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Environmental Audit
Committee

Halting biodiversity loss

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The Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty's Ministers; and to report thereon to the House.

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The current staff of the Committee are: Gordon Clarke (Clerk); Sara Howe (Second Clerk); Richard Douglas (Committee Specialist); Oliver Bennett (Committee Specialist); Susan Monaghan (Committee Assistant); Stella Kin (Secretary); and Elizabeth Gardner (Sandwich Student)

Contacts

All correspondence should be addressed to The Clerk, Environmental Audit Committee, Committee Office, 7 Millbank, London SW1P 3JA. The telephone number for general inquiries is: 020 7219 6150; the Committee's e-mail address is: eacom@parliament.uk

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Summary

The Government will fail to meet its 2010 target to halt biodiversity loss, although the target might have been unrealistic. Good progress has been made towards the target in some respects. For example, 80% of Sites of Special Scientific Interest are now in a favourable condition and a number of rare species have recovered. But biodiversity loss continues apace in the wider countryside and many species and habitats continue to face severe declines and local extinctions. Although there are barriers to overcome there is no reason why biodiversity loss could not be halted in England—indeed, with leadership and effective policies, biodiversity loss could be reversed. The Government should adopt a new target for halting and reversing biodiversity loss by 2020.

To achieve this the Government will have to go beyond traditional nature conservation policies. It will have to ensure that, wherever possible, biodiversity is protected and enhanced by all departments and policies. There is a compelling economic case for doing this. This approach will be required if biodiversity is to be prevented from declining further due to growing pressure from development and climate change. Therefore we welcome that the Government will now conduct an ecosystem assessment to demonstrate how this approach could be taken forward in practice—particularly as we recommended such an assessment in 2007. This assessment must address continued failures by a number of departments to recognise the importance of biodiversity in their policies. It must also focus on delivery of biodiversity protection at the regional and local scales.

One of the most important contributions that the government could make to halting biodiversity loss would be to provide more support for the UK Overseas Territories, where it is the eleventh hour for many species. Although England has a number of internationally important species and habitats, the biodiversity found in the UK Overseas Territories is equally valuable and at a greater risk of loss. The Government must act now to protect these areas.

1 Introduction

1. In the EU, 42% of mammals, 43% of birds, 45% of butterflies, 30% of amphibians, 45% of reptiles and 52% of freshwater fish are thought to be threatened with extinction. To address this, in 2001 EU Member States committed themselves to halting biodiversity loss within their borders by 2010.¹

2. Earlier this year the Wildlife and Countryside Link, an environmental NGO umbrella body, reported that the Government was not on course to hit this target, and that progress towards it had stalled. Last year we found that the Government was failing to provide adequate support and funding for biodiversity protection in the UK Overseas Territories (UKOTs).² We decided to undertake this inquiry to: assess progress towards the 2010 biodiversity target; examine the causes of and responses to biodiversity loss in England; and, determine whether the Government has acted upon the serious concerns that we have raised regarding nature conservation in the UKOTs. As biodiversity is a devolved issue, this Report focuses mainly on England. Our inquiry avoided the marine environment as this was considered in Parliament's scrutiny of the draft Marine Bill.³

What is biodiversity?

3. Biological diversity, or biodiversity, refers to: the variety of all species of plants and animals; the genetic variety within each species; and to the variety of habitats that support them. It is often thought that large losses or changes in biodiversity reflect negative and normally man-made pressures. Biodiversity can therefore be used as a measure of the health of the natural environment.

4. Global assessments of biodiversity indicate that many natural environments are under considerable pressure. The UN Millennium Ecosystem Assessment found that the majority of species are either declining in abundance or that their population distributions are contracting. Although biodiversity will change over time with evolutionary and other natural processes, humans have accelerated the natural extinction rate by as much as 1000%.⁴ Globally some 12% of birds, 23% of mammals and 32% of amphibians are threatened with extinction over the next 100 years.⁵ UN experts warn that a species is lost every 20 minutes, putting the global extinction crisis on a par with the loss of the dinosaurs some 65 million years ago.⁶

5. Biodiversity loss is often considered an emotive or moral issue, particularly where large charismatic species are involved. But biodiversity loss can have significant economic impacts:

1 "Biodiversity Loss: Facts and Figures", *Europa*, 9 February 2004, <http://europa.eu>

2 Environmental Audit Committee, Fifth Report of Session 2006–07, *Trade, Development and Environment: The Role of the FCO*, HC 289

3 Joint Committee on the Draft Marine Bill, Session 2007–08, *Draft Marine Bill*, HC 552-I

4 Millennium Ecosystem Assessment, *Ecosystems and Human Well-being: The Biodiversity Synthesis Report* (Washington 2005)

5 *ibid*

6 "Herculean task to safeguard biodiversity", *Planet Ark*, 20 May 2008, www.planetark.com

- the loss of genetic diversity in crop species can increase the vulnerability of global food production to new pests and diseases;
- the loss of species with known or unknown uses reduces the material from which important new discoveries might be made, such as in medicine; and
- biodiversity directly or indirectly supports many of the natural processes from which we currently receive substantial benefits.

6. A dramatic example of the critical importance of biodiversity for humans occurred in the 1970s when a new rice virus appeared, the grassy stunt virus. The virus destroyed a significant proportion of the rice crop in Asia and had an impact on billions of people. Scientists screened thousands of different rice varieties but only a single wild rice strain was found to have resistance to the virus. This wild rice strain came from one known location and had been collected by scientists shortly before the site had been destroyed by a hydroelectric dam. Without this one strain of wild rice, production of one of the world's most important food crops would have been seriously damaged. Other food crops have faced similar problems.⁷

7. Closer to home, bees provide another example of the importance of biodiversity. Without insect pollination at least 39 UK crop species either fail to produce fruit or seeds or produce a substandard crop. The economic value of this to the UK is estimated to be around £120–200 million per annum, but the true value is substantially greater given that many wild plant species also require insect pollination.⁸ The loss of bee species and other pollinators could have major economic impacts by damaging food production and causing unplanned changes to natural ecosystems. It is therefore of considerable concern that many bee species are declining or have become extinct in the UK.⁹

2 The state of UK biodiversity

8. Global pressures on biodiversity are mirrored in the UK. Natural England published a report, *State of the Natural Environment 2008*, which came to six headline conclusions about England's natural environment:

- i. it is internationally important¹⁰ and provides large economic benefits;
- ii. it has been under “huge” pressure for some 50 years, this pressure is continuing and will be exacerbated by climate change;
- iii. it is much less rich than it was 50 years ago, particularly outside protected sites;

7 Geoffrey Heal, *The costs of inaction with respect to biodiversity loss*, Background paper prepared for OECD, 14 April 2005

8 “Bee Health”, *Department for Environment, Food and Rural Affairs*, 8 April 2008, www.defra.gov.uk

9 “Wild bees and the flowers they pollinate are disappearing together”, *Natural Environment Research Council*, 21 July 2006, www.nerc.ac.uk

10 For example, England has 20% of Europe's estuary habitats and 18% of Europe's heathland.

- iv. conservation action has levelled-off this decline over the past ten years, but only 40 per cent of species are stable or increasing;¹¹
- v. large-scale integrated conservation work has led to significant conservation successes; and
- vi. if biodiversity is to survive future pressures from development and climate change a new approach is required in which conservation is delivered across the landscape and is fully integrated with other policy areas.¹²

9. Habitat biodiversity trends are mixed. Some 80% of Sites of Special Scientific Interest (SSSI), which cover around 7% of the country, are in a 'favourable' or 'unfavourable recovering' condition. But habitats outside SSSI appear to be faring less well and are generally in a poorer condition. Indeed, the composition of the countryside appears to be changing with significant gains to built-up and garden habitats and fen, marsh and swamp habitats, but some 97% of our flower-rich meadows have been lost since World War II.¹³

10. This mixed picture is also found in species biodiversity. The historic dramatic decline in bird species now appears to have stabilised—although, as Dr Mark Avery from the RSPB pointed out to us, the number of common farmland birds are still half what they were a generation ago.¹⁴ Some species have started to recover, such as the otter, but some are still rapidly declining, such as the water vole. Of priority Biodiversity Action Plan species (those of conservation concern), 28% are still clearly declining, 12% are increasing and 34% are considered stable, with no clear trend for the remaining species.¹⁵

Will we meet the target and where do we want to get to?

11. Witnesses and the Government were in agreement that the UK's target to halt biodiversity loss by 2010 would be missed. The Department for Environment, Food and Rural Affairs (Defra) accepted in its memorandum that progress on biodiversity has been mixed. It argued that the target was "never realistically achievable in all areas and aspects" but claimed that the target had acted as a "call to arms", galvanising activity across society.¹⁶

12. The RSPB accepted that the target was challenging and said that it was not surprised that the target will not be met.¹⁷ RSPB thought that it would be important to introduce a new target to ensure that momentum would not be lost after 2010, and for this target also to aim for the re-creation of biodiversity. Dr Brotherton, Head of Biodiversity at Natural England, echoed this call. He pointed out that there is no clear target beyond 2010 and said that he would like to see a "2020 vision for biodiversity" that includes targets to reverse

11 Q 1

12 Q 1

13 Natural England, *State of the Natural Environment 2008, 2008*, p 48

14 Q 92 [Dr Avery]

15 Natural England, *State of the Natural Environment 2008, 2008*, p 162

16 Ev 60

17 Q 85 [Dr Avery]

historic declines in order “to deliver a healthy natural environment”.¹⁸ He said that this should be accompanied by clear targets rather than just indicators. Both organisations agreed that it is perfectly feasible to reverse biodiversity loss. Dr Avery from the RSPB argued that “we should not set our sights too low” as much of this work can be done quickly and at low cost.¹⁹ Natural England’s *State of the Natural Environment 2008* showed that conservation programmes and regulations, especially when targeted, can successfully address biodiversity loss.²⁰ This has been demonstrated by progress towards a 2000 PSA target to have 95% of SSSI in favourable condition by 2010—83% of SSSI are now in target condition compared to 57% in 2003.²¹

13. However, the National Farmers’ Union (NFU) pointed out that it might not be realistic to return to biodiversity levels seen in the past. Paul Temple, Vice President of the NFU, said that the UK population had grown considerably since the fifties and that modern farming techniques, which have had an impact on biodiversity, enable the production of more food for this larger population. He pointed out that there was the need to reconcile competing land uses with biodiversity conservation in today’s context.²² Development, recreation and policies such as biofuels add further to land use pressure.

14. Joan Ruddock MP, Defra Parliamentary Under-Secretary of State, told us that we need to learn from the 2010 target to identify specific challenges in meeting any future targets. For example, the Minister pointed out that we now know far more about dealing with habitat loss that is a result of inappropriate management, and that targets could be developed to reflect this. She also acknowledged that “we can restore some habitats”²³ but she seemed less optimistic about reversing historic biodiversity loss, arguing that “there is no way that we can just turn the clock back, in any comprehensive sense”, given a number of pressures such as housing.²⁴

15. The Government is unlikely to meet its 2010 target to halt biodiversity loss. Although good progress has been made in some respects, a new target and a new approach will be needed to address the dramatic biodiversity loss that is occurring in England.

16. Halting biodiversity loss must not be the end-point for biodiversity conservation in England. We should go beyond this to enable growth in biodiversity into the future. Achieving this will require leadership, effective policies and delivery all firmly rooted in the scientific evidence.

17. To ensure that momentum is not lost after 2010 the Government should adopt a new target and vision for halting and reversing biodiversity loss by 2020. This needs to be accompanied by specific, measurable and achievable targets for habitats and species.

18 Q 22

19 Q 10

20 Natural England, *State of the Natural Environment 2008*, 2008, p 298

21 Q 25

22 Q 65 [Mr Temple]

23 Q 121

24 Q 119

The ecosystems approach

18. The evidence we received indicated that protected area arrangements are largely adequate and that the condition of these areas is improving.²⁵ However, witnesses were clear that the target for halting loss would not be achieved without protecting biodiversity in the wider landscape or by addressing the environmental impacts of wider policies.²⁶ This could be achieved through the application of the ecosystems approach, which seeks to promote the sustainable management of the landscape by ensuring that the environmental impacts of policies are correctly identified and addressed.²⁷ This approach protects biodiversity by ensuring that its value is reflected in the decision making process. In practice this approach requires a clear scientific understanding of ecosystems, and the application of this knowledge to policies to ensure that they are aligned with the ecosystem's long-term survival.²⁸

19. Dr Tew, Chief Scientist, Natural England, thought that the “ecosystem approach” would be a “paradigm shift” in helping to ensure that all government departments adequately value the natural environment and biodiversity.²⁹ Natural England told us that if the Government can deliver this approach on the ground “so that land managers are rewarded for delivering that full suite of environmental services, then we will start to mainstream a healthy natural environment into the economy of this country”.³⁰

20. We recognised the value of the ecosystem approach in our 2007 report on the UN Millennium Ecosystem Assessment, but we found that a significant barrier to it was a lack of information. To address this we recommended that the Government undertake an ecosystem assessment to “enable the identification and development of effective policy responses to ecosystem service degradation”.³¹

21. On 22 July 2008 Hilary Benn MP, Secretary of State for Environment, Food & Rural Affairs, announced that Defra would conduct an ecosystem assessment for England to ensure that the integrated regional strategies required by the Sub-National Review will be based on “the best evidence of environmental threats and opportunities”. He said that Natural England and the Environment Agency will now “work to identify the environmental pressures in each region”. He argued that the planned ecosystem assessment will: help to ensure that ecosystem services are properly valued; bring together all existing information about the state of the natural environment to “improve awareness and understanding”; and to help develop a future vision.³²

25 Ev 1

26 Q 2

27 “The Ecosystem based approach”, *Joint Nature Conservation Committee*, 22 October 2008, www.jncc.gov.uk

28 *ibid*

29 Q 3

30 Q 6

31 Environmental Audit Committee, First Report of Session 2006–07, *The UN Millennium Ecosystem Assessment*, HC 77

32 “Speech by Rt Hon Hilary Benn MP at the Barnes Wetlands Centre: Why the Natural Environment Matters”, *Natural England*, 21 July 2008, www.naturalengland.org.uk

22. To halt biodiversity loss, to reverse historic losses, and to make biodiversity more robust in the face of future pressures, an ecosystem approach will be required. We therefore welcome the Government's plan to conduct an ecosystem assessment for England. The Government must ensure that this is completed and published at the earliest opportunity. In addition to showing how an ecosystem approach can be delivered, the assessment should consider:

- the protection of biodiversity outside protected areas, particularly on small sites that are not protected by statutory environmental impact assessment;³³
- how agri-environment schemes can deliver habitat creation and enhancement, possibly through a more targeted approach, and whether wider agricultural support mechanisms are aligned with an ecosystems approach;
- how development can lead to gains in biodiversity and ecosystem services (such as through compensation for biodiversity loss and the provision of green infrastructure), and whether development policies are aligned with the ecosystems approach; and
- scenarios for a future vision of the natural environment linked to a new target for halting and reversing biodiversity loss.

3 Cross-government action

23. Dr Brotherton, Head of Biodiversity, Natural England, told us that a challenge in achieving an ecosystem approach and protecting biodiversity was that not all of government and society recognised the true value of the natural environment, “the scale of the problem, nor the scale of the opportunity”.³⁴ Dr Tew, Chief Scientist, Natural England, said that departments other than Defra “do not take biodiversity as seriously as they should [...] because they do not sufficiently value it [or] integrate it into what they do”.³⁵ He pointed out that biodiversity targets cannot be met if only Defra and its agencies worked on the problem.

24. Natural England raised concerns about a number of policies. It said the Department for Communities and Local Government (DCLG) had failed to account adequately for biodiversity in its policies on brownfield development, new development growth points, sustainable construction codes or access to public green space. It said that the Department for Health had failed to take advantage of the psychological and physical health benefits of the natural environment, and that the Department for Business, Enterprise and Regulatory Reform (BERR) had failed to adequately consider the biodiversity impacts of energy

33 Q 8 [Mr Jackson]

34 Q 2

35 Q 6

policy.³⁶ We recently found that the Department for Transport had failed to address the potential biodiversity impacts of biofuels policy.³⁷

25. PSA targets agreed in the Comprehensive Spending Review (CSR) should help to ensure that departments are working together to protect the environment and biodiversity. PSA 28, to “secure a healthy natural environment for today and the future”, included an aim to value, safeguard and enhance biodiversity.³⁸ However, Natural England was concerned that biodiversity did not have a higher profile across the whole range of PSAs, particularly those relating to productivity, transport and economic performance.³⁹ We note that while DCLG is a formal delivery partner for PSA 28, its Departmental Strategic Objectives lack the environmental focus required and fail to describe how it will act on its PSA 28 commitments.⁴⁰

26. Continued evidence of departments failing to account for biodiversity is found in BERR’s Renewable Energy Strategy consultation document published 26 June 2008. The consultation found that:

... the least cost delivery of our 2020 renewable energy goals might require approximately 30% of the UK’s renewable energy to come from bioenergy across the heat and electricity sectors. This is in addition to the bioenergy needed for transport.⁴¹

27. Such a large expansion in bioenergy production could have large negative environmental impacts as described in our recent report on biofuels.⁴² In response to that report the Government told us that sustainable bioenergy production would be explored further as part of the Renewable Energy Strategy. But the consultation document focused on the technical availability of bioenergy rather than sustainable availability. It indicated that sustainability will be addressed through standards in a similar way to that by which the Government has managed its controversial biofuels policy.⁴³

28. Joan Ruddock MP insisted that there has not been a loss of focus on biodiversity in government, and that the issue has actually increased in profile. She thought that some of the criticisms heard by the Committee were due to the fact that this work was on-going, that the media was not reporting on it, and that therefore it is “difficult to get people to appreciate just how much is being done”.⁴⁴ She pointed to the Wetland Vision project which has undertaken an assessment of England’s current wetlands and describes how the

36 Q 13

37 Environmental Audit Committee, First Report of Session 2007–08, *Are biofuels sustainable?*, HC 76-I

38 HM Government, *PSA Delivery Agreement 28: Secure a healthy natural environment for today and the future*, October 2007

39 Q 21 [Dr Brotherton]

40 Department for Communities and Local Government, *Departmental Strategic Objectives*, 22 October 2008, www.communities.gov.uk

41 Department for Business, Enterprise and Regulatory Reform, *UK Renewable Energy Strategy: Consultation*, June 2008

42 Environmental Audit Committee, First Report of Session 2007–08, *Are biofuels sustainable?*, HC 76-I

43 Department for Business, Enterprise and Regulatory Reform, *UK Renewable Energy Strategy: Consultation*, June 2008

44 Q 159

partners, which include Natural England, would like wetland landscapes to look like in 50 years time. She said that the Government's role in the development of this project was not fully appreciated.⁴⁵ She also pointed to a range of other actions as evidence of the Government's work on this issue and that they were doing "a great deal" on biodiversity.⁴⁶

29. Defra and its delivery bodies are working to halt biodiversity loss. To be able to achieve this, and also to deliver the ecosystems approach needed to protect biodiversity into the future, it is crucial that all departments work in concert. Public Service Agreement 28 might facilitate cross-departmental work on biodiversity. However, we are concerned that a number of policies indicate the continued failure of departments to consider biodiversity impacts. In particular, we note that although the Department for Communities and Local Government is a formal delivery partner for PSA 28, it appears to have failed to transpose this responsibility into its Departmental Strategic Objectives. Without appropriate mitigation activities being taken, some of its policies, such as brownfield development and housing targets, might contribute to biodiversity loss. Its Departmental Strategic Objectives must be updated and it must align its policies with the ecosystem approach. Another example is the failure of the Department for Business, Enterprise and Regulatory Reform's renewable energy strategy consultation document to address the potential impacts of bioenergy policy.

Planning

30. The planning system was identified by witnesses as a key issue for biodiversity protection.⁴⁷ A number of key changes to the planning system have come out of the Sub-National Review, which seeks to strengthen economic performance in the regions. One outcome, the single regional strategies, (which will describe the balance of economic, social and environmental objectives of an area) could benefit biodiversity by enabling strategic planning for biodiversity. However, Simon Marsh, Head of Planning and Regional Policy for RSPB, told us that while the development of these single regional strategies was "moving [biodiversity protection] in a positive direction", there might be negative aspects to the Sub-National Review.⁴⁸ In particular he was concerned about there being "no guaranteed place for environment stakeholders to have a core role in regional processes".⁴⁹ RSPB told us that:

[The Sub-National Review] turns England's public institutions, planning and funding structures on their collective heads—in order to remove perceived barriers to economic growth. The commitment to living within environmental limits has been reduced to a footnote, in the context of reforms that fail to steer us towards sustainable development. The Regional Development Agencies (RDA) will have little incentive to promote sustainable development when their performance is judged on meeting a new single growth target, measured by Gross Value Added. The logical response to this is that a strong statutory purpose to further sustainable

45 *ibid*

46 *ibid*

47 Q 28

48 Q 103

49 *ibid*

development must be included in the regional strategies, which RDA will have a responsibility to produce.⁵⁰

31. In the Sub-National Review itself the Government recognised that the Regional Development Agencies (RDA), which will produce the single regional strategies, will have “a clear focus on improving regional economic growth”. Although RDAs must “demonstrate regard” to a set of “underlying principles” that will include “the five principles of sustainable development [...] (living within environmental limits, ensuring a just society, achieving a sustainable economy, using science responsibly and good governance)”.⁵¹

32. Delivering an ecosystem approach will rely to a large extent on regional and local government, particularly when it comes to planning. A number of recent changes might facilitate this, such as the production of single regional strategies, which could provide for the detailed mapping of biodiversity in a region and for opportunities for its protection and enhancement.

33. However, some aspects of the Sub-National Review might undermine an ecosystems approach. In particular we are concerned that the Regional Development Agencies responsible for drawing up the single regional strategies (as well as acting as the regional planning bodies), will have an overriding focus on economic growth as their performance will be based on a single economic growth indicator. There is also a considerable risk that sustainable development issues will not carry much weight in the decision making process given the absence of ecosystem service information at regional and local scales.

34. The Government said that the new Local Government Performance Framework would help to improve the consideration of biodiversity at the local level. The new framework includes 198 indicators, of which individual local authorities chose 35 to focus upon. Indicator 197, *Improved Local Biodiversity—proportion of Local Sites where active conservation management is being achieved*, is the only one explicitly related to biodiversity (although others such as those relating to air quality, waste or climate change adaptation might also have biodiversity benefits).⁵² Performance against this indicator will be assessed on the basis of the percentage of local wildlife sites being managed for their biodiversity value. It therefore has a focus on the protection and enhancement of existing sites. Although this is very important in itself, such a focus will not deliver the landscape approach that is needed, and might not help to deliver the landscape scale enhancements detailed in the single regional strategies given its focus on individual sites.

35. Natural England was hopeful that the new indicator could have a major impact on local biodiversity protection, but expressed disappointment that only 26 local authorities, of over 380 in England, had adopted the indicator. It thought that this was “perhaps another symptom that local authorities fail to understand the benefits that a rich natural

50 Ev 34

51 HM Treasury, *Review of sub-national economic development and regeneration*, July 2007

52 Department for Communities and Local Government, *The New Performance Framework for Local Authorities & Local Authority Partnerships: Single Set of National Indicators*, October 2007

environment can bring to the communities that they serve”.⁵³ NGOs were unconvinced that the new indicator would lead to the enhancement of biodiversity, and pointed out that existing policies such as Planning Policy Statement 9, which encourages habitat creation and the protection of biodiversity, had not delivered the step-change required. Concern was also raised that the biodiversity duty placed on local authorities by the Natural Environment and Rural Communities Act was failing to deliver biodiversity protection and enhancement.⁵⁴ It was argued that these failures might be the result of:

- local authorities not seeing biodiversity as a priority;
- inadequate local expertise and information; and
- the biodiversity duty being too weak.

36. The Minister told us that the fact that 26 local authorities have made biodiversity a priority is “quite an achievement”, given that they have only had to have regard to biodiversity since 2006 and given the other major considerations that they have.⁵⁵ She also pointed out that although an authority might not adopt the biodiversity indicator, they will still be required to report against it. Regarding wider planning reforms the Minister told us that she is “confident that we have had sufficient input and a degree of influence over what is happening” and that “the implementation of the Sub-National Review does not have an emphasis on economic growth to the exclusion of all other considerations”.⁵⁶ She also told us that the Government has published an introductory guide to ecosystem services valuation to help planning authorities to take into account ecosystem services, and that they will be reviewing how well the biodiversity duty is being adhered to.⁵⁷

37. We welcome the Government’s forthcoming review of the biodiversity duty. **We are concerned that Planning Policy Statement 9 and the biodiversity duty have not adequately protected or enhanced biodiversity and that such opportunities continue to be missed.** It is possible that the new local government performance framework will help to address these issues, but the fact that only 26 local authorities have adopted the biodiversity indicator does not give us much cause for optimism. The failure to apply these policies could in part be due to the lack of information and expertise at regional and local levels and the Government must ensure that the forthcoming ecosystem assessment provides the necessary information. **We recommend that the ecosystem assessment:**

- **assesses whether the single regional strategies follow the ecosystems approach and adequately provide for biodiversity protection and enhancement**
- **assesses whether, when combined, the single regional strategies will provide the England-wide network required for biodiversity;**

53 Q 22

54 Q 22

55 Q 139

56 Q 145

57 Q 138

- describes practically how an ecosystem approach can be delivered at regional and local scales; and
- demonstrates the value of ecosystem services at regional and local scales.

38. In the mean-time other policies and development risk causing further biodiversity loss. It is critically important that all levels of government ensure that all policies are reviewed to align them with an ecosystems approach.

4 UK Overseas Territories

39. The UK Overseas Territories (UKOTs) are globally significant in terms of their biodiversity. They contain some 240 globally threatened species, 74 of which are critically endangered. Responsibility for local environmental policy is devolved to local UKOT governments where they exist. However, in evidence to us the UK Overseas Territories Conservation Forum (UKOTCF) argued that it is “entirely unrealistic to expect government and NGO bodies in these small communities to find locally all the human and financial resources required to monitor and protect their fragile natural environment”.⁵⁸ Consequently, it said, “local environmental legislation and its enforcement are often weak, including in critical areas such as spatial planning”.⁵⁹ UKOTCF believed that under these circumstances the UK Government has a moral responsibility to support UKOT governments in protecting their biodiversity. It pointed out that the UK Government is accountable for UKOT biodiversity under international conventions. The UKOTCF also saw a link between the Government’s failure to ensure good standards of good governance in the UKOTs and negative impacts on biodiversity protection.

40. Iain Orr of BioDiplomacy was critical of the continued failure to join-up government in dealing with the UKOTs. He argued that ministers and officials from Defra, Department for International Development, FCO, Department for Culture Media and Sport, Ministry of Defence and Ministry of Justice “need to have a shared understanding of what role each of them has in supporting the 2010 [biodiversity] target”.⁶⁰ UKOTCF agreed that the government’s approach to environmental protection “remains fragmentary and inadequate”.⁶¹

41. In the past we have severely criticised the Government for failing adequately to protect the biodiversity of the UKOTs. In our Report on the *UN Millennium Ecosystem Assessment*, published in January 2007, we expressed concern about the continued threat of extinction of around 240 species in the UKOTs and argued that it was “distasteful”, given their lack of resources, that the FCO and DFID had argued that it was up to the UKOTs to fund protection of these species. We concluded that if the “Government is to achieve the [...] 2010 target to significantly reduce the rate of biodiversity loss within its entire territory, the Government must act decisively to prevent further loss of biodiversity in the

58 Ev 107

59 ibid

60 Ev 184

61 Ev 107

UKOT”.⁶² We urged the Government to increase funding for conservation and ecosystem management in the UKOT and to give Defra joint responsibility with the FCO and DfID for delivering this.

42. We returned to this issue in our Report on *Development and the Environment: the Role of the FCO*. We found that the funding situation for environmental protection in the UKOT appeared to be based on what the FCO and DFID could spare, rather than a strategic assessment of need, and we reiterated our previous call for increased funding. We recommended that Defra should be involved at the highest level in a review of the Environment Charters, which describe the various roles and responsibilities of the Government and the governments of the UKOT (where they exist). We recognised that changes in departmental responsibilities would need to be reflected in Defra’s Comprehensive Spending Review settlement. We concluded that failing to address the issue of biodiversity loss in the UKOT:

[The Government] will run the risk of continued environmental decline and [further] species extinctions in the UKOT, ultimately causing the UK to fail in meeting its domestic and international environmental commitments. Failure to meet such commitments undermines the UK’s ability to influence the international community to take the strong action required for reversing environmental degradation in their own countries, and globally.⁶³

43. The Foreign Affairs Committee published a report on the UKOTs. It concluded that:

[...] given the vulnerability of Overseas Territories’ species and ecosystems, [the] lack of action by the Government is highly negligent. The environmental funding currently being provided by the UK to the Overseas Territories appears grossly inadequate⁶⁴

44. Recommendations that we have made in the past appear largely to have been ignored. There has not been an adequate assessment of funding needs and how funding might be delivered.⁶⁵ In the review of the Environment Charters,⁶⁶ the UKOTCF claimed that the government “felt unable to provide information to this exercise, which [it] attributed to lack of resources [...] and therefore] consideration of fulfilment of commitments by [government] remained very incomplete”.⁶⁷ A reassessment of the various roles and responsibilities of departments was not carried out as part of the Comprehensive Spending Review, and Defra has not been made jointly responsible for the UKOT.

62 Environmental Audit Committee, First Report of Session 2006–07, *The UN Millennium Ecosystem Assessment*, HC 77

63 *ibid*

64 Foreign Affairs Select Committee, Seventh Report of Session 2007–08, *Overseas Territories*, HC 147-I

65 Ev 108

66 The Environment Charters describe the responsibilities of the UK Government and the Government of each Territory for the conservation of the environment in the UKOTs

67 Ev 108

45. The Minister pointed out that funding was provided by DFiD and FCO, and argued that it was for those departments to address any funding shortfall, although she told us that Defra had tried to support the UKOTs through the Darwin Initiative.⁶⁸ She told us that she had not met recently with FCO and DFiD Ministers on the Inter-Departmental Group on Biodiversity, which was set up to help deal with the environmental challenges identified in the UKOT, but that a meeting would be arranged. An official told us that the group had met some four times over the past four years, and accepted that the intention was initially for it to meet every six to nine months.⁶⁹ Joan Ruddock MP said that the Committee “may have a point to make about wider co-ordination [and that] I think we should be asking ourselves the questions that you have posed: Do we think this is sufficiently well coordinated across government? Do we think that the overseas territories are getting the maximum result from whatever funding government is able to give them? What more do we need to know?”⁷⁰

46. The Government has a clear moral and legal duty to help protect the biodiversity of the UK Overseas Territories and Crown Dependencies, where it is the eleventh hour for many species. We are extremely concerned that recommendations that we have made in the past that would have helped to protect the environment of the Overseas Territories have been ignored. The Government must:

- **adopt a truly joined-up approach to environmental protection the UKOTs and Crown Dependencies, by bringing together all relevant departments including the FCO, MoJ, DfID, Defra, DCMS and MoD, and the governments of the UKOTs and Crown Dependencies;**
- **make better use of the Inter-Departmental Group on biodiversity to provide more oversight and support for the development and implementation of effective environmental protection policy in the UKOTs, and expand the Group to include other relevant departments;**
- **have Defra assume joint responsibility for the UKOTs, and reflect this in future spending settlements; and**
- **address the dire lack of funds and information for environmental protection in the UKOTs. An ecosystem assessment should be conducted in partnership with each UKOT in order to provide the baseline environmental data required and to outline the effective response options needed to halt biodiversity loss.**

47. With leadership, and a relatively small sum of money, the incredible biodiversity found in our overseas territories can be safeguarded into the future. One of the most important contributions that the Government could make to slowing the catastrophic global biodiversity loss currently occurring would be to accept its responsibilities and to provide more support for the UK Overseas Territories in this area.

68 Q 176

69 Q 172 [Mr Brasher]

70 Q 177

Conclusions and recommendations

1. The Government is unlikely to meet its 2010 target to halt biodiversity loss. Although good progress has been made in some respects, a new target and a new approach will be needed to address the dramatic biodiversity loss that is occurring in England. (Paragraph 15)
2. Halting biodiversity loss must not be the end-point for biodiversity conservation in England. We should go beyond this to enable growth in biodiversity into the future. Achieving this will require leadership, effective policies and delivery all firmly rooted in the scientific evidence. (Paragraph 16)
3. To ensure that momentum is not lost after 2010 the Government should adopt a new target and vision for halting and reversing biodiversity loss by 2020. This needs to be accompanied by specific, measurable and achievable targets for habitats and species. (Paragraph 17)
4. To halt biodiversity loss, to reverse historic losses, and to make biodiversity more robust in the face of future pressures, an ecosystem approach will be required. We therefore welcome the Government's plan to conduct an ecosystem assessment for England. The Government must ensure that this is completed and published at the earliest opportunity. In addition to showing how an ecosystem approach can be delivered, the assessment should consider: the protection of biodiversity outside protected areas, particularly on small sites that are not protected by statutory environmental impact assessment;
 - how agri-environment schemes can deliver habitat creation and enhancement, possibly through a more targeted approach, and whether wider agricultural support mechanisms are aligned with an ecosystems approach;
 - how development can lead to gains in biodiversity and ecosystem services (such as through compensation for biodiversity loss and the provision of green infrastructure), and whether development policies are aligned with the ecosystems approach;
 - and scenarios for a future vision of the natural environment linked to a new target for halting and reversing biodiversity loss. (Paragraph 22)
5. Defra and its delivery bodies are working to halt biodiversity loss. To be able to achieve this, and also to deliver the ecosystems approach needed to protect biodiversity into the future, it is crucial that all departments work in concert. Public Service Agreement 28 might facilitate cross-departmental work on biodiversity. However, we are concerned that a number of policies indicate the continued failure of departments to consider biodiversity impacts. In particular, we note that although the Department for Communities and Local Government is a formal delivery partner for PSA 28, it appears to have failed to transpose this responsibility into its Departmental Strategic Objectives. Without appropriate mitigation activities being taken, some of its policies, such as brownfield development and housing targets, might contribute to biodiversity loss. Its Departmental Strategic Objectives must be

updated and it must align its policies with the ecosystem approach. Another example is the failure of the Department for Business, Enterprise and Regulatory Reform's renewable energy strategy consultation document to address the potential impacts of bioenergy policy. (Paragraph 29)

6. Delivering an ecosystem approach will rely to a large extent on regional and local government, particularly when it comes to planning. A number of recent changes might facilitate this, such as the production of single regional strategies, which could provide for the detailed mapping of biodiversity in a region and for opportunities for its protection and enhancement. (Paragraph 32)
7. However, some aspects of the Sub-National Review might undermine an ecosystems approach. In particular we are concerned that the Regional Development Agencies responsible for drawing up the single regional strategies (as well as acting as the regional planning bodies), will have an overriding focus on economic growth as their performance will be based on a single economic growth indicator. There is also a considerable risk that sustainable development issues will not carry much weight in the decision making process given the absence of ecosystem service information at regional and local scales. (Paragraph 33)
8. We are concerned that Planning Policy Statement 9 and the biodiversity duty have not adequately protected or enhanced biodiversity and that such opportunities continue to be missed. (Paragraph 37)
9. We recommend that the ecosystem assessment: (Paragraph 37)
 - assesses whether the single regional strategies follow the ecosystems approach and adequately provide for biodiversity protection and enhancement
 - assesses whether, when combined, the single regional strategies will provide the England-wide network required for biodiversity;
 - describes practically how an ecosystem approach can be delivered at regional and local scales; and
 - demonstrates the value of ecosystem services at regional and local scales.
10. In the mean-time other policies and development risk causing further biodiversity loss. It is critically important that all levels of government ensure that all policies are reviewed to align them with an ecosystems approach. (Paragraph 38)
11. The Government has a clear moral and legal duty to help protect the biodiversity of the UK Overseas Territories and Crown Dependencies, where it is the eleventh hour for many species. We are extremely concerned that recommendations that we have made in the past that would have helped to protect the environment of the Overseas Territories have been ignored. The Government must:
 - adopt a truly joined-up approach to environmental protection the UKOTs and Crown Dependencies, by bringing together all relevant departments including the FCO, MoJ, DfID, Defra, DCMS and MoD with the governments of the UKOTs;

- make better use of the Inter-Departmental Group on biodiversity to provide more oversight and support for the development and implementation of effective environmental protection policy in the UKOTs, and expand the Group to include other relevant departments;
- have Defra assume joint responsibility for the UKOTs, and reflect this in future spending settlements; and
- address the dire lack of funds and information for environmental protection in the UKOTs. An ecosystem assessment should be conducted in partnership with each UKOT in order to provide the baseline environmental data required and to outline the effective response options needed to halt biodiversity loss. (Paragraph 46)

12. With leadership, and a relatively small sum of money, the incredible biodiversity found in our overseas territories can be safeguarded into the future. One of the most important contributions that the Government could make to slowing the catastrophic global biodiversity loss currently occurring would be to accept its responsibilities and to provide more support for the UK Overseas Territories in this area. (Paragraph 47)

Formal Minutes

Tuesday 28 October 2008

Members present:

Mr Tim Yeo, in the Chair

Colin Challen
Mr David Chaytor
Martin Horwood
Mark Lazarowicz

Jo Swinson
Dr Desmond Turner
Joan Walley

Halting biodiversity loss

The Committee considered this matter.

Draft Report (*Halting biodiversity loss*), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 47 read and agreed to.

Summary agreed to.

Resolved, That the Report be the Thirteenth Report of the Committee to the House.

Ordered, That the Chairman make the Report to the House.

Written evidence was ordered to be reported to the House for printing with the Report.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned till Tuesday 11 November at 09.45am]

Witnesses

Tuesday 17 June 2008

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Dr Peter Brotherton, Head of Biodiversity, and **Dr Tom Tew**, Chief Scientist,
Natural England

Ev 10

Paul Temple, Vice President, and **Andrew Clark**, Head of Policy Services, National
Farmers' Union

Ev 24

Tuesday 24 June 2008

Dr Mark Avery, Director of Conservation, **Simon Marsh**, Head of Planning and
Regional Policy, RSPB, **Matt Shadlow**, Buglife–The Invertebrate Conservation
Trust, and **Matthew Jackson**, Head of Policy, Planning and Wider Countryside,
The Wildlife Trusts

Ev 46

Tuesday 15 July 2008

Joan Ruddock MP, Parliamentary Under Secretary of State (Climate Change,
Biodiversity and Waste) and **Martin Brasher**, Head of Wildlife Habitats and
Biodiversity Division, Defra

Ev 68

List of written evidence

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3	Royal Society for the Protection of Birds (RSPB)	Ev 32
4	The Wildlife Trusts	Ev 36
5	BugLife–The Invertebrate Conservation Trust	Ev 41: Ev 58
6	Department for Environment, Food and Rural Affairs (Defra)	Ev 60: Ev 80
7	Dr Alan Feest, University of Bristol and ecosulis Ltd	Ev 82
8	Betty Lee	Ev 86
9	Welsh Association of National Park Authorities (WANPA)	Ev 87
10	Butterfly Conservation	Ev 91
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12	Game and Wildlife Conservation Trust	Ev 100
13	St Helena National Trust	Ev 104
14	UK Overseas Territories Conservation Forum	Ev 107
15	Royal Horticultural Society	Ev 111
16	Vaughan Grantham	Ev 113
17	The Horticultural Trades Association	Ev 114
18	Minister for Environment, Sustainability and Housing, Welsh Assembly Government	Ev 118
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23	The British Association for Shooting and Conservation	Ev 145
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31	Wildlife and Countryside Link	Ev 182
32	BioDiplomacy	Ev 183
33	Scottish Government	Ev 185
34	Eco-Logically	Ev 186
35	Matthew Thomas, Ecologist, Brighton and Hove City Council	Ev 189

List of Reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2007–08

First Report	Are biofuels sustainable?	HC 76-I & -II (HC 528)
Second Report	Reducing Carbon Emissions from UK Business: The Role of the Climate Change Levy and Agreements	HC 354 (HC 590)
Third Report	The 2007 Pre-Budget Report and Comprehensive Spending Review: An environmental analysis	HC 149-I & -II (HC 591)
Fourth Report	Are Biofuels Sustainable? The Government Response	HC 528 (HC 644)
Fifth Report	Personal Carbon Trading	HC 565 (HC 1125)
Sixth Report	Reaching an international agreement on climate change	HC 355 (HC 1055)
Seventh Report	Making Government operations more sustainable: A progress report	HC 529
Eight Report	Climate change and local, regional and devolved government	HC 225
Ninth Report	Carbon capture and storage	HC 654 (HC 1126)
Tenth Report	Vehicle Excise Duty	HC 907
Eleventh Report	The Exports Credit Guarantee Department and Sustainable Development	HC 929
Twelfth Report	Greener homes for the future? An environmental analysis of the Government's house-building plans	HC 566

Session 2006–07

First Report	The UN Millennium Ecosystem Assessment	HC 77 (HC 848)
Second Report	The EU Emissions Trading Scheme: Lessons for the Future	HC 70 (HC 1072)
Third Report	Regulatory Impact Assessments and Policy Appraisal	HC 353 (HC 849)
Fourth Report	Pre-Budget 2006 and the Stern Review	HC 227 (HC 739)
Fifth Report	Trade, Development and Environment: The Role of FCO	HC 289 (HC 1046)
Sixth Report	Voluntary Carbon Offset Market	HC 331 (HC 418)
Seventh Report	Beyond Stern: From the Climate Change Programme Review to the Draft Climate Change Bill	HC 460 (HC 1110)
Eighth Report	Emissions Trading: Government Response to the Committee's Second Report of Session 2006–07 on the EU ETS	HC 1072
Ninth Report	The Structure of Government and the challenge of climate change	HC 740 (HC 276)

Session 2005–06

First Report	Greening Government: the 2004 Sustainable Development in Government Report	HC 698
Second Report	Sustainable Timber	HC 607 (HC 1078)
Third Report	Sustainable Procurement: the Way Forward	HC 740
Fourth Report	Pre-Budget 2005: Tax, economic analysis, and climate change	HC 882 (HC 195)
Fifth Report	Sustainable Housing: A follow-up report	HC 779
Sixth Report	Keeping the lights on: Nuclear, Renewables, and Climate Change	HC 584 (HC 196)
Seventh Report	Sustainable Development Reporting by Government Departments	HC 1322 (HC 1681)
Eighth Report	Proposals for a draft Marine Bill	HC 1323 (HC 1682)
Ninth Report	Reducing Carbon Emissions from Transport	HC 981
Tenth Report	Trade, Development and Environment: The Role of DFID	HC 1014 (HC 197)
Eleventh Report	Outflanked: The World Trade Organisation, International Trade and Sustainable Development	HC 1455 (HC 354)
Twelfth Report	Transport Emissions: Government Response to the Committee's Ninth Report of Session 2005–06 on Reducing Carbon Emissions from Transport	HC 1718

Oral evidence

Taken before the Environmental Audit Committee

on Tuesday 17 June 2008

Members present

Mr Tim Yeo, in the Chair

Mr Nick Hurd
Mark Lazarowicz
Jo Swinson

Dr Desmond Turner
Joan Walley

Memorandum submitted by Natural England

EXECUTIVE SUMMARY

- The government is not on course to meet its 2010 target, biodiversity loss continues although good progress has been made in some areas, in particular in improving the condition of designated sites.
- There had been significant progress with the incorporation of biodiversity into policy and legislation but biodiversity still needs to become central to all strategic decision making.
- Resources are limited and we need to ensure that they are focused effectively.
- There still remains a gap in public awareness of the importance of biodiversity and the risks associated with its loss. Greater understanding is needed of the contribution biodiversity makes to our quality of life and the services on which we depend.

INTRODUCTION

Natural England is a statutory body created in 2006 under the Natural Environment and Rural Communities Act by bringing together English Nature, parts of the Rural Development Service and the Countryside Agency. Natural England has been charged with the responsibility to ensure that England's unique natural environment, including its flora, fauna, land and seascapes, geology and soils are protected and improved.

Natural England's purpose, as outlined in the Act, is to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Our evidence is structured in response to the questions posed by the Committee.

POLICY AND PROGRESS

1 *Is the Government on target to meet its 2010 biodiversity target?*

1.1 The Government is not on course to meet its 2010 target, as revealed in a major report recently published by Natural England¹. Despite significant progress in some areas (see examples below), biodiversity is still declining, particularly in the wider environment outside of designated sites. Many habitats and species are well below their levels of 50 years ago and there is evidence of recent declines eg in woodland birds, woodland butterflies and breeding waders. Recent surveys of habitats outside of designated sites revealed just 21% of lowland semi-natural grassland sites to be in favourable condition (compared to 49% in SSSIs) and of 104 randomly selected non-SSSI stands of lowland heathland surveyed in 2005 and 2006, none were in favourable condition.

1.1.2 But significant progress has been made in a number of areas:

- 82.7% of Sites of Special Scientific Interest (SSSIs) by area are in favourable or recovering condition in England (31 March 2008) compared with 50% in 2000.
- The long-term decline in many farmland birds is slowing.
- Some six million ha within agri-environment scheme agreements (65% of the farmed area of England).

¹ Natural England 2008. State of the Natural Environment. <http://www.naturalengland.org.uk/sone/default.htm>

2.1 *How effective is the biodiversity monitoring and reporting process*

2.1.1 The UK monitors its biodiversity more effectively than most countries, and this involves considerable effort from government, NGOs and other stakeholders. Established species monitoring schemes, involving many thousands of volunteers, include those for breeding birds, butterflies, bats and cetaceans. Some groups are less well monitored including some invertebrates, lower plants and fungi.

2.1.2 There are periodic habitat surveys such as Countryside Survey and SSSI site condition monitoring. Gaps exist in many habitat inventories, in particular outside designated sites, where condition monitoring is also limited. Natural England is running projects to fill some of these gaps, including for wood pasture and parkland, traditional orchards and limestone pavement. Significant gaps also exist on the status and trends of marine habitats, but the Government-led UK Marine Monitoring and Assessment Strategy (UKMMAS) aims to address these.

2.1.3 Considerable effort is put into biodiversity reporting and this is also generally effective, generating results that influence policy and help drive conservation action. Reporting initiatives and requirements include, UK and country strategy biodiversity indicators, UK BAP reporting, Common Standards Monitoring for SSSIs, Habitats Directive reporting, and reporting against the PSA target for farmland birds.

2.1.4 There is a challenge to integrate monitoring and reporting data from many sources. As part of the new Biodiversity Framework for the UK (Conserving Biodiversity—The UK Approach), JNCC and the country agencies have been tasked with drawing up a UK strategy for surveillance and monitoring to coordinate such work. Innovative methods of sharing data and making them publicly available include systems such as the National Biodiversity Network (NBN), Local Record Centres and the Biodiversity Action Reporting System (BARS).

2.2 *Are the biodiversity indicators meaningful?*

2.2.1 Yes the biodiversity indicators, both at UK and England levels, are generally meaningful. The UK Biodiversity Indicators² and the 51 indicators in the England Biodiversity Strategy³ cover a range of state, pressure and response measures that are relevant to how biodiversity is changing and can be used to influence policy and action (eg see Annex 1).

2.2.2 Several UK biodiversity indicators still need further development and currently lack reliable data to underpin them (notably the habitat connectivity and invasive species UK indicators). In order to make biodiversity indicators relevant to more sectors, we also need to identify ecological, environmental and social indicators that will allow the monitoring of ecosystem health and the status of ecosystem services.

2.3 *Is there adequate data upon which to define targets and assess progress?*

2.3.1 In some cases, the data are adequate to define targets and assess progress, eg for the condition of SSSIs and the trend in farmland birds. Elsewhere, the picture is mixed:

BAP

2.3.2 The UK Biodiversity Action Plan (UK BAP) targets for priority habitats and species specify the extent and condition of habitats to be maintained, restored or created, and the size or range of species populations to be attained. The data underpinning the revised UK BAP targets for the published in 2006 are variable in quality. We do not have adequate data to set targets for all of the 1,149 species and 65 habitats on the revised UK list of priority species and habitats published in 2007.

Habitats

2.3.3 A major periodic survey of broad habitats types across the UK, *Countryside Survey*⁴, was completed in 2007 and is due to report later this year. Additional information is provided by England-wide inventories for 23 of the 42 terrestrial and coastal priority habitats. The inventories are of variable quality and are not sufficiently accurate at present to monitor changes in overall habitat extent⁵. A further £750k has been earmarked by Natural England over the next three years to update and address inventory gaps.

2.3.4 Sample surveys based on the inventories have been carried out to assess the condition of lowland grassland⁶ and lowland heathland⁷ stands outside of SSSIs across England. A sample survey programme is planned to assess the condition of upland habitats in 2008.

² Biodiversity indicators in your pocket: <http://www.jncc.gov.uk/pdf/2010-BIYP2007.pdf>.

³ England Biodiversity Strategy: <http://www.defra.gov.uk/wildlife-countryside/biodiversity/biostrat/index.htm>

⁴ <http://www.countrysidesurvey.org.uk/>

⁵ Natural England 2008. State of the Natural Environment. <http://www.naturalengland.org.uk/sone/default.htm>

⁶ English Nature 2005. The condition of lowland BAP priority grasslands: results from a sample survey of non-statutory stands in England.

⁷ Natural England 2007. The condition of lowland heathland: results from a sample survey of non-SSSI stands in England.

Marine habitats and species

2.3.5 For much of the marine environment there is insufficient baseline data to establish population status or habitat distribution, or to set suitable targets for their protection and report against key policy instruments, such as the Habitats Directive (eg Article 17)⁸.

Species

2.3.6 A significant proportion of information on the occurrence and distribution of species comes from the voluntary recording community⁹ (although this varies between groups). Increasingly this information is becoming more accessible as the data are made available through the NBN Gateway, although some problems remain¹⁰.

2.3.7 Natural England has increased its funding of local record centres to £640,000 per year. Initiatives such as the Defra Fund for Innovation in Local Biodiversity Recording and the Defra / National Biodiversity Network Trust contract are also looking to improve the availability of species data.

3.1 *Are the policy and institutional frameworks effective at protecting biodiversity?*

3.1.1 The NERC Act improved the policy and institutional frameworks for protecting biodiversity. The creation of Natural England has helped to integrate biodiversity protection with agricultural management and landscape and resource protection. Natural England has been appointed Defra's lead delivery agent for the England Biodiversity Strategy. The NERC biodiversity duty¹¹ and the subsequent local authority biodiversity indicator are also potentially important in improving biodiversity protection.

3.1.2 Notwithstanding these positive steps, biodiversity is currently not adequately protected, especially outside of designated sites where biodiversity is one of several factors taken into account by relevant authorities.

3.2 *Is biodiversity addressed effectively at local and regional levels?*

3.2.1 There is an improving and strengthening policy framework to protect biodiversity at local and regional levels in England. The NERC biodiversity duty should be a real catalyst for increased consideration of biodiversity conservation. There is also clear and explicit policy with regard to spatial planning in new planning legislation¹² and associated policy statements¹³ (eg PPS 1, 9 & 11).

3.2.2 Regional and local biodiversity partnerships have played a significant role in influencing the development of policy, identifying priorities, and directing local conservation action. To facilitate this, Natural England employs regional biodiversity coordinators and has increased its funding for LBAPs to £800,000 per year for the next three years.

3.2.3 There is, however, inadequate implementation and monitoring of the effectiveness of regional and local policies and too little positive action for conservation on the ground.

3.3 *How successful has the UK Biodiversity Action Plan (UK BAP) been?*

3.3.1 The UK Biodiversity Action Plan has had a number of successes, including:

- Improving the status of many priority species and habitats¹⁴: in England, based on the latest BAP reporting data from 2005, 45.5% of priority species are increasing or stable and the decline has slowed for a further 9.5%; 38% of priority habitats are increasing or stable and the decline has slowed for a further 33%.
- Shifting the focus of conservation action from just looking after protected sites to also encouraging action for the wider environment.
- Engaging over 1,000 organisations across Government, voluntary and business sectors, both locally and nationally.
- Embedding the target-focused approach and leading to the integration of biodiversity targets into a wide range of policies, programmes and practices.
- Attracting significant new funding for biodiversity eg from HLF, Landfill tax bodies and the Aggregates Levy Sustainability Fund.

⁸ Defra 2005. *Charting progress: an integrated assessment of the state of UK seas*. London: Defra.

⁹ Coordinating Commission on Biological Recording 1995. *Biological Recording in the United Kingdom*.

¹⁰ NBN Data Access Group 2007. *Paper on Access to data held on National Biodiversity Network Gateway*.

¹¹ Natural Environment and Rural Communities (NERC) Act 2006 http://www.opsi.gov.uk/acts/acts2006/pdf/ukpga_20060016_en.pdf

¹² Planning & Compulsory Purchase Act 2004

¹³ <http://www.planningportal.gov.uk/>

¹⁴ 2005 BAP Reporting: <http://www.ukbap.org.uk/GenPageText.aspx?id=104>

3.3.2 The UK BAP has been least successful at delivering marine targets. This is partly because of the lack of a good evidence base, the need to consider whole ecosystems and the lack of effective conservation mechanisms such as Marine Protected Areas. Progress towards meeting targets for habitat expansion and restoration and for widespread species has also been limited.

3.3.3 Additional weaknesses of the UK BAP process include a lack of integration between habitat and species-based working, and between national and local groups. The process is also bureaucratic, with too much emphasis on planning and not enough on action.

3.4 Does “Conserving biodiversity—the UK approach” address the need to have a joined up approach to biodiversity protection with the devolved administrations?

3.4.1 Yes. The new UK strategic biodiversity framework¹⁵ sets out a vision and shared approach to conserving biodiversity within the UK’s devolved structure. The emphasis for future UK-level work will be achieving effective information exchange, providing guidance, standard-setting, research, and some reporting. Most policies and major funding streams are now at country level and so it is appropriate that work to embed biodiversity into policies and programmes, set targets, plan and prioritise action is also carried out within country biodiversity strategies.

3.4.2 Defra has appointed Natural England its lead delivery agent for the England Biodiversity Strategy and for developing and implementing this framework within England.

4.1 How well is biodiversity protection incorporated into the policy-making process?

4.1.1 The England Biodiversity Strategy aims to embed biodiversity in all relevant decisions and policies across sectors.

4.1.2 Biodiversity objectives are well-integrated into the periodic reviews of water prices. Direction and guidance is in place to support biodiversity in water companies’ “Water Resources Management Plans”.

4.1.2 Biodiversity is incorporated into the policy-making process for forestry, for example in the recent England Forestry Strategy (2007), and PPS9 provides protection for ancient woods and veteran trees. The Forestry Commission is also developing a policy to restore open ground priority habitats from inappropriate plantations.

4.1.3 The draft Marine Bill needs to be strengthened. Currently there is no duty to designate Marine Protected Areas in the draft bill and we urge provisions that require public bodies to seek our advice when carrying out activities in the marine conservation zones.

4.1.4 There is also no legal mechanism for dealing with the effects of diffuse air pollution on biodiversity, nor a consolidated programme for tackling the issue, although Defra’s development of a strategy to tackle ammonia emissions to meet international obligations includes work on the impacts on ecosystems.

4.1.5 In general, while Defra has made significant progress in embedding biodiversity in its policies, the progress made by other government departments, such as BERR and CLG has been limited. It is too early to assess whether PSA 28 will be effective in helping to achieve this.

4.2 How well will the Ecosystem Approach Action Plan address this issue?

4.2.1 The Ecosystem Approach Action Plan makes a commitment to a more holistic approach to policy-making and ensuring that the value of ecosystem services is fully reflected in decision-making. This will, we believe, continue to improve the integration of biodiversity into policies, particularly within Defra family. Natural England is committed to supporting the action plan through delivery of six of the 37 actions in the plan.

4.2.2 The action plan acknowledges the significant impact that a number of government policies have on the natural environment, both direct and indirect, including CLG, DTI, HM Treasury, DBERR and the Department of Health. The plan includes few actions for these departments and so the plan is less likely to address the issue in relation to them.

4.3 Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

4.3.1 Not yet, and failing to view ecosystems as valuable economic assets is undermining efforts towards conserving biodiversity and achieving sustainable development because there are few incentives for investing in or protecting our natural environment. Recent progress in enhancing the evidence base in this area, does however, give cause for some optimism. These include a number of projects led by Defra, and work at international level on the economics of ecosystems and biodiversity¹⁶.

4.3.2 Natural England’s Upland Futures project is assessing the types and flow of ecosystem services in the Uplands. We will also produce maps to illustrate the distribution of ecosystem services.

¹⁵ UK Biodiversity Partnership Standing Committee (2007) Conserving Biodiversity—The UK Approach. Defra.

¹⁶ http://ec.europa.eu/environment/nature/biodiversity/economics/index_en.htm

KEY THREATS

5.1 *What are the key drivers of biodiversity loss in the UK and is the Government tackling them?*

5.1.1 An analysis of the causes of unfavourable condition of SSSIs in England and threats to the range of habitats and species from both SSSI and BAP data, has revealed the key pressures and risks to be¹⁷:

- Habitat destruction and fragmentation by development.
- Agricultural intensification and changes in agricultural management practises.
- Changes in woodland and forestry management.
- Water abstraction, drainage and inappropriate river management.
- Inappropriate coastal management.
- Lack of appropriate habitat management.
- Atmospheric pollution (acid precipitation and nitrogen deposition).
- Water pollution from both point and wider (diffuse) agricultural sources.
- Climate change and sea level rise.
- Sea fisheries practises (such as over-fishing and fisheries by-catch).
- Recreational pressure and human disturbance.
- Invasive and non-native species.

5.1.2 There are a number of Government measures dealing with drivers of biodiversity loss and that they are discussed in other sections of this evidence including planning control, the England Forestry Strategy, the Marine Bill, and the invasive non-native species framework. Perhaps most important are actions relating to CAP reform and the funding and implementation of agri-environment schemes. Natural England is committed to delivering more for biodiversity through better targeting of Environmental Stewardship.

6.1 *Will the Invasive Non-native Species Framework Strategy prove effective?*

6.1.1 The GB Strategy for invasive non-native species¹⁸ (INNS) should prove effective at reducing the threat from invasive non-native species if it is sufficiently resourced both by Government, Agencies, NGOs and trade for both financial resources and staff time. An active GB Non-native Programme Board and Secretariat is essential to provide this pivotal role to its delivery.

6.2 *Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

6.2.1 There is inadequate regulation and resources to prevent further invasion and to undertake eradication programmes. For example, we don't currently have a method of entering land to undertake invasive non-native species (INNS) control without the land owner's permission.

6.2.2 The plant health regime with the Plant Health and Seed Inspectorate is a robust and effective defence against introduction of new non-native plant pests. The plant health inspectors, however, are unable to act on non-native species they find other than those which are considered pests.

6.2.3 We need to work with trade to reduce the risk of further introductions but we also need to consider regulation to apply to high risk pathways. We cannot, for example, currently restrict trade between EU member states for the reasons of reducing the risk of INNS.

6.2.4 The marine environment can pose some particular issues (eg vector of introductions) for which a terrestrial or even freshwater approach may not be valid.

6.2.5 There is insufficient funding to co-ordinate INNS activity and inadequate contingency funds to be able to respond quickly to deal with new threats early on when its most cost effective.

7.1 *What impact will climate change have on UK biodiversity?*

7.1.1 The likely impact of climate change on biodiversity is now well evidenced¹⁹ and includes changes to timing of seasonal events, species distributions, species abundance, rates of growth and, possibly, rates of decomposition. In England, habitat loss has already occurred in coastal areas due to sea level rise²⁰ and there are likely to be adverse impacts on habitats as a result of changed rainfall patterns and increased extreme weather events²¹ that are not yet quantified. In the marine environment, climate change is expected

¹⁷ Natural England 2008. State of the Natural Environment. <http://www.naturalengland.org.uk/sone/default.htm>

¹⁸ <http://www.defra.gov.uk/wildlife-countryside/non-native/uk-policy-action.htm>

¹⁹ Hopkins *et al.* 2007 Conserving biodiversity in a changing climate : guidance on building capacity to adapt. Defra, London.

²⁰ Royal Haskoning 2006 Coastal squeeze, saltmarsh loss and Special Protection Areas. English Nature Research Reports Number 710. English Nature, Peterborough.

²¹ Hulme M. *et al.* 2002 Climate Change Scenarios for the United Kingdom: The UKCIP02 Scientific report. Tyndall Centre for Climate Change Research, School of Environmental Sciences, University of East Anglia, Norwich.

to lead to change in species distribution, and may have serious effects due to ocean acidification. In England, we also expect gains for biodiversity as many English species are at the northern end of their range, and these may increase in abundance and extend their range as our climate warms.

7.1.2 Climate change may drive other indirect impacts on biodiversity through increased demand on land for crop production, bio-fuels and wind farms. Existing fragmentation of habitats is creating problems as species and habitats are unable to migrate through the landscape. Further non-strategic decisions on land use could increase this problem.

7.2 How might the impacts of climate change be reduced? How can the potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

7.2.1 Conservation of protected areas and other high quality wildlife habitats is important. As climate changes we will need to re-assess the conservation objectives of these sites.

7.2.2 The designation of new sites needs to be considered in the light of climate change adaptation. For example, SSSI boundaries may be drawn to include all land which holds the special interest features, and areas necessary to ensure their long-term sustainability. This has been applied to recent designations, such as Pakefield to Easton Bavents (Suffolk) where the SSSI includes sufficient land to accommodate the special interest over 50 years of predicted coastal erosion.

7.2.3 Climate change will have a major impact on the marine environment, and marine protected areas will play a critical role in enabling adaptation of marine biodiversity.

7.2.4 The range and ecological variability of habitats and species should be maintained as an insurance against uncertainty, except where there is clear evidence this is inappropriate due to climate change. Landscape diversity should be maintained and, where possible, enhanced to conserve biodiversity in the face of climate change.

7.2.5 Changing rainfall patterns will affect our rivers and make them susceptible to increased flood surges and periods of low flow. Similarly, rising sea levels on the coast, coupled with a possible increase in the frequency of storm surges means that risk of coastal flooding is more likely. A range of options involving natural processes, as opposed to hard engineering, exists which offer the possibility of reducing flood risk at lower long-term cost, whilst creating space for biodiversity and other societal benefits.

7.2.6 Some species will need to move significant distances from their current locality if they are to survive as our climate changes. Enhancing biodiversity across whole landscapes by creating new habitat, restoring degraded habitat, or reducing the intensity of management of areas between existing habitat will increase connectivity and facilitate dispersal.

8.1 Does planning policy adequately protect biodiversity?

8.1.1 We believe that, if properly applied, the current planning policy framework is adequate in protecting and enhancing biodiversity but more needs to be done to ensure that policies are effectively implemented and good practice is developed and shared.

8.1.2 Natural England supports the strong emphasis in Government planning policy on the conservation and enhancement of biodiversity. We assist in the implementation of Government planning policies for biodiversity through our role as a statutory consultee on spatial plans (regional spatial strategies and local development frameworks) and on development proposals.

8.1.3 Development plans have incorporated policies on the protection of designated sites of importance for biodiversity and geodiversity and have largely been successful in steering major development away from the most sensitive areas. Spatial plans, however, should do more to promote the enhancement of biodiversity, through the identification of areas or sites for the restoration of existing habitats or the creation of new ones. Planning obligations and the proposed Community Infrastructure Levy could be harnessed to secure both the on-site requirements for green infrastructure and wider biodiversity enhancement.

8.2 Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity?

8.2.1 There is the potential for Eco-towns to deliver significant benefits for biodiversity if properly designed and implemented. We believe that Eco-towns and new growth points should be genuine exemplars of sustainable development, showing the way for all new development.

8.2.2 Biodiversity is a key component of effective Green Infrastructure and we want to see this better reflected through biodiversity targets in sustainable communities plans for growth areas in the same way that they have carbon emission targets. Biodiversity must be properly taken into account in National Position Statements, and there is a need for the new regional strategies emerging from the sub-national review to include proper spatial planning for biodiversity protection and enhancement.

8.3 *Should there be a review of green-belt policy, and what might the consequences be for biodiversity?*

8.3.1 Our views on green belt policy are set out in our recent submission to the Environmental Audit Committee's Greener Homes for the Future Inquiry. Natural England believes that Green Belt policy has been effective in containing urban areas and supporting urban regeneration but there is a potential danger that it can increase pressure for the development of more environmentally sensitive sites outside the Green Belt, including those protected for their biodiversity importance. We are calling for strategic reviews of Green Belt boundaries to ensure that the most environmentally sustainable options are identified for future development.

8.3.2 More should be done to promote the positive objectives for the Green Belt set out in PPG2 Green Belts (1995) which states that land within Green Belts should fulfil a range of objectives, including securing nature conservation interest.

8.4 *Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

8.4.1 As set out in our policy on Housing and Green Infrastructure, we believe we should consider all potential options for future development. Simplistic assumptions about greenfield and brownfield sites are unhelpful. Many brownfield sites will be suitable for housebuilding whereas others will have high biodiversity, geodiversity or social value and should not be developed.

RESOURCES

9.1 *Are there adequate resources for biodiversity protection and enhancement?*

9.1.1 There are currently insufficient resources for biodiversity protection and delivery of our BAP targets. Defra's latest estimates suggest the current shortfall for BAP target delivery in England was £250 million in 2005–06 and this will reduce to about £130 million by 2010–11 as a result of increases in Environmental Stewardship (ES) spend²². Biodiversity protection and enhancement would be improved if a greater proportion of the £2.9 billion funds for Environmental Stewardship were available for the Higher Level Scheme (HLS). Optimising biodiversity gains is a central aim of the current review of Environmental Stewardship (and other grant schemes such as EWGS). This is not, however, without significant challenges as demonstrated by the impacts of zero set-aside, the competing financial incentives of rising commodity prices and the challenge of transition from classic schemes to ES.

9.1.2 In the marine sector there is a strong focus on delivering a suite of Marine Protected Areas (MPAs) by 2012. This will require significant expertise and finances to provide evidence for site identification and management, and have meaningful stakeholder dialogue in the process.

9.1.3 Despite a challenging grant in aid settlement, Natural England has managed to increase the resources it is allocating to biodiversity, through efficiencies and staff cost savings. We have also made three year commitments to many of our key biodiversity partners at national and local levels, to help them plan their biodiversity delivery more effectively.

9.2 *Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

9.2.1 This is outside Natural England's remit.

PROTECTED AREAS

10.1 *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future?*

10.1.1 The Environmental Audit Committee will be aware that the National Audit Office is currently investigating the effectiveness of SSSIs in safeguarding biodiversity in England. Natural England looks forward to the findings of this investigation.

10.1.2 The networks of protected areas in England are a cornerstone of our approach to conserving biodiversity; there are 4,114 SSSIs covering about 8% of England. Some very rare and localised habitats and species are found only in protected areas. Our protected areas will continue to be of importance, especially in the context of a changing climate, but they are not sufficient to maintain biodiversity on their own. Other more common, mobile and widespread features are well represented in England's wider rural, urban and coastal landscapes. A suite of conservation tools including protected areas, agri-environment schemes, appropriate planning policy, etc, is therefore necessary to safeguard biodiversity.

²² <http://www.ukbap.org.uk/bapgroupage.aspx?id=110>

10.1.3 The UK is actively pursuing a programme to extend the UK network of marine protected areas. Natural England, JNCC and the other country conservation agencies are identifying new SACs in both territorial and UK offshore waters. The draft Marine Bill sets out plans to designate a series of Marine Conservation Zones (MCZ) around England and Wales and in UK Offshore Waters. These are essential measures towards halting the decline in marine biodiversity.

10.2 *Are arrangements to protect sites effective?*

10.2.1 The legislative powers under national and European law to manage and protect SSSIs and Natura 2000 sites are effective. There has been a significant strengthening in the legislation safeguarding our protected areas in the last 15 years, through amendments made to the Wildlife and Countryside Act 1981 (by the Countryside and Rights of Way Act 2000 and Natural Environment and Rural Communities Act 2006)) and the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). The legislative framework is not, however, effective against wide-ranging threats such as diffuse pollution, climate change, deer, disease and invasive species, nor does it provide strong protection for local wildlife sites.

10.3 *Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

10.3.1 Yes, more work is required to reduce habitat fragmentation. We also need to reduce the intensity of land use in key areas to enhance the matrix between fragments. Historic habitat loss means that in many parts of England, particularly in the lowlands, semi-natural habitats often survive as small, isolated patches.

10.3.2 Critical to the development of ecological/habitat networks is the conservation of protected areas and other high-quality wildlife habitat. These will form the core areas, rich in biodiversity, which will populate the rest of the network once connections are improved. Areas for the maintenance and enhancement of ecological networks can now be clearly identified and embedded in land use planning and biodiversity action. Natural England is leading the way in the implementation of this approach.

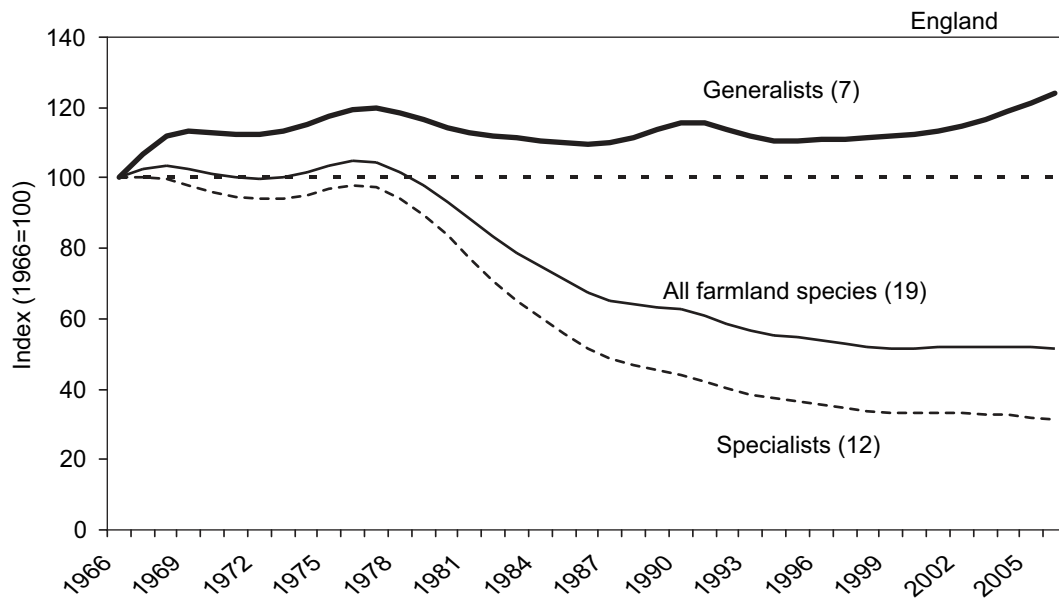
Annex 1

Example of the use of the Farmland Bird Indicator to measure progress with the PSA target on farmland birds:

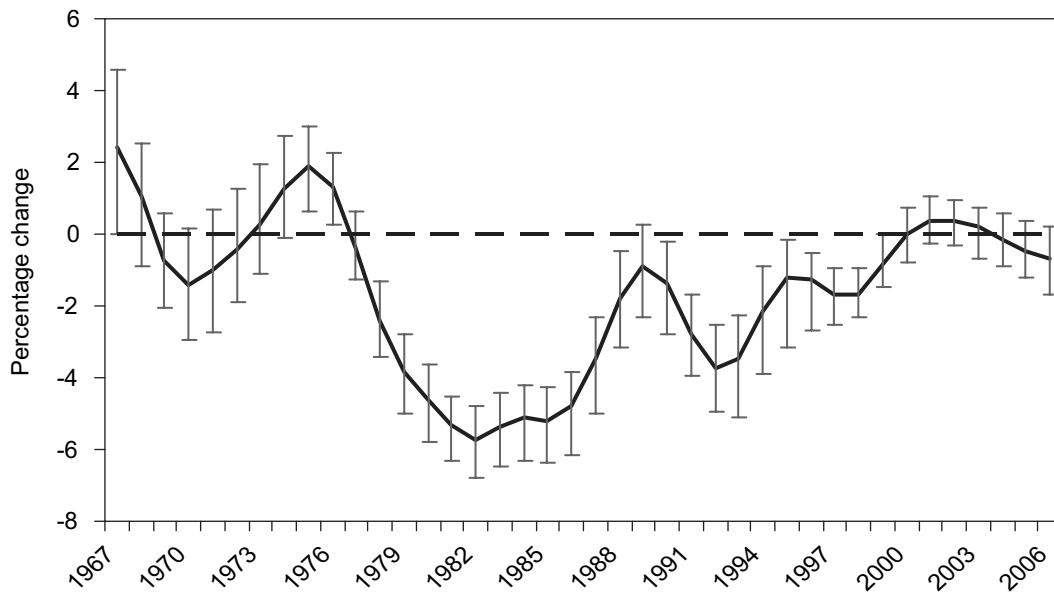
The well-documented decline in England's farmland birds is now widely recognised as major nature conservation issue and is viewed as symptomatic of the plight faced by a broad range of biodiversity characteristic of agricultural ecosystems in this country. For this reason, Government adopted a PSA target in 2000 which sought to reverse the decline in farmland bird populations by 2020 as a surrogate for the health of biodiversity, in general, in England's wider farmed environment. Progress with the PSA target is assessed annually using the Farmland Bird Indicator (FBI), a composite index made of the trends of 19 widespread bird species associated with farmland (Figure 1). The FBI is sub-divided into "specialist" and "generalist" farmland bird species. The recent levelling-off of the FBI has been driven largely by increases in some of the generalist species, such as wood pigeon and jackdaw, whilst most of the specialist species, such as skylark and corn bunting, continue to decline. In fact, eight of the 19 species included in the FBI are still declining and the indicator reached its lowest ever level (c. 55% of the 1970 figure) in 2006.

The FBI is considered to be a 'fit for purpose' measure of progress with the PSA target because:

1. The FBI is based on statistically robust data, collected annually by an independent organisation (British Trust for Ornithology).
2. There is a strong evidence base linking the trends in many of the FBI species to farm management practices, hence, we know what changes in land management are needed to recover populations.
3. A suite of policies and delivery mechanisms (notably Environmental Stewardship) have been developed to deliver the farm management needed to reverse the declines in farmland birds.
4. There is growing evidence that the land management implemented for birds also benefits a range of other biodiversity.
5. The FBI can be understood and has resonance with key stakeholders (farmers and their advisors, and the general public).

Figure 1**FARMLAND BIRDS INDICATOR FOR ENGLAND, 1966–2006**

The PSA will be met when the year on year change in the FBI (Figure 2) is significantly positive for a run of years. Whilst there has been no significant change in the FBI since 1999, we are clearly some way from meeting the PSA target.

Figure 2**YEAR ON YEAR CHANGES IN THE FARMLAND BIRD INDEX FOR ENGLAND, 1967–2006**

Note: Graph shows the year on year change, plus upper and lower 95% confidence limits, in the smoothed FBI for England.

2 June 2008

Witnesses: **Dr Peter Brotherton**, Head of Biodiversity, and **Dr Tom Tew**, Chief Scientist, Natural England, gave evidence.

Q1 Chairman: Good morning, welcome, and thank you for coming. You have reported recently on the state of the natural environment, and I wanted to kick off, if you could just summarise what your report said about the UK's biodiversity and, in particular, whether we are on course to meet our commitments to halting biodiversity loss.

Dr Tew: Good morning, Chair, and thank you for inviting us. There are six headline points from *The State of the Natural Environment* Report, 330 pages, the first 300 of which are valuable reading whilst one does not need to go through the references. The headline points are, firstly, that England's natural environment is hugely important both ecologically and economically, so 20% of Europe's estuaries and 18% of Europe's heathlands have internationally important populations of species. Economically, they are tremendously valuable and provide fuel, food, water, carbon sequestration and so on. Secondly, it is under huge pressure at the moment, pressure that has been going on for the last 50 years and continues, exacerbated by climate change. The third point is 50 years of historical decline really, that the natural environment is much less rich now than it was 50 years ago, particularly outside of designated sites. Fourthly, in the past decade, we have seen a levelling off of that decline, so conservation action, and that is the fifth point, when it is integrated, when it is large-scale, can work, so we have seen very significant successes in the last 10 years. The final point is the call really for a new approach to biodiversity conservation working at that landscape scale and in an integrated way. Are we going to hit the biodiversity targets? We are going to hit some and we are going to exceed some, but for most of them we are not going to, so only 40% of species are stable or increasing and less than number of habitats are stable or increasing, so it is a mixed picture.

Q2 Mr Hurd: A mixed picture, you say, but what would you identify as the key issues that need to be addressed to halt biodiversity loss by 2010?

Dr Brotherton: The key issue is that society has not yet recognised the scale of the problem, nor the scale of the opportunity. Frankly, we have only just worked out how to measure progress towards the 2010 target and we have no clear action plan to achieve it. We need biodiversity considerations to be better embedded across all parts of government and sectors of society. To do this, we believe that the full socioeconomic benefits of biodiversity have to be properly recognised, and they are not and that is a chronic failing. In terms of on-the-ground changes that we would like to see, we think there are three main things that still need to happen. Firstly, we need to halt, and then reverse, the decline in biodiversity outside of designated sites. About 50% of our priority habitat occurs outside of biodiversity sites and that is where it is mostly still being lost. Secondly, we need to reduce the fragmentation of habitats through enhancing the connections and improving the matrix in which our

good examples of habitats sit, and that is going to require conservation of biodiversity to be properly planned at a landscape scale, as Dr Tew has said. Thirdly, we want to see better protection of marine biodiversity and, in particular, there needs to be a network of marine protected areas and the problems of over-fishing need to be tackled.

Q3 Mr Hurd: Can I draw you out a little bit on your first premise which is that we do not attach or we do not articulate enough in relation to the value of biodiversity in socioeconomic terms. Do you have any specific ideas about how that should be done? Is that a government-led exercise?

Dr Brotherton: There is already increasing evidence that biodiversity makes a significant contribution to economic development and health, for example. Biodiversity, a rich natural environment, has been shown to improve the physical and mental well-being of people leading to reduced days of absence from work and making a significant contribution to the local economy. There are a number of initiatives under way both at the global and national level to try and capture those values and, more widely, to capture the values of the full suite of ecosystem services that biodiversity delivers, and we look forward to those reporting.

Dr Tew: If I may expand on that briefly because it is a very interesting question, between 1940 and 1990 we concentrated on conserving our special sites, and we got better and better at that with better legislation and better management. In 1990, there was a paradigm shift with Rio and the Biodiversity Convention and we started looking outside of the special sites into biodiversity action plans. We are on the verge now of a second paradigm shift which is called "the ecosystem approach" and the language is, frankly, not helpful, but essentially it means society properly understanding and valuing what a healthy natural environment delivers in terms of, as I said earlier, flood defence, clean water, carbon sequestration. If we can convert that into delivery on the ground so that land managers are rewarded for delivering that full suite of environmental services, then we will start to mainstream a healthy natural environment into the economy of this country. That paradigm shift is going on around the world and it was the basis for the Millennium Ecosystem Approach, and the challenge now is to start delivering that changed intellectual framework.

Q4 Mr Hurd: But now managers are being incentivised to deliver that and we pump billions of dollars around the world into subsidising farmers now to do exactly that, so are you talking about something different because that is already happening?

Dr Tew: I do not think we are paying land managers to provide that suite of ecosystem services. Certainly in biodiversity terms, we give them a list of rare, protected species which occur on their land and we ask them to manage the land appropriately, but of course that land must meet a

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wide range of societal needs, so the change there is to properly value a healthy natural environment and we need our society and our politicians to understand the full value of that because then we can start to pay sensible sums of money for good land management.

Q5 Joan Walley: Is this not all a bit sort of cloud-cuckoo-land though because, to do that, we need to have the resources on the ground, we need to have the trained people who can actually advise on what the best action plan is in order that we do not get this huge gap between vision and action on the ground?

Dr Tew: I think that is a very good question. It is not cloud-cuckoo-land, but I would accept that there may be a gap between the intellectual theory and delivery on the ground, and, as I say, that is the key challenge, one in which Natural England are hoping to show national leadership. For instance, we might consider deploying some experimental powers to come up with new incentive schemes. In terms of biodiversity delivery on the ground, I will hand over to Pete, but, via the funding of regional and local biodiversity action plans and action planning, we are putting funding in to making sure that that local delivery is there.

Dr Brotherton: That is exactly right, both in terms of supporting a range of habitat- and species-based initiatives and, more recently, we have been very pleased to be appointed as Defra's lead delivery agent for the England Biodiversity Strategy and we are looking to achieve better integration of habitat- and species-based approaches to achieve delivery across whole landscapes to deliver a suite of habitat and species objectives from that approach.

Q6 Joan Walley: Perhaps I can then build on that and ask you how that approach will be reflected in respect of national policies because in your evidence you single out specifically DCLG and DBERR as two departments which, unlike Defra, have not given proper regard to biodiversity. How would you meet that gap in respect of the way in which government departments are not even understanding it, according to your evidence?

Dr Tew: Yes, it is a significant challenge and, broadly speaking, you are right, we believe that other government departments do not take biodiversity as seriously as they should, and again I would say that that is because they do not sufficiently value it and they do not sufficiently integrate it into what they do, so biodiversity still these days is seen as an add-on to the core duties of government departments. It is potentially seen as a conflict and it is potentially seen as a constraint, but I refer you, however, to Mr Cameron's words yesterday when he said that a green economy is a healthy economy, and we agree, that a healthy natural environment is going to lead to a healthy economy. We do not believe that biodiversity targets can be hit just by Defra and its agencies. We think buy-in across government is

actually essential, and I have here a long list of things that we would like other government departments to do.

Q7 Joan Walley: I would like to hear that.

Dr Tew: Perhaps I can go through some of them now. For instance, for DCLG we think that the planning system should take full account of biodiversity, and we do not think it does at the moment. We think that the brownfield target could potentially lead to biodiversity loss, and we have other things to say about brownfields. We want DCLG to ensure that new communities at growth points are designed sustainably with minimum impacts on the natural environment, and there are huge challenges around that. We would like to see also appropriate access to green space with ANCGST standards. We want DCLG to lead on the delivery of better-quality urban parks and green spaces. That is my DCLG list and I have more for other departments.

Q8 Joan Walley: Just going back to what you were saying about DBERR and the Department for Transport, and you were saying that departments would need to value and integrate this biodiversity agenda, what you really seem to be saying is that, in order to get progress, it is not something that you can legislate for, it is something which has to be done because of an understanding of those values. If I may move on to the Department for Transport and DBERR, how would you see there being progress on this agenda, their actually understanding and valuing biodiversity in order to make sure that their policies do not actually bring about loss?

Dr Tew: In broad terms, we would like other government departments to recognise the two-way nature of this street, so, firstly, to recognise the potential damage that inappropriate planning can do to the environment and, secondly, to recognise the value that the environment has to their agendas. Now, I am probably going to struggle on transport and I would start, I think, with health and say that we have got lots of ambitious health targets, including a PSA target on health, but biodiversity is not mentioned as part of that target, yet we know that biodiversity can, as Pete said, deliver enormously to both physical and psychological health, so we would like to see that integration and an understanding that biodiversity and a healthy natural environment can help deliver other agendas as well as an understanding of the impact of their agenda on biodiversity and, yes, that proper understanding clearly is better than regulation.

Q9 Joan Walley: In your evidence, you make reference to the draft Marine Bill, which is the subject of a Joint Committee at the moment, and you have pointed out that there is no duty to designate marine protected areas. Would you like just to say how, if that was understood and acted upon, we could prevent further biodiversity loss?

Dr Tew: Yes, the key issue here is that simply there is no duty to designate on anyone, so no one can be held to account for failing to designate a suite of

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marine protected areas. Furthermore, if anyone, the Secretary of State for instance, should choose to designate marine protected areas, there are no clear proposals on how that might work in practice, so at the moment we have a system where the designation of marine nature reserves is kicked around in Cabinet committee and the product has been one marine nature reserve in the last 15 years. We would like to see a clear duty and responsibility and we would like to see a clear process for designation.

Q10 Joan Walley: Which department, do you think, or departments should be responsible for taking that forward?

Dr Tew: We think that should be the responsibility of the Department for the Environment.

Q11 Dr Turner: Can I come back to DBERR because you have not actually said anything about DBERR and some of us think that DBERR is not actually that hot at delivering on its official main agenda, let alone biodiversity. What do you actually seek from DBERR in terms of biodiversity?

Dr Tew: I have a couple of examples here that give a flavour of the sort of thing we are after. One is that there is a strategy for sustainable construction, which at the moment is largely focused around the entirely laudable aims of carbon-neutral construction, but actually—

Q12 Dr Turner: But that is DCLG again.

Dr Tew: Sorry, I have it under DBERR in my briefing, a strategy for sustainable construction. Do you know differently, Pete?

Q13 Chairman: It is DCLG, I am afraid.

Dr Tew: Okay, I will try my other example, and that would be incorporating biodiversity into energy strategies so the energy strategy for the nation: do we have a strategic overview of where our energy has come from and what our energy demands are and where we are going to get it?

Q14 Dr Turner: Can I give you one suggestion then and tempt you to respond. DBERR is responsible for licensing electricity generators and increasingly going into the marine environment. What do you feel about the proposition that there is actually a potential synergy between marine protected areas and either offshore wind or tidal stream or whatever because it will minimise the possibility of commercial fishing exploitation in those areas, so in fact an offshore wind farm or a tidal stream turbine farm could actually itself become an effective nature reserve? Have you thought of that synergy?

Dr Tew: We have thought of that and we are—

Q15 Dr Turner: That is something that DBERR could contribute to.

Dr Tew:—and we are very open to those possibilities and I think there is a strong argument for that. Evidence for it, however, is rather lacking, but it seems intuitively to be the case that you could, at the same time as building offshore wind farms, create a suite of marine protected areas. Of course, because

wind farms tend to be located in shallower seas, then there is a high potential for high biodiversity there. I also think that there needs to be more analysis done of the long-term impact of wind farms because in fact empirical evidence from other countries suggests that the wildlife which is initially affected, perhaps the sea birds, actually tends to habituate to wind farms and come back into those areas quite quickly, so we think that there is lots of extra work that needs to be done with DBERR and others in properly compiling the evidence base around those issues, and we are very open to that. That does not mean to say that there is carte blanche to build wind farms on internationally protected sites.

Q16 Dr Turner: Have you felt that DBERR has shown any interest in this so far?

Dr Tew: It is outside my area of expertise. My instinct would be that, yes, we are talking with DBERR about that issue.

Q17 Joan Walley: If I could just follow up what you were just saying about DBERR and energy policy which you singled out, can I just ask you about the situation in respect of open-cast mine planning applications because at one stage there was a presumption in favour of the environment relative to applications for open-cast mining, but is that still the case, given the changes that there are in terms of energy strategy and the proposals in respect of the Planning Bill and taking account of the opportunities for biodiversity that currently are on sites where maybe there could be applications for open-cast coal-mining?

Dr Tew: I am sorry, that is again outside my expertise and I apologise. Would you like us to respond in writing to that?

Q18 Joan Walley: I would, yes.

Dr Tew: We will do so.¹

Q19 Mark Lazarowicz: You have mentioned DCLG and DBERR, and I would not want the Department for Transport to get off the hook, so what are your main feelings about how that has reacted to biodiversity issues?

Dr Tew: The key issue for us here is the environmental performance of transport and how the Department for Transport takes biodiversity into account, particularly in the marine environment, so I think there are significant issues about large-scale transport infrastructure and whether biodiversity is taken into account in the planning thereof.

Q20 Mark Lazarowicz: Has it been so far by the Department?

Dr Brotherton: It has been mixed. In Wales, the Highways Agency has its own Biodiversity Action Plan and the point there is that there are real opportunities along infrastructure to enhance biodiversity and to think about how transport is routed to minimise the impact, so we would expect

¹ See Ev 17.

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transport infrastructure, just like any other, to follow the mitigation hierarchy of trying to avoid what damage it can, to reduce any residual damage and then to mitigate what is left over through taking positive steps to enhance biodiversity within that infrastructure.

Q21 Mark Lazarowicz: We have of course the new public service agreements which are designed to ensure that departments do take account of biodiversity issues across the scene. Have we begun to see any beneficial consequences from those PSAs and what benefits, do you think, can we potentially draw from them?

Dr Brotherton: Firstly, it seems to us somewhat extraordinary that we have an international commitment to halt biodiversity loss, but it does not have its own PSA targets, and we did argue that biodiversity should have one. Nonetheless, we welcome PSA28, which aims to achieve a healthy natural environment, and having DCLG and the Department for Transport as the delivery partners to that PSA should help to encourage positive action, although it is early days yet at this point. We also note that DBERR has agreed to sit on the delivery board for the target and that again should encourage their involvement. That is the target that we expect to have the biggest impact on the halting of biodiversity loss, but even there biodiversity is only one of a range of five indicators against which progress with that PSA is going to be assessed. Biodiversity is not really well-recognised in any of the other PSAs and I believe the only other PSAs to even mention the word “biodiversity” are the PSAs for climate change and the Olympics. It is interesting that PSA29, which relates to poverty reduction in poorer countries, does refer to the need to enhance the natural environment and it mentions biodiversity, but the PSAs that focus on enhancing our own economy, PSA1 on productivity, the transport PSA, regional, economic performance and others, do not actually make that link. Coming back perhaps to what we said earlier, we see then, therefore, that there are risks for biodiversity, that these other PSAs will not properly take it into account and, just as importantly, opportunities to deliver the objectives of those PSAs will be missed because biodiversity has a real role to play in supporting sustainable development and economic growth.

Q22 Mark Lazarowicz: And, even with PSA28 of course, which does rate biodiversity, the measure of success relates to the farmland bird populations as the single indicator of success in reaching that target. Is that actually sufficient, given the complex nature of biodiversity?

Dr Brotherton: Well, I think it actually relates to wild birds as a whole, but, as we can see from the recently published full indicator sets, which include 18 separate indicators for biodiversity, we need to go beyond one measure, such as wild birds, to assess overall progress, so we would expect the Government not to just base its overall assessment on halting biodiversity loss against that one

indicator. Perhaps more worryingly is the fact that these are just indicators without any targets and we would very much like to see a clear target that takes us beyond 2010 to really deliver a 2020 vision for biodiversity in which we have gone beyond halting biodiversity loss and reversed that decline to deliver a healthy natural environment.

Q23 Mark Lazarowicz: Finally, of course it is not just that the Government has a role to play, but local government is very important as well. We have got the new biodiversity indicator and the new performance management framework for local government. Do you think that is going to have a major impact here or not?

Dr Brotherton: We hope so. It should both improve the protection and management of local wildlife sites and biodiversity and it is also geared at encouraging real leadership from local authorities for the natural environment in their area, recognising that not all wildlife sites are owned by the local authorities, but they will be expected to help initiate action to improve those local wildlife sites. For example, we would expect them to support local biodiversity partnerships and local record centres. We understand that so far 26 local authorities have chosen to set stretch targets for the indicator with the best representation in the South West, and that is in many ways disappointing and perhaps another symptom that local authorities fail to understand the benefits that a rich natural environment can bring to the communities that they serve, so we are pleased that we have got that indicator and we think it does have potential, but it is early days.

Q24 Jo Swinson: You mentioned having lobbied for biodiversity to have its own PSA. Were you surprised that the Government did not agree to that, and how does that affect your view of the priority the Government is putting on meeting international targets?

Dr Tew: There is clearly a tension between having a PSA target for everything and having relatively few PSA targets that the Government can focus on, so in the end, with only 30 or 40 PSA targets across the board, it was perhaps not surprising, but we were disappointed.

Q25 Jo Swinson: A previous target which was dropped by the SSSI sites, which seems to have worked to an extent in terms of the percentage in a good condition rapidly increasing, what do you think that tells us about how effective targets can be in actually bringing about change and benefiting biodiversity?

Dr Tew: I think it is a very good illustration of where good targets can work and we are all very proud of the progress under that SSSI target. SSSIs were 57% favourable in 2003 and, as of this morning, they are 83% favourable. I can tell you exactly the condition they are in and exactly where that is because we now have pushed by that target and we now have the best monitoring standards in the world, we have an extremely spatially literate understanding of the condition of our SSSIs, where they are and what

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condition they are in, we have a programme board that gets wide buy-in from across government and we have a highly developed understanding of what is wrong, what needs to be done to fix it, how much it will cost to fix it and whose job it is to fix it. All of those are valuable lessons which, we think, can be applied to biodiversity that come from a good target with a clear challenge and good metrics, so we think that process is working very well, we are on course to achieve 95% in favourable condition by 2010, and that would be a very significant achievement for this country.

Q26 Jo Swinson: Do you have any examples of other similar targets that you would like to see the Government putting in place for other aspects of biodiversity?

Dr Brotherton: Well, we have some targets for our priority habitats and species, and those targets run up to, in most cases, 2025 and what those prove very useful at is that they can be broken down to different scales, so it is very hard for somebody to decide, "Right, I'm going to go out and fix biodiversity loss", but what they can understand is the biodiversity that is on their patch and how conserving that or creating a certain amount of new biodiversity on their patch, so restoring a reed bed or creating a patch of woodland, contributes to that overall objective and it gives them that context for their delivery, which has proved enormously beneficial to putting biodiversity on a much more outcome-focused track which has not quite got us to the point where the SSSI target has got to yet, but the direction of travel is right.

Dr Tew: I think a theme might well be that it is not that we need more targets at this stage, but it is about delivery. The biodiversity action planning process is a wonderful example of producing action plans, and what we hope to do with our lead on the delivery of the overall strategy is to provide integration and streamlining so that we can actually start to deliver on the ground.

Q27 Jo Swinson: Are you at all concerned, with the PSA on the SSSI sites being dropped, that there will be back-sliding on that and that they might not be as well maintained?

Dr Tew: Not on our watch.

Q28 Dr Turner: Your manifesto calls for the Government to meet its commitments to halting biodiversity loss by "planning for" nature conservation at a landscape scale. Just what do you mean? Do you envisage some sort of government-appointed equivalent of Capability Brown going out and setting out the countryside in gardens, or what?

Dr Tew: No, that is an interesting thought, but no. So that the Committee understands well, it is the regional spatial planning structure with integrated regional strategies providing a framework and then local delivery frameworks providing the delivery on the ground. What we mean by that is that we are now very excited at the levels, and it is a relatively new phenomenon, of the amount of data we have. The amount of evidence we have about the natural

environment together with, frankly, the computing power we have these days and the geographical information systems means that, for the first time, we can start to represent spatially where biodiversity is, where it should be and where we should start planning for its recovery and enhancement, so, when we talk about spatial planning at a regional scale, we really mean no more than map-based delivery to the people on the ground who recognise the maps and who are inspired and motivated by a vision for the natural environment that properly integrates biodiversity alongside the whole suite of other land uses that we need our natural environment for, so it is the conversion of all these fine words about otters to a map on the ground that says, "We think we should do this here".

Q29 Dr Turner: Well, that is great because the Sub-National Review focuses very heavily on economic growth, which is unsurprising given the departments that are involved, so what impact do you think that is likely to have on biodiversity because it is rather cutting across what you have just been setting out, is it not?

Dr Brotherton: Well, we hope it will not cut across that and that sustainable development will underpin the objective of achieving economic growth so that the protection and enhancement of biodiversity is properly recognised and seen as an opportunity to deliver that sustainable development. At the risk of repeating ourselves, a high-quality natural environment will drive economic prosperity and we really need, at the national and local level, the Government to see a healthy natural environment as an asset rather than as a constraint to development.

Q30 Dr Turner: But there is a serious risk, is there not, of fragmenting habitats in the process of carrying through development which is focused on economic development rather than biodiversity as the primary aim?

Dr Brotherton: That has been the experience so far. We have got a heavily fragmented landscape and that brings us back to Dr Tew's point about properly planning at the landscape scale to address that and reverse that fragmentation by seeking to improve connections.

Dr Tew: Perhaps I could give one very good example from the recent past where the reverse has happened which is the Thames Basin Heath, an internationally important site for birds, heathland birds, where a fragmented site and fragmented populations of Dartford warblers and woodlarks and so on were suffering, and the area was under intense housing development pressure. Natural England, with the local planning authority and regional partners, agreed a plan to allow housing development that would release funds for actually defragmenting that landscape so that you created green infrastructure and you ended up with housing development that was truly sustainable and that produced an increase in the quality of the natural environment, not the other way round, and it is an example of what can be done when both sides sit down and plan at an early stage.

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Q31 Dr Turner: So coming to the Planning Bill then, how do you think the proposed changes resulting from the Planning Bill will affect biodiversity?

Dr Brotherton: We think that will depend heavily on the extent to which the proposed Infrastructure Planning Commission is given a duty to protect and enhance biodiversity and the extent to which it is required also to consider all relevant environmental legislation and government policy, such as PPS1 and PPS9, when considering its decisions. Natural England is currently working with several government departments to provide technical advice on biodiversity issues so that it is properly taken into account in the preparation of national policy statements relating to the Sub-National Review.

Q32 Dr Turner: You have already given examples of how, with a bit of careful planning, housing growth and habitat integrity can go hand in hand. Do you think that those sorts of considerations should be made absolutely binding as legal requirements in the future?

Dr Tew: I think that is going beyond our current policy at the moment and I am not qualified to push us that way.

Dr Brotherton: A good start would be to properly apply the policies that are already there. PPS9 makes some quite good provision for biodiversity, both its protection and its enhancement, and that would be a good start.

Q33 Dr Turner: Of course the eco-towns are something of a major new departure. Do you think that there should be a legal requirement to incorporate natural habitat provision either within an eco-town or immediately adjacent?

Dr Tew: We certainly think that is good guidance and PPSs and PPGs at the moment are going that way, and we believe that a good eco-town in the right place with high levels of green infrastructure and high build standards will not only damage the local environment, but can improve it, so we see absolutely no reason why there must be a conflict between a healthy natural environment and more housing provision, providing it is in the right place and done in the right way.

Q34 Dr Turner: However, my question is: do you think this requirement should be built into the structure with legal backing?

Dr Tew: Again I am afraid, sorry, I do not know the intricacies of our policy on that point, so I am reluctant to commit myself.

Q35 Dr Turner: A personal view of its desirability?

Dr Tew: I think it would be better if we followed up in writing, if that would be helpful.²

Q36 Joan Walley: If I can turn to the Green Belt and Natural England's call for strategic reviews of the Green Belt boundaries to see whether some of the

land could be made available for development, we would be interested in the reasons why you have set this out and your views on this.

Dr Tew: Well, I refer to a previous response to this Committee, I think, on the Green Belt, but, just to summarise, we do think there is a review of Green Belt policy needed. We think that the Green Belt is often of poor or uninspiring quality and our call is to "green" the Green Belt. I think we did feel misunderstood when we were publicly quoted on that. We are conservationists, we are not developers, we have no remit for development and we want to see better conservation use made of the Green Belt, and there are two issues here. One is whether the Green Belt itself is delivering a high-quality natural environment, and the second is whether the stranglehold that the Green Belt has at the moment is actually putting pressure on high-quality environmental sites just outside the Green Belt so that the pressure is being put on to wildlife sites just outside the Green Belt. In short, with a demand for potentially three million new homes in this country and, I think, with no clear idea of where two million of those will go, I do not think we can possibly ignore the opportunity to review Green Belt policy at this time; I think that would be short-sighted.

Q37 Joan Walley: Can I just clarify, when you call for a strategic review of the Green Belt, who do you see doing this strategic review?

Dr Tew: Government.

Q38 Joan Walley: Under Defra, DCLG?

Dr Tew: I think the answer would be that we would hope that Defra and DCLG would work together on a national review.

Q39 Joan Walley: So then turning to the other side of the coin, which is the National Brownfield Strategy, will that enable us to identify whether brownfield sites are being used effectively to reduce the development pressure in the countryside and might this obviate the need for a review of the Green Belt?

Dr Tew: I do not think it will obviate the need for a review of the Green Belt. We think the prominence given to biodiversity in the National Brownfield Strategy is very helpful, but the challenge is to translate the principles in the National Brownfield Strategy into practice. As you may know, there is a new BAP priority habitat, which is called "open mosaic habitats on previously developed land", so, in bringing together the prominence given to biodiversity in the National Strategy and this new BAP habitat, we think there is a great potential, but we really need some clear guidance on the definition of terms and we need some clear targets for that habitat established, so terms like "previously developed" or "brownfield" are not very well-defined and we think that that needs much better categorisation. At the moment, as I understand it, domestic gardens, derelict buildings and naturally revegetated open land are all jointly included within the category, and it seems to us that that pooling together into one single definition is not very helpful.

² See Ev 17.

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To answer your question, I think it would complement, but not obviate, the need for a Green Belt review.

Q40 Joan Walley: So how would you go about preventing brownfield sites with high biodiversity value from actually being developed?

Dr Tew: Via the guidance to planners and the planning system. At the moment, there is an issue—

Q41 Joan Walley: But you just said in answer to the previous question that you did not quite understand how that biodiversity was being linked into the duties of the Planning Bill. Would that not need to be linked to that?

Dr Brotherton: The first step is to actually map where these sites are and that is a process that is already under way.

Q42 Joan Walley: Is that being done right the way across the country?

Dr Brotherton: I will come back to you on that, if I may. Already planners have a duty to have regard for biodiversity. There is now a new habitat on the section 41 list, the statutory list that contains the species and habitats of principal importance for the conservation of biological diversity in England, and they are expected, through current policy, PPS9 notably, to have regard for those habitats, so they should already be taking measures to protect them when they find that habitat. We see part of our role as helping them fulfil that duty by helping them to know where those are.

Q43 Joan Walley: But does that not assume that each local authority area, producing a local development planning framework, has the resources to be able to identify those sites and act in respect of any applications coming in for planning development? I am not sure that that is available in my constituency. Are you confident that that is available across the country?

Dr Brotherton: This year, we are completing the network of local record centres which are repositories of biodiversity information for both habitats and species, and we are investing in improving the habitat inventories for a range of priority habitats, including traditional orchards and others, and we would encourage, and do already encourage, local authorities to see high-quality biodiversity information as critical to underpinning their planning functions, so what we have done is to provide the infrastructure that we would expect local authorities and others to help support in the future and to help support the collection of good-quality biodiversity information.

Q44 Joan Walley: Just finally on the issue of Green Belt, there has been an argument put forward that the development of the Green Belt could be positive due to the potential for improving biodiversity. I am just wondering whether or not a better way of improving that biodiversity on Green Belt land

would be to have better land management regimes that could actually exist there in that Green Belt area. What is your view on that?

Dr Tew: Well, I would not disagree with the generic point, and I think it is a case-by-case basis. I think if you have got land that is simply neglected and not being managed, then you need to do something about it.

Q45 Joan Walley: But how would you address those land management regimes that could exist there as a way of improving biodiversity?

Dr Tew: Incentivisation outside of land that is either an SSSI or is eligible for agri-environment schemes is an issue because there are not huge sums of money to spend on land management outside the main frameworks we have, which is agri-environment schemes, SSSI protection or biodiversity delivery, and that is why I think we do need to look at other ways. There is no doubt in principle that appropriate development properly done will increase the biodiversity value of land, or can increase the biodiversity value of land.

Q46 Joan Walley: In terms of what you just said about SSSIs and the resources that are available to help with SSSIs, what resources are currently available and how adequate are they?

Dr Brotherton: For biodiversity as a whole?

Q47 Joan Walley: Biodiversity in respect of SSSIs.

Dr Tew: Again I am afraid I do not have the figures for the SSSI programme off the top of my head, but we can provide them very easily because we quantify them extremely accurately. At the moment, funding for SSSI delivery over the past few years is reaching the targets and our programmes and our funding are designed to deliver the Government's target.

Q48 Dr Turner: Of course farmers are managing 75% of the countryside and you are concerned about the Stewardship Scheme. Helen Phillips has spoken about raising the bar for the Entry Level Scheme and the need for a more targeted approach for high-level stewardship, so can you tell us how Natural England is planning to get more out of the Stewardship Scheme for biodiversity protection and enhancement?

Dr Tew: Agri-environment schemes have been running for 20-odd years now and there has been significant progress, and we are the first to recognise some of the fantastic things which have been delivered, but the ES Review, which is ongoing, shows rather limited alignment between where the money has historically been deployed and where it might best be deployed. Furthermore, and speaking frankly, taxpayers need complete assurance that their money is being spent to deliver real environmental benefits, so Natural England is not in the business of measuring success by the amount of agri-environment money it simply ships out of the door. Where we have concerns that, for instance, the uptake of in-field stewardship options that would benefit farmland birds has been limited, on the one hand, and, on the other hand, where the most

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popular options tend to be those which are easiest for the farmers to manage, then we do think that some rebalancing of that is necessary, and that is ELS. In terms of HLS targeting, the issue here really is about trying to find synergy between these multi-option schemes and we think that has been somewhat lacking in the past, so we would like to target funds at those areas that are going to deliver the greatest environmental bang for the buck, so maps that take account of all the key objectives across biodiversity and landscape, resource protection and so on as well as our commitments to SSSIs allow us to look at areas where we get real synergy between the different parts of the scheme. We intend to be proactive in securing agreements in those target areas, we want to work very closely with farmers in those target areas and we want to provide as much advice as we possibly can to farmers in those areas and to gather their support as far as possible.

Q49 Dr Turner: Obviously the support of farmers is crucial to making this work properly, and farmers have said that they will be discouraged from entering into these schemes if you get too tough, so is there a risk that this might adversely affect the ability to meet your targets?

Dr Tew: I think there is always that risk. As soon as the price of wheat goes up, farmers say they do not want to enter the schemes, and that is clearly an understandable economic decision. On the other hand, farmers are always very consistent in saying that they do not want further regulation, so there clearly is that balance, but farmers are the stewards of the countryside and we do need to work with farmers to ensure a healthy natural environment. There is no doubt that the evidence base I referred to

earlier shows a significant historical decline across a suite of species, so it rather suggests we have still not got that right. We think the key here lies in both land managers and indeed the public understanding the full range of environmental benefits that a healthy natural environment brings, and we want clarity on goals, we want a strong partnership with the farming community and we think that that will produce good schemes that farmers will sign up to.

Q50 Dr Turner: Entirely, but not necessarily, related, do you think there is an inherent conflict between set-aside schemes and biodiversity management in land which is still under cultivation because it increases the intensity with which the remaining land is cultivated? Is there a problem there?

Dr Tew: Bearing in mind that set-aside was a production-control mechanism rather than one designed to produce environmental benefits, I think it illustrates two things: one, that there has been great environmental benefit from set-aside; and, two, that that environmental benefit sometimes takes time to develop and yet is destroyed overnight with the plough. In answer to your question, no, I do not think there is direct conflict. I think we need to have an overview of how the land is managed. It does illustrate, I think, how conservation needs a long-term view and does not respond well to the short-term idiosyncrasies of perhaps agricultural policy or market forces.

Q51 Chairman: I am conscious that you want to be away and we have really, I think, covered everything, so thank you very much, both of you, for coming in.

Dr Tew: Thank you, Chairman, for inviting us.

Supplementary memorandum submitted by Natural England

Thank you for the opportunity to give evidence to your Committee on 17 June 2008. Further to that session, there were two key issues on which we offered to provide clarification.

Q17—relating to open-cast coal mining applications

Natural England response: Planning applications for open cast mining are dealt in the same way as any other proposals for the working of minerals. Government policy on minerals planning is set out in a series of Minerals Policy Statements/Guidance. These are taken into account by regional planning bodies in the preparation of Regional Spatial Strategies and by local planning authorities in the preparation of Minerals Local Plans or Local Development Frameworks. Planning applications are considered against relevant policies in these plans and should incorporate appropriate proposals for restoration and after-use.

Q33—relating to whether there should be a legal requirement to incorporate natural habitat provision either within an eco-town or immediately adjacent

Natural England response: Natural England does not think that a legal requirement for the inclusion of natural habitats within or adjacent to eco-towns is necessary or sends the right message to developers. Government policy on planning for biodiversity (as set out primarily in PPS9, Biodiversity and Geological Conservation) sets out the importance of retaining existing habitats and of creating new ones in connection with development. Natural England expects the proposed Planning Policy Statement on ecotowns to be consistent with policy in PPS9 and has highlighted the need to strengthen provisions for retaining existing environmental assets in its response to the Ecotowns: Living a Greener Future consultation. To be worthy of the ecotown label, these developments should incorporate and enhance biodiversity as a matter of course.

Ecotown developers should be challenged to create innovative proposals that protect and enhance existing habitats and other environmental assets on or near the proposed sites so that they can be cherished and enjoyed by the new residents.

On a separate note, during our oral evidence we referred to the Government's Strategy for Sustainable Construction which was published on 11 June 2008 as being led by DBERR, whereas members of the Committee thought it was led by DCLG. We have sought to clarify this and it seems to us that, although the Strategy is a joint Government / industry initiative, the lead Government department is indeed the Department for Business, Enterprise and Regulatory Reform, which also undertook the consultation on the strategy in 2007.

I hope this is helpful and look forward to reading the Committee's report of this inquiry.

4 July 2008

Memorandum submitted by the National Farmers' Union of England and Wales

SUMMARY

- The UK agricultural sector takes its role in the preservation of biodiversity seriously and is already co-operating with other sectors to meet the goal of halting the loss of biodiversity by 2010. Most open and semi-natural habitats depend on agricultural activities. The quantity and quality of these habitats is fundamental to the diversity and composition of species. If the agricultural management of these highly valuable areas changed, or if these areas were abandoned, biodiversity could be threatened.
- For 21 years, several voluntary agri-environment schemes have provided payments to farmers to, amongst other aims, protect and enhance biodiversity. There have been notable upturns or stabilization in the populations of many farmland species illustrating that these schemes have generally been successful.
- Although data for birds tend to be more complete, it is recognised that the baseline data for many species remains patchy. Importantly, the skills for accurate identification and monitoring work that provides the input to this national database ultimately relies on an ageing population of volunteers so national continuity and consistency is threatened.
- This concern in loss of skills and resource extends to the scientists and establishments which underpin the knowledge generated to understand the management of biodiversity alongside productive agriculture IN the future.
- The NFU believes that climate change and invasive non-native species are the two biggest threats to biodiversity in the UK. Generally the NFU supports the introduction of a strategic approach to manage non-native invasive species within Great Britain. Such species are a potential threat to the success of agriculture as well as biodiversity. Any attempt to eradicate or control non-native invasive species will need cooperation from land managers. However, restrictions on the introduction of species must not prevent farmers and growers from being able to react to markets and to grow new varieties of crops, as and when they become commercially available.
- Scientific projects have attempted to model the likely impact of climate change on biodiversity. However, there are currently many uncertainties and it is essential to recognize and accept that biodiversity is not static and that not all species will be compatible with our climate in the future. The costs of wholesale protection could be enormous but yield little long-term benefit and a coherent national strategy is vital.
- The far reaching resource implications of halting biodiversity loss are difficult to express in conventional economic terms. By 2005–06, public sector expenditure on supporting biodiversity had increased by over 60% in real terms compared with 2000–01, with £397 million pounds of public sector funding alone going into biodiversity. Given the costs of retaining and protecting our existing biodiversity, it is questionable whether the re-introduction of species to the UK can be justified.
- £3 billion is currently available between now and 2013 as part of the Rural Development Programme for England (RDPE)—almost double that available for all rural development schemes in 2000–06. However, the current budget remains under-spent. Rather than target Environmental Stewardship ever more exclusively on biodiversity, we believe that broad and shallow activity, such as that promoted by ELS, running across the whole countryside, will have the greatest benefits for the suite of environmental goals. Therefore it is essential that Environmental Stewardship remains attractive to farmers: practical, economically attractive and suitable for all landscapes.

- England has a network of nationally designated and protected sites. The protection offered for these sites and the biodiversity they support is under constant improvement both through national and European legislation. However, it is essential to recognise that such regulation should not stifle the farming activities that share the same space and often manage the very landscape that biodiversity depends upon.
- A concern is that by focussing funds, many isolated target areas can produce “islands” for biodiversity that are less resilient to pressures such as climate change. It is important that funding and communication between stakeholders does not stop at apolitical boundaries and a flexible approach working with farmers and land managers is needed.
- Key challenges for the agricultural industry will be how farmers will continue to meet growing food demands while also meeting environmental responsibilities such as the halting of biodiversity loss.

What role does the agricultural industry play in halting the loss of biodiversity?

1. The National Farmers’ Union (NFU) is pleased to respond to the Environmental Audit Committee’s inquiry on halting UK biodiversity loss. The NFU has some 55,000 farmer and grower members in England and Wales and represents the great majority of full time commercial farmers.

2. UK agriculture provides an essential service to support the landscape and its associated biodiversity. Measures to protect wildlife, soil and water resources (resource protection) are supported through nationally available agri-environment schemes, such as Environmental Stewardship which was introduced in England in 2005, which are accessible to the farming community. Where good resource protection measures are in place it is fair to say that wildlife and biodiversity also benefit from this investment. For example wet meadows, moorland and saltmarshes can contribute to improving water quality as well as providing key habitat supporting wildlife and biodiversity. It is extremely difficult to quantify the ecosystem service and economic implications of biodiversity loss with any degree of accuracy, especially when many of the fundamental basics of farming systems remain poorly understood (eg soils, carbon etc.).

3. Data available for the period 1970–2005 shows the decline in farmland specialist bird species, which started in the 1970’s, this appears to have stabilised. The halt in decline can be attributed to the implementation of agri-environment schemes in the late 1980’s.

4. There have been some notable gains in populations of some species (eg stone curlew, red kite, otter). This illustrates that agriculture, funded through appropriate agri-environment schemes, makes a significant contribution to halting biodiversity loss. Other key areas where farming is already making a major contribution to maintaining and enhancing biodiversity include:

5. The conservation of wetland areas is helping to support wildlife and save rare species of flora and fauna. An area of farmland equivalent to almost 600 hectares has so far been returned to natural; wetland, saltmarsh and mudflat in managed realignment programmes. These activities can be compatible with agriculture and need the careful and ongoing land management skills that farming can provide.
6. Management of landscape features such as the laying and trimming of hedgerows and the building and upkeep of stone walls is preserving the “living fences” of Britain’s rural area. Hedgerows are important habitats in their own right. They are a primary habitat for at least 47 species of conservation concerns in the UK. These boundary features are thought to be extremely important in providing connectivity between wildlife sites, increasing landscape permeability and providing means for biodiversity to adapt to external pressures such as climate change. This has been summarized by a recent report on The Impact of climate change on the delivery of biodiversity through agri-environment schemes (2007)²³. Agri-environment schemes, such as Environmental Stewardship available in England, provide a source of funding to support activities that maintain and enhance these boundary features. To date, almost 160,000 km (a third) of hedgerows are now specifically managed to benefit wildlife through options within Environmental Stewardship. Whilst only 22% of hedgerows are in favourable condition (Defra 2007)²⁴, agri-environment schemes are making significant improvements. In 2006, the then Countryside Agency commented “The quality and size of many hedgerows have improved and the widespread removal of this distinctive feature of the English landscape has all but ceased.” Defra’s *Farm Practices Survey 2006*²⁵ has also found that more farmers than ever before, are cutting their hedgerows every two to three years and that much of this cutting is in the autumn and winter months to avoid nesting birds.
7. Buffer strips create new habitats for invertebrates, small mammals and birds and have been shown to offer good protection to watercourses.
8. Storage of carbon - research on land management and soil carbon points to the modest, relatively long-term, but complementary role that soil carbon sequestration can play in reducing atmospheric greenhouse gas emissions, and the additional benefits that can be gained from increased soil carbon—improved productivity, resilience to erosion and biodiversity. The main

²³ <http://www2.warwick.ac.uk/fac/sci/whri/research/environmentandecology/climatechange/>

²⁴ *The Environment in your Pocket* (2007). Published by Defra

²⁵ <http://statistics.defra.gov.uk/esg/publications/fps/Final%20Report2006.pdf>

climate change benefits of soil carbon sequestration mitigation actions taken now will emerge only over decades as the carbon builds up in the soil. Evidence suggests, therefore, that there is significant potential for agriculture to mitigate carbon emissions, in particular through changing land use, improved crop land and grazing land management, and restoration of degraded land and cultivated agricultural soils.

9. The management of soils. Soils are major players in the carbon cycle. In England and Wales the total amount of carbon in the soils is estimated to be 2890×10^{12} g, with peat soils containing the majority (Dawson and Smith, 2007²⁶). Carbon has a number of key properties, such as water holding capacity, supply of nutrients, binding the soil together and therefore reducing erosion, all of which are essential for good agricultural production. Compared to organic carbon contents of 5–10% in pasture soils, arable soils often contain no more than 1–2%, which is principally due to removal of organic residues, as well as tillage and weight of root systems (Briggs and Courtney, 1991²⁷). Activities which build up the organic matter in soil have a dual outcome: they build up soil carbon, thereby reducing the atmospheric carbon, and also improve the soil quality—crucial for food production. Research on soil management suggests that additional benefits that can be gained from increased soil carbon include improved productivity, resilience to erosion, and biodiversity (Dawson and Smith, 2007; Smith et al., 2007²⁸).

10. This list is not exhaustive, but it highlights the important role agriculture plays and has the potential to play in supporting biodiversity. Most open and semi-natural habitats currently depend on agricultural activities and it is the quantity and quality of these habitats which contributes fundamentally to the diversity and composition of species. If, however, the agricultural management of these highly valuable areas changed or if these areas were abandoned, a lot of species could be threatened with extinction and thus biological diversity would be lost.

POLICY & PROGRESS

11. The UK Government has a commitment to halt the loss of biodiversity by 2010. The Biodiversity Action Plan (BAP) is the UK's initiative to maintain and enhance biodiversity which was launched in 1994. In order to assess the state of biodiversity in England, Defra has also devised a set of 51 indicators and only one indicator, relating to coastal and marine priority species habitats, shows a clear negative trend (State of the Countryside 2007²⁹).

12. The UK Biodiversity Action Plan Reporting System (BARS³⁰) developed over four years ago, is being continually refined with BAP changes and IT developments to facilitate de-centralised online data entry. It would appear to provide a useful tool to look at progress towards England Biodiversity Strategy and likelihood of achievement of EU BAP 2010 targets, provided the quality and consistency of the data entry can be guaranteed. Whilst data for bird species tends to be more complete, it is recognised that the baseline data for many other species still remains extremely patchy. Skills for identification and monitoring work for biodiversity that provides the input to this national database ultimately relies on an ageing population of volunteers. There is no new generation of recorders and courses are changing at universities so it is unclear where future recorders with natural history skills will come from to provide the accuracy, breadth and depth of coverage for continued and improved biodiversity monitoring.

KEY THREATS

13. The NFU believes that climate change and invasive non-native species are the two biggest threats to biodiversity. However, it is also important to note that there are other pressures such as the increasing population and the urbanisation that are also making demands on land use.

The new Invasive and Non-native Species Framework Strategy for GB

14. Generally, the NFU supports the introduction of a strategic approach to managing non-native invasive species within Great Britain. The management of land that invasive species inhabit can be very difficult and expensive for farmers. Therefore preventing establishment of species that are known to be a threat, must be taken forward within a joined up approach. However, restrictions on the introduction of species must not prevent farmers and growers from being able to react to markets and to grow new varieties of crops, as and when they become commercially available.

²⁶ Dawson, J. and P. Smith (2007) Carbon losses from soil and its consequences for land-use management, Science of the Total Environment.

²⁷ Briggs, D. and F. Courtney (1991) Agriculture and Environment—the physical geography of temperate agricultural systems (p.58). Longman Scientific and Technical.

²⁸ Smith, P. et al (2007) Greenhouse gas mitigation in agriculture. Phil Trans. Roy. Soc. B.

²⁹ *The State of the Countryside 2007*. Published by the Commission for Rural Communities

³⁰ <http://www.ukbap-reporting.org.uk>

15. Non-native invasive species are a potential threat to the success of schemes to protect biodiversity. Any attempt to eradicate or control non-native invasive species will need buy-in and cooperation from land managers. Farmers currently manage over 75% of the countryside and therefore they must be considered carefully within the implementation of this strategy. The *Invasive and Non-native Species Framework Strategy for GB*³¹ (published on 28 May) recognizes the need for stakeholder involvement. It cites a series of 49 specific actions to underpin a proposed framework that covers, amongst other objectives, prevention, monitoring, control and eradication as well as improved awareness and public vigilance. It also recognizes that existing legislative provisions remain disjointed with many gaps.

16. In addition, the new strategy makes no real mention of the funding mechanism to ensure this strategy can be implemented on the ground. The cost of eradicating or controlling invasive species is high and resources are, as always, limited. For example, Japanese knotweed was introduced to Europe as an ornamental plant in the early 19th century. It appears to have no natural enemies in Britain and its large vigorous growth and fast colonisation means it can rapidly invade and dominate habitats, thus jeopardising local biodiversity. To protect habitats and local biodiversity, the cost of a national eradication programme for this species alone is estimated in the Defra Review of Non-native Species Policy to be in the region of £1.56 billion.

17. If a decision was taken to ensure that the “polluter pays” it must only be applied where there is satisfactory evidence to prove that the species was introduced or spread by that individual’s actions. The public has access to farm land, through both the public rights of way network and open access rights, so the landowner or manager may not have actually been responsible for the establishment of a species on their holding at all. This must be considered carefully if legislation or guidance is developed so that landowners cannot be unfairly penalised.

18. The NFU believes that the introduction or reintroduction of species extinct within Great Britain, even within their perceived natural range, should also be considered within the scope of this work. Thorough risk assessments should be applied to any such projects and it must be considered that in the absence of the species proposed for reintroduction, the ecosystem may have adapted. In addition, the costs of protecting our existing biodiversity in the UK and calls from some stakeholders to increase this budget, funding the re-introduction of species would seem questionable.

Climate change

19. Recent scientific projects have attempted to model the likely impact of climate change on biodiversity (eg MONARCH³²) however there are currently many uncertainties. It is also essential to recognize that biodiversity is not static and that not all species will be compatible with our climate in the future. Hence efforts to protect species should be appropriately and realistically targeted. The costs of wholesale protection could be enormous but yield little long-term benefit. The economic effects of these changes on the land-based rural business sector are likely to be extremely complex and variable. Changing conditions are also likely to have significant economic impacts on agriculture and how land is managed. This will impact through markets, both in the UK and abroad and is likely to have knock-on impacts on biodiversity. Until there is an understanding of how biodiversity will respond to climate change it is impossible to carry out a full assessment of the economic impacts and how agriculture will need to respond. NFU, Agricultural Industries Confederation (AIC) and Country Land & Business Association (CLA) Climate Change Task Force is reviewing the climate change evidence and its impacts on farmers and growers. The joint-industry report (Part of the Solution³³) focussing on adaptation and mitigation was recently launched.

RESOURCES

20. There are many pressures on preserving biodiversity in the future which will be associated with a demand on resource and funding, these will fall into two broad categories:

21. The direct impact of the loss of biodiversity from the ecosystem which causes some failure of the ecosystem function. This loss of function then requires economic investment to rectify the loss.
22. Direct expenditure invested to halt the loss of biodiversity through mitigation or adaptation activities.

23. The far reaching resource implications of biodiversity loss are difficult to express in conventional economic terms. Often the value of biodiversity is intrinsic and whilst some studies have attempted to place a value on biodiversity and ecosystem services (as described in the Biodiversity Synthesis of the Millennium Ecosystem Assessment³⁴), it is far from an exact science. This is further complicated by the fact that the costs associated with the loss of biodiversity may be slow to become apparent due to the buffering capacity

³¹ http://www.nonnativespecies.org/documents/Invasive_NNS_Framework_Strategy_GB_E.pdf

³² Monarch—Modelling Natural Resource Responses to Climate Change.

³³ *Part of the Solution* (2007) Climate Change Task Force Report published by the NFU in conjunction with AIC and CLA

³⁴ Millennium Ecosystem Assessment (Ecosystem and Human Well-being: Biodiversity Synthesis)

of ecosystems, or the costs may even be spatially displaced from the source of the original biodiversity loss. However, we can start to consider the economic costs of activities that invest in helping mitigate loss of biodiversity or help biodiversity adapt to external pressures.

24. Since 1987 several voluntary agri-environment schemes have provided payments to farmers to, amongst other aims, protect and enhance biodiversity. These schemes were reviewed in 2003 (Anon, 2003) for their effectiveness in protecting biodiversity. According to the Joint Nature Conservation Committee's Biodiversity Indicators in Your Pocket (2007³⁵), this review found that Environmentally Sensitive Area and Countryside Stewardship schemes were generally successful in maintaining wildlife value, although the latter was more effective in enhancing the contribution of the land to UK biodiversity.

25. By 2005–06, public sector expenditure on biodiversity had increased by over 60% in real terms compared with the amounts spent in 2000–01 (Figure 1). The trend for spending by non-government organisations (NGOs) is less clear as expenditure has fluctuated since 2000–01. According to Defra statistics, in the 2005–06 financial year, £397 million pounds of public sector funding went on biodiversity (2006 National Statistics³⁶ suggest £347 million of this is specifically spent on agri-environment schemes). Net of public sector funding, NGOs spent about £154 million.

26. Since 2005 a new scheme, Environmental Stewardship, has been introduced in England to build on the successes of the earlier “Classic Schemes” and specifically to provide multiple environmental benefits, including the way they contribute to UK biodiversity targets. According to Natural England's State of the Natural Environment Report 2008³⁷, if you include other Environmental Stewardship schemes as well as the Classic Schemes (ESAs and CSS), this equates to approximately six million ha, which is close to 65% of the eligible agricultural land in England. A recent report made by the Central Science Laboratory (2007³⁸) provides a detailed evaluation of the uptake of ELS and its contribution to specific biodiversity objectives through option selection. The number of farmers participating in these schemes continues to grow. A major success given that mass participation is a basic pre-requisite to meet the Government's environmental targets, including those for biodiversity. However, maintaining and enhancing biodiversity comes at a cost to farming and cannot be considered in an economic vacuum.

27. According to the supporting material presented by the Environmental Audit Committee, “the RSPB has calculated that there is at least a £300 million per annum spending shortfall for biodiversity protection”. Essentially £3 billion is currently available between now and 2013 to spend on conservation schemes—almost double that available for all rural development schemes in 2000–06. However, the current budget spend remains below projections. Therefore, the argument presented by some environmental lobby groups for more funding into agri-environment schemes is fundamentally flawed. It is essential that the schemes that are currently on offer in England remain attractive to farmers in order to make the most of the budget that is already available. By “attractive” this includes many criteria such as whether the schemes currently in offer are able to fit within the practical as well as the economic constraints of farming systems and provide opportunities that are suitable for all landscapes. This is a crucial time for the success of Environment Stewardship in England and it is imperative, both from an economic and ecological view point, that farmers and landowners can enter the Entry Level Scheme to provide the broad national coverage of the benefits they deliver.

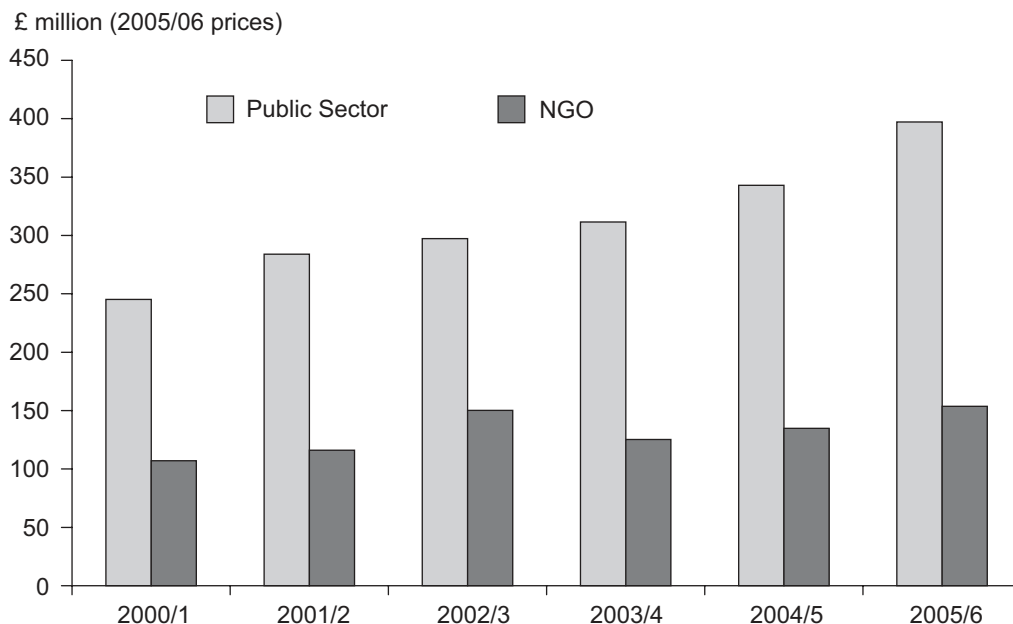
28. Another key resource consideration, that is often overlooked, is the retention of the scientists and establishments which generate the knowledge essential to understand the management of biodiversity in the future. In recent years we have seen a continual erosion of these skills and research farms which have provided the long-term farm scale studies. These studies have helped to develop farming practices that are sympathetic with conserving biodiversity alongside productive agriculture. This knowledge will be increasingly important in a future in which we will see many land use demands from a finite area.

³⁵ Biodiversity Indicators in Your Pocket (2007) Published by the JNCC

³⁶ <http://statistics.defra.gov.uk/esg/quick/summary.xls>

³⁷ <http://www.naturalengland.org.uk/sone/docs/StateofNaturalEnvironment.pdf>

³⁸ *Evaluation of the Operation of Environmental Stewardship* (2007) Defra Project MA01028. Central Science Laboratory

Figure 1**UK SPENDING ON BIODIVERSITY 2000/01—2005/06**

Source: Environment in your Pocket 2007, published by Defra

PROTECTED AREAS

29. England is covered by an extensive network of nationally designated and protected sites, for example over 4,000 Sites of Special Scientific Interest (SSSI). In addition, as part of the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992) it requires EU Member States to create a network of protected wildlife areas, known as Natura 2000, these include 236 Special Areas of Conservation (SAC) to protect wildlife and biodiversity in England. According to the State of the Countryside 2007³⁹, a total of 8.1% of England by area is now designated as a National Park, 8.2% SSSI's and an additional 15.7% as Areas of Outstanding Natural Beauty. By 2005, 60% of the area of SSSI's specifically on agriculturally managed land were in good or recovering condition. Moreover, Natural England's recently published State of the Natural Environment 2008 report⁴⁰ notes that 80% of SSSI's by area are now in favourable or recovering condition. This means that the target of achieving 95% of SSSI's in favourable recovering condition will be achieved by 2010. Environmental Stewardship, particularly through HLS, makes an increasing contribution to management of these SSSI's. This demonstrates that there is a significant network of protection and that current policies are making progress. The protection offered for these sites and the biodiversity they support is under constant improvement through national and European legislation. However, it is essential to recognise that such regulation should not be so oppressive as to stifle the farming activities that share the same space and in many cases manage the very landscape that biodiversity depends upon.

30. Habitat scale is very important in a changing climate and hence preservation of biodiversity. Generally, larger areas of semi-natural habitat are more resilient than small ones. A key concern of the NFU is that focussing funds on too many isolated target areas can produce "islands" for biodiversity that are less resilient to pressures such as climate change. Efforts should be made to extend and protect the larger areas of semi-natural habitat rather than focusing on too many small disconnected sites. For this approach to work, it is important that funding and communication between stakeholders does not stop at political boundaries and a more flexible approach working with farmers and land managers, is needed.

³⁹ *State of the farmed Environment in England & Wales* (2006). Published by the Environment Agency in conjunction with the NFU.

⁴⁰ <http://www.naturalengland.org.uk/sone/docs/StateofNaturalEnvironment.pdf>

CONCLUDING REMARKS

31. Preserving biodiversity worldwide is, besides climate change and sustainable water management, one of the main challenges of the 21st Century and of high importance for UK farmers. The agricultural world is particularly aware of this fact, balancing the key priorities of maintenance of the positive effects of agricultural production with the reduction of any adverse environmental impact. The UK agricultural sector takes its role in the preservation of biodiversity seriously and is keen to cooperate with other sectors to meet the goal of bringing the loss of biodiversity to a halt by 2010. The “ecosystem services” provided by nature and especially by biodiversity include the provision of food and non-food commodities as well as protective functions related to air, water and climate. Biodiversity is one of the foundations of both a sustainable environment and a sustainable economy in agriculture, fisheries and forestry.

32. Farmers already have a good understanding about their role and the need to protect and conserve biodiversity. Continued efforts to build on this knowledge can only help farmers to further develop this understanding of how their activities relate to biodiversity. It is also crucial to maintain the economic viability of their agricultural activity alongside the promotion and conservation of biodiversity. Key challenges for the agricultural industry will be how farmers continue to meet growing food demands while also meeting environmental responsibilities such as the halting of biodiversity loss.

3 June 2008

Witnesses: Mr Paul Temple, Vice President, and Mr Andrew Clark, Head of Policy Services, National Farmers' Union, gave evidence.

Q52 Chairman: Good morning and welcome to the Committee. You have heard, I think, the last exchanges when your industry was being mentioned. Perhaps I could kick off. In your memorandum,³ you say that climate change is one of the biggest threats to biodiversity. Could you say how you think farmers can help to mitigate the impact that climate change is going to have on biodiversity?

Mr Temple: I can give you a specific example. I often state the fact that farmers are at the front end of climate change obviously working with weather all the time. I also point out that the commodity prices we have got are as a result of climate change and the fact that it is pressurising production globally, not just in one place. As a specific example, a lot of it is dealing with the extremes, so in the dry weather it is about managing water so that there is water still available for the biodiversity that needs it as an everyday function, and in the wet conditions, last summer was a great example where, through real frustration of a lot of farmers, the lack of maintenance or the decline in waterway maintenance caused severe flooding. Now, that flooding actually caused catastrophic biodiversity loss in those particular areas because it came really quickly and it was widespread. Now, I think the one thing that farmers take away from this is that we have almost got to be able to cope with the extremes that climate change throws at us, whether that is dry weather or whether that is wet weather.

Q53 Chairman: How are you going to cope? What can you do? You have described ways in which the impact of climate change is felt. What can you do as farmers?

Mr Temple: To manage the removal of water you need to ensure that the water pathways work, and every area is quite different. One of the things that came out of last summer is that the management of this should be very much on a local level where you have the local expertise. It is about ensuring that you

can cope with the extremes of the weather so you do not put the land in jeopardy of flooding. In dry weather this might mean having within waterway movement the ability to hold back water so that areas do not dry out. It is about more of an integrated approach to the way we move and manage water.

Mr Clark: The point about climate change and its impacts on farming is that it impacts on the whole of the countryside and it needs farmers to act across the whole of the countryside. I would highlight a couple of measures that we are doing at the present moment which we think are going to help farmers and the countryside cope with climate change far better than it currently does. One would be soil protection reviews which all farmers have to undertake as part of their Single Payment Scheme receipts. Each one of the 100,000-odd farmers that currently receive the Single Payment Scheme need to carry out a soil protection review on their farms to identify the character of their soils and to ensure that they do not get eroded, they are not subject to compaction and they retain their organic content, which are all good things from a climate change point of view. The other country-wide measure which we think is very important is that of environmental stewardship and involvement in the Entry Level Scheme, which gets farmers thinking about the biodiversity benefits, the resource protection benefits, the landscape benefits and gets a management across the whole of the countryside.

Q54 Joan Walley: I would like to ask you a little bit more about the agri-environment schemes. How concerned are you about them? How do you see them meeting the challenge of more biodiversity? Are you afraid that there could be changes that you would not want to go along with?

Mr Clark: We are concerned about environmental stewardship because we think there have been rather too many critics of a scheme which is only in its infancy. We think that Environmental stewardship, particularly the Entry Level Scheme, has been a huge

³ See Ev 18.

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success. Many, many farmers have adopted the scheme. In the last 21 years that agri-environment schemes have been available to farmers we have gone from a situation where conservation was very much an after-thought, it was something that was practised in the field corner and spoken about but not really rewarded, to a situation where the bulk of the countryside is managed under environmental stewardship. Perhaps I could just illustrate that point. There is a "State of the Natural Environment" report that Natural England published and no doubt spoke about in their evidence session. On page 270 of that it shows you the uptake of agri-environment schemes. I know you cannot see the detail from where you are sitting, but basically if we had looked at this map in 1987 it would have been blank, there would have been virtually no formal conservation agreements where farmers were rewarded for their conservation management, but, as you can see, most of the countryside is now participating in those types of schemes. We think environmental stewardship is a good job, it is something which is a win-win for the environment and for farming, but the critical thing to remember in the context of this particular inquiry where you are looking at biodiversity loss is that Environmental stewardship is a multi-themed approach. Biodiversity is one of the objectives but so is landscape, so is heritage, so is public access, so is genetic conservation and access to the countryside. It is a wide-ranging scheme and biodiversity is only one of the objectives, albeit one of the priority objectives.

Mr Temple: Let me use myself as an example because I am a farmer and I am in the Entry Level Scheme. I did think about whether or not I should go into it. By going into it there is a significant benefit because we manage our hedges in a different way and we manage over-winter stubbles in a way that we would not do normally and these can have additional costs attached to them, but because you are part of a scheme you are willing to go and put that little bit of extra time and effort into it. The interesting thing that comes out as a result of being in it is you get a change of approach. I think that is one of the big success factors of having literally so many people in it, it changes people's approach to their relationship with biodiversity and the landscape.

Q55 Joan Walley: You say there has been a huge amount of success already, as exemplified by that report that you have just referred to, from the agri-environment schemes. Given that one of the challenges for the future is going to be to have to recreate new habitat areas and then seeing how the existing ones and the new ones that will be created all link up together, is that not going to mean some changes to the way in which the agri-environment scheme is run at the moment? Are you putting forward proposals as to how there should be change in the future for that?

Mr Clark: Effectively there are two important parts of the environmental stewardship. There is the Entry Level Scheme, which is a broad and shallow scheme

that is available to all. We think that is the most important part of it because that is the skeleton of the countryside. That looks after the framework, that ensures that the hedgerows, the field margins, the streams and water courses are all protected. If you do not have that wider countryside protected under a theme like that then you could spend a lot of money looking after SSSIs and your best bits but they would be like a set of jewels without a setting. We need to have the setting to start with. You can then look, through the Higher Level Scheme, at these higher level requirements which are focussed on biodiversity and other premium benefits. If we break the model of the Entry Level Scheme being the scheme that is the scheme of choice for farmers, with the critical mass participating in that, then I think there is a real concern that that scheme will not achieve what it could have achieved. We are concerned about the funding for that and the continued message to farmers is that that is the one to go for.

Q56 Joan Walley: Is the Chief Executive of Natural England not on the record as saying that we need to get more out of these schemes? If that is the case, how are you going to work with your members to see how we can get more out of these schemes?

Mr Temple: One of the sources of real frustration was that that was put down on record because in many ways it was almost as though he was saying, "Well, you haven't really done much". For people such as myself, believe you me, we have had to do a considerable amount of work and investment in time and effort to make this a success and to hear that that really has not achieved a great deal, is not a positive way of taking these forward.

Q57 Joan Walley: Is it not always the case that there is always more to do? Is that not indicative of how much further you need to get?

Mr Temple: I think it is about fitting this into local circumstances, ie what are we going to get the most use of in a particular circumstance? What was really interesting to me was that a group of farmers actually came together and said they would like to explore the HLS in a different way. So instead of their individual holding being looked at, several of them could be looked at together so as to have a bigger approach to environmental stewardship. Instead of having small islands we had a degree of connectivity that made the best use of what a larger geographical area had to offer.

Q58 Joan Walley: Could you give us an example of how that is being done?

Mr Temple: A classic example is Holderness in east Yorkshire. It is very much flat and featureless land. This particular group of farmers could see a unique balance in getting the drainage right and at the same time creating a recognised and substantial area of wetland. They thought that was a great balance in that they would get the benefit of the drainage and at the same time they recognised the need to put a substantial body of land into a wet area to keep that balance there. That was a group of farmers coming

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together with a thought process that would not have been there five or ten years ago. It is unfortunate that Natural England has not chosen to try and encourage people to move into that thought process.

Mr Clark: Can I just return to the original question about whether we felt that ELS had done enough for biodiversity? There are two points I particularly wanted to make in relation to the Chief Executive of Natural England's points. One view we have is that, in terms of biodiversity evaluation, it is really far too early to tell whether ELS is working or not.

Q59 Joan Walley: When would you be able to tell?

Mr Clark: The pilot scheme was launched in 2003 and the full scheme came out in 2005, and after two years of working on a pilot scheme it was very difficult to detect changes from biodiversity, especially on farmland birds. A lot of the criticism of ELS has been really focussed around whether it is going to be good for skylarks or not. ELS is about an awful lot more than simply farmland birds.

Q60 Dr Turner: There are new pressures on biodiversity in agricultural land in terms of the very high wheat price, for instance, and the demand for bio-energy crops. It looks as if set-aside land may well disappear and consequently there is a need to compensate for that. There is a suggestion from Natural England that five per cent of arable land should be managed specifically for environmental purposes to compensate. Do you have any comments on what the effect of these pressures is going to be?

Mr Temple: It is hugely frustrating to see the way that this is being distorted. When it first came out it was actually not liked by many of the environmental groups, and this is genuinely a market management tool. When the decision to set it to zero was made last year for very sensible reasons, because of the food supply situation—and I know where with the decision emanated from—farmers did not immediately rush out and replant everything that was in set-aside. A substantial amount was already in industrial cropping anyway. Secondly, what they have chosen to do is they only chose to put back into production what made sense, so margins and poorer areas of land have been left out of production. Thirdly, we have had environmental schemes and we have now over 60 per cent of the land area in one kind of a stewardship scheme or another. This factor ought to be recognised because set-aside was simply an incidental benefit. I think everything about this is about getting the best value for money; it is about design benefits in environmental schemes so that it functions properly. The whole process of the health check is about streamlining things, making things common across Europe and simplification. To put a set percentage against this actually runs contrary to everything we are trying to do. If you take France as an example who did have a percentage, they could quite typically include hedges. On my farm I would have to go round and measure every single hedge and margin. The time taken to do that would be phenomenal. The cost of inspecting it would be incredible. That is not an efficient way of delivering

benefit. I think everybody is perfectly willing to look at the ELS and HLS and see what we need to achieve to offset what we felt was a benefit but it does need putting into context.

Q61 Dr Turner: Do you find that the very high prices that are emerging are discouraging farmers from going into stewardship schemes? They do not get paid much under the stewardship scheme, do they?

Mr Temple: I dispute the term "very high prices" for the very simple reason that we have come from exceptionally low and unsustainable prices. These are necessary prices. In actual fact, these high prices give you more of a chance of managing the environment rather than less of a chance because it takes that pressure off a farmer as such. We will look at stewardship schemes and think is there the balance, but I think a lot of people who are within stewardship schemes want to carry them on because they feel good about being part of them.

Mr Clark: I could give you an example of that. I mentioned earlier on that before the Environmental Stewardship Scheme was launched there was a pilot scheme in 2003. One of the areas that it was piloted in is Market Deeping in the Fens of East Anglia. A lot of farmers there are profoundly frustrated that they will not be able to continue their agreement if they cannot get a good reward for their commitment to that scheme. They are not actually looking at the price of wheat, they are looking at the margin. Our costs have gone up at the same time as our prices. What an environmental stewardship agreement offers you is a five-year certainty of return, which is something you cannot get, at least not so easily, certainly not for five years, in terms of your commodity markets. As part of the overall business package a farmer is looking at, they will be looking at and evaluating the conservation business contribution as well as the cropping contribution. It is too easy to get into a bit of a simplistic panic about the price of wheat and think nobody will do this, that just as we have lost set-aside as a compulsory measure everybody will plough up every hectare of set-aside and every hectare of set-aside was valuable.

Mr Temple: Until literally last week's rains in the middle of America I tended to be looking a little bit further forward than most. There is a huge crop of wheat globally. Our concern now is whether the farmers put crops into the ground next year given the cost of all the inputs that go with it.

Q62 Dr Turner: How sustainable is the future of agriculture in its present form?

Mr Temple: There are some great opportunities for agriculture because of the growing demand for products, but it is going to be volatile and I think that is the key factor.

Q63 Dr Turner: In order to get the environmental benefits that we are seeking we need to have a sustainable pattern. The factors that you have just mentioned run counter to that. Do you see a solution?

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Mr Clark: What we see is greater volatility. What we have seen through the increase in commodity prices is at the moment those are mainly restricted to the combinable crop sector. We are hoping to see them feeding through into the livestock, which from a biodiversity point of view is probably even more important in a UK context. What we have to see is that the total business is sustainable. You have to have a sustainable commodity production, whether it is in livestock or commodity products, and also a sustainable contribution from conservation schemes and that type of thing. That is how you get a sustainable business. What we cannot have is conservation on the cheap which relies on the fact that agriculture, as it has been over the last 15 years, has been in a period of recession and in a sense, you get it through benign neglect or because people cannot afford to do anything else. That is not sustainable.

Mr Temple: What is fascinating now that we have got decoupled agriculture and we have had this period of volatile prices is the fact that we are seeing, finally, a greater willingness by the whole of the supply chain to link up. You have Sainsbury's making a direct link right the way through to the farmer producing the wheat that will go to a mill, that will go into flour, that will go into a baker and onto their shelves. Critically, it includes the retailers allowing that passage of margin right the way through the chain. I think government can play its part in terms of public procurement. It is a real frustration that we have a higher welfare standard for pig production and yet when it comes to the government that effectively put this thing in place, do they procure pork products to that standard? I think that is a particularly relevant point. We can farm to any standard required provided we are not put at a disadvantage.

Q64 Jo Swinson: I am intrigued by what you were saying about the higher commodity prices not necessarily meaning people will be keen to lead the schemes. To what extent is that a risk? Do you think that the payments do not need to be reviewed as they are because of the margins issue, that people will remain in the schemes?

Mr Clark: I think payments should be reviewed because we are certainly into a very different situation to what we were when the scheme was launched in 2005. Both commodity and output prices are much higher, as are input prices. My fundamental concern is to make sure that that scheme remains attractive to farmers. Fundamentally Natural England's contribution to the "new world order" in a sense, where we have got change in the reward structure for farmers, is to make sure that their contribution to keeping the countryside sustainable is to ensure that environmental stewardship remains attractive and open to all. We have got to have confidence amongst farmers that that is something which is going to be delivered, so in that context, yes, payments do need to be reviewed and we need to make sure that those

schemes continue to be as rewarding as they were previously. That does not mean every single price goes up. We need to know that they are still current.

Mr Temple: It comes down to the practical thought process of a farmer faced with increased costs. If you take my position of managing hedges, they are more difficult to manage in that sense than they are in our standard practice, there is a greater cost attached to them. When the price of diesel and the cost of labour is rising then you have to weigh up exactly what the implications of that are. If you take over-winter stubble, we would normally plough in the autumn when the weather would create the seedbed. If I plough on over-wintered stubble on February 15, as I am allowed to do, I would have no nature in the soil and I would have to create that by using energy, ie diesel and machinery, sheer power to create that seedbed. The simple equation is what makes most sense to me in terms of a farmer.

Q65 Jo Swinson: There was clearly a bit of tension earlier when Natural England's comments were mentioned about having more biodiversity outcomes assessing the schemes. If you are arguing for higher payments in some cases, would that be able to go hand-in-hand with reviews to the way the schemes are structured and to be more based on the outcomes for the benefits to biodiversity?

Mr Clark: I guess it depends on how much biodiversity benefits and what type of biodiversity they want to have. My starting point would be that the Entry Level Scheme, as I have said before, sustains the whole countryside and provides the basic framework in which some of the more demanding wildlife can survive because it has a framework and it is more permeable and that type of thing. If they need to have more infield biodiversity, if they want to have particularly breeding habitats for birds like the skylark and have more than the 13,000-odd skylark plots that there are currently available, then that has to be costed out very effectively to make sure that the hassle that creates as well as the costs that might create for farmers are taken into account and, perhaps most importantly, that the options that look at infield practice, which are obviously going to have the biggest impact on a farm's productive capacity, are marketed. It is not enough just to simply present an option and sit back and say, "Are you going to go and take that?" and then complain that nobody picks it up. If you were talking to rather hard nosed marketing executives, they would be out there trying to understand why farmers do not adopt it, whether it is the price that is wrong or there is something wrong with the product and they would be trying to make sure that that is promoted as much as possible to farmers. There are three issues: there is obviously the payment review, the being clear about how much of a particular biodiversity good they want to have, and then there is going out there and selling that. We are prepared to sell it but we need to have a convincing case.

Mr Temple: There is a degree of frustration as to where these biodiversity targets/measurements actually come from because there is not that much

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data that realistically makes a lot of sense to me. At what point in history are we choosing the change? Fifty years ago was mentioned earlier. Well, 50 years ago there was only just over 30 million people in this country. My grandfather, because of the four coast rotation and the standards he was farming to, produced less than an eighth of the cereal crops. That is fantastic biodiversity no doubt, but how does that fit when we have got 60 million in this country and the kind of pressure we have for supply? This is why we think sensible engagement in environmental schemes is the right way forward, because we can design in the benefit. There is real frustration that we have lost several experimental husbandry farms which would have been great places to have tried to look at designing biodiversity, ecological benefits in and at the same time see how that fits with productive farming, but we have lost those.

Q66 Jo Swinson: You have mentioned a couple of times the target for skylarks. If your argument is that there is not a wide enough set of indicators, what are the indicators you would like to see being prioritised or highlighted?

Mr Clark: I do not think there are a wide enough set of indicators. It is frustrating that biodiversity as a whole seems to be just focussed on the number of farmland birds. That is seen as an indicator of the rest of wildlife. I think we have got some data which we could send the Committee afterwards that looks at the British Trust for Ornithology's data and shows that there are many bird species which are thriving. The collared dove is an example of one which has come from nothing 50 years ago to being the most commonly heard bird, certainly in my garden in the Cotswolds! I think we need to have a much wider range of indicators. One of those has got to be the uptake schemes because if you are not in a scheme then obviously it is not going to be contributing anything. One of them does need to be a wider choice of biodiversity species. More than just farmland birds, we need to be looking at otters and badgers in terms of larger mammals, beetles and butterflies and moths, a more comprehensive set of indicators. The key thing is not to be simply hooked on what we had 50 years ago and say that is the nirvana that we all need to aim for. We need to have something which looks to the future and says, in the context of a countryside which needs to be much more productive, what is the best set of biodiversity that we can have in amongst that. We are convinced that you can be both productive and biodiversity friendly but I suspect it is at a different set of levels than we might have had 50 years ago and it certainly would look different in terms of landscape.

Q67 Jo Swinson: You were mentioning about how the portfolio within the farm includes the environmental management schemes and obviously your production as well. To what extent do you think that will change in the future? Do you think it will switch to more environmental management in terms of the income and the proportion of business that takes up, less, or do you think it is at about the right level?

Mr Temple: My grandfather did not need a book of rules to create the look of the countryside because he loved what he was doing and he literally sensed that feeling of care for the next generation. The majority of farmers do feel themselves as custodians for the next generation, they genuinely do care and they have a raised awareness as to where this all fits. What has been shown, interestingly, from some of the schemes that have been put in place is that when biodiversity has been lost, if you change something and recreate a habitat, then it returns. So it is related specifically to the provision of habitat. There are some really tough challenges ahead for us as to how we get that balance right. You have to look with some degree of global context of supply as to what we do and how we do it, where products are going to come from and the balance of products.

Q68 Chairman: Your memo highlighted invasive non-native species as being a threat to biodiversity. Do you think the Government's Invasive Non-native Species Framework Strategy is an effective response to this?

Mr Clark: We believe that it is broadly going in the right direction. Where I think we are somewhat sceptical is, as with all Government strategies, it seems to be setting up a process and a committee to assess which are the species that need to be controlled and that type of thing. The question from a farmer's point of view is who ultimately has to control that species and what impacts it might have in terms of what is genuinely good business. I know some of our horticulture producers were rather concerned that some of the species on the list of invasive species might end up being ones which they want to sell through garden centres, that type of thing. It is about how it happens on the ground rather than the grand process.

Mr Temple: If you asked most farmers they will say, "How well controlled is Ragwort on public property?". These are the things that you have to be very careful about. When people have great vision, that is fine, but eventually you require somebody to do something about it.

Q69 Chairman: What is the best way to support farmers or to fund farmers, or both, to deal with this problem?

Mr Clark: It is difficult. Clearly some of these species are so widely spread now that I suspect that the costs of controlling them—Himalayan balsam being one which is mainly on water courses so there is not a direct impact on farms and Japanese knotweed—are probably prohibitive. It is almost as if by naming it as a problem it gives us a problem which we cannot solve. What is the productive impact of that?

Q70 Mark Lazarowicz: More than most issues, this is one which certainly cuts across administrative boundaries and I understand this is a GB-wide strategy. Are you satisfied there is enough cooperation between the different devolved administrations and governments and the UK Government on this issue? Will we get a GB-wide approach here?

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Mr Clark: I am afraid I do not know what either the Welsh Assembly—

Q71 Mark Lazarowicz: I was asking whether you are satisfied there will be adequate co-ordination at GB level to ensure this is activated at a GB level.

Mr Clark: We certainly need to have a GB-wide approach because these species can come in via Scotland, Wales or England and, similarly, they need to be controlled on that sort of scale. The rhododendron is an example of the type of thing which primarily is in Wales but is moving into north-west England as well.

Q72 Chairman: Are genetically modified crops a threat to biodiversity?

Mr Temple: That is a real poisoned chalice of a question!

Q73 Joan Walley: It is a genuine question.

Mr Temple: It is a genuine question. Our perspective as an organisation is that we should have the option of choice in terms of using them. I took part in the field-scale evaluation trials and what fascinated me were the significant environmental benefits they offered because whenever I took visitors to the site and put them in the middle of the field during the winter invariably they got the two halves lost. They looked at the side of the oil seed rape that was full of weeds, that provided over-winter feed for various animals and then they looked at the side that was immaculately clean and only had oil seed rape and in their minds they said the clean side is the GM side, the side with weeds is the good side. I thought it was particularly telling that that was the thought process of people who had never been involved in it. Having been to Spain and seen the significant benefits there and in France and having listened to Brazilians using the technology, Argentineans that have seen substantial soil management benefits as well, there is the real possibility of gains, but it comes back to the frustration of we have no experience, we have no trials. One of the few trials we have in Leeds was recently trashed. This goes back to how far we are falling behind globally in terms of research and development. We do not know because we are not doing enough, but from what I have seen in practical farming circumstances I actually think in many cases they offer benefits rather than disadvantages.

Q74 Chairman: Is your enthusiasm for GM crops based on a wish on the part of your customers to whom you are selling your crops for more GM products?

Mr Temple: The customer comes first in all of this. Our immediate frustration at the moment is the fact that globally these crops are being grown and they are our competitors. If the farmers of the UK were basically allowed to produce as they are, with no access to GM crops, no GM feed and marketed as such, that is fine, but that is not the way the world works, especially in Europe where we have a real problem over authorisation. We have real problems supplying feed, higher feed costs and yet our competitors in Brazil, Argentina and North

America have access to these products that can freely come into this country and compete against our product. There is a huge debate that we should be having so that consumers understand the reality of food supply, can make an informed choice and farmers are given the option of choice as to whether it makes sense to grow these crops, but this is not for everybody.

Q75 Chairman: Are you saying that if they had information they would say, “Yes, we want more food which contains GM ingredients.”? Is that what you think consumers in this country want?

Mr Temple: I would not know what the consumer thinks. It is about offering the information and the choice. From our point of view as a farmers’ organisation, we do not want to be at a disadvantage. This can be played either way as far as we are concerned. If you want to keep the products out that is fine, you will end up with a more expensive product and if the customer is prepared to pay for it then that is not a problem at all.

Q76 Chairman: In most of the businesses I have been involved with the producers look very carefully at what consumers want. What do you think consumers want today, more GM or less GM?

Mr Temple: Do not ask me. I am just saying they should be informed about the choice. It goes back to the issue of livestock feed.

Q77 Chairman: Has the NFU not done any research on the subject of whether the customers to which your industry is selling everyday, on which your livelihoods and your members’ livelihoods depend, want more GM or less GM?

Mr Clark: We have not commissioned any consumer surveys to assess whether the public is more pro or less pro GM than it was previously. We want consumers to have confidence in our product. We want to be fairly rewarded whatever that product is, but what we are most decidedly for is pro-science and pro-technology. We think that technology has a major contribution to make to ensure that we can farm in an environmentally friendly way, which is good for biodiversity as well as many other environmental goals, that is the critical thing. We are frustrated that a particular technology, in this case genetic modification, is being disregarded because of the connotations with GM. There might be things which are very good from an environmental point of view which we seem to be picking up from other countries.

Mr Temple: It would be interesting to ask how many people realise how many countries are growing it, what crops are grown, why these crops are being grown and where these products end up in the chain because I do not think most people know. It is far too big a task for us to undertake as a farming organisation.

Q78 Joan Walley: I want to follow up on what you were saying about choice and the importance of the consumer having choice in terms of the research that has been done and the implications on choice

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whereby you have got two fields side by side and in one you have got GM crops and the effect that that has on contamination in respect of the adjacent field. Surely that is getting rid of the choice for the neighbour, is it not, because you would have the contamination?

Mr Clark: There is some level of contamination through pollen and there are clear statutory controls on that. In the evaluations we are trying to understand how much contamination there was and whether this would be a long-term problem. In the absence of comprehensive trials to understand the importance of separation, distances and that type of thing I do not think we can really go any further than what has already been published by government.

Mr Temple: There were never any issues in terms of pollination through the FSE trials. We are bereft of data in a sense because we have not been engaged in that process and that is a source of frustration. From a farming point of view, we either engage in this or we do not. We do not mind if we do not so long as we are not put at a disadvantage.

Q79 Chairman: I am still puzzling to work out what the disadvantage is, but not producing something that the consumers do not want—

Mr Clark: Are you saying that consumers do not want it?

Q80 Chairman: You are saying you do not know and you have not asked them. That suggests to me you suspect the answer is they do not want any in that case. If I was producing a product which I thought the consumers wanted and I wanted to produce it I might just do a bit of research to check they wanted it, but I would not be complaining about the fact I am not allowed to produce it if actually they did not want it.

Mr Temple: You would be better off talking to the supermarkets, but effectively they are looking at changing their positions because of the reality of supply. I do not know whether or not you are aware of the unauthorised species problem we are having with both maize and soya, but the soya is a critical thing for Europe. We are major importers of soya to the tune of 30 million tonnes.

Mr Clark: For animal feed.

Mr Temple: Not just for animal feed. There are new varieties out in the US and in South America that are being grown and it will become increasingly difficult to segregate. The importers fear this real problem of zero tolerance being inflicted on cargo loads of soya and not being able to import them into Europe. The frustration for us as farmers in Europe—and this is a European problem—is the fact that we will end up with higher protein costs, but those same unauthorised varieties can actually be fed to livestock products in countries across the world and can be imported into this country. That is the very real situation that faces us. The Commission's own figures have between a 30 and 40 per cent loss to the pig and poultry sector and the repercussions follow through into the cereal sector because that is where your supply comes from.

Q81 Chairman: My impression is that the supermarkets look incredibly carefully at what their consumers want all the time, that is how they survive. I do not have the impression that they are saying, "Please let's have more stock on our shelves with GM ingredients." I may be wrong but that is not my impression. I believe they have made their judgment based on very careful market research. I would have thought, if I was a producer in your position, it would be incredibly good news that those customers are not going to be able to access products from abroad because of the element of GM which they can no longer guarantee is not present. I would have thought that was incredibly good news for British agriculture, not bad news.

Mr Temple: This is a classic misunderstanding of the situation of supplying protein to Europe. How much protein do you think we produce in Europe?

Q82 Chairman: I have not got the remotest idea how much protein is produced in Europe or anywhere else.

Mr Temple: And most people have not. We are fundamentally reliant upon South America and North America for our protein. The real concern for us is the fact that China went from 2 million tonnes to 20 million tonnes of soya requirement in just three years. Europe is no longer the dominating force in purchasing. Having spoken to Argentinean growers and asking if they would choose to supply solely for Europe or just grow for the global market, the answer is the global market. That is the real situation. As an organisation we are not there to push GM. We are there simply to allow choice, to try and find a sensible way through. The biggest thing we are there for is to make sure as producers we are not put at a disadvantage.

Mr Clark: From a supermarket point of view, supermarkets are going to need to take a decision as to whether they can, in assuring their customers that they are stocking GM-free products, sustain that in the long term.

Q83 Chairman: They are only going to find that difficult to do if you do not want to stay GM free.

Mr Temple: This can affect red wheat. A flour miller came up to me and said that this problem affected him. There is no GM wheat out there. You cannot get every last grain of everything out. If they get so much as one grain of unauthorised soya in a boatload of red wheat it is not tipped, it is rejected. These are the problems we are grappling with in Europe at the moment. They are the real issues out there whether we like them or not.

Q84 Chairman: Is there a debate about where we should be aiming for in a biodiversity policy? It has been said that it is unrealistic to be able to move back 50 years. Is there now a discussion to be had about what is relative to aim for?

Mr Temple: The critical point is the balance between productive farming and managing the balance of margins, especially water margins. It is certainly about ensuring that land does not unnecessarily flood because that actually causes widespread

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disruption and at the same time I think it is really important that we cope with the dry periods as well. We cannot tell at the beginning of a year whether it is going to be a wet year or a dry year. Productive farming has to be profitable to deliver the environment, that is the order it goes in. A lot of what we are trying to do now is mitigate against climate change of the extremes. If we can handle the extremes then I am sure we can manage to get the balance between productive farming and the biodiversity. So long as there is that level of encouragement for farmers, they are recognising the benefit that has been put in, especially over the last 10 or 20 years of these schemes, then we will be able to deliver it without any problems.

Mr Clark: There probably needs to be a new balance looking ahead. We have got new challenges in terms of climate change, the Habitats Directive and Water Framework Directive. There is a whole range of new demands coming in on the environmental side at the same time as new demands in terms of being more productive. The countryside has changed a lot in the last 150 years and I think we should welcome change in the future, but it is from an informed position rather than a not quite sure what we have got one.

We know what we have got. It does not necessarily mean we need to keep what we have got. We might want to have more of something else or we might accept that we are going to lose some things and gain others. What we certainly need is probably a new landscape that is better fitted to water protection and a landscape with hedgerows and buffer strips and woods in different places. We certainly need to have a new balance in that respect.

Mr Temple: One of the key areas is the uplands, the less favored areas, which is a huge challenge. Our thought process of looking at how we manage this into the future is quite different to what it was 20 or 30 years ago. I found it fascinating that the less favoured area was created in 1946 as the hill co-payment. That was a political act that tried to encourage production on these hills. Our thought process now, as we look forward to hill areas, is how we can get the balance between keeping some element of productive farming and farmers there, how we manage the environment, how to manage the water that falls on those lands and recognise there are going to be opportunities in terms of selling loads of bio-energy.

Chairman: Thank you very much for coming in.

Tuesday 24 June 2008

Members present

Mr Tim Yeo, in the Chair

Mr Martin Caton
Colin Challen

Dr Desmond Turner

Memorandum submitted by the Royal Society for the Protection of Birds

SUMMARY

- Biodiversity is a public good. It improves our quality of life and has its own intrinsic value. Currently the true socio-economic value of biodiversity and ecosystem services is inadequately assessed.
- Although the 2010 target will be missed, we believe the focus and energy behind this should be captured in a new 2020 target to halt and reverse biodiversity loss.
- Government can encourage biodiversity conservation through four basic tools: regulation, financial instruments, exhortation and the market. All four need to be strengthened if the target to halt biodiversity loss is to be met.
- This submission highlights five key areas that we believe should be the focus of attention: international leadership, protected sites, climate change adaptation, embedding biodiversity in Government policy and reviving the Biodiversity Action Plan.

1. INTRODUCTION

1.1 In 2005, Achim Steiner (Director General, IUCN) predicted how progress against the target to halt biodiversity loss would be viewed in 2010 (UKBAP conference, Bristol). “Governments will claim the target has been met, NGOs will claim it has not and Statutory Conservation Agencies will say they do not have enough information to make an assessment!”

1.2 The RSPB is one of the NGOs that do not believe that the UK is on course to meet its commitment to halting biodiversity loss by 2010. There are several reasons for this:

- Species are still being lost, eg the St Helena Olive, *Nesiota elliptica*, became globally extinct in 2003.
- Species declines continue, eg 331 species were listed due to severe decline under the 2007 revised UK priority list. In May 2008, two birds found on UK Overseas Territories, the Gough bunting and the Tristan Albatross, had their global threat status increased to “critically endangered” (the highest category) and Curlew was elevated to “near threatened” (37% decline in UK between 1994–2006).
- Priority habitats and protected sites are impoverished: eg 54% of English and 68% of Welsh SSSIs remain in “unfavourable” condition and 38% of UK priority habitats are declining.

1.3 In Northern Ireland, the government has already revised the target to halt biodiversity loss by 2016 (Building a better future, PSA 22).

1.4 The 2010 biodiversity target is ambitious and challenging. The Government’s performance should be under reasonable scrutiny, to ascertain first whether we have stopped the loss and decline in species and habitats and second, have the right measures for conservation been put in place with sufficient urgency and commitment?

1.5 The 2010 biodiversity target has provided a welcome focus on biodiversity conservation both at home and abroad. We believe that the UK Government should champion the establishment of a new binding 2020 target to halt and reverse biodiversity loss.

1.6 We believe that government needs to take significant action in the five key areas below up to, and beyond, 2010 if we are serious about halting biodiversity loss.

2. SHOW INTERNATIONAL LEADERSHIP

2.1 Public interest in biodiversity conservation in the UK suggests we should be a world leader on global action for biodiversity.

2.2 We list below some examples where we should be leading the way globally:

- Calling for an internationally binding agreement to reduce global emissions sufficiently to limit average temperature rises to no more than 2°C above pre-industrial levels. This must include provision to reward developing countries for protecting and restoring biodiverse forests and peatlands (see below).
- At least matching the funding for global biodiversity recently announced by Angela Merkel, the German Chancellor. For example, by reviewing UK funding plans for REDD (reducing emissions from deforestation in developing countries) activities to ensure they match the scale of the challenge.
- Working to prevent the extinction of albatrosses from long line fishing, for example, through all tuna commissions introducing and implementing bycatch mitigation measures with measurable effect.
- Increasing resources for conservation in the 14 UK Overseas Territories. These hold more globally threatened bird species (34—including one third of all breeding albatrosses) than the whole of Europe. £16 million per annum for the next five years is required to meet the costs of priority conservation action on UKOTs. This is a small price to pay for the conservation of a global asset.

2.3 Another area where the UK can lead is on the issue of invasive non-native species. This is a global issue of growing significance. The impact of invasive non-native species has been a major cause of biodiversity loss over recent centuries and, with increasing globalisation of trade and climate change, is set to intensify. The UK's geographical boundaries put us in a strong position to address this issue effectively. Moreover, the UK Overseas Territories support wildlife of major international significance. The impact of invasive non-native species is easily the single greatest threat to these species.

2.4 We welcome the recent production of the GB Non-native Species Framework Strategy but believe there are several ways in which its launch needs to be followed up. Resources need to be available to develop an effective rapid response capacity, and simple, clear lines of responsibility identified, so that newly established non-native species can be dealt with quickly and at minimum cost. The strategy also needs to be backed up by appropriate legislative change. To strike the right balance between prevention and control/mitigation we need to focus now on constructive action on the ground, with properly planned and resourced public awareness and training programmes initiated urgently. In particular, the UK Overseas Territories must be brought within the scope of the strategy. The Government has provided support for important specific project work in some of these areas (eg funding for feasibility studies on rodent eradication on Gough Island), but this needs to be backed up by resources to complete the required work and to fulfil our international conservation responsibilities on the Overseas Territories, in the longer term.

3. IMPROVE PROTECTION AND MANAGEMENT OF IMPORTANT WILDLIFE SITES

3.1 The current threats to UK priority species and habitats were identified as part of the 2005 UK Biodiversity Action Plan (BAP) reporting round. Habitat loss or degradation, housing and coastal development are significant threats, highlighting the importance of the protected sites network and the vital role of the planning system in safeguarding biodiversity. In the longer term, “new” threats to biodiversity up to 2050 have been identified through a horizon scanning process. These include several related directly to climate change (eg extreme weather events, sea level rise) and mitigation measures that result in land use change (eg demand for biofuels, coastal offshore power generation).

3.2 Protecting and managing significant areas for nature conservation must remain a cornerstone of conservation policy. With increasing pressure on land use, it is vital that protection of terrestrial and freshwater sites is maintained. In addition, management must continue to be improved to ensure that these protected sites are brought into, and maintained at, favourable condition as soon as practicable. This will ensure the UK's protected area network is well placed to fulfil its role at the centre of the UK's efforts to help biodiversity adapt to climate change.

3.3 Much more should be done for biodiversity in the UKs “protected landscapes”, the National Parks and AONBs (Areas of Outstanding Natural Beauty or their equivalents in Scotland). For example, 45 protected landscapes cover approximately 24% of England's land surface, hold 52% (by area) of English SSSIs and are outstanding for BAP priority species and habitats. However, against two measures from the Government's Natural Environment PSA: (1) favourable condition of SSSIs, and (2) the population trends of wild birds, biodiversity performs no better in these protected landscapes than outside of them. We have to raise our expectations for biodiversity delivery in these iconic places. We need much smarter systematic collaborations for biodiversity in these places—Defra, Natural England and, of course, the National Parks and AONBs need to mobilise public, private and third sector actors to focus much more intensively on better biodiversity delivery.

3.4 Conservation needs to catch up fast in the marine environment. The draft Marine Bill is welcome. We now need commitment to establish a complete, coherent and well-managed Marine Protected Area network by 2012 (including Natura 2000 sites, OSPAR MPAs, nationally important marine sites and, where necessary, some highly protected areas). We need the funds to back up the legal framework and the ambition to ensure that 20–40% of our seas are adequately protected for wildlife and sensitive habitats.

4. IMPLEMENT APPROPRIATE ADAPTATION TO CLIMATE CHANGE

4.1 Climate change is often an additional threat to biodiversity. We therefore need to re-double our efforts to address the non-climate pressures on wildlife, including persecution, pollution and habitat loss. Improving our delivery of nature conservation at species, site and policy levels needs to be part of our approach to adaptation.

4.2 The Government should have a bold vision for adapting to climate change and protect our vulnerable natural heritage from the impacts of climate change by ensuring that policies and resources are in place to enable adaptation. The emerging UK Adaptation Policy Framework, adaptation programmes required under the Climate Change Bill (and any future Scottish legislation) and the Climate Change Commission for Wales should embed the principles for conservation identified by the MONARCH programme:

- conserve existing natural resources and high-quality environments;
- reduce other sources of harm not linked to climate, such as pollution and inappropriate management; and
- make sound decisions based on analysis, including thoroughly analysing the relevant drivers of change, and adapt conservation priorities in response to climate change.

4.3 In our view, enacting these principles will require investment in the management of protected areas, a massive increase in land managed for nature conservation, creating countryside more permeable to wildlife and building biodiversity and sustainability safeguards into the adaptation plans of other sectors (eg agriculture, water management and forestry).

4.4 The Government has a key role to play in restoring wildlife habitat to help climate change adaptation. For example, the Habitat Action Plan for lowland heathland includes the modest target of 15,250 ha of re-creation by 2030. The Forestry Commission manages a significant area of plantation forestry on former lowland heathland sites (estimated at 55,000ha). The targeted removal of these plantations, particularly where this links heathland areas and increases patch size should make heathland more resilient to climate change. The production of a policy on Open Habitat Restoration from forestry is a key deliverable of the revised England Biodiversity Strategy. It will be important for this policy to include a real commitment to lowland heathland restoration and be backed up by an implementation plan including specific targets for the area and timescale of habitat re-creation.

4.5 In addition, positive planning should play a more active role in habitat re-creation. For example, encouraging restoration of mineral extraction sites to priority habitats could make a major contribution to UK BAP targets. There is potential to meet all the BAP expansion targets for nine priority habitats in England on existing minerals sites but the vast majority of this potential is not being realised. Local authorities could be identifying and securing habitat re-creation in Mineral and Waste Development Frameworks and securing appropriate management, either through use of planning agreements or by developing local partnerships with organisations such as the RSPB. Government could provide more encouragement for BAP habitat restoration by revising *Mineral Planning Guidance 7: Reclamation of Mineral Workings*.

5. EMBED BIODIVERSITY INTO GOVERNMENT POLICY

5.1 The conservation of biodiversity is a key test of sustainable development. Policies that promote other aspects of development at the expense of biodiversity mean we will fail to live within environmental limits. In 2005, the UK Government and the devolved administrations for Scotland, Wales and Northern Ireland agreed a common framework for sustainable development called “Securing the Future”. This framework set twin goals of delivering a strong, healthy and just society, while living within environmental limits—underpinned by the use of sound science, good governance and a sustainable economy.

5.2 The challenge now is for government to put its good intentions into practice. However, the Government’s consultation “Prosperous Places: Taking forward the Sub-National Economic Development and Regeneration” turns England’s public institutions, planning and funding structures on their collective heads—in order to remove perceived barriers to economic growth. The commitment to living within environmental limits has been reduced to a footnote, in the context of reforms that fail to steer us towards sustainable development. The Regional Development Agencies (RDAs) will have little incentive to promote sustainable development when their performance is judged on meeting a new single growth target, measured by Gross Value Added. The logical response to this is that a strong statutory purpose to further sustainable development must be included in the regional strategies, which RDAs will have a responsibility to produce.

5.3 The UK economy grew 43% between 1990 and 2005; during the same period, farmland and woodland bird populations fell below 1990 levels. Increasing prosperity will not automatically deliver environmental benefits without positive government intervention.

5.4 Delivering biodiversity conservation needs to be mainstreamed into all areas of land use policy through appropriate intervention. For example, further Common Agricultural Policy reform is needed to target payments to land managers who actively protect and enhance the natural environment rather than simply adhering to baseline compliance standards. We support UK progress on shifting more funds from farm subsidies into Rural Development payments but this needs to be attached to a bolder vision for land use and the environment. Therefore, as part of the EU budget review, we propose that the UK Government should negotiate for the creation of a single European Sustainable Land Management Policy (combining all of CAP Pillar I—traditional income support for farmers—and Pillar II—rural development payments). This would be charged with delivering the EU's commitments for sustainable land use for food, fuel and fibre production and ecosystem services, biodiversity and a sustainable economy. It would deliver, inter alia, the shortfall in funding required to meet many existing UK BAP targets.

5.5 The RSPB strongly supports the value of the planning regime for biodiversity, as expressed in the Birds and Habitats Directives, domestic legislation, national planning policy and development plans. However, it is sometimes undermined by misinterpretation and poor implementation by decision-makers. While the planning system provides opportunities to build biodiversity into new development, it is not currently benefiting those species most in need. Poorly-located new development can place additional pressure on existing biodiversity. We are concerned about the quality of environmental assessment of development plans, whether Strategic Environmental Assessment or assessment under the Habitats Directive. [Detailed comments on this are given in paragraphs 30–40 of our submission to the Committee on *Greener Homes for the Future*, and on eco-towns in paragraphs 11–19.]¹

5.6 We do not believe that greenbelt policy needs to be reviewed. We support the current planning controls as expressed in PPG2 Green Belts and PPS7 Sustainable Development in Rural Areas, and consider that these provide an appropriate level of protection. We welcome the inclusion of nature conservation as an objective for land-use in green belts. This designation is an important policy approach to dealing with urban sprawl. It should continue to be used for this purpose. [Detailed comments appear in paragraphs 25–29 of our submission on *Greener Homes for the Future*.]²

5.7 In Wales, delivering environmental protection and opportunities to provide environmental enhancement contained within the Wales Spatial Plan is a key aspect of the Welsh Assembly Government's commitment to sustainable development. Biodiversity conservation should be integrated into area and national spatial planning through the development of a spatial expression of the Wales Environment Strategy to ensure cohesion and continuity between the spatial environment strategies being developed at an area level. These strategies should consolidate, build upon and link existing work relating to local biodiversity action plans and landscape scale management initiatives.

5.8 It is important to understand the relationship between biodiversity per se, key species conservation practice and delivery of ecosystem services. Key species conservation delivers both the cultural services associated with the species, and a variety of provisioning and regulating services associated with land management of habitats for those species. Although it is important to reflect the value to humans of ecosystem services from biodiversity in decision-making, biodiversity is also important for its existence, non-use value. The many donations and subscriptions to conserve habitats and species worldwide, for example contributions to the RSPB's albatross campaign, clearly demonstrate that people in the UK recognise their role as custodians of the natural world, both in this country and on the other side of the planet. Adopting a narrow focus on the productive potential of nature threatens to weaken the delivery of critical, cultural, health and educational benefits the natural world provides. This must be recognised and accounted for in policy making. Ecosystem service arguments must compliment ethical and scientific reasons for conservation and recognise the additional intrinsic value of nature beyond the benefits human society derives. Defra's new Ecosystem Approach Plan reflects the need to capture these values. It is too early for it to have gained much traction in decision-making, though it has already spawned several relevant projects, such as to estimate the value of the UK BAP and Environmental Stewardship.

5.9 Achieving the 2010 targets necessitates a step change in funding levels to nature conservation. Estimates point to an annual UK shortfall of £27 million in habitat action plans and a major shortfall of £300 million for actions in relation to widespread species targets (see 5.4 above). For the marine environment, the Impact Assessment of the draft Marine Bill contains some estimates of funding requirements for establishing a network of Marine Conservation Zones. Work in this area is on-going, but evidence suggests a requirement of around £15 million to establish Marine Conservation Zones and an additional £5 million per year for effective inshore fisheries management. Such an annual increase in expenditure of around £350 million per year represents only 0.06% of current Government expenditure.

¹ Environmental Audit Committee, Twelfth Report of Session 2007–08, *Greener homes for the future. An environmental analysis of the governments house building plans*, HC 566.

² Environmental Audit Committee, Twelfth Report of Session 2007–08, *Greener homes for the future. An environmental analysis of the governments house building plans*, HC 566.

6. RE-INVIGORATE THE BIODIVERSITY ACTION PLAN

6.1 From 1995, action plans with clear targets were produced for most of the 575 priority species and all of the 45 habitats. “Lead Partners”, including NGOs, were given responsibility for reporting and co-ordinating action. This approach galvanised a great deal of positive action and has helped to turn around the fortunes of some of our most threatened wildlife eg corncrake, Deptford pink and large blue butterfly.

6.2 More recently, the UK BAP has lost its way. A review of the priority list was initiated in 2004 and concluded in 2007, with 1,149 priority species and 65 priority habitats listed. Progress on defining action and identifying how this will be taken forward has been painfully slow. There is no clear timetable for developing actions and targets for the new habitats, and mechanisms to deliver species through broader habitat groups are still being developed. The review has taken more than 1,500 days and there are now less than 940 days to the end of 2010. We need to focus on catalysing action.

6.3 We need to encourage more targeted conservation action at a local level. For example, as joint Lead Partners for the Black Grouse under the original BAP the RSPB and the Game and Wildlife Conservation Trust have worked to co-ordinate black grouse conservation on the ground. This bird requires a mosaic of forestry and moorland habitats. It cannot be easily catered for by a generic habitat based approach. Work is undertaken via a series of regional partnership projects (with funding and involvement from a range of organisations including the Forestry Commission and the Statutory Nature Conservation Agencies). Project officers help to co-ordinate surveys, organise management work, provide advice to site managers and landowners and/or help with funding applications depending on the local circumstances. This action works: in the North Pennines the black grouse population has been increasing at 5% per annum where advice has been taken up, compared to a 2% decrease where it has not. In Wales, the population has risen by 63% since 1997 in areas where targeted habitat management and monitoring has taken place.

6.4 Many species have benefited from this type of species recovery work, which is often part-funded by the Natural England, Scottish Natural Heritage and Countryside Council for Wales. Continued and enhanced support for this type of work will empower partnerships between NGOs and Government agencies to deliver species conservation on the ground.

6.5 We support the production biodiversity indicators as a mechanism of assessing progress. The suite of 18 UK biodiversity indicators produced by the Government includes six that are directly related to the status and trends of the components of biological diversity (species, habitats, genetics and protected areas). These indicators represent “the bottom line” against which progress should be judged. Progress against the other indicators, welcome though it will be, should not be allowed to deflect focus from what is happening to the UK’s biodiversity itself. In addition, we believe that the Government should set time bound targets for these indicators and their component parts so that assessments of progress can be transparent. (This is also the case for other indicators such as Defra’s composite “Securing a healthy natural environment” indicator, PSA 28).

Without clear positive action from the Government, the progress and momentum generated by the 2010 target will be lost.

June 2008

Memorandum submitted by The Wildlife Trusts

INTRODUCTION

1. The Wildlife Trusts welcome this opportunity to submit evidence to the Environmental Audit Committee to inform the inquiry into protecting biodiversity in a changing Britain.

2. There are 47 local Wildlife Trusts across the whole of the UK. We are working for an environment rich in wildlife for everyone. With 765,000 members, we are the largest UK voluntary organisation dedicated to conserving the full range of the UK’s habitats and species whether they be in the countryside, in cities or at sea. We manage 2,200 nature reserves covering more than 80,000 hectares; we stand up for wildlife; we inspire people about the natural world and we foster sustainable living. www.wildlifetrusts.org

3. Given our extensive engagement at all levels of the BAP process we are well placed to respond to this inquiry. At a UK and national level, we represent The Wildlife Trusts on the UK Biodiversity Partnership Standing Committee, the England Biodiversity Group and a wealth of other country/specialist groups including the Wildlife and Countryside Link Biodiversity Group. Through our roles as lead partner for a number of BAP species, Charing Regional Biodiversity Forums and hosting a significant number of Local Biodiversity Action Plan coordinators coupled with our engagement in virtually all LBAP processes we contribute significantly to both the strategic action planning and direct conservation of the UK’s biodiversity. Locally, Trusts are also engaged in 146 Local Strategic Partnerships and more than 62 Local Site partnerships. In both cases, they take a leading role in more than 25% of these.

4. The Wildlife Trusts recognise that the pressures upon our wildlife have continued to increase and realise the ramifications of climate change could be catastrophic for UK biodiversity. In order to avoid the large-scale biodiversity losses that climate change could cause in the UK, we believe the future of wildlife conservation is through taking a landscape-scale approach. To this end The Wildlife Trusts have developed A Living Landscape, an aspirational but realistic vision for biodiversity conservation (attached).³ We are involved in more than 100 Living Landscape schemes across the UK and want to see policy, incentives and regulation to support their delivery. By rehabilitating degraded habitats and greenspaces in town and countryside we can reconnect the remaining biodiverse hotspots scattered across the UK, creating a dynamic landscape capable of supporting the changes wrought by climate change.

5. The Wildlife Trusts are also aware of the increasing demands being placed on our marine environment through over fishing, development and climate change. Marine conservation within the UK is decades behind our terrestrial approach with only 0.001% of our seas being highly protected. We are calling upon the UK Government and devolved administrations to publish a Marine Bill which will ensure that an ecologically coherent network of Marine Protected Areas are designated. In order to fulfil the UK's international commitments and achieve the Government's vision of clean, healthy, productive and biologically diverse oceans and seas, it is necessary to designate more than just a handful of small, isolated sites. Rather, the aim must be to build a wide-ranging network of sites that represents the full range of habitats and wildlife in our seas. For the network of sites to be ecologically functional, it must be designed to provide connectivity between sites—in other words, MCZs must be an appropriate distance apart to facilitate movement of larvae (and in some cases adults) between sites. This will allow the sites to support each other, as well as helping to replenish the wider sea.

6. While our response to this inquiry is focused primarily on policy in England, the principles are common throughout the UK.

SUMMARY

7. The Wildlife Trusts are concerned Government is not on course to meet its target of halting biodiversity loss in the UK by 2010. We believe the natural environment needs to be an underpinning feature across all Government departments and that a landscape scale approach to conservation should be adopted. While Defra has taken positive steps to address landscape scale conservation through its work on ecosystems, we are concerned the same commitment is not being recognised or addressed across other departments and broader policy. We want to see a fundamental shift across government to recognise the importance of the natural environment to our quality of life and in our response to climate change. The Wildlife Trusts believe the natural environment should be at the heart of the UK's climate change adaptation framework.

GENERAL COMMENTS

Biodiversity Trends

8. Whilst certain priority species have seen modest increases in population size, and in some cases have successfully expanded their geographic range (e.g: otter *Lutra lutra* and bittern *Botaurus stellaris*), The Wildlife Trusts are concerned that we are still seeing significant declines in biodiversity. Since 1997 the number of species targeted for conservation action by the UK Biodiversity Action Plan has more than doubled from 577 to 1,149. Furthermore, declines are not just limited to rare species. Increasingly we are seeing a decline in scarce species at a county level, which won't necessarily be picked up by national monitoring measures.

9. In addition, the range and extent of natural habitats within the UK continues to decline, with remnant areas experiencing fragmentation and isolation to such a degree that their long term viability cannot be assured.

Monitoring

10. The effectiveness of biodiversity monitoring varies across the UK, affected by the availability of baseline data, resources and the processes used. Currently monitoring systems are not integrated, making it difficult to achieve a comprehensive picture of the changing state of biodiversity in the UK. At present there are a number of systems which do not necessarily or consistently feed into one another. For example the National Biodiversity Network (NBN), Local Records Centres, LBAP monitoring via BARS, the Observatory Programme launched by Defra. This can result in a misrepresentation of the UK's biodiversity status.

11. We believe there needs to be comprehensive UK coverage of Local Records Centres supported by a sustained allocation of resources, coupled with the introduction of standard methods aimed at simplifying and encouraging regular reporting.

³ Not printed.

12. Habitat opportunity maps can provide local, regional and national government with vital information to support a robust, climate-proof, long term, landscape-scale vision for the benefit of biodiversity, people and the economy. The Wildlife Trusts believe we should take this spatial approach to demonstrate our aspirations and ensure it is imbedded within planning policy and decisions.

13. With existing biodiversity indicators being heavily biased towards rural species and communities, their use as a tool for measuring relative gains and losses is limited. We want to see the development of indicators which provide more comprehensive measures. In particular, we believe completing the habitat connectivity-index indicator is an urgent priority.

14. We were pleased to see the inclusion of National Indicator 197: Improved local biodiversity through the positive management of Local Sites, within the national suite of indicators for local authorities and their partners. Through our experience of engaging with, and influencing Local Area Agreements we know how important this indicator could be in focusing resource and effort on improving biodiversity. We now want to see it recognised and promoted nationally and through the regions as a priority for inclusion within Local Area Agreements.

Factors contributing to biodiversity loss

15. The pressures causing or contributing to biodiversity losses in the UK are extensive. The impact of these pressures is resulting in habitat destruction, degradation of quality, and isolation of remnant areas.

Agriculture

16. In 2000, over 75% of land in the UK was dedicated to agricultural production. Across the EU, farmland supports over 120 vertebrate species of European Conservation Concern, a number significantly higher than any other habitat, highlighting both the conservation importance of the land and the vulnerability of these species. The industrialisation of agriculture had a universally detrimental impact upon ecological interactions, with few fragmented areas of good quality habitat surviving. The Wildlife Trusts recognise the efforts made by the Government to increase ecological diversity on farmland, but believe the following concerns need to be addressed:

- There is insufficient resource. There needs to be further reform of the Common Agricultural Policy (CAP) with modulation from Pillar 1 to Pillar 2 to support agri-environment measures.
- Cross compliance and Entry Level Stewardship measures need to be revised to provide increased connectivity and permeability, in particular to compensate for loss of set aside.
- Higher Level Stewardship (HLS) is currently being used to deliver too many objectives, with the result it now focuses primarily on the maintenance of existing habitat.
- HLS targeting needs to prioritise Local Wildlife Sites and habitat restoration schemes to ensure it supports biodiversity need.
- Currently there is a missing mechanism within land management schemes that prioritises restoration and re-creation of the natural environment.
- In the current climate of high-commodity prices, pressures on land use for food and fuel will be intense and agri-environment will need to be modified to ensure it provides an attractive and competitive business option for farmers.

17. Further policy recommendations for biodiversity in agriculture are outlined in the attached Wildlife and Countryside Link report: Beyond the Pillars.

Development

18. Inappropriate and unsympathetic development continues to place pressure upon biodiversity. The Wildlife Trusts do not consider growth and conservation to be mutually exclusive. However, the benefits of ecosystem services are generally undervalued and misunderstood by planners and unfortunately there is nothing enshrined in planning policy to encourage decision makers to consider the worth of biodiversity in terms of maintaining ecosystem services. We believe the planning system should ensure all new development is environmentally sustainable and delivers gains for biodiversity.

19. Recently the Natural Environment and Rural Communities (NERC) Act 2006 placed a further statutory responsibility upon local authorities to place biodiversity conservation and enhancement at the heart of decision making. In reality, the effective implementation of this and other policies varies dramatically between local authorities, with biodiversity protection still generally perceived as a peripheral “box-ticking exercise” as opposed to an integral aspect of modern land-use planning. Many local planning authorities lack in-house ecological expertise and planners do not necessarily possess the skills to make sound ecological judgements. Furthermore, pressure to meet Government targets can impose unrealistic timescales to make decisions, resulting in opportunities to secure biodiversity enhancement and re-creation being overlooked.

20. The Wildlife Trusts are concerned that the Government's current house building programme could result in further degradation to wildlife. There is no precedent of ecological excellence in development design and delivery, and therefore we cannot be confident that this round of housing growth will raise the bar. The focus for new development is very much upon climate change mitigation, with ecological impacts featuring low on the agenda as an optional extra. For example, the Code for Sustainable Homes does not have a mandatory requirement covering biodiversity.

21. High quality green infrastructure could have a significant positive impact on biodiversity by ensuring new developments are permeable to wildlife rather than presenting an insurmountable barrier. However, as green infrastructure is not currently established as a mandatory planning requirement in new development, its true potential is not being realised.

22. Preferential optioning of brownfield sites for development is causing damage to urban biodiversity interests. Many derelict brownfield sites exhibit high biological diversity of both rare and common species, while mature gardens offer wildlife havens and extensive functional connectivity. The Wildlife Trusts are concerned about the cumulative loss of biodiversity and connectivity as a result of the increased pressure from infill development and we believe gardens should be delisted from the definition of brownfield sites. We also want to see all proposed developments on brownfield sites assessed against criteria which include direct and indirect biodiversity impacts.

23. Our specific policy recommendations for biodiversity in planning are outlined in the attached briefings on Eco-towns,⁴ the Sub-National Review, the Planning Bill, and Protected Areas.

Threats to the Marine environment

24. The UK's marine environment is currently over-exploited and under-managed. Despite having a suite of targets in place for the marine environment we are still failing to meet them. In 2005, human activity was acknowledged as being the prime cause for adverse changes in marine life⁵, which continues to be the case today. Whilst many thousands of animal and plant species are found here, these species, and their habitats, are poorly protected, facing significant threats from over-fishing, pollution, habitat destruction, offshore development and climate change. These all pose a real threat to the balance and integrity of the marine ecosystem.

25. The marine environment is not sustainably managed at present, and the need for a new approach is urgent. The Wildlife Trusts want to see a Marine Bill which provides an opportunity to bridge the gap between the protection of wildlife on land and at sea, and to bring greater coherence to the planning of the many activities which take place in the marine environment. We believe the Bill should provide a coherent legislative framework to deliver the Government's stated goal of "clean, healthy, safe, productive and biologically diverse oceans and seas"⁶. This framework should be delivered through an ecosystem-based approach, placing the environment at the heart of the management of marine activities. This new approach, underpinned by the precautionary principle, must be based on an explicit recognition of the services provided by healthy marine ecosystems, including many direct economic and social benefits.

26. We welcome the Government's continuing commitment to a Marine Bill, and the wide-ranging scope of the current draft Bill. While we support the general thrust and content of the draft Bill, we have some significant concerns that parts of it (especially section 4 on Marine Conservation Zones), are weak and if left unchanged may mean the UK Government will fail to achieve its objectives for nature conservation.

Climate Change

27. The rapid changes in climatic conditions will have an enormous impact upon UK biodiversity as the speed with which environmental changes occur will outpace ecological adaptation. We therefore believe it is essential that the natural environment is placed at the heart of the UK Climate Change adaptation framework to ensure its importance is recognised throughout government.

28. We also want to ensure biodiversity is enshrined within the new duty introduced by the climate change Bill requiring local authorities to take account of climate change adaptation and mitigation within Local Development Frameworks.

29. Invasive, non-native species have had a marked impact upon UK biodiversity, and many resources have been dedicated to controlling their spread and limiting their effects upon our ecosystems. There is a need to differentiate between natural invasions occurring as a result of climate change and those introductions mediated by humans. In order to prioritise action against invasive non-natives a measure of the predicted long term impact of these species upon ecosystem function should be balanced against the potential cost and scale of effort required for control or eradication. We believe action should be targeted on those invasive non-native species where there is the highest risk, for example aquatic invasive plants.

⁴ Not printed.

⁵ Charting Progress, An Integrated Assessment of the State of UK Seas, Defra, 2005

⁶ Safeguarding Our Seas, A Strategy for the Conservation and Sustainable Development of our Marine Environment, Defra, 2002

30. We are already witnessing changes in the marine environment arising from climate change and further changes are expected. For example sea temperatures are rising and the distribution of plankton species is changing. The oceans' phytoplankton is estimated to absorb about half of the CO₂ generated by humans, making our seas as important as rainforests in mitigating climate change impacts. Thus, we strongly believe climate change makes the protection of marine biodiversity and its sustainable management even more critical.

Conservation strategies and resources

31. The problem we face with the historic approach to conservation is that designation, management and support have all been focused on a site based approach. While these sites and their protection will be essential components of future adaptation for the natural environment they will not be sufficient to maintain biodiversity into the future. We believe future policy must be formed on wider landscape issues to ensure long-term viability of our natural environment.

32. The focus of conservation efforts must be upon re-establishing a network of high quality, functional and robust habitat corridors across the landscape, reconnecting the disjointed and heavily fragmented biodiverse islands that constitute the current system of protected sites, and enable a flow of species movement and migration across the country. This aim is encapsulated by The Wildlife Trusts visionary document, A Living Landscape.

33. The Wildlife Trusts own and/or manage circa 700 Sites of Special Scientific Interest of which 80% are now in favourable condition. To date, funding for protected sites has been predominantly targeted at bringing these sites up to a favourable level. We now need to see funds targeted at maintaining these sites and to support our response to macro landscape issues such as coastal squeeze, upland management and diffuse pollution, so we can bring the remaining 20% into favourable status and ensure their sustained management for the future.

34. Funding is also needed to support the protection and management of the UK's non-statutory Local Sites. The Wildlife Trusts Survey of Local Site systems in England (2007) showed there are more than 38,000 Local Sites providing wildlife havens and connectivity across the country. This, and earlier surveys by The Wildlife Trusts have all shown lack of funding coupled with the relatively small and easily overturned protection afforded to Local Sites through the planning system are perpetuating the trends of loss and degradation inflicted on Local Sites over recent years. For example between 35% of Nottinghamshire's Local Wildlife Sites were severely degraded or lost between 1994 and 2004.

35. The Wildlife Trusts firmly support Government proposals for introducing Marine Conservation Zones (MCZs) and urge new laws to be introduced without delay. These areas will supplement internationally important sites protected under EU legislation and underpin resilient, functioning marine ecosystems by enabling habitats and wildlife to recover to a near-natural state. Highly Protected Marine Reserves (HPMRs), within the MCZs will act as control sites, helping us to understand the impacts of human activities in the marine environment. In 2001, 160 of the world's foremost marine scientists stated that HPMRs result in "long-lasting and often rapid increases in the abundance, diversity and productivity of marine organisms" and "full protection (which usually requires adequate enforcement and public involvement)" is critical to achieve the full range of benefits.⁷ We consider the Marine Bill will have failed if it does not lead to the designation of a suite of HPMRs within the network of Marine Conservation Zones.

36. A review of the green belt policy has the potential to provide improved benefits for biodiversity. The Wildlife Trusts would recommend that such a review is carried out but done so in light of adaptation policy and habitat opportunity mapping.

37. Government public sector funding for biodiversity peaked in 2005–06 at £397 million, a real-term increase of 50% over 2000–01 expenditure⁸.

38. While not necessarily competitive in the current climate, there is some funding available for biodiversity. However we believe further opportunities should be harnessed for restoration and re-creation. For example:

- Further modulation should be introduced through the CAP health check to provide sufficient funds for ongoing agri-environment support.
- Increased funds should be targeted to biodiversity conservation through mechanisms such as the "Community Infrastructure Levy" and "flood risk management" with the focus on delivering green infrastructure.
- With the UK climate change adaptation framework providing a key driver for land use policy. We believe new funding instruments focusing on restoration and recreation of the natural environment should be central to this.

⁷ Scientific Consensus Statement on Marine Reserves and Marine Protected Areas. National Center for Ecological Analysis and Synthesis, 2006

⁸ Expenditure on Biodiversity in the UK, Defra, 2005

39. The Wildlife Trusts believe that without integrated partnership working across agencies and NGOs biodiversity gains will not be achieved in proportion with expenditure.

30 April 2008

Memorandum submitted by BugLife—The Invertebrate Conservation Trust

INTRODUCTION

1) Buglife—The Invertebrate Conservation Trust is the charity that represents the needs of all invertebrate species. Buglife has 27 member organisations, including all the leading invertebrate specialist societies, and 1000 individual supporters. Buglife’s aim is to halt the extinction of invertebrates and to achieve sustainable populations of invertebrates.

2) Invertebrates are a key part of the biodiversity. 64% of all UK species are invertebrates. Invertebrates provide us with nutritional, ecological, agricultural, medical and technological benefits—for instance about half our marine fisheries income comes from invertebrate species. Invertebrates are key to the healthy ecosystem function—many of our wild flowers would disappear without insect pollination and most birds and mammals would starve. As well as providing us with many ecosystem services, their future value is not yet understood; they are increasingly used in medicine and biological pest control.

3) Invertebrates are more vulnerable to decline and extinction than other groups of organisms as they are less mobile, more habitat specialised and do not have seeds or spores that enable them to survive bad conditions. This is supported by the fact that butterfly population declines are much worse than those for plants or birds (Comparative Losses of British Butterflies, Birds, and Plants and the Global Extinction Crisis. 2004 J. A. Thomas, et al. Science).

4) Buglife undertakes key roles within the Biodiversity Action Plan (BAP) partnership. Buglife staff are active on the Wildlife and Countryside Link (WCL) Biodiversity Working Group and the Scottish Environment Link Biodiversity Task Force, and represent WCL on the Biodiversity Reporting and Information Group (BRIG). Buglife took a lead in coordinating the recent review of the BAP invertebrate list, liaising with over 350 experts, and a Buglife trustee represented all species on the Priority Review Group. Buglife currently leads on the conservation of 18 BAP Priority invertebrate species and is at the cutting edge of developing conservation activities for many of the new species on the revised list. Buglife has been actively involved with several BAP Priority Habitats, notably Saline Lagoons and the new Open Mosaic Habitats on Previously Developed Land.

1. *Is the Government on course to meet its 2010 biodiversity target?*

5) The UK is not on course to “halt the loss of biodiversity by 2010” (the EU target). It may be on course to “slow the rate of loss of biodiversity by 2010” (the UN target), but evidence for this is limited. In terms of invertebrates we are still losing biodiversity and the rate of loss appears to be steady or increasing over the last decade.

6) Unfortunately, for many groups of invertebrates it is still not possible to accurately compare how many species are increasing to how many are decreasing. Where changes in distribution have been calculated the pattern is that declining species outnumber increasing species two to one:

	<i>Species Declining</i>	<i>Species Increasing</i>
Butterflies	71%	20%
Moths	66%	20%
Bumblebees	66%	0%
Grasshoppers and crickets*	45%	28%

* based on coarse resolution distribution data that underestimates the full extent of declines

Where it is possible to analyse the changes in abundance of invertebrates the results are very concerning:

- Riverflies—66% decline since 1930s—mostly in the last 15 years.
- Butterflies—33% decline in the last 10 years.

7) The list of UK BAP Priority Species compiled consists of species that are in need of urgent remedial action. All the species on the list fit one, or more, of the following criteria; a 50% or greater decline in the last 25 years; a 25% decline in the last 25 years and the UK contains a significant proportion of the world population; internationally threatened; very localised in the UK with clear threats to its survival; or there is a substantiated extreme threat to the continued survival of the species.

8) In the recent (2005–07) review of the BAP Priority list the number of species meeting the criteria increased to 1,149 (430 invertebrates) from the 557 (about 250 invertebrates) on the original (1994–98) list. There are a mix of reasons why there has been a doubling of the number of species on this list, some of the increase is a result of better data being available now, some as a result of a more thorough application of the criteria, but some must also be because biodiversity is continuing to be lost. Only 67 of the original invertebrate species were delisted. Fifty-eight of these were delisted because of:

- improvements in knowledge—commoner than, or not as vulnerable to threats, as was thought when listed;
- increased assessment rigour—no verifiable evidence of “extreme” threat or, having established more precisely the decline rate, this did not meet the criteria (species were removed because they had declined by more than 40% in the last 25 years—less than the 50% criteria);
- extinction (five species, including the globally extinct Essex emerald (*Thetidia smaragdaria maritima*));
- taxonomy changes—considered to be a variety of another species (two species).

Only nine invertebrate species were delisted because their status had improved. For three of these it was possible to attribute the increase to action by people resulting in better habitat management.

In other words, between 1995 and 2008 only 5% of invertebrates on the UK BAP Priority list had increased to the point where they could safely be taken off the list and of these less than 2% had increased because the way we manage the countryside had improved (and one of these species is likely to be sent backwards by current set-aside loss).

2. How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?

9) The processes for setting targets and reporting progress have been effective. However, there have repeatedly been some species and habitats where it has not been possible to get forms filled in, or where statuses are not known. Underlying this is the insufficient commitment of resources by Government to improving knowledge of the distribution and status of listed species and habitats.

10) It was stated in the paper “UK Biodiversity Indicators: 2008 Update” presented to the UK Biodiversity Partnership Standing Committee on 29 April 2008 that:

“In November 2007, the Ministerial submission on UK progress against the 2010 target, summarised the message from the indicators as follows:

The assessments since 2000 generally show marked improvements compared to longer term trends (ie 10–30 years) where comparable data exist. It is likely that the 2010 assessment will be similar in outcome but more comprehensive than in 2007, thus presenting evidence of a halting and in some cases reversal of biodiversity loss, and stable or increasing investment and engagement of people.”

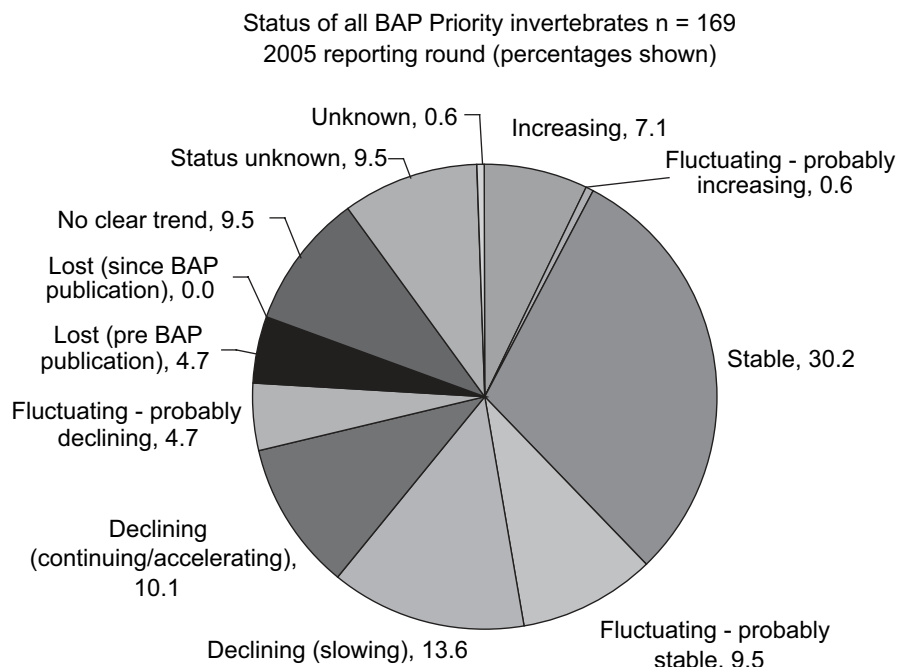
11) The set of indicators used are less than ideal, although they do represent the best datasets available. However, in our opinion the method used to assess the key indicator relevant to invertebrate biodiversity—UK BAP Priority Species—is highly misleading and results in the misleading assessment indicated in paragraph 10.

11.1) Comparatively few of the indicators are actual measures of biodiversity (status of habitats, species and genetic resources). Even in the first focal area “Status and trends of the components of biological diversity” indicator 6 which relates to the area and status of protected areas is only loosely connected to the status of components of biodiversity (see paragraph 30 for the reasons). In addition, the assessment of “Favourable” includes “Unfavourable—recovering”, but a site can be listed as “recovering” without there being any evidence that the status of the interest features is actually improving.

11.2) The key indicators that are directly related to the status of British invertebrates are “Butterflies of the wider countryside”, “Specialist butterflies” and “UK BAP Priority Species”. These represent bottom line assessments of what is really happening to species in the UK. The index for “Butterflies of the wider countryside” shows no clear trend at the moment although recent data indicates a possible decline. The index for “Specialist butterflies” remains depressed and shows no sign of recovery. The status of “UK BAP Priority Species” is given a positive assessment, but we believe that this assessment is misleading. The assessment is based on the changes in the status of 188 species and one species-group for which assessments were available in both 2002 and 2005. Of the 189 species or species-groups, 17% were assessed as “increasing” in 2005, up from 13% in 2002, while 43% were assessed as “declining or lost” down from 50% in 2002. Hence, the overall movement in the indicator was assessed as positive. It is clearly good news that slightly fewer species are declining and slightly more species are recovering, but a positive assessment on this basis only represents progress towards “slowing the rate of loss of biodiversity by 2010”. The UK is signed up to the EU target of “halting the loss of biodiversity by 2010”. As there are still more than twice as many BAP Priority Species declining as are increasing, we cannot conclude that we are currently “halting” the loss of species. The sad fact of the matter is that if the only change between assessments is that a number of species

on the BAP list go extinct, then the proportion of species declining will fall. It would be theoretically possible to give a positive assessment based on the current methodology at every stage until all the species are extinct. Hence, we believe that “UK BAP Priority Species” indicator should be assessed as negative.

11.3) If you are a BAP listed invertebrate then you are less likely to be increasing than if you are in another taxonomic group. In 2005 only 7.7% of invertebrate species were increasing or probably increasing.



This is further evidence that invertebrate biodiversity is faring particularly badly under current conditions and more resources need to be urgently allocated to conserving BAP species and their habitats if we are to slow the loss of biodiversity to the point where it is halted.

12) The targets set are generally rigorous. More resources are required by those acting on the ground to initiate and undertake monitoring action so that they are able to report accurately, the quality of data for many species is poor and it is missing altogether for around 20% of species. It is essential that targets are now set for the new BAP Priority Species so that all concerned can be clear what we want to achieve for these species.

3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

13) Effectiveness can, to some degree, be ascertained from the results. However, there is no scientific control, so we do not know what would have happened to the species and habitats on the UK BAP list if they had not been listed. While the number of species that have been “turned around” by the BAP process is very disappointing it is highly probable that had it not been for the BAP process there would have been an even greater number of extinctions and declines. Moving a species from endangered to safe can take several years as it is necessary to establish its status, understand its ecology, identify the threats, identify the solutions and implement these solutions. There is no doubt that the BAP process has very significantly raised the profile of a great many invertebrate species and has focused attention on their conservation needs. There are many conservation issues that society would be less aware of were it not for the BAP.

14) The Government commitment to delivering all of the actions set out in the UK BAP plans has been disappointing. Amongst Government bodies only the Environment Agency took the process seriously, identifying, costing and prioritising all the action attributed to them. The Statutory Nature Conservation Organisations failed to adopt the actions and targets in a systemic fashion and their contribution has relied on the piecemeal involvement of individual officers and small central teams. Biodiversity targets set for the Government landholding appear to have been quietly dropped.

15) At a local level the delivery of invertebrate species action has been disappointing due to a paucity of knowledge and motivation. A major failing has been that (with one or two exceptions) the Local BAP has not been incorporated into the local development plan or the workprogrammes of other council departments.

16) “Conserving biodiversity—the UK approach” does address the need to have a joined-up approach. Although it provides no solution to the fact that devolution has significantly increased the work burden on NGOs and specialists through the multiplication of fora and initiatives—the expert knowledge needed to deliver biodiversity is now stretched dangerously thin. Action to deliver conservation benefits for the new BAP listed species and habitats is not yet in evidence, particularly in Scotland and Wales.

4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

17) The ecosystem approach initiatives have yet to produce tangible benefits. The principle that conserving biodiversity should be cross-departmental and integral to policy making is important, so, in this regard, the initiatives should be welcomed. There is concern that an “ecosystem approach” may be interpreted as meaning that we no longer have to worry about the fate of individual species or habitats. This is fuelled by incidents such as the speech given to the UK Sustainable Development conference on 6 March 2008 when Hilary Benn said that Defra’s approach will be “valuing ecosystems rather than the components of ecosystems”. This fails to appreciate that ecosystems are but the sum of their components and risks giving the impression that the components of ecosystems (species and habitats) are only of any value if they are of proven economic value, rather than being of intrinsic value in themselves. The millions of British people who support the conservation of wildlife understand that life on Earth has a greater value than simply being useful.

5. What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?

18) Existing and continued habitat fragmentation and poor management of sites for their biodiversity interest are the two biggest drivers. Other key drivers include agricultural intensification, nitrate deposition, abstraction, sea level rise and pesticide pollution. The impacts of some potential drivers such as EMF radiation, pharmaceutical pollution and light pollution have not been adequately assessed.

19) Implementation of the Water Framework Directive is key. It needs better stakeholder involvement; to incorporate small waterbodies such as ponds and ditches; a clear commitment of new resources.

6. Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

20) Until there is evidence of this being put into action then it will not be possible to assess how effective or well resourced it is.

7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

21) The impacts of climate change on invertebrate species will be enormous. Despite this, in the short to mid term the greatest risks of extinction and decline come not from climate change itself, but from existing threats, particularly habitat fragmentation, which will compound climate change.

The following report is a good synopsis:

Conserving biodiversity in a changing climate (Hopkins, et al. 2007 Defra/UK Biodiversity Partnership).

The number one priority is to “Conserve existing biodiversity”.

22) Informed, intelligent, evidence based, monitored and adaptive management of existing habitats will enable us to foster conditions on sites that could retain species for many decades beyond the point that they would have become extinct. Thereby enabling much more time and opportunity for them to colonise new sites and adapt to the changing environment.

23) There is more research needed into the dispersal abilities of a range of invertebrate species so that their future can be planned and interventions made if required. To the thousands species of flightless beetle, snail, etc. an obstacle like the M4 is equivalent to the width of the English Channel (but with more traffic). How will we ensure that such barriers will not result in species extinctions?

8. *Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

24) The policy (PPS9) is well worded, however, in practice (including with “eco-towns”) it is failing to provide sufficient protection to biodiversity; reasons include failure to:

- protect, or exclude from development, key sites for BAP Priority Habitats and invertebrate biodiversity,
- identify key sites or undertake adequate invertebrate surveys,
- place sufficient weight on UK BAP Priority and Red Data Book listed species, and
- shift development onto alternative sites when important biodiversity is found.

Data on the distribution of biodiversity should be generated by Local Authorities as part of spatial planning.

25) The Biodiversity Duty (NERC Act Section 40) is too weakly worded to be effective or enforceable. Legally “have regard.....to the purpose of conserving biodiversity” is interpreted as “think about conserving biodiversity” there is no requirement for action and it is outweighed by almost any other perceived duty or objective. In the case *Regina (Buglife—The Invertebrate Conservation Trust) v Thurrock Thames Gateway Development Corp*; WLR (D) 59 Mr Justice Mitting described the duty as “a weak one”. The Biodiversity Duty must be revised and strengthened so that it is enforceable and hence given sufficient regard by public bodies, it should also be extended to cover private bodies to prevent them destroying priority biodiversity, eg prior to it being considered by the planning process.

26) The brownfield development targets are damaging biodiversity, there are numerous examples of key brownfield sites and priority biodiversity lost to development (eg Ferry Fields, Tilbury, Essex and Coventry Colliery and Homefire Plant).

27) If biodiversity was adequately protected then its conservation would not need to be addressed via a review of greenbelt (or perhaps more to the point greenfield) land. There is no doubt that much “greenfield” is in fact sterile, ploughed, brown land that contributes little to biodiversity conservation. If safeguarding key brownfield sites of importance to biodiversity meant that there was insufficient suitable land remaining to meet development aspirations then the issue of where this could be located would need to be addressed.

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

28) No and no.

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

29) Elliot Morley introduced a new Code of Guidance on SSSIs in 2003 stating that the purpose of SSSIs was to “safeguard for the present and future generations the diversity and geographic range of habitats, species and geological features”. Unfortunately, many endangered invertebrate species are currently not “safeguarded” because the SSSI system was developed in the 1940s and is based on bird and plant habitats. Dragonflies and butterflies are the only invertebrates that have established scientific criteria. The section of the SSSI selection guidance relating to other invertebrates is not clear enough to facilitate site selection. The criteria for selection of SSSIs for invertebrate interest must be revised and a new set of SSSIs developed to secure populations of endangered invertebrates.

30) Even when endangered invertebrates do happen to occur on an SSSI they are in most cases not mentioned in the formal “interest features”. The approach taken by NE and SNH is that anything not specifically mentioned is not protected by the legislation; is not part of the site’s objectives; and is not part of the assessment of “Favourable Condition”. Hence, being an endangered invertebrate on an SSSI is often a hollow protection. Even when a threatened species is mentioned on the designation document the condition monitoring does not usually directly assess the status of the species—they are well documented cases where the assessment for an SSSI unit is “Favourable” despite the extinction on the unit of the species for which it was designated. CCW have taken a much more inclusive approach to this issue in Wales. To safeguard endangered invertebrates the lists of interest features on SSSIs must be updated, and condition monitoring must include a measure of the status of the listed species. The resource implications of this need to be met by central government.

31) It is essential that the Marine Act contains provisions that will ensure that a network of Marine Conservation Zones are established around the UK, that the tools are there to provide sufficient protection to key habitats and species and that the resources are in place to assess the effectiveness of conservation measures.

32) There has been little progress to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain. Habitat Action Plans have broadly failed in their targets to deliver more habitat. The loss of set-aside will result in a significant backward step. Much more work is needed.

6 June 2008

APPENDIX 1

ANALYSIS OF REASONS FOR DELISTING INVERTEBRATES FROM THE UK BAP IN 2007–08

Examples of species delisted by the BAP process include; Edmond's ground beetle (*Tachys edmondsi*), which is no longer considered to be a species distinct from its close relatives; the Moccas beetle (*Hypebaeus flavipes*), which is still only known from one site but there is no immediate threat to its habitat; the ground beetle *Amara strenua*, which has only declined by 41% in the last 25 years and hence fails to meet the criteria; the Medicinal leech (*Hirudo medicinalis*) which has now been refound in a number of areas where it was thought to have gone extinct; and the Essex emerald (*Thetidia smaragdaria maritima*) is globally extinct). Only nine invertebrate species were delisted because their status had improved. There were only three of these for which it was possible to attribute the increase to action by people through better habitat management: the fortunes of the Flixweed leaf beetle (*Psylliodes sophiae*) took an upturn when the foodplant did very well on arable set-aside in the Brecks, and the Silver-spotted skipper (*Hesperia comma*) and the Adonis blue (*Polyommatus bellargus*) have flourished due to changes in chalk grassland grazing levels. The species which increased without explanation were Waved carpet (*Hydrelia sylvata*), Square-spotted clay (*Xestia rhomboidea*), Scarce merveille du jour (*Moma alpinum*), Double-line (*Mythimna turca*), a ground beetle *Badister collaris* and a cuckoo bee *Nomada ferruginata*.

Extinct species removed from list:

- Pea bee *Andrena lathyri*
- A mayfly *Heptagenia longicauda*
- Large Copper *Lycaena dispar*
- Small lappet *Phyllodesma ilicifolia*
- Essex emerald *Thetidia smaragdaria maritima*

Witnesses: **Dr Mark Avery**, Director of Conservation, **Mr Simon Marsh**, Head of Planning and Regional Policy, RSPB, **Mr Matt Shardlow**, Director, Buglife—The Invertebrate Conservation Trust, and **Mr Matthew Jackson**, Head of Policy, Planning and Wider Countryside, The Wildlife Trusts, gave evidence.

Q85 Chairman: Good morning. Welcome. We are very grateful to you for coming in. You know who we are and we know who you are, so I will dispense with any introductions or formalities. I think you are all familiar with this Committee from previous evidence sessions. Perhaps I could kick off with a general question. I think you all take the view that Britain is not going to meet our 2010 target for biodiversity. It was quite challenging. Is it surprising that that is the case or was it always likely that we would not meet it?

Dr Avery: You are absolutely right: it is not surprising. I would have to say, looking back a few years, that NGOs were amazed that governments signed up to this target, signed up across the world to a target of slowing biodiversity loss but in the European Union to halting it. We are not surprised. It was challenging. What we do is to look at the Government's intent and actions through the last few years, to judge whether the UK Government is serious about doing something about biodiversity, and there we would have to say the picture is mixed. There are some good things and some things we would like to see a lot more action on. From the

RSPB's point of view, once we get to 2010 and we have not met that fairly challenging target, we believe that we cannot just leave it and walk away from it. Biodiversity is important to our quality of life. The maintenance and enhancement of biodiversity ought to be one of the things by which we judge whether a nation is civilised and cultured, we would say. We would like to see something that replaces the 2010 target, maybe going on to 2020, and that certainly ought to have an element of biodiversity protection and, we would say, enhancement. In a rich, scientific, knowledgeable nation like the UK surely creating more biodiversity to enhance the quality of life of people is something that we ought to be doing. That is one of the things by which we should judge ourselves. I do not know whether my colleagues would like to add something.

Mr Jackson: We thought it was a very challenging target and any hope of achieving it would have required buy-in not only from Natural England and Defra but across the board. It has done a lot in terms of raising the profile, in terms of setting the scene, but there has not been particular focus on climate change adaptation and how that interacts with

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biodiversity across the board. You will have seen from our submission¹ that that is one of the things that concerns us greatly about how we go forward, but the point is made by the RSPB about not looking at 2010 as the cut-off, particularly given that it seems increasingly unlikely that the target will be met. I think there is scope now for looking at what makes a sensible target for going forwards, and halting the decline and reversing the decline is where we would put our money.

Mr Shardlow: Invertebrates, which make up 64% of biodiversity in terms of the species in the UK, have always been somewhat at the bottom of the list of wildlife conservation priorities. The BAP process and Convention have thrown a lot more attention on what is happening to that critically important part of biodiversity, and that is to be warmly welcomed. In terms of the follow up, we have been fairly roundly disappointed by the rather meagre resource that has been put into monitoring and researching and developing actions for those species and implementing those actions. There are incredibly good examples, particularly in terms of birds—and I think of things like stone-curlew and bittern—where almost inevitable extinctions have been turned around by focused activity involving partners with funded resources put towards those ends. In terms of invertebrates, there are relatively few cases where we can see that adequate effort has been put in, and for fairly modest resources they could have made much more progress in terms of halting the decline of quite a significant number of those species. Thirty-odd per cent of those species are still declining on the BAP list compared with only 7% of them which are going up. That is not a result to be particularly proud of. Our assessment would have to be based on whether reasonable resources have been put in over that time period and consecutive ministers have failed to adequately resource the BAP process.

Q86 Chairman: I do not know whether you have read the minutes we took last week from Natural England² but frankly I was a bit disappointed. You say that we need more buy-in from Natural England to achieve 2010 target. That is still true if you roll the period forward 10 years. It is still just as important. I was disappointed, to put it mildly, by the responses we were getting.

Mr Jackson: Yes. I think we would agree with you. I have only seen a summary, unfortunately, as I have been away. Particularly on this issue about looking forwards and thinking about targets, there has been a whole raft of extra additions, both in terms of BAP habitats and species, but really they are not adding anything. They are the bits that were missing in the first place. Particularly for a range of invertebrates, there was a whole chunk there that was not covered. It is slightly worrying to hear Natural England saying, “No, we have our targets and we should not be looking for further targets.” Those targets do not cover the habitats and species we have been talking about, are not particularly ambitious in terms of even achieving halt. Natural England were rightly

proud of the ground they have made in terms of looking at SSSIs and bringing them into favourable condition, but you have to remember that the SSSI series is a very small subset of the habitats that are out there, and when we talk about getting them into favourable condition we are really talking about reverting them to the state they were in (in the 1940s and 1950s in some cases, and the 1970s and 1980s for some of the later ones) when they were designated. To rest too much on your laurels at this stage and say they have achieved an awful lot in terms of driving that target forwards is not going to be enough, I am afraid, to halt the loss of biodiversity.

Q87 Chairman: Taking about them being more ambitious and not just halting the loss but reversing it and achieving enhancement—which seems to me a very reasonable ambition for a country which is both work prosperous and also reasonably well informed about these issues—are there other countries that are affected that are ahead of us? Can you identify other countries where enhancement is now being achieved?

Dr Avery: One example from which the UK could learn would be the Netherlands. In terms of habitat creation and establishing a network of natural sites, of corridors through the landscape, the Dutch government has committed to spend quite a lot of money doing that, and they are doing it, so it is very obvious in the Netherlands. The Netherlands is quite an engineered landscape, so maybe they are more accustomed to looking afresh and putting things in place if they want them, but they are setting up new areas of wetlands and woodlands and they are connecting areas of existing heathland and woodland by natural corridors. That is a defined area of policy by the Dutch government. The UK could have done that too. When John Major and others came back from the Earth Summit there was a lot of enthusiasm, and this was under a Conservative administration. The whole of the Biodiversity Action Plan process was set up with immense enthusiasm and a lot of leadership from government. That is not a party political point, because I would say that then Labour ministers, such as Michael Meacher, carried that process on with equal enthusiasm. But at that time part of the reason for setting targets and having plans was that people, industry, some politicians came up to major conservationists like ourselves and said, “What is it that you want? You seem to want everything. You need to set priorities.” The Biodiversity Action Plan process allowed government and NGOs, representing a large slice of the British population, to come together and define what winning at nature conservation would look like. That was in terms of setting targets for species but also for habitats. We would say, looking at progress since that period, that there has been a lot more progress on meeting species targets—although that is uneven, in that there has been more progress in some areas than others—but where we have really fallen down is in doing what the Dutch have done, which is recreating habitats, putting back some of the wild areas that we have lost, in an imaginative way. Certainly, as we

¹ See Ev 36.

² See Ev 10.

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look forward over the next few decades, with climate change everybody is seized by the fact that species will want to be moving across the landscape. Where we see species now will not be where they want to live in 20 or 40 years time. If nature is going to respond to climate change, then we need to do things like create more stepping stones and more corridors through the landscape. We ought to be doing that anyway, but we certainly ought to be doing it looking forward because that will make nature more resilient to the threats that are piling up in the future.

Mr Shardlow: Another thing to note from the Dutch approach is that fundamental to their culture of nature conservation is science and monitoring. It is not viewed—as it is sometimes in this country—as an afterthought that will happen if there is a bit of money left at the end or if the members of the organisations at this end of the table can go out into the field and do a bit of work for free. There is a lot of scientific weight behind a lot of the conservation action in the Netherlands. In terms of the UK, there is a group set up as part of the process for the Biodiversity Research Advisory Group, which was set up to establish what the research needs were for biodiversity delivery in the UK. The wildlife NGOs, as part of the Wildlife and Countryside Link partnership, were part of that but became frustrated with the inability in the group not only to tackle the detail of what was needed in terms of research—looking at these individual species and habitats, looking at what the blockages were there for delivery—but also their apparent inability to influence NERC and other funders to channel the money towards the research that was necessary. Eventually the Wildlife and Countryside Link resigned from that group, in protest at its lack of perceived delivery.

Dr Avery: May I add one more thing: thinking back to the leadership that was given by John Gummer and Michael Meacher in the early stages of that process, I do not think it is unfair to say that that is lacking; that there is less evident enthusiasm from ministers for the UK or in England for us to do a great job for biodiversity. It is quite difficult to imagine a minister making a speech in favour of the dung fly, which is something John Gummer did very eloquently.

Mr Shardlow: Dung beetle.

Dr Avery: I remember the speech but not the species! It is still difficult to imagine a minister doing that and we would be worried that, at a time when economics are more difficult, providing for biodiversity always comes under a squeeze. If anything, the way we tend to be looking at biodiversity in government now is looking at how much use biodiversity is for us, looking at ecosystem services, carbon storage, flood alleviation. I am not knocking that—before other committees we have said how important that is and I think that is a valuable extra reason for conserving biodiversity—but taken to an extreme, it leads you to a position where you only value biodiversity that is of direct benefit to us as people, so you get to a position where you are saying, “Ask not what Defra will do for biodiversity because we are still trying to figure out which bits of biodiversity will do

something for us.” That is quite a different place from where we were 15 years ago, and we need a bit of rebalancing of enthusiasm for the natural world. If the song of the skylark disappeared from the countryside, we would not be economically worse off. I could not argue that, but I think the quality of many people’s lives would be significantly reduced. That is a public good that government should be helping to provide.

Chairman: I am grateful to you for this reminder. I was a minister at DoE when the Biodiversity Action Plan was being drafted in 1994, when there were many meetings with civil servants on exactly that issue.

Q88 Colin Challen: It sounds to me like biodiversity is now being treated like Greek classics or Latin, in that it is seen now to be totally superfluous to the needs of modern society. I am wondering how effective these plans and strategies can be compared to policy like set-aside. Did that make a bigger contribution than having these smaller, more discrete policies on biodiversity? Somebody once said that commerce always trumps conservation. I think that follows on from your remarks implying that having these strategies on biodiversity will never really compete with the sheer pressure of agribusiness. Do you think they can ever really do the job comprehensively?

Dr Avery: I would first like to say that I do remember a little bit of Latin or Greek but I would admit it is not that much use in my life; but biodiversity is absolutely of value to millions of people’s lives. One of the sad things is that when politicians meet representatives of NGOs, they are always amazed by how many people support our organisations but politicians do not want to please those people by their actions quite enough. We would like to see more action. One way of asking your question is: Will biodiversity policies do the job on their own? They will not. We need environmental thinking/sustainability thinking to be threaded through everything that government does. All public policies have to take account of the environment and biodiversity: the planning system, economic systems, fisheries all need to have green cloak around them if we are going to maintain biodiversity. But we do need some money and some policies that are for biodiversity alone, to do the job for biodiversity. There is not quite enough of that money and there certainly is not funding for the type of habitat recreation approach that, as I have said, the Dutch government follow.

Q89 Colin Challen: I am not quite sure from what you were saying before whether you thought it was a good or a bad thing. Is harnessing the eco services agenda good or bad for the biodiversity agenda per se? I get the idea that in Holland they are successful because they are creating protected recreated habitats, which could almost, I guess, become nature’s tourist attractions for all these different kinds of life, but the rest of it is simply going to go along the usual pattern for industrialisation of the countryside.

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Dr Avery: We can do much better than that. Compared with the Dutch, we have much better agri-environment schemes which are better designed and have more impact. There is a danger that they are not going to have a big enough impact and they could be a bit better designed—so they are not perfect—but they are miles better than, for example, the Dutch government have put in place. However, we have not put in place that habitat recreation, and we need to both. The Dutch have fallen down badly on the farmed landscape, where we are doing a bit better, but I would say we are falling down badly on recreating natural habitats, where the Dutch are doing rather better. Surely we should be doing both. We have to do both if we are going to have an impact across the range of common species ones.

Mr Shardlow: I interpret your question, in part, as what use is the BAP process, what use is planning? A mistake made occasionally is that people look at Biodiversity Action Plans and think they are a delivery mechanism unto themselves. They are not. There should be an overarching pulling together of all sorts of mechanisms, such as set-aside, such as agri-environment schemes, setting the agenda for each species and habitat of what that species and habitat requires from the whole suite of delivery mechanisms we have, and establishing an agreed target amongst government and NGOs through the BAP partnership that everybody is working to achieve using the mechanisms that are available.

Mr Jackson: You seem to be asking: Is there a lot to be gained from a lot of these other mechanisms that are not necessarily biodiversity driven? There is a lot in terms of ecosystem services; for instance, a recognition of the importance they play in their own right, as Mark was saying, is very useful. It sets a very important message out there, which is that there are systems that are fragile and on which we depend. There may be a lot of biodiversity gain which could come from that sort of approach. On the other hand, set-aside—which was the example you used—was not intended as a biodiversity delivery mechanism, which is one of the reasons it has not delivered in all those its for biodiversity. I think there is quite a lot of set-aside out there which is not doing an awful lot for wildlife. Just latching on to other mechanisms, I am afraid, is not enough. That comes back to what Matt was saying about the fact that you do need a mechanism which focuses on biodiversity and then goes out from there and looks at those other agendas—the spatial planning agenda we have been talking about; the ecosystems services agenda we have been talking about—and identifies where those mechanisms can provide for those but also identifies where there are gaps, where there are things which are not being covered by those mechanisms, and that hopefully leads us on to looking at new mechanisms to provide them.

Q90 Colin Challen: Looking at the needs of priority species and habitats recently added to the priority list, is enough being done there? Are the resources being made available?

Mr Shardlow: Each country is charged with delivery under the BAP process. Essentially, at the UK level, we have set the new list, we have set the priorities, and they have been agreed and signed off by ministers in each of the four countries—which we welcome, obviously. The next step, we think, has to be looking at those species and habitats and establishing the new round of targets and how the actions of those species are going to be set and then delivered. I would describe it as still a bit slow. We have recently agreed through the England Biodiversity Group a strategy for taking forward species and habitats, but, as yet, we do not have, for instance, clear deadlines as to when targets are going to be set for the new species and new habitats. They are talking about integrating the needs of species through habitats—which again we welcome, as long as it is recognised that that in itself is not going to deliver all the requirements of the species and, in particular, we can think about the points we were making earlier about research and monitoring. You cannot deliver monitoring for a species through a habitat action plan; there have to be some separate lines of activity to make sure that we are checking on how that species is progressing towards the agreed target. That is all to come. I hope that in the next year or two we will be seeing more action from the Country Biodiversity Groups and from the relevant statutory agencies towards developing that. Worryingly, there is still very little talk of resources being allocated to that process and resources were very tight during the review process as well. The UK BAP process was done on a shoestring. Some of the bits towards the end of it would have been much improved with further rounds of consultation but there just were not the resources there to do it. Having said that, we have a good list of BAP species, we have a good list of BAP habitats, and it is a list that we should all congeal around, working out where we want to go and how we are going to get there.

Dr Avery: It is a bit unfortunate that sometimes it seems as though civil servants feel there are just too many of these threatened species. We would agree that there are too many of them but it is hardly the species' fault. I do not know whether members of the Committee remember the film *Amadeus*, which is about Mozart, but when Mozart plays a new piece of music to a sponsor, the criticism he gets is "Too many notes." We sometimes feel that we are being told that there are too many priority species, but that is kind of the point. Biodiversity is diverse and rich, and I am afraid quite a lot of these species are in trouble. That is not something to sweep under the carpet or say that one ought to have prioritised it so that there are only two threatened species. There is a lot to do, so let us roll our sleeves up and start dealing with this biodiversity loss.

Q91 Colin Challen: I guess we have too many people really. That is the other problem. You have all identified the need for extra funding for biodiversity related work. To what extent do you think that a reformed CAP might be the best way of meeting that demand?

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Mr Jackson: You alluded to the fact that there is a lot of competition out there. If we are trading quotes, my favourite is Mark Twain, who said “The problem with land is that they do not make it any more” and he has a point. It is competing resources for a limited amount of land out there. Biodiversity is going to come under further strain. You have talked about set-aside and we are seeing that disappearing now. Some of that may not be of value for wildlife; some of it is. We are seeing species like woodlark, for instance, being affected by set-aside coming out now—which is a process that is ongoing. In terms of CAP reform, there is an awful lot that can be done. At the moment the ELS is fairly welcomed as a stepping stone, certainly by the farming community, but in terms of what it achieves for biodiversity, it is not terribly great. It is very broad-brush and there is a huge overlap with cross compliance, the things that farmers have to do already for a single farm payment. I think there is a question mark about how much added-value you get out of the ELS as a mechanism. In terms of HLS, which is the more targeted approach, Natural England are going through the exercise now of targeting their resources. Because of the 2010 target and because of the SSSI focus, they are having to focus a huge portion of that resource at achieving that 2010 target. In terms of the things we have been talking about, in terms of looking to reverse the decline of biodiversity, in terms of looking at creating what you could call a permeable countryside, a countryside that species can move through, there is a huge question there about resource. There clearly has to be a lot that can come through the CAP process. Certainly merging the two pillars would be an aspiration we have long held, in terms of looking at that. Rather than separating production and the environment and keeping them separate, there must be a lot to be gained from bringing those together. We have already seen the benefits of a partial approach to that, in terms particularly of upland farming and the change from production subsidies to area payments, et cetera, et cetera, but modulation was very limited in terms of how far we went. There is a lot more that could be achieved and the mechanism may be by bringing the two pillars together. Therefore HLS has to be a mechanism. The other concern, of course, is about competing uses of the countryside, and the biofuel agenda has brought that into focus, where you are looking at adding in yet another use for the countryside which in many ways may be laudable in terms of what it achieves but actually is cross-competing with all the other issues: food production and, in this case, biodiversity. Essentially, if the extra competition for the use of the countryside continues to increase, the value we are going to get from the existing CAP is going to become less and less, so I think we do need to look very seriously at how we can take that forwards, look at merging the two pillars so that we can focus on what we are trying to achieve.

Q92 Colin Challen: How optimistic are you about biodiversity protection in the UK, still less reversing the existing trends.

Mr Jackson: There was a great stride forwards with the CROW Act in terms of the protection from the protected sites, so within protected sites we have come a huge way forwards. It brought in the ability to deal with third party damage, for instance, which had not been there. It got rid of the issue of potentially deliberate neglect, for instance. If you had a SSSI prior to the CROW Act coming in, you could do nothing and eventually it would lose a lot of its interest. We now have positive management. But I would bring you back to that issue I was talking about, that SSSIs are just a small sample of the important countryside that is out there protecting our biodiversity. Some of that has now been covered through things like the Environmental Impact Assessment Regulations, which are being applied beyond SSSIs, but we have just had a revision of the regulations and that has brought in a two hectare threshold; for instance, in relation to important grassland. They said, “We don’t need to bother about an EIA for anything below a two-hectare site” but in Derbyshire, for instance, once you come out of the Peak, 65% of very important grasslands are of less than two hectares. I am working most of the time in Oxfordshire and Buckinghamshire, which is essentially farmed out clay with very important small sites in there. It is a huge proportion of those sites which will fall below that threshold. So we are doing a lot on protected sites but we have a long way to go when we come beyond those protected sites.

Dr Avery: Our take on that would be very similar. The work on SSSI condition has been pretty good. I would not say it is perfect, but there has been a great deal of progress made over the last few years. I think quite a lot of that has been driven by the fact that there has been a target and that civil servants and ministers have seen that there is a challenging target which is achievable but will require quite a lot of co-ordinated work and action to get close to it. We would say that the statutory sector and government have done a good job on that and it is a good advert for setting targets. On rare species, it would be entirely possible to see lots of progress in the future, just as we have in the past, partly because NGOs can do some of the work themselves, particularly with bits of funding from Natural England. Those tasks are not too tricky. They are challenging but you can get on and do it. However—and agriculture is an example—going back to species that are in the wider countryside, that do not live on protected areas, that are subject to the impacts that the growing economy puts on them, then it is difficult to be that optimistic. Farmland birds have not increased in numbers overall for about a decade. The way I look at it is this: my daughter has just finished her first year at university and when I finished my first year at university (which does not feel that long ago to me) the farmland bird index was twice the level it is now. In one generation of our family, the number of common farmland birds in the countryside has halved. That does not feel like progress. That graph has been pretty much static for the last 10 years almost. Despite all the agri-environment schemes and the progress we have made with those—and

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there has been real progress—we are not seeing biological progress yet. I would have said a couple of years ago that we would see that graph going up over the next few years. I would now be less confident. We have seen set-aside set to zero, with nothing put in place to replace it. Set-aside was not an environmental scheme, but, for once, a policy that was not to do with the environment had environmental benefits, and we are losing those. There is not enough money going into agri-environment schemes. The RSPB would like to see further switching of money from Pillar 1 to Pillar 2 of the CAP, but just at the moment, because commodity prices are high, many farmers are not that bothered about agri-environment. They are considering, when they come out of existing agreements, whether or not to go into a new agreement. When the price of wheat is at the moment £130 a tonne, compared with £56 a tonne a couple of years ago, you look very carefully at agri-environment schemes. These are voluntary schemes. No farmer has to go into them. We have put a lot of our hope into a voluntary arrangement. I am not sure it is going to work as well in the future—and that goes back to what we said earlier, that economics can trump ecology. It is difficult to feel optimistic for some of those widespread species.

Q93 Colin Challen: How well is Natural England doing in performing its role as a champion of nature?

Mr Shardlow: Could I make a comment on the CAP, which also links through to that question. The CAP can fund quite a lot of very important things but there are some things that it is very poor at funding. It is very poor at funding research; it is very poor at funding monitoring that is needed. There are good examples with quite a lot of these species. In terms of triage, if this was the National Health Service for wildlife, they are in a critical condition and need much more close attention and intervention than agri-environment can necessarily provide. An example might be, for instance, the field cricket, which declined down to one site. They needed to do some very radical management, stripping off trees on neighbouring sites to bring them back into a condition that enabled them to take them into captive breeding and then reintroduce them on to the other sites. A CAP could not possibly fund that sort of intensive remedial action to save a species from extinction. Another issue with delivery through agri-environment is that some work done by Butterfly Conservation has shown that the number of visits you have to make to get a successful scheme for an endangered species is quite high. I think 10 was the number of visits they needed to make to a landowner, to talk them through what they needed to do, to hold their hand through the process of delivering that habitat and delivering the requirements of those species, and to get it just right, so that it really worked. There is a resource issue there for Natural England and an expertise issue. If they are going to be delivering agri-environment schemes that tackle a whole range of species and habitats in the countryside, we cannot just throw the money at the farmer and expect the farmer to know

what to do. They need quite a lot of help and assistance, so there is a resource burden there to make sure that that money is effective in achieving what it needs to do. You talked about optimism. One thing that I would be optimistic about is the interest and the involvement of the public. Memberships of the Wildlife Trusts and RSPB have been rising significantly over the last 10 years and Buglife, the Invertebrate Conservation Trust, did not even exist when the Government signed the halting biodiversity loss targets. The interest from the public in saving biodiversity continues to rise. As long as that keeps happening, hopefully we will eventually see changes in other areas of society to match that concern and that interest. That is where my optimism stems from. With Natural England's approach, it is still early days, but it is not so early days that we cannot start to see some trends coming out. They have been through enormous change (when English Nature, the Countryside Commission, and the RDS came together). One thing I notice is that the Nature Conservation area of their work reflects very much the Wildlife and Countryside Act type of approach—Nature Conservation as it was back in the 1980s—and it has not, in my opinion, fully taken on board the biodiversity agenda which is set out more in the NERC Act—which is slightly ironic because it is the NERC Act that set up Natural England. There are elements of the NERC Act, like the biodiversity duty, where, when you look at Natural England's involvement, for instance, in giving advice to other statutory bodies and planning authorities, we do not feel they are currently placing adequate weight within their advice on the impacts of developments and other issues on biodiversity of species and habitats compared with their more traditional role of protecting SSSIs. If we are going to move towards having a landscape-based approach and delivering biodiversity across the land, then I think they have to take on a bit more of a biodiversity-focused remit. They cannot drop protecting SSSIs or any of the more statutory wildlife and countryside approach, but they have to take on a more open approach, involving the BAP process more fundamentally within their core work programme.

Q94 Dr Turner: Natural England recently reported that the natural environment is much less rich than it was 50 years ago, which chimes with your remarks, Dr Avery, that the number of farmland birds has declined by a half in just a generation. What do you think is the realistic limit we can place on attempts to recreate diversity? Is it realistic to expect we can go back to the halcyon levels of biodiversity of the countryside enjoyed when I was a tiny boy?

Dr Avery: I do not think we want to turn the clock back economically but we do want to turn the clock back a bit ecologically. I think that is entirely possible. The example I gave of farmland birds having halved in numbers in a rather short period of time, we could turn that around. I know we could do that because the RSPB bought an arable farm 10 years ago and we have almost doubled the numbers of farmland birds on that site and we are producing

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just as much product and oilseed rape as that farm produced under its previous management. On that farm we are basically putting in the agri-environment options in an intelligent and sensible way. Maybe as an organisation we have a bit more experience and knowledge about how to do this really well, but it does show that for farmland birds we can produce just as much product off that land but almost twice the number of birds. That gives an example of how we should not set our sights too low. Some of this can be done and it can be done quite quickly and it can be done at basically no cost. Not everything we would like to see can be done at no cost, but in the big scheme of things, increasing the level of biodiversity in the countryside is not going to be very expensive.

Q95 Dr Turner: Obviously, we are concerned with the impact of climate change on the countryside and on biodiversity. Are you able to give us a view of how much of our problem is down to agricultural management and how much of it is long-term climate change impact? Can you disentangle them?

Dr Avery: I think that would be fairly easy to do. I cannot give you a figure off the top of my head because that does come back to the richness of biodiversity and one would have to look species by species and work out for each species what were the major reasons for decline or lack of interest. We could go away and think about that. For different species the answer would be different. Certainly as we go into the future, the next few decades are going to have climate change having a bigger and bigger impact. We can already see that in the way that species are moving across the landscape. It is very obvious for many bird species and it will affect the whole of our biodiversity. That is why we need to understand that process. We need to work to mitigate the impacts of climate change but we have to put effort into adaptation. That goes back to recreating stepping stones in the landscape and corridors through which species can move. I think we should have been doing that anyway. Even if climate change were not happening, all those things would be a good thing to do, and they were almost written into the original Biodiversity Action Plan, but, since we are living in a changing climate, it is even more important that we do that and we do it in a way that will make wildlife and the countryside more resilient.

Mr Jackson: Your question was: Can we tease out what has happened in terms of up to now for losses? I think it is pretty clear. I cannot think offhand of a single species that we have lost that we would put down to climate change. What has happened to date principally has been the impact of land use, both agricultural management and development. That is an issue particularly on places like the South Coast, where now we have squeezed habitats because the sea is going one way and we have housing in strips along the coast, et cetera. Infrastructure development, as well as farmland activities, has caused pretty much, as far as I am aware, all of the declines in biodiversity to date. We are expecting to add now, on top of a very fragmented landscape

which has been intensively managed, the pressure of climate change, and I think we are going to be seeing those losses coming in to the future.

Mr Shardlow: There are some areas where climate change over the last 20 years may have been a factor. For instance, the loss of river flies from chalk rivers may be to do with changes to weather patterns, for instance. In terms of the threats, though, it is very hard to disentangle all these things. In climate change, the big problems that species will face are the same as the problems they face now: habitat fragmentation, isolation of patches, inability to disperse, bits of habitat that are too small. The Biodiversity Partnership has recently produced a report that I would refer to the Committee called *Conserving Biodiversity in a Changing Climate* (Hopkins 2007). In that it sets out a very good set of criteria/set of principles for what we think the priorities are. The number one priority within that document is to conserve existing biodiversity. Unless we tackle the traditional problems that biodiversity has faced in terms of managing sites correctly, maintaining species, and making the countryside more permeable to them, we will not set up a countryside that is resilient to climate change either.

Q96 Dr Turner: Defra has spoken on these issues. Some would say, "It's about time too" because most of the things they are suggesting should have been done a long time ago. Having said that, what do you feel about Defra's guidance on habitat recreation and so on? Have you any confidence that their guidance is likely to be acted upon?

Dr Avery: We would encourage them to act on it. As we have said already, the whole area of habitat recreation is the area in which we have seen very little progress over the last decade, even though there were targets and plans in place to do it. The fact that there was not a pot of money set aside into which people could tap to do that work was one of the reasons why it did not get done. It always looked expensive and nobody said they had the budget to do it. Finding the resources and putting the resources in the right place so that that action can be taken has to be part of the way forward. It is something that we should be doing. Defra should be encouraged to do it. The fact that the minister for biodiversity is also the minister for climate adaptation perhaps means that we have more of an opportunity there to push those things forward together than we would have done in the past. Let us hope so.

Mr Shardlow: If there is one urgent reason for creating habitat it has to be sea-level rise, which threatens to destroy quite a large area of natural habitats. The Broads themselves, probably the finest lowland wetland we have in the United Kingdom is threatened with climate change. When the sea comes to the Norfolk Broads it will cause several national extinctions of species. Where are we setting back the habitats? Where are we creating the habitats around the coastline that enable a more dynamic and natural process to happen? The answer is that it is very localised. There are only a few examples where this is happening. We can look at a few cases, most of them involving the RSPB and The Wildlife Trusts,

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where there are small managed retreats, but who is creating the freshwater habitats behind that to replace the freshwater habitats that we are likely to lose in the next 20 or 30 years?

Q97 Dr Turner: Of course it is very nice that Defra has identified the problem and issued guidance but, as we all know, Defra is a very cash-strapped department. Do you feel that the resources that Defra can put into this are adequate?

Mr Jackson: No is a very simple answer to that. Talking about Natural England and what they have achieved so far—and they have been right at the sharp end of the lack of resource that Defra have: the whole single farm payment issue landed neatly in the lap of Natural England as soon as they arrived—in some ways it is quite impressive that they have achieved what they have to date. In terms of going forwards, we are back where we were when we looked at the 2010 target and it being bought into. The reaction was, “That’s great, but it is going to need buy-in across the board,” and I think that is still where we are at. Defra cannot do it on their own; they need the resources and the respect of the rest of the Civil Service. Basically, they need buy-in across government for those sorts of targets, to have any hope of achieving them.

Q98 Dr Turner: Of course there are several cans of worms involved in your answer, and I think we had better not go there.

Dr Avery: Could I say something on Natural England. Are they doing a good job? They are doing quite a good job. I think the RSPB was very worried when Natural England was set up that they might not act as champion for nature and biodiversity because of the much wider remit that Natural England have. I would say that that fear is now dispelled. Our worry about Natural England is not their way of looking at the world and where they are coming from and what they want to do; it is whether they have the resources, whether they have been given sufficient resources by Defra. Clearly this year they are on a standstill budget but have to find £5 million of efficiency savings. They are losing, I think, 200 staff, and that would be a huge impact on any organisation. If we are going to do a better job on biodiversity, if we are going to do things like recreate habitats, then organisations like Natural England need the resources to go out and spend money and create a better countryside. I think we would be fairly confident that they could do that well if given more resources. They have gone through teething problems, but teething problems that have been imposed on them by their parent department to some extent because of cuts in funding.

Q99 Dr Turner: The Climate Change Bill has a proposal that will require an amendment to develop an adaptation programme which addresses the need to have a strategy to direct and enforce biodiversity adaptation. Do you think this is going to work? What is your view on these provisions?

Dr Avery: I think it is a good start. It shows that government is beginning to think about these things. To some extent we have covered this ground, but the things that need to be done are fairly straightforward but they need resources. It is good that more thought is being given to them but more resources need to be given to them if we are to see any real progress on the ground.

Q100 Dr Turner: It always comes back to money, does it not?

Dr Avery: Yes. As you have said, Defra is short of cash but the amounts of money we are talking about are terribly small in government terms. I do not think nature conservationists should be too embarrassed about saying that we do need a few more tens of millions of pounds. That is pretty small beer in government funding and this is to do long-term good for public benefit across the country.

Q101 Dr Turner: I sympathise, but you try telling Prudence that.

Dr Avery: That is a fair point.

Mr Jackson: The climate change adaptation process could be very helpful, but it comes at a time when there are other pressures which push in the other direction. The Planning Bill, of which you will be well aware, is about to work its way through and there are stresses and strains there about how that works, and there is the sub-national review and this process of regional development agencies taking over planning on the ground. I am saying that there is a good process being brought in potentially, but it is behind the other processes. It is behind the National Planning Bill—which could have been a way of bringing that forwards. It could have been incorporated in that, and it could have sat alongside the other national planning statements, for instance, so that you were getting an integrated approach at the top.

Q102 Dr Turner: You have heard about joined-up government.

Mr Jackson: We have studiously avoided using the phrase. At the bottom end, where they are talking about joining it up and they are talking about planning coming in together with the development agencies, there are big concerns there about the relative weight again. It is not just about the money; it is about respect and it is about the agenda being respected across the board.

Q103 Mr Caton: You have placed great emphasis this morning on the need to recreate natural habitats across the landscape and the Netherlands have been commended. How practically do we make that happen here in the UK?

Mr Marsh: One of the tools we can use to achieve that is through the planning system. That is starting to be taken on board through the current round of regional spatial strategies. For example, we have recently had the East of England Regional Spatial Strategy approved, and that has moved beyond the traditional site protection policies to thinking much more at the landscape scale about how we can

encourage and bring forward opportunities for large-scale habitat creating and restoration. That, in turn, should be taken forward by local planning authorities as they prepare their new style local development frameworks, and they are now required to seek out opportunities for habitat creation under PPS9, the planning policy on biodiversity and conservation. I think that is encouraging, although we still have some way to go on that. Maybe there is an issue about whether regional planning bodies and local authorities have the resources and the skill to do that. I think that is a potential issue. It is very important for them to work with regional and local biodiversity partnerships to bring those forward. At the same time, however, as my colleague has said, while we seem to be moving in a positive direction on some aspects of planning, there are threats coming forward from the sub-national review. For example, under the proposals there seems to be no guaranteed place for environment stakeholders to have a core role in regional processes. We feel that has been a very valuable role in the past to improve the approach to biodiversity in regional planning. We would certainly like to see much more of, if you like, a guaranteed role for environmental stakeholders in the new processes.

Q104 Mr Caton: Will the regional and local planning authorities we are talking about be required to produce habitat maps to direct protection restoration? Or is it that some will do it and some will not?

Mr Marsh: There is a policy requirement in PPS9. As to whether that means they produce habitat maps, I think different regions have taken different approaches to doing that. For example, the South West Biodiversity Partnership has produced a South West nature map which has been incorporated into the South West Regional Spatial Strategy and that requires local planning authorities to then identify specific opportunities for habitat creation and enhancement across the South West. But different regions have been approaching that in slightly different ways.

Q105 Mr Caton: How can we assess progress towards landscape scale conservation?

Mr Jackson: Essentially it is a very difficult issue. There are lots of ways of looking at it. One of the problems that Simon has been talking about in terms of the way that this sort of exercise has been dealt with by local authorities going forwards, is that we are really playing catch-up in terms of finding out which habitats are there. Some local authorities have been undergoing a review, for instance, of where they have BAP priority habitats. The new BAP priority habitats have set that agenda back a little bit. It makes it very difficult for local agendas to incorporate that, but you have to know what is out there before you can start measuring progress. The new local indicator 197—which is part of the planning and monitoring process—is an indicator that local authorities were invited to add on to their list for their local area agreements. They were to

select from a list, and biodiversity snuck in there at number 197 or 198, right at the bottom of the list. For these habitats which are beyond the protected network—what we call the local wildlife sites, effectively—it is a requirement to monitor where advice has been given to landowners on the ground. That is a step in the right direction. That means we are getting some idea, but, again, we are caught in the problem of lack of resource on the ground (a) to get the starting maps, the idea of where we are starting from, and (b) to drive that forward in terms of coming up with a sensible indicator which gives us an idea. That probably ought to be based around the issues we have been talking about: connectivity and permeability and what you are adding to that in terms of landscape scale. What we call a living landscape is the process we are trying to drive forwards, which is about connecting up these sites and providing these sorts of corridors. That sort of modelling, I suggest, ought to happen nationally, so that we are getting a national picture that can then come along on the ground and which local authorities ought to be able to bring through their own monitoring.

Q106 Mr Caton: You have mentioned the inclusion of biodiversity in PPS9, but there have been serious questions asked, especially by NGOs, about the implementation of that. Is the performance management framework going to be the silver bullet?

Mr Jackson: Sadly not, no. It is a step in the right direction. PPS9 says that we should be looking for a net gain for biodiversity. We can probably talk about individual developments, some of which are in the pipeline. Simon could talk about the Thames Gateway and some of the benefits that are being produced there. There are other examples across the countryside. Camborne in Cambridgeshire, which is a mixed bag in terms of sustainability, is a new settlement, it is very bad from a car user point of view, but in terms of biodiversity it actually produces some benefit. When you look across the board, we are not getting the net gain of biodiversity that PPS9 was supposed to give us. There is a big step change that needs to be provided. There are opportunities. The mapping that you have talked about and the living landscape approach to planning which can stop this foreclosing on opportunities to main connections can also bring forwards some gains sometimes in small ways, sometimes in bigger ways. Minerals planning gives the opportunity for a much more landscape scale approach to these things. You can look at a river corridor and say, “Well, if we’re going to interfere with it what is it we want at the end of the process?”, but we are not getting an awful lot of that at the moment.

Mr Marsh: We were very pleased when PPS9 came out, apart from perhaps being slightly weak on climate change aspects which I think has now been rectified elsewhere. I think the issue is, as you suggest, the implementation of PPS9. I would like to suggest several reasons why implementation is sometimes poor. I think part of the issue is that among local decision-makers there is still a culture

that sees the need that we have to balance jobs against the environment, which I think is a false dichotomy. Then there is a view of assessment tools which one uses in the planning system especially at the strategic level. For example, strategic environmental assessments are seen very much as a legal exercise and not as a tool for adding value or ensuring biodiversity protection and enhancement. Sometimes there are issues about considering alternatives and my colleagues might want to come in on that one. Also, I think there is the fairly fundamental issue of a lack of ecological advice available to local planning authorities, many of whom do not have their own specialist expertise to call on.

Mr Shardlow: I want to make a point about the statutory underpinning that a lot of local authorities have for large areas of their work. They can often point to various legal documents that justify them undertaking various lines of decision-making, but where it comes to pure biodiversity decision-making, where making the decision is going to benefit biodiversity, it is very hard for them to point to a statutory reason for them to do that. In Buglife's opinion the biodiversity duty, which was put through as part of the NERC Act, which applies to all public bodies, to have a regard for biodiversity is not having the effect that was hoped at the time, that it would really hype it up the agenda, particularly within the planning area. PPS9, which I agree with my colleagues is fine words, is not being implemented on the ground, eg where there is going to be damage to biodiversity they should be putting the development on alternative sites. In practice practical considerations like the landholding of the developer mean that that is very rarely actually applied, so you end up without the elements of PPS9 being fully applied, whereas if there was more of a duty not just to have a regard, which is widely interpreted as being to think about, but to actually take forward biodiversity through the planning process, through the duties of public bodies, that might give that edge of extra weight to considering biodiversity within the process, which might make more of the decisions fall off on the side of biodiversity rather than on the side of jobs or development or another issue.

Q107 Mr Caton: So that duty on public bodies needs to be toughened up in your view?

Mr Shardlow: We would say so.

Mr Jackson: There is a huge question mark there about how you can have due regard in the exercise of your usual functions if you do not have a single officer with the expertise to tell you what impact you are having on biodiversity. The only survey I am aware of for local authorities and their access to ecologists was carried out by the Association of Local Government Ecologists and they found that over 70% did not have access to that expertise. I cannot see how you can, even if it is a planning function, which is only a small part of local authority functions, have that due regard if you do not have somebody there to call on.

Mr Shardlow: Interestingly, in Wales they have taken a different approach in that one of the elected representatives on each of the local councils in Wales has a biodiversity role, they are effectively a biodiversity champion. I think they are finding, supported by senior civil servants within the Welsh Government, that it is having a real impact in terms of changing attitudes within councils, and that is something that could be looked at, certainly in England and possibly in Scotland, as a way forward for councils to get biodiversity more embedded across their operations.

Q108 Dr Turner: Quoting Natural England again, new development and biodiversity protection do not have to be at odds. There are opportunities in new development to enhance biodiversity protection. Have you seen much evidence of this in practice?

Mr Marsh: Yes. I think we could point to a number of examples where it is possible to deliver both development and biodiversity. One which my colleague alluded to earlier is in the Thames Gateway where we have been working on helping to deliver the Green Grid as part of the Thames Gateway strategy. There we are helping to deliver about three kilometres square of new wildlife habitat which will be highly accessible to people in the new communities and existing communities in the Thames Gateway as well as delivering benefits to wildlife. There are other examples in some of the growth areas around the country. We could point to the River Nene Regional Park in Northamptonshire and proposals around the Cambridge sub-region as well, where we are delivering a major reserve at Fen Drayton Lakes.

Mr Jackson: I think that is certainly true. I talked about the Camborne example in Cambridgeshire earlier. There is an issue about the level from which you are starting. Camborne was four oil seed rape fields before the new development came forwards, so it was a very low base from which to start. Having said that, an awful lot has been achieved there by the Wildlife Trust in terms of providing new habitats and opportunities. I think there is a danger in talking about green infrastructure, which Natural England have very much on their agenda because it cuts across a lot of the things they need to deal with, and seeing it as a panacea for wildlife issues. There are an awful lot of things that fall under the remit of green infrastructure, cycleways, footpaths, et cetera, et cetera, which are very important and laudable but which may not do an awful lot for wildlife and the biodiversity gains we have been talking about. I think we need to be very clear about building that in when we talk about green infrastructure and making sure it does not fall off the edge. I have seen an awful lot of green infrastructure strategies in my time which have started out with good aims but at the end of the exercise have basically provided some cycleways and footpaths and have not done the imaginative networks that the River Nene Regional Park has done. They have been very clear about linking together habitats and getting that sort of benefit.

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Mr Marsh: I was just going to come back to the funding issue because again that is critical to delivering green infrastructure. We really feel that at least 10% of all the funding for growth area infrastructure needs to be spent to deliver green infrastructure and to allow for its management in the future. Unfortunately, that is far from the case in all the growth areas, so that is of concern.

Q109 Dr Turner: To what extent do you think the Government has taken into account environmental limits in its house building plans? Is it remotely adequate?

Mr Jackson: We are straying into Thames Basin Heaths' territory potentially. I think there are clear cases where we are pushing the limits. As I come from the Wildlife Trust I should be in a position to be saying eco-towns are exactly what we want; they should be driving forwards the biodiversity agenda alongside the climate change adaptation and mitigation agenda, but sadly that is not the case. We have got Weston Otmoor which has a SSSI as part of the footprint of the development. We have got Borden-Whitehill in Hampshire which is all the SPA/SAC issues that we have got around the Thames Basin Heaths. The Thames Basin Heaths that Natural England talked to you about in their evidence and they were singing as a great example of joint working does not quite square with my memory of the process where essentially Natural England started saying, "You've got a problem here. You're loading an awful lot of people onto an environment which at the moment has reached its limits. We cannot cope with more recreational pressure." They produced a delivery plan and CLG's response to that was to undertake a separate peer review of that process. They got their lawyers and consultants basically to prove what Natural England had come forwards with. Rather than taking their own adviser's view on it they said, "Hang on, before we spend any money on this we want an independent assessment of that." That gives you an example of how much respect Natural England has been held with in terms of their support across Government. Even there we are struggling to drive forwards the delivery plan for coping with the extra recreational pressure on the Thames Basin Heaths. The local authorities have been working very hard to identify land that can be alternatives, that can draw the new inhabitants away from the Thames Basin Heaths, but it is not plain sailing and it is not plain sailing for a whole range of reasons. In Surrey Heath, for example, they are adamant that they do not have the land to be able to provide the mitigation. That really is a case of us reaching our environmental limits in terms of how much we can cram in. There are other good examples where great things can be achieved. The expansion of Aylesbury is not going to have that sort of impact and a lot can be achieved in terms of producing biodiversity gains. It really is a question about where you are putting the housing, but there are places where we are reaching those limits.

Q110 Dr Turner: Taking those limits into account, how can we guarantee that new developments are actually capturing the opportunity to enhance biodiversity production? Should we do this through statutory planning agreements?

Mr Marsh: I think guaranteeing it through statutory means is quite difficult. Certainly we should be trying to ensure that all new developments do best for biodiversity through planning policy and through the development planning system. I think it is a question that needs to be asked of eco-towns, for example. The aspirations for eco-towns, whether it is for green infrastructure or water standards or whatever, are very good but it is not clear how that will be delivered in order to get the standard of development that we require. The best way to do this is to ensure that such proposals do come through the development plan process, which would set out the standards which are expected of planning applications and that will give the local authority the ability to negotiate satisfactory schemes and make sure that what is approved and actually delivered on the ground helps to deliver those standards.

Mr Jackson: You could achieve an awful lot simply by adding biodiversity gain to the list of things that local authorities are audited for by the Audit Commission when they do their reviews. It is not on there at the moment as a target. The NERC duty that we talked about is a three-yearly review, there are some about to be undertaken, but it is not there on the annual monitoring reports that local authorities have to undertake. You could achieve a lot without having to go down the statutory route by making a target of it, as we were talking about earlier.

Q111 Dr Turner: Do you think that the Code for Sustainable Homes contributes anything to this process? It does not refer to biodiversity protection at the moment but it does refer to environmental ecological enhancement. Is there anything there to get hold of?

Mr Marsh: Generally we welcome the Code for Sustainable Homes and though you are right, it does not use the term biodiversity, there is certainly a component in it which looks at the ecology of the site, whether it is of low value before development and the extent to which it is enhanced in the process of development. There is an issue in that that ecological component is not a mandatory part of the code and, in fact, the code itself is not mandatory. Although the public sector is leading the way by going for at least Level 3 of the code, there is a question about how far the private sector will follow that and even if it does, whether the biodiversity component really gets a look in to that process. I hope the CLG will be monitoring the take up of the code but also monitoring the take up of the ecological components of the code as well.

Mr Jackson: You could build a Level 6 dream house on top of a very important limestone grassland for instance and still achieve Level 6 because of the way the code works. Although there is a lot in there to be praised, it does need to be mandatory, but you should not be able to score that sort of level.

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Q112 Colin Challen: Is there any validity in the argument that perhaps some greenbelt land should be released for development in order to protect other greenbelt land which might have a higher biodiversity value?

Mr Marsh: We are not convinced there is a need to radically review greenbelt policy. We very much support this aspiration of Natural England to green the greenbelt where that is possible. I think we would point out that greenbelt policy does contain within it a certain amount of flexibility for land to be re-designated, but that must be done transparently and through the development planning process. We do not have an issue with that. I think there is an issue about the long-term stability and permanence of the greenbelt. If you start to suggest that some of it might be up for grabs that does give landowners and others the thought that maybe there is some value attached to this land because at some time in the future it might be possible to develop it. It attracts a kind of hope value and that is not terribly helpful in terms of getting positive land use management of the greenbelt. I think we have to be quite cautious about suggesting that some parts of the greenbelt might go in order to get gains elsewhere. I think we would be particularly concerned about proposals to bring forward inappropriate development, housing, for example, simply in order to ensure that other parts of the greenbelt are managed in a proper way.

Q113 Colin Challen: You are saying there should be a cautious approach, which I certainly agree with, but how would that be codified? Is there some way that that could be done? I have some Grade 3 agricultural land in my constituency which, thankfully, is being preserved at present at least for the foreseeable future. Is there some way that you can make the cost of developing that so high, perhaps if it was tied to something else, so you would have to show a clear benefit perhaps in biodiversity terms, it would act as a disincentive to the kind of pressures that you have acknowledged are there?

Mr Marsh: I would suggest that the best way to deal with the greenbelt is through the development plan process. Should there be a need to review it that is the best way to do it, to consider what is the most sustainable use of the land in the long term. I think we also need to be looking at agricultural, water and forestry policies because they will have as much of a bearing on the management of the land in the greenbelts as planning policies. We might suggest that in certain greenbelt areas local authorities should think about preparing green infrastructure strategies for how they would manage that land in the long term without necessarily having to develop parts of it.

Q114 Colin Challen: Another pressure is perhaps in the brownfield development context. Sometimes there is an artificial divide between brownfield and greenfield. I can think of places in Leeds which are brownfield, they are designated as such, which now, after 30 or 40 or even 50 years of neglect by mankind, perhaps have more biodiversity and natural resource

value than some of that third degree agricultural land I have mentioned. How rigidly should we stick to the divides? Is there a trade-off between the two?

Mr Shardlow: Yes, absolutely, we agree with you. Unfortunately, within the category brownfield it includes a lot of very important wildlife sites. Some of the more alarming examples are with MoD property where you can have a bit of MoD land that is at a firing range or a tank range and that gets classed as brownfield land, or an airfield which gets classed as brownfield land. A lot of those sorts of places can contain what we would class as classic biodiversity priority habitats, but there are also other places, for instance old mining waste, quarries, dredging areas where dredging has been dumped, which have also developed over the last 50, 60 or 70 years enormous biodiversity importance. Currently those are included within the definition of brownfield. Work we have done on the Thames Gateway area has shown that about 50% of the area of land identified as brownfield in the Thames Gateway area is potentially of high importance for biodiversity and yet currently there are areas of land which are largely designated for development. Our point would be that if the current calculations the Government are using to determine where development needs to go are based on that development having to go on brownfield land that is actually very important for biodiversity, then if we are going to conserve biodiversity—and obviously we think that is a very important thing to do—there may be the need to revisit the question of where that development has to go, which does not necessarily mean it has to go on greenbelt, but it does mean that they have to work out realistically, if they are going to conserve biodiversity, where the development is going to have to happen.

Q115 Chairman: I want to deal with two more points. One is the UK overseas territories. This is something the Committee has taken an interest in in the past. Do you think that the Government has improved its support for the UK overseas territories?

Dr Avery: No. I am glad the Committee is taking an interest in them because it is difficult to find anywhere in Government that will take an interest in their biodiversity. The Foreign Office tends to look at Defra and Defra looks at the Foreign Office and that is not a good enough position when these are areas which are UK overseas territories and some of them are incredibly rich in biodiversity. We ought to be proud of them and doing something to conserve their biodiversity rather than ignoring them and passing the buck.

Q116 Chairman: Why do you think it is ignored by the British Government?

Dr Avery: I guess because to do some good one would have to find some money and everybody thinks that they have not been given the resources to do it, but actually somebody saying “It’s your job” either to Defra or to FCO would help because then somebody would have to do something about them. The Government ought to be ashamed of the fact

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that it has done very little on the UK overseas territories. If we are proud to have these areas we ought to be proud of their biodiversity and working to conserve it.

Q117 Chairman: Finally, the Government seems to have rediscovered some enthusiasm for GM crops. Does this raise any concerns in your minds about the extent to which we still do not fully understand the environmental consequences of planting GM crops in this country?

Dr Avery: The RSPB was very involved with this issue a few years ago. I sat on the then Government Chief Scientist David King's science review group on GM crops. I think our position would remain as it was then, that the RSPB is not philosophically opposed to GM crops per se. We would look at each GM crop crop-by-crop to look at what impact it could have on biodiversity. The crops that were being proposed for commercial release at that stage

were herbicide tolerant crops which would have led to widespread use of very powerful herbicides which would have further clobbered farming and biodiversity. That is what the science showed at that time. Similar crops would have a similar impact. Other GM crops might bring environmental benefits, although I keep saying this to the biotech industry and inviting them to come to us with a crop that will be environmentally positive and they have not been beating a path to our door so far. We would be worried, but we would say that each crop ought to be looked at on its own basis.

Mr Jackson: It is not the basis of the technology itself, it is what you do with it. Essentially the aim of most of the GM crops is to do exactly what Dr Avery was saying, which is to provide you with an easier way of removing the biodiversity that is competing with your crop production. We are very concerned about the outcome rather than the technology itself.

Chairman: Thank you all very much indeed for coming in.

Supplementary memorandum submitted by Buglife—The Invertebrate Conservation Trust

1. *Will the national brownfield strategy prevent brownfield sites of high biodiversity value from being developed?*

1) Not as it stands.

2) The National Brownfield Strategy is only applicable to England. While this is where there is greatest pressure on the development of brownfield sites of high biodiversity value (including the target to build more than 60% of new housing on brownfield land) there are brownfield sites of high biodiversity value in other countries, particularly Scotland and Wales that are also experiencing development pressure.

3) The National Brownfield Strategy is more of a concept than an actual written strategy. The origination is an English Partnerships' document "Towards a National Brownfield Strategy"¹ (September 2003) and their follow up document "National Brownfield Strategy Recommendations to Government"² this is couched as being "recommendations for a National Brownfield Strategy". The recommendations were submitted to Government in May 2007 and a decision regarding their adoption as formal policy was expected in Autumn 2007. Instead of adopting the policy Government responded to the recommendations in the document "Securing the Future Supply of Brownfield Land; Government Response to English Partnerships' Recommendations on the National Brownfield Strategy"³ (March 2008). Hence there does not appear to be a publicly available, openly developed National Brownfield Strategy as such, although there are a number of documents that could be considered to be components of a strategy.

4) The title of the Government response "Securing the Future Supply of Brownfield Land" sets out the strategic priority for this land type. The contents of the response do not give any clear indication that brownfield sites of high biodiversity value will be protected from inappropriate development, although it does state that "planning, development, and regeneration should have minimal impacts on biodiversity and enhance it wherever possible". The most positive elements of the document for brownfield biodiversity are the commitments made with regard to the new Biodiversity Action Plan Priority Habitat "Open Mosaic Habitats on Previously Developed Land" (paragraph 17). Defra aims to:

- "Provide a clearer agreed definition of the UKBAP priority habitat type to aid 'identification on the ground'.
- Provide a comprehensive list of species of conservation importance which are associated with this habitat type, including UKBAP priority species.
- Develop and apply a methodology to determine the extent, distribution and quality of all the land in the UK that falls within that definition.
- Develop an action plan for the 'Open Mosaic Habitats on Previously Developed Land' habitat type."

This is very warmly welcomed, although any strategic commitment to action that would directly prevent "brownfield sites of high biodiversity value from being developed" is apparently deferred until the completion of the Action Plan. During the intervening time (several years?) brownfield biodiversity will continue to be endangered and destroyed.

5) The proposal in paragraph 18—developers need to do more to assess and mitigate environmental implications—we would consider to be insufficient. The Local Plan should be based on better knowledge of the distribution of brownfield biodiversity so that key sites for Brownfield biodiversity are clearly identified as local wildlife sites and are not for development in Local Plans. It is unfair to leave the conservation of biodiversity to a developer who has already invested in the land resource. The economic pressures to push ahead with the development are very high and the political and lobbying pressures on the planning body are similarly great. The corollary of this is that the key parts of PPS 9 that are in place to protect the most important biodiversity resources (PPS9 paragraph 1 iv “Where granting planning permission would result in significant harm to those interests [biodiversity], local planning authorities will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm” and paragraph 16 “Planning authorities should refuse permission where harm to the species or their habitats [of principle importance (BAP Priority species and habitats)] would result unless the need for, and benefits of, the development clearly outweigh that harm”) can become unacceptable safeguards in practice.

6) Paragraph 34 of the Government’s response announces the establishment of a new National Brownfield Forum to take the place of the current English Partnerships Brownfield Forum and Defra’s Contaminated Land Forum. However, the list of proposed participants in this forum contains no representative with a biodiversity conservation remit. If biodiversity is not considered at this strategic level then it is unlikely that future brownfield policy will develop in a way that is conducive to Halting Biodiversity Loss.

7) The Royal Commission on Environmental Pollution’s twenty-sixth report “The Urban Environment⁴” concluded that “some brownfield sites have surprisingly high levels of biodiversity and are home to nationally rare and endangered species, particularly invertebrates” and therefore recommended that “the UK government and devolved administrations review the environmental impact of brownfield policies across the UK, and consider whether the 60% target will remain appropriate across England after 2008.” The Government response⁵ does not directly answer this question but relies heavily on the content of “Securing the Future Supply of Brownfield Land”.

RECOMMENDATIONS

1) A National Brownfield Strategy document is developed that includes clear commitment to excluding from the Brownfield category sites that support significant populations of rare BAP Priority species.

2) Sufficient resources must be made available by the UK Government and devolved administrations to ensure that a high quality job is done on the task of determining the extent, distribution and quality of all “Open Mosaic Habitats on Previously Developed Land”.

3) A member with a clear biodiversity remit should be appointed to the new National Brownfield Forum.

4) Data on the distribution of biodiversity is generated by Local Authorities as part of spatial planning.

5) The Biodiversity Duty is revised and strengthened so that it is enforceable and hence given sufficient regard by public bodies, such that it provides a counterbalance to the various statutory drivers, targets and lobbying pressures that exist for other land use priorities.

REFERENCES

- 1 www.englishpartnerships.co.uk/docdownload.aspx?doc=Towards%20a%20National%20Brownfield%20Strategy.pdf
- 2 <http://www.englishpartnerships.co.uk/brownfieldstrategy.htm>
- 3 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/Ssecuringfuturebrownfield.pdf>
- 4 <http://www.rcep.org.uk/urban/report/urban-environment.pdf>
- 5 <http://www.defra.gov.uk/environment/rcep/pdf/government-response-rcep.pdf>

25 June 2008

Tuesday 15 July 2008

Members present

Mr Tim Yeo, in the Chair

Mr Martin Caton
Colin Challen
Mr David Chaytor
Martin Horwood
Mark Lazarowicz

Mr Graham Stuart
Jo Swinson
Dr Desmond Turner
Joan Walley

Memorandum by the Department for Environment, Food and Rural Affairs (Defra)

INTRODUCTION

1. This Memorandum sets out Defra's responses to the questions identified by the Committee for its inquiry into halting UK biodiversity loss. It is written from a UK perspective except in the case of devolved matters, where it is written from an England perspective.

POLICY AND PROGRESS

Q1 Is the Government on course to meet its 2010 biodiversity target?

2. There are two main targets. In 2001, EU Heads of Government adopted the target that "biodiversity decline should be halted with the aim of reaching this objective by 2010". In 2002, the UN World Summit on Sustainable Development endorsed the target agreed five months earlier by the Parties to the Convention on Biological Diversity (CBD) "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth". There is no single agreed measure of biodiversity loss but, within the CBD, Parties have decided to use a broad framework of goals, sub-targets and indicators relating to seven focal areas of the Convention to assess progress towards the 2010 target. A similar framework of indicators has also been adopted by the European Council of Ministers for assessing the European target. Following this lead, we have developed a broad range of indicators to measure our performance, in addition to the more specific targets agreed for priority species and habitats in the UK Biodiversity Action Plan. We are on course to meet both versions of the 2010 target in some areas, not to meet it in some, and to exceed it in others by not only halting decline but reversing it.

3. The assessments since 2000 generally show marked improvements compared with longer term (ie 10-30 year) trends where comparable data exist. Of the 20 UK measures for which post-2000 assessments are now available, 12 show improvement, 7 show no change; and only one (the wintering waterbirds indicator) shows deterioration. Taken together, these show that the rapid declines in biodiversity during the last quarter of the 20th century have been substantially slowed and in some cases halted, and that spending and public engagement have increased.

4. In absolute terms, the EU target to halt the loss of biodiversity by 2010 will not be met—and was never realistically achievable in all areas and aspects. It has, however, acted as a call to arms, and has galvanised activity by both Governments and NGOs to tackle a range of the most urgent problems.

Q2 How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?

5. Very effective overall. The UK's biodiversity is more closely monitored than most, partly as a result of our long tradition of voluntary biological recording, and particularly in relation to relatively large and easy to count species (eg birds, bats, butterflies and vascular plants). Co-ordinating scattered and disparate records is still a challenge, which we are tackling through sponsorship of the National Biodiversity Network¹.

6. A major periodic survey of broad habitats, Countryside Survey², was completed in 2007 and is due to report later this year, but a significant gap remains in respect of some of the less widespread priority habitats, especially outside designated sites. We are addressing this with JNCC, Natural England and the Environment Agency by developing a surveillance strategy for UK terrestrial biodiversity, and Natural England is initiating a programme of habitat inventories. We are also investing in Local Record Centres, which are intended to fill in some of the gaps in our baseline data.

7. Monitoring is inherently more difficult and much more costly in the marine environment than it is on land, but we are making a significant investment to improve our marine biodiversity data. Our current monitoring programme was designed to comply with the sector-based requirements of national and international regulations. Given Government's desire to move towards an ecosystem-based approach to the management of the marine environment, we have recognised the need for greater integration of monitoring programmes to enable us to make robust assessments of the overall state of the marine ecosystem. We have initiated the UK Marine Monitoring and Assessment Strategy (UKMMAS) to achieve these goals. As part of this work, JNCC is leading the development of a coherent strategy for marine biodiversity monitoring, including a review of currently available indicators.

8. We already have a good set of indicators for terrestrial biodiversity, which have drawn on data from Government agencies and non-governmental and research organisations and are published in Biodiversity indicators in your pocket 2007³. There are 18 indicators, comprising 29 component measures covering various aspects of biodiversity. Individually, they show both recent and longer-term change. Collectively, they provide an overview of progress for biodiversity as a whole. Four of the indicators are still being developed, with the aim of publishing trends for all 18 in 2009.

9. Additionally, a wider range of state and response indicators are published within country-level biodiversity strategies (eg England Biodiversity Strategy³) and relevant pressure indicators are included within the set of UK Sustainable Development Indicators⁴.

10. The 2004 PSA Targets on SSSI condition and Farmland Birds⁵, and the 2007 PSA indicator on changes in wild breeding bird populations in England⁶ are underpinned by robust data. The data underpinning the UK Biodiversity Action Plan targets published in November 2006 are more variable in quality, and we recognise that there are not yet adequate data to set targets for all of the 1,149 species on the UK list of priority species and habitats published in August 2007. A balance does, however, need to be struck between the resource spent on data collection and refinement and that spent on direct intervention to protect and enhance our biodiversity, and we think the current balance is about right.

Q3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

11. We believe that the frameworks relating to protected sites are generally effective at protecting terrestrial biodiversity, and that progress has been made on those relating to the wider countryside.

12. The bringing together of the former agriculture and environment departments in 2001, and the subsequent creation of Natural England under the Natural Environment and Rural Communities (NERC) Act 2006 have enabled closer integration of biodiversity policy with policies for agriculture and wider countryside management. Agri-environment schemes contribute to biodiversity protection in a number of ways. In particular, Environmental Stewardship is a key Defra policy delivered by Natural England. Scheme options which have had particular benefits include those for hedgerow management, which have resulted in over 90,000 km of hedgerows under environmentally friendly management and 30,000 km of restored and newly planted hedgerows. In addition, the Hedgerows Regulations 1997 have helped to protect hedgerows of historical and biodiversity importance from removal. The Environmental Impact Assessment (Agriculture) (England) Regulations 2006 give protection to uncultivated land and semi-natural areas from agricultural improvement.

¹ <http://www.nbn.org.uk/>

² <http://www.countrysidesurvey.org.uk/>

³ <http://www.defra.gov.uk/wildlife-countryside/biodiversity/biostrat/index.htm>

⁴ http://www.sustainable-development.gov.uk/progress/data-resources/documents/sdiyp2007_a6.pdf

⁵ <http://www.defra.gov.uk/corporate/busplan/spending-review/psa2004.htm>

⁶ http://www.hm-treasury.gov.uk/media/1/3/pbr_csr07_psa28.pdf

13. In respect of protected sites, the NERC Act closed the few remaining gaps in legislative provisions concerning damage to protected sites, by introducing new measures to cover third party damage. The emphasis now is on effective enforcement of the measures which are in place and promotion of positive site management.

14. In the wider countryside, the protection of biodiversity is one consideration amongst many. Three recent developments are important here. The first, introduced by the NERC Act, is the new duty on all public and statutory bodies—including local authorities—to integrate biodiversity into their decision making. We have published guidance for local authorities on this, and will be monitoring the effectiveness of their response. The second is the adoption of our innovative ecosystem-based approach to policy making (see Q4), which will enable biodiversity issues to be considered as an integral part of ecosystem services

15. The third development is the new Public Service Agreements (PSAs) which include the new Natural Environment PSA (PSA28)⁷ to “Secure a healthy natural environment for today and the future”. This agreement approaches the natural environment from a more holistic view and sets out what other Government departments have agreed to do in order to achieve the outcome of a “healthy natural environment”. CLG, DfT and FCOM are formal delivery partners while others, including BERR, have significant contributions to make. The Delivery Agreement for PSA 28 identifies Natural England as the lead delivery agent for the England Biodiversity Strategy (EBS). This includes a role both in direct delivery, and in overseeing and facilitating delivery across the piece by a range of partners. As part of this role, NE is working with us to refine the structure of EBS implementation arrangements, in order to improve the integration of BAP delivery with work to embed proper consideration of biodiversity in all relevant sectors of policy and decision-making.

16. Funding has been secured for local and regional co-ordination of biodiversity activity; this will focus on supporting local and regional partnerships, delivering Biodiversity Action Plans at local and regional levels, reporting and monitoring progress and integrating biodiversity into regional and local policies. A local government performance indicator for biodiversity (the proportion of Local Sites under conservation management) is included within the basket of national indicators by which local authority performance will be measured⁷. The new local government inspection regime, Comprehensive Area Assessment, will monitor the delivery of the indicators focussing on those agreed in Local Area Agreements.

17. Future priorities include:

- the further integration of biodiversity into local and regional policies, processes and programmes, such as Community Strategies and Regional Spatial Strategies, facilitated by the NERC Act biodiversity duty;
- building partnerships at the local and regional level; and
- improving access to sources of advice, expertise and datasets for local and regional authorities.

18. The UKBAP has raised awareness of threats and helped coordinate and drive new conservation work at national and local levels. This has been achieved by identifying priorities for action and setting biological targets for the recovery of species and habitats, including those not subject to statutory protection. It has also been influential in attracting other sources of funding such as Landfill Tax and Lottery money.

19. The UKBAP has also engendered a strong partnership between the UK Government, Devolved Administrations, statutory agencies, local authorities and non-Governmental organisations, and this partnership has enabled us to make much more progress than would have been possible otherwise.

20. Success of the UKBAP in the marine environment has been more limited, primarily because the marine environment does not lend itself to local action (an important reason for the success of the UKBAP terrestrially). There are particular issues involved in taking effective action for some mobile priority species (eg sharks, skates, rays and deep water species), including achieving effective fisheries control measures beyond six nautical miles, where agreement is generally required at EU level. The development of the forthcoming EU Shark Plan of Action will provide a good opportunity for us to make progress here.

21. The draft Marine Bill contains integrated proposals to facilitate effective conservation management and improve the management of human activities in the marine environment. The Bill’s proposals for Marine Protected Areas are covered under Q10 below, but the Bill also includes provisions for marine planning and licensing, new enforcement powers, and the creation of the Marine Management Organisation and Inshore Fisheries and Conservation Authorities, all of which will help to improve the management and conservation of marine biodiversity.

22. *Conserving biodiversity—the UK approach*⁸ sets out our shared purpose in tackling the loss and restoration of biodiversity, the guiding principles that we will follow to achieve it, our priorities for action in the UK and internationally, and indicators to monitor the key issues on a UK basis.

⁷ <http://www.communities.gov.uk/publications/localgovernment/nationalindicatorsupdate>

⁸ <http://www.defra.gov.uk/wildlife-countryside/pdfs/biodiversity/ConBioUK-Oct2007.pdf>

23. Government responsibility for delivering biodiversity is devolved but it is recognised that knowledge and expertise on components of biodiversity are often relevant to more than one country and can be held by individuals or organisations (such as NGOs) who operate across the UK. To work efficiently and avoid unnecessary bureaucracy, the new framework clarifies that the emphasis for future work at UK level will be on co-ordination, information exchange, identification of research priorities and some reporting. JNCC has a key role in this respect.

Q4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

24. Work to embed proper consideration of biodiversity in all relevant sectors of policy and decision-making is undertaken through the biodiversity or environment strategies of each of the four countries of the UK. Achievements in England include the establishment of the biodiversity performance indicator for local government, and the fourth Periodic Review of Water Prices, which has led to £500m of investment benefiting more than 170 water and wetland SSSIs damaged by sewage pollution and over-utilisation of water. Adequate integration of biodiversity protection into all relevant policy areas is a continuing priority.

25. Biodiversity protection has been incorporated into the Government's marine strategy, and key components of this are included within the draft Marine Bill. The Common Fisheries Policy, as written, is based on an ecosystems approach, and the UK Government is firmly committed to this.

26. Through its ecosystems approach action plan, Defra is committed to developing a more strategic approach to policy making on the natural environment, based on a number of core principles, including taking a more holistic approach to policy-making and delivery and ensuring that the value of ecosystem services is fully reflected in decision-making. The plan includes a range of actions with direct relevance to biodiversity.

27. On valuation, in particular, the plan sets out actions to:

- review existing policy and project appraisal tools to explore how the principles of an ecosystems approach, including the valuation of ecosystem services, could be incorporated;
- develop a benefits transfer strategy for use in valuing ecosystem services;
- promote the development of the existing Environmental Valuation Reference Inventory (EVRI) database to ensure that it captures studies on the valuation of ecosystem services most useful and relevant for benefits transfer, including from Defra-funded studies; and
- review work on non-economic and participatory valuation methodologies and produce guidelines on their use alongside economic valuation methodologies

28. Defra has published “An Introductory Guide to Valuing Ecosystem Services” to assist those involved in the decision-making process to take better account of the value of ecosystem services. We have also funded or supported a number of research projects on valuing ecosystems services.

29. Internationally, considerable progress is also being made through the G8 Potsdam initiative to produce a Stern-style review, called The Economics of Ecosystems and Biodiversity. The main aim of this project is to assess the value of the loss of biodiversity and the costs and benefits of actions to conserve it. It will use a range of mechanisms and will develop methodologies such as tracking the movement of biodiversity, measuring the change in its abundance and quality, and measuring the economic value that such changes represent. An initial report on this work was presented to the recent CBD Conference of the Parties in Bonn, and the UK announced a contribution of £100k towards the next phase of the work.

30. While more work is needed to refine and develop valuation methodologies, we have already started to use valuation tools in government policy. For example, work to value marine ecosystem services has been undertaken by Government, most recently as part of the impact assessment undertaken for the nature conservation provisions of the draft Marine Bill.

KEY THREATS

Q5. What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?

31. Detailed work has been done on reasons for adverse condition in the context of the SSSIs PSA target in England. The top ten reasons are: overgrazing (typically in the uplands), moor-burning, coastal squeeze, drainage, water pollution from agriculture and discharge, air pollution, undergrazing (typically in the lowlands), inappropriate scrub control and lack of appropriate forestry/woodland management (including management of deer grazing).

32. In the UKBAP 2005 reporting round⁹, lead partners were asked to list the issues that were currently posing, or likely to pose, a significant threat to their species or habitat over the next 5 years. Key threats faced by priority habitats and species were: habitat loss (particularly due to agriculture or changes in management practices), infrastructure development (mainly housing infrastructure and development on the coast), and climate change.

⁹ <http://www.ukbap.org.uk/library/Reporting2005/UKBAPReport05.pdf>

33. In the marine environment, climate change and some fishing activities have a particularly adverse impact on biodiversity. Some fisheries stocks are not currently at full reproductive capacity, and levels of by-catch can impact on other marine species. Climate change is already starting to have a significant impact on some species (see Q7).

34. Action to address each of these drivers is being taken under the auspices of the UKBAP and the country biodiversity strategies.

Q6. Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

35. We are confident that the Invasive Non-native Species Framework Strategy will help. It is based on internationally agreed advice and principles, and has received widespread support from stakeholders. Its core premise is agreed under the Convention on Biological Diversity: of firstly seeking to prevent introductions; then swift action against those that are found early; and, finally, effective longer-term management of those that are already established. However, as we have acknowledged in the strategy, no system will be completely watertight because there is so much scope for invasive species to be introduced deliberately or accidentally through global trade and travel.

36. Work is in hand on making further use of existing regulatory powers to control what may be released or sold, but the scope for additional regulation needs to be balanced against the burdens it would impose. Success will also depend on other approaches such as changing behaviours, and improving understanding of the risks and the need for action against such species.

37. The plant health regime is a good example of an existing robust line of defence against the introduction of invasive non-native plant pests and the strategy will lay the foundation for better protection of our native wildlife in general. We intend to back up preventative measures with arrangements to instigate appropriate control actions much sooner in future. This could involve a range of bodies whose interests or responsibilities are relevant and may therefore be resourced in a number of ways. However, early action is more likely to succeed, will cost significantly less and will minimise any potential harm to native wildlife and habitats.

38. Eradication of established invasive species must be approached very carefully—particularly in terms of knowing the true size and extent of the problem, the effectiveness of control techniques and the likely response of the species to such action—in order to avoid unsustainable commitment of resources. For example, the policy review group that reported in 2003 estimated that eradicating Japanese knotweed in Britain would cost £1.56 billion. Priority will therefore need to be given to preventing as many future problems as possible through detection and rapid response, and to managing those species that have already become well established in a cost-effective and targeted way. The GB Programme Board will advise Government on the case for major or national eradication programmes in future.

Q7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

39. While we cannot be certain of the impacts climate change will have on UK biodiversity, we know that we are likely to face longer, hotter summers, wetter winters and more extreme weather events, and that there will be longer growing seasons for plants. These conditions could significantly affect species' ranges, preferred habitats and behaviour.

40. Many species are already showing evidence of northward extension in their distribution in the UK. We can use studies such as the MONARCH report which modelled the “climate space” of priority species identified in the UKBAP, using established climate change scenarios to indicate possible outcomes.

41. In the marine environment, it is predicted that climate change will lead to changes in temperature, pH level (ocean acidification), water circulation and sea level rise. Changes are likely to occur in the abundance and distribution of marine habitats and species. For example, recent warmer conditions appear to have led to changes in the distribution of fish prey species, which in turn have led to reduced breeding success in some seabird populations. Sea-level rise associated with climate change is likely to accelerate the rate of loss of coastal habitats around the UK. For example, it is estimated that an average of 100 ha of saltmarsh is being lost every year in the UK as a result of coastal squeeze. The vast majority of these losses are in the south and east of England where Government has established a target for the creation of at least 100 ha of intertidal habitat per year through the flood management programme to offset this impact and contribute to meeting biodiversity targets.

42. Increasing the resilience of species, habitats and ecosystems to climate change will help the widest range of biodiversity to survive its impacts and adapt. So we should seek to:

- conserve the range and ecological variability of habitats and species;
- maintain existing ecological networks;
- create buffer zones around high quality habitats; and
- take prompt action to control the spread of invasive species

We are mainstreaming climate change across all the workstreams of the England Biodiversity Strategy so that consideration of the impacts of climate change becomes an integral part of all decisions made for biodiversity.

43. Our biodiversity plays an important role in helping mitigate against climate change with forests and peatlands providing carbon sinks. Adaptation for biodiversity will need to be a long term activity as our knowledge increases. It is difficult to predict the likely consequences of mitigation and adaptation measures in other sectors, but the key lies in ensuring that sustainable options are developed, for example in the area of renewable energy.

Q8. Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?

44. The Government's aim is that development should have minimal adverse impacts on biodiversity and enhance it wherever possible. The policy and legislative framework to enable this to happen is already largely in place, through PPS9 and accompanying guidance; the linked Government Circular on statutory obligations for biodiversity and geological conservation and their impact within the planning system; and the arrangements for appraising regional spatial strategies, local development documents and individual planning applications.

45. In practice, much depends on the relative weight afforded to these policies amongst the many others embodied in planning legislation and guidance. In a small, densely populated country, with continuing high levels of demand for housing and infrastructure development, it remains a challenge to achieve full integration of biodiversity conservation and enhancement with relevant social and economic considerations, as part of delivering sustainable development.

46. One of the problems we face is how to make it easier for developers to provide for biodiversity, in a meaningful way and at a sufficiently large scale, as a normal part of their work. This requires clarity at the outset about what is needed, and the cost and means of delivering it. To this end, we are undertaking research to assess the potential for making better use of biodiversity offsets (ie offsite compensation measures) which might have a role in reducing adverse impacts on the wider countryside.

47. The proposals for a Community Infrastructure Levy on new development could potentially make a significant contribution to minimising the impacts on biodiversity of housing and other new development. Green infrastructure, and its associated biodiversity, is an essential component of a good quality of life when communities grow and needs to be fully integrated into new development.

48. All New Growth Point (NGP) proposals are screened by NE and EA for their potential impacts on biodiversity; where impacts are potentially significant, appropriate conditions (eg necessary mitigation) are attached as part of the NGP designation. The consultation paper issued by CLG in April makes clear that eco-towns will be expected to "enhance the biodiversity value [of the locality], providing a variety of important habitats and inter-connecting wildlife corridors. . ." The proposed locations have themselves been subjected to exactly the same sort of "showstopper" review as proposed NGPs, with potential impacts on biodiversity one of the assessment criteria.

49. The Government is working with the Town and Country Planning Association (TCPA) on the practical application of the key sustainability criteria for eco-towns. TCPA are producing a series of guidance worksheets, including one on biodiversity, which will be available to all those involved with taking forward eco-town proposals.

50. In May 2007 the Planning White Paper, Planning for a Sustainable Future¹⁰, reinforced the Government's commitment to the key principles of Green Belt policy set out in PPG2. The planning system exists to identify the most appropriate locations for development taking into account a wide range of considerations, and Green Belt policy is an important part of this.

51. While environmental enhancement is not the primary purpose of the green belt, there are examples of communities, local authorities and landowners working together to improve the environmental quality of green belt land, providing benefits for biodiversity. The Community Forests programme is a good example of this, and similar initiatives to provide opportunities for biodiversity, leisure, and healthy living in urban fringes are possible within current Green Belt policy.

¹⁰ www.communities.gov.uk/publications/planningandbuilding/planningsustainablefuture

52. Government's recent response to English Partnerships' recommendations on the National Brownfield Strategy¹¹ recognised that not all brownfield land is suitable for development purposes and that such sites can be important for biodiversity. The revised UK Biodiversity Action Plan list of priority species and habitats (approved by Ministers in August 2007) includes "Open Mosaic Habitats on Previously Developed Land" for the first time. We are currently commissioning research to:

- refine the definition for this new priority habitat to aid identification on the ground; and
- identify options for compiling an inventory of all the land in the UK that falls within that definition.

This work, and the proposed BAP for this habitat type, will help avoid damage to those brownfield sites which are important for biodiversity.

RESOURCES

Q9. Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?

53. A report commissioned from external consultants and published in 2007¹² estimated current spend on the UKBAP in 2005–06 as £388m pa. Our biodiversity expenditure indicator¹³ shows that since 2000–01 there has been a year on year increase in biodiversity expenditure from the public sector in real terms, resulting in an overall increase of 33 per cent. The lion's share of this comes from agri-environment expenditure; £2.9bn of agri-environment funding has been secured for England for the period 2007–13, much of which will be targeted at biodiversity. Statutory nature conservation agencies, and Forestry Commission are the other major public sector contributors, together with lottery funding. In addition, the private sector, in particular Wildlife and Countryside Link organisations, are major funders.

54. Where UK Overseas Territories (UKOTs) are included within the UK's ratification of a multilateral environmental agreement, they must be able to meet the obligations under that agreement. For the Convention on Biological Diversity, St Helena (and dependencies), Gibraltar, Cayman Islands and British Virgin Islands are the UKOTs included in the UK's ratification. One of the principles that govern the relationship between UKOTs and the UK Government is that Britain will continue to provide help to the UKOTs that need it. This is an important point, given the wide range in GDP between different UKOTs.

55. Defra has provided funding to a number of programmes in the UKOTs. Through the Darwin Initiative we have so far contributed in excess of £1.5m including £79k over the past year on two projects in Tristan da Cunha (enabling implementation of the CBD in the marine environment) and the Falkland Islands (conservation of freshwater fish). The new Darwin Round, announced at the recent CBD Conference of the Parties in Bonn, that it will give priority to applications for the UKOTs. Defra has supplemented its Darwin support indirectly through voluntary contributions made to international agreements, in particular the Agreement on the Conservation of Albatrosses and Petrels (ACAP), of which the UK was a founding member. We have given voluntary contributions to ACAP and we are also contributing towards the costs of an officer who will co-ordinate ACAP activities in the South Atlantic territories from a base in the Falkland Islands.

56. The Overseas Territories Environment Programme (OTEP) was established to help the UKOTs to implement their Environment Charters and environmental management more generally. It is jointly funded by FCO and DfID. In the first phase (2004–07), a total of £3m was spent on biodiversity conservation in the UKOTs; funding in the current phase is £0.5m pa from each department over the next three years. DfID, FCO and Defra officials consider annual OTEP applications for funding. The FCO portion of OTEP is a ring-fenced element within the larger Overseas Territories Programme Fund (OTPF), a £6.5m programme. Environmental projects can and have been funded from other parts of the OTPF.

PROTECTED AREAS

Q10. Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?

57. A coherent network of protected areas is vital for conserving the best of our biodiversity, and is an integral component of the England Biodiversity Strategy. On land, designations include non-statutory local sites and local nature reserves, Sites of Special Scientific Interest (SSSIs), National Nature Reserves, European Sites (as part of the Natura 2000 network), and Ramsar Sites. While we expect to bring forward new national and European marine designations (see below), the extent of the suite of terrestrial and freshwater sites is now largely complete.

¹¹ <http://www.communities.gov.uk/documents/planningandbuilding/doc/securingfuturebrownfield.doc>

¹² <http://www.ukbap.org.uk/bapgroupage.aspx?id=110>

¹³ <http://www.jncc.gov.uk/pdf/2010-BIYP2007.pdf>

58. Natural England is developing a framework to assess the climate change resilience of SSSIs, which it plans to pilot this year and roll out across England in the two following years. We will consider the fitness for purpose of the protected areas network in the light of Natural England's work, but it seems likely that the existing network will still have a key role to play. Protected sites, supplemented by a broader mosaic of non-statutory local designations, already have the best potential to support the movement and changing distribution of species. We may need to build in the flexibility to adjust the conservation objectives and notified interests of existing sites, as well as developing landscape-scale responses to facilitate movement of species. We have commissioned research looking at such a broader 'landscape scale' approach.

59. Protection for important and threatened marine habitats and species is not at the same level as terrestrial protection. However, the UK is committed by international agreements and EU Directives to establishing an ecologically coherent network of well-managed Marine Protected Areas (MPAs). A UK-wide vision for the network of MPAs (which will include Marine Conservation Zones and European marine sites) is being developed with the Devolved Administrations and the statutory nature conservation bodies. The proposals contained in the draft Marine Bill will play an important role in helping to deliver this vision.

60. The draft Marine Bill provides a power for Ministers to designate Marine Conservation Zones (MCZs) for the purpose of conserving marine flora, fauna and habitats. In particular, we want to designate areas which are important for rare and threatened species, and for habitats that best represent the biodiversity of UK waters. The network will be designed to deliver, together with our European sites, an ecologically coherent network of Marine Protected Areas, which are mutually supportive and which contribute to healthy marine ecosystems. The MCZ provisions in the draft Bill will not apply to the territorial waters of Scotland and Northern Ireland. Instead, those Devolved Administrations have announced their intention to legislate separately, and we are working with them to ensure the coherence of the overall network.

61. The protection of MCZs will largely be achieved through the marine licensing (and other existing) consent regimes, in the same way as for European marine sites. Levels of protection, and the management implications, will depend on the conservation objectives set for each site. Public authorities will be under a duty to further—or, where this is not practicable, least hinder—MCZ conservation objectives in carrying out their functions. They will not be able to license any activities that would hinder the achievement of an MCZ's conservation objectives, except in cases where there are no suitable alternatives, the damage to the environment will be outweighed by the public benefit, and the damage is compensated for. The Marine Management Organisation (and Welsh Ministers in Wales) will have powers to make conservation orders to protect MCZs from harmful activities which would otherwise be unregulated. Additionally, Inshore Fisheries and Conservation Authorities in England will be placed under a specific duty to ensure that conservation objectives for MCZs are furthered, such as by making fisheries byelaws where necessary.

62. On land, our emphasis is on both the protection and the enhancement of sites, and progress in improving their condition has been good. The condition of SSSIs, which include European sites, is one of the key indicators of the success of our biodiversity strategy. We are aiming to bring 95% of the area of SSSI land in England into favourable or recovering condition by December 2010. 82.9% of the SSSI area was in target condition by early June 2008—up from a baseline of only 56.9% five years earlier. Further progress relies on a partnership approach to positive site management. Stakeholders with major land-owning or managing responsibilities have recently agreed to delivery commitments which should bring at least a further 5% of SSSI land within target condition by March 2009. The challenge is to maintain that momentum as we work towards the 2010 target.

63. While management of special sites is a pre-requisite of securing future biodiversity, it is not sufficient on its own. Firstly, not all of the UK's priority species and habitats are found in designated areas; secondly, there is a need to buffer and link small sites to reduce the risks to survival faced by small, isolated populations; thirdly, studies of predicted responses of species and habitats to climate change suggest that most of the species that are currently the focus for conservation are likely to experience changes in the location and/or extent of areas across the UK where the climate will meet their requirements. This illustrates the need to reduce habitat fragmentation to facilitate species dispersal and establishment in new locations as the climate changes. The Wildlife Trusts and other NGOs have championed this work through their "living landscapes"¹⁴ and "rebuilding biodiversity"¹⁵ campaigns, which Government has welcomed and encouraged.

17 June 2007

¹⁴ <http://www.wildlifetrusts.org/index.php?section=about:publications:free>

¹⁵ (Living Landscapes, full report)

Witnesses: **Joan Ruddock MP**, Parliamentary Under Secretary of State (Climate Change, Biodiversity and Waste) and **Mr Martin Brasher**, Head of Wildlife Habitats and Biodiversity Division, Defra, gave evidence.

Q118 Chairman: Good morning. Our apologies for keeping you waiting while we were trying to reach agreement on other matters. Thank you very much for coming in. This is our last evidence session on the biodiversity inquiry. Could I kick off by asking why you think the 2010 target is not going to be reached? We have made progress towards it but your own memorandum recognises we are not going to reach it.¹ Why do you think that is?

Joan Ruddock: Thank you, Mr Chairman. I have Martin Brasher here with me, who I may refer to at certain points; he is the Head of our Wildlife Habitats and Biodiversity Division. If I might just say something about the loss of biodiversity first, I think that we sometimes forget that we have been losing species for a long time; that species are habitually lost over time and that, therefore, to imagine that we human beings can somehow halt that loss was quite, I think, a tall order. My own sense is that it has been a very, very important driver to action; however, it did perhaps put us, the human species, in a position that perhaps was not entirely reasonable. So, first of all, we have always been losing species. What is of great concern and has been of great concern in more recent years is how the speed of loss, and it is the speed of loss that we have been trying to address. I think that, perhaps, in absolute terms, we were never going to absolutely halt every single species lost but we had to put in place a target that would galvanise us and, indeed, in terms of Europe and the world community. So what I am really saying is that I think one could not have an expectation that in absolute terms we would halt species loss. Therefore, the judgment ought to be: how successful have we been in our aspiration to reach such a target? On that I would say that we have been reasonably successful, and we have much to show in terms of what we have achieved. We have species and habitats that have improved, some which have remained constant and some which have been lost. Overall, I think, it is a good picture and I think there are not many countries in the world that have been able to tackle this extremely difficult subject with the kind of commitment and expertise that we have found in this country.

Q119 Chairman: I would accept the very challenging nature of trying to halt the loss of biodiversity, but I think what you are saying is that the target was, perhaps, too challenging to have a serious chance of being met, and that was the view of some other witnesses that we had. What do you think would be a more realistic target to set for the future so that we, at least, maintain this momentum we have got and keep it as a high priority? What would you consider to be sensible?

Joan Ruddock: First of all, perhaps I should also add another perspective. I talked about the rate of loss but, perhaps, if we look back, what we can see is that the rate of loss, if we go back to, say, the 1970s and compare to the 1990s, that rapid decline in most areas has been halted and in many areas now we

have stabilisation of populations, albeit they were at a lower level. What I take from that is that we know how to do certain things. On the other side of the coin, the challenges that are constantly upon us are ones that may be increasing. If we are looking at the international targets, as opposed to just the UK, then of course some of those pressures are continuing apace and are quite outside our means of doing anything about them. So in terms of what sort of target might we set for the future, first of all I think it has got to be conditioned on what have we learnt in trying to go for 2010. I think we have to examine very carefully what are the things which stand in the way of making progress and whether they are getting worse or better. If we think of habitat loss through inappropriate management, then I think we know how to do that better and we could have a target which depends on that. In terms of infrastructure development, we are a very small country, a small landmass and very highly populated and we have infrastructure demands that will always be there, particularly in terms of, for example, housing and numbers of households. Some of those will remain very challenging pressures. The third one, which is inescapable (and that is what we need to know—it is inescapable), is climate change. Those things will continue to bear down upon anything that we do in the future. I am pleased that we have got an agreement for an inter-sessional process in the CBD so that we can work out we are contributing to that, and we will continue to work very hard to share our expertise and to try and achieve a future target which is both challenging but, also, realistic. I would not like to say at this point what that ought to be but I definitely, definitely know that it has to be rooted in: what are the things that make this so difficult? How are they moving and how can we have programmes that address those particular issues—not just here but throughout the world?

Q120 Dr Turner: Joan, do you think it is, in fact, achievable to attain some level of biodiversity retention which is going to be sustainable in the long term?

Joan Ruddock: Optimistically, I hope that it will be. I think there are just too many factors for any one Minister in one country to just say yes or no to that question. We are dealing here with very complex science; we are dealing with forces that, particularly in relation to climate change, we have only more recently begun to understand thoroughly. We can never predict political change. Individual countries can actually be completely ravaged by the fact you have political change that then means no conservation programmes are addressed—certain forms of development or the things that happened in the rainforest. These are major, major forces that are not under our control. What I do think, on the very positive side, is how much has been learned by having the 2010 target in place, how much we know what to do and how much there is in international agreement to try to move forward. The fact that the CBD has already said that there should be a process that would move beyond 2010, is very positive.

¹ See Ev 60.

15 July 2008 Joan Ruddock MP and Mr Martin Brasher

Q121 Dr Turner: If we take a reasonable degree of political stability for our part of the world as a given, several witnesses have demanded not only biodiversity retention but a certain amount of reversing of the loss of biodiversity. Do you feel that this is a practical proposition? How do you react to their suggestions?

Joan Ruddock: I think that there can be some reverses, and I think you may have heard evidence about the Forestry Commission and re-establishing heath land by chopping down trees. There can be a case for doing this, and I think we have to make judgments about our whole ecosystems and where it is appropriate to reverse certain things that have happened and where not. We have to consider trade-offs with carbon (that is now a very big factor which we have not factored in entirely in the past) and we also have to say there is no way that we can just turn the clock back, in any comprehensive sense. We cannot turn the clock back. We can restore some habitats and, of course, huge amounts of work are going into conserving existing habitats and trying to make sure that, in the face of climate change, we have measures in place that can enable us to conserve as much as we can of what we have now because otherwise we are unlikely to have those habitats for the future.

Q122 Dr Turner: Of course, there are those who would like to go back to the Halcyon days of, say, 50 years ago when bits of the English landscape looked very different and biodiversity was indeed very different. Clearly, in the face of population and land-use pressures, that is extremely difficult and, presumably, another factor is the degree of resource which the Government feels able to put behind the process of reversal and going back to the hazy days of the 1950s. How far do you think it is reasonable for us to proceed along this line and how much government resource can you justify putting behind such efforts?

Joan Ruddock: First of all, I think that just to end really about this issue of how far back you can go, we have an overall strategy for biodiversity. That is backed up by priority species and priority habitats; we have the ecosystems approach and, of course, we have our SSSIs. If we were to say: "People would like to see a different shape to the countryside", we, as the custodians of our biodiversity strategy, have to be looking at not what it looks like (although that can be a consideration) but what does it do for biodiversity? What are we enabling ourselves or our landowners or managers to conserve? What are we going to gain overall? So in terms of lowland heath, for example, where you have a very limited amount of land, and arguably we had much more and it is reasonable to return some more, then that may be the right thing to do because it is actually benefiting priority species and it is a priority habitat, etc. etc. So those judgments may be reasonable to make. As to how much resource we should direct to it, I would say that we have increased the resources available from government to biodiversity consistently over the years and we now have this major programme of the agri-environment schemes (£2.9 billion over the

next six years) and that money and those schemes will actually make an enormous difference, because that is linking up the management of the countryside in the service of biodiversity, and that is a major way and a major contribution that we are making, both financially and structurally. That is a huge step forward, in my view, and one that is continuing—it goes beyond the 2010 target. So I think that is an indication that the Government is prepared to put in a substantial resource—and it is substantial—but you may say it is not enough.

Q123 Dr Turner: No.

Joan Ruddock: Good.

Q124 Jo Swinson: Minister, you mentioned that climate change is inescapable. Can you tell us what the Government is doing to ensure that biodiversity will be able to adapt to the climate change which we know is going to happen and is already happening?

Joan Ruddock: I am very pleased, I have to say, with what we are doing in this field because most of us round this table, who have been keen environmentalists all our lives, I think, have concentrated a great deal on mitigation in relation to climate change, and that has been the political debate and the public debate nationally and internationally. For us to move on very fast to adaptation, again, puts us really at the forefront of what is happening in climate change. We are, as a Government, very committed, as you will know, because we have clauses in the Climate Change Bill on adaptation. In every aspect of our country, economy and society we will have to adapt to climate change and, of course, biodiversity is no different. So what we did just last year, in partnership with the RSPB and a number of other organisations, is produce a report, which is called Monarch, which is modelling natural resource responses to climate change. This made use of, again, a unique resource which is called UKCIP, which is the UK Climate Impacts Programme. That programme is a group of people who are producing probabilistic scenarios for climate change, and what they did, in this report, was to work with us to assess the potential impacts of climate change on wildlife in Britain and Ireland, and they projected how climate space might change for 2020, 2050 and 2080. That was a major piece of ground-breaking work and it modelled changes to 120 species selected for action in the UK Biodiversity Action Plan, and then considered the analysis of 32. If the Chairman will allow me, I will just very briefly say that 15 of the species are projected to gain climate space with no significant loss; eight are projected to lose climate space; three indicate no significant loss or gain and six are likely to both gain and lose. To explain what "gain and lose" means, they may lose in the South and they may end up in the North. A northward shift of territory is something that not only came out of that report but, when the RSPB did their report on European Breeding Birds they also projected and predicted that there would be a move north for certain species. So that was the start of a process where we immediately did not think of floods and all

the other great things that we might have to adapt to but we thought of biodiversity and did that piece of ground-breaking work. Overall, we have got a Climate Change Adaptation work-stream as part of the England Biodiversity Strategy. I could go on, if people would like, just to say how this fits within the overall government framework, which is that our adaptation to climate change programme is bringing together all the work that is being done by all government departments and, on 22 July (which is one day next week but I have forgotten which day), we will be launching this and we will be launching our Adapting to Climate Change website, together with a report, which will indicate just how much work is already under way around government and, of course, what we need to be doing for the future.

Q125 Jo Swinson: So you are confirming that biodiversity is part of that adaptation work-stream directly being included in that. Can you tell us how the Adaptation Sub-Committee that will be created through the Climate Change Bill might also be addressing these issues? Do you expect it to be addressing biodiversity amongst the other things it will be dealing with?

Joan Ruddock: The Adaptation Sub-Committee (for those who may not be entirely aware) is going to be part of the Climate Change Committee. What we have said repeatedly throughout the whole procedures on the Climate Change Bill is that all aspects of the work do have to meet the Government's sustainable development criteria, and that within sustainable development we include the natural environment and biodiversity. The other thing I should say is that, of course, (and perhaps people will ask these questions later on) through our Public Service Agreements, Defra leading on the environment and on biodiversity as a consequence of that, it means that anything now that is being done within government, of whatever kind, will be conditioned by that PSA. So the answer is yes, whatever the Adaptation Sub-Committee is doing, it will have to have this as a consideration. It is, of course, essentially an advisory body, advising through the Climate Change Committee, and reporting as well.

Q126 Mr Stuart: Is the Road Transport Fuels Obligation good or bad for biodiversity in the United Kingdom?

Joan Ruddock: I think that having a Road Transport Fuels Obligation is the right thing to do. The question is: are we setting it at the right level and, also, have we got the right kind of controls in place? That has been a debate around government for some considerable time, and the consequence of that was, of course, the Gallagher Review, commissioned by government to look at the wider social and environmental impacts of biofuel production. What we had always said was that if we were to have biofuel production in this country then, clearly, it had to be sustainable, and we know what we mean by "sustainable". The issue has been more the situation in those countries which have much larger production of biofuels to date where, clearly, some

of the practices have not been sustainable. What we need to ask ourselves now, as a world community, is whether we can have biofuels that are sustainable. I do not think we know the exact answer to that at the moment.

Q127 Mr Stuart: If we do not know whether we can have sustainable biofuels then, by a logical conclusion from that, is the RFTO, having already been set, ahead of the knowledge to make it a sensible move?

Joan Ruddock: I think that what happens with these issues is, clearly, that we are all striving all the time to find ways of reducing our carbon emissions, and the best biofuels, which can be sustainable, do that job, and therefore there is no reason to set your face against biofuels per se—it is addressing the issues that have subsequently arisen. We, at the moment, as you know, have only got 2.5%, and the Government has said we need to take a cautious approach and we have already said that, in terms of the EU aspiration for 10%, at the moment there could not be any guarantee that that could be done and done sustainably. The last thing we want is for people in the rich countries of Europe to be creating a demand for biofuel that then meant people in other countries did not get their food crops, etc, etc. You know as well as I know what the linkage is. The question, I think, is unanswered as yet, and Gallagher made some suggestions, there is more thinking to be done and we are going to take a cautious approach as to how far we move. At the moment our demand for biofuel is very, very small indeed.

Q128 Mr Stuart: It is moving to 5%, is it not?

Joan Ruddock: Yes.

Q129 Mr Stuart: Basically, it is questionable that 2.5% is actually sustainable because we do not have the information and Gallagher does not change that, and yet we are moving to 5%. Surely, that is unsustainable.

Joan Ruddock: Any further information would have to come from my colleagues in the Department for Transport, but I think I am simply putting on the record what Gallagher has told us and the fact that the Government commissioned that, for the obvious reason that we have concerns and that we will take a cautious approach to any further increase. That is what has been said and I cannot, from my position, add anything more to that.

Q130 Mr Stuart: The Renewable Energy Strategy. Is that good or bad for biodiversity?

Joan Ruddock: What we need to do and what we are doing, in terms of renewable energy, is to try to seek some coherence and some synergy between biodiversity, conservation and renewable energy policy. It is obvious that there could be clashes (and you might like to ask me about that), but we need to do the work and not assume that it is not possible to do all we want to do on biodiversity and, at the same time, have renewable energy. What I would say is this: if we do not have a massive increase in

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renewable energy, biodiversity will suffer. Biodiversity suffers because of climate change, and if we are to do our duty in this country in reducing our emissions and encourage other countries to do the same and set the example that says: “We will take this upon ourselves; we will do this; you should also do it”—if we do not do that then the fate of our species and our ecosystems is doomed, frankly, if we do not get carbon reduction worldwide. That has to be an absolute goal—that emissions are driven down. We will have to have renewable energy—there is no question about that—so we have to work out how to do it and how to do it in the least harmful way where there could be a conflict between renewable energy and biodiversity.

Q131 Mr Stuart: And we should proceed on the basis of evidence. Is that right?

Joan Ruddock: We should definitely proceed on the basis of evidence.

Q132 Mr Stuart: In response to our biofuels report the Government said that the level of bioenergy that could be sustainably produced in the UK would be explored within the Renewable Energy Strategy, but the Strategy simply did not address the issue. Why was that?

Joan Ruddock: I am not aware of the extent to which you suggest that the issue has not been addressed. What is the point?

Q133 Mr Stuart: Basically, the Renewable Energy Strategy simply stated that sustainability could be addressed through standards, and yet the Government has suggested that it was going to be fully explored within the Renewable Energy Strategy. If we must move ahead on the basis of evidence—and we all recognise the need to reduce the emissions—we must not start doing things which could be counterproductive. We will both lose the public and we will act in a way which is environmentally counterproductive, and that cannot be the right way to proceed, regardless of political pressures.

Joan Ruddock: Any infrastructure development, again, has to have regard to biodiversity. That is built into the planning system; it is built into the overall PSAs of Government, and it has to be done that way. The considerations have to be made. So whether it has been sufficiently discussed in the document you have referred to or not, there is a framework in place, and these decisions will have to be taken in relation to that framework. The other thing I would say is that there is a great deal of information available to us, and developing all the time, as to how we can look at development, make a judgment about development needs, see if that is likely to have any impact on biodiversity in any particular way, and then ask ourselves the question: is there any way of doing the development and protecting biodiversity potentially at a different site? That work is all there and those considerations are there.

Q134 Mr Stuart: Going back to your framework point, that is precisely what we highlighted in our biofuels report: we do not feel the framework is in place to make sure that these things are balanced, and that the understanding and evidence before action is not in place and yet the RTFO is imposed. A third of the UK’s 2020 renewables target is expected to be from biomass. What is the Government doing to ensure that the resultant intensification of land use does not have negative impacts, not least on biodiversity?

Joan Ruddock: One of the forms of biomass that may be the best and most productive is waste, and that is where a great deal of work is actually going on around government—to try to see how best we can get bioenergy without impacting on land use. What Gallagher has said, I believe, is that we should look at marginal lands, and so on and so forth. Now, that may be a way forward, that may be a way of preventing a clash between agriculture—food cropping—and other things, but there could be biodiversity considerations which we have already flagged up, if you are talking about marginal lands. This is a complex situation and we are working on it. We do believe that second- and third-generation biofuels, particularly using waste, may be the way that we can deal better with our sustainability issues but get the volume of bioenergy that we are going to need.

Q135 Mr Stuart: At the moment, what is being built is not on marginal land and it is not second-generation biofuels. In my constituency there is a plan to build a wheat-based bioethanol plant, and it will be using conventional wheat. There are a number of plans to build such sites around the UK. Is that really, as an outcome of government and European policy, sustainable?

Joan Ruddock: I would want to check on your specific proposals and see what examination had been made before I would pronounce on it because, clearly, I do not know the details. However, it is my understanding that at the level at which there is planting for fuel use in this country, at this time, we do not believe that we have any difficulties with sustainability. In answering your first question what I was flagging up is that we have a small demand and we have a small amount of crops being grown for fuels at the moment, and we do not have concerns that that level is sustainable. We have taken steps to ensure, through the various planning and other regimes, that it should be sustainable. The question that Gallagher is answering is much wider, and the caution that the Government has put in place is about ratcheting up the amount, and that is where sustainability will have to be tested on every occasion.

Q136 Chairman: At the very least, we have a target for biofuels and within the Renewable Energy Strategy a substantial amount of renewable energy is also now projected to come from biomass, so there is going to be a lot of pressure, is there not, in doing both those things as well as achieving progress on biodiversity?

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Joan Ruddock: The answer is yes, it is something that we recognise has potential conflicting pressures. I have to say, again, as I said earlier, we are a small island, with a huge population on a relatively small landmass, and we will struggle to answer all of these questions to everybody's satisfaction. What we have tried to do is to put in place these sort of overarching concerns that we should not be doing anything that is having an adverse effect on our biodiversity and ecosystems without knowing and asking the questions and then coming to a decision—which is not to say we might have to reach some decision at some time, but we are not at that point at the moment. I suspect that Mr Stuart's example is one where sustainability issues have been perfectly explored and satisfied. We are not at that point yet. We are not planting fuel crops all over the country at such a pace that these considerations are arising, but we have to keep looking to the future. I have to say that the greatest concern that people have is not actually what is going on in this country but the fact that if the European Union, as a whole, were to create a much greater demand for biofuels then I think we now know that we cannot be certain that we would not be having a really adverse effect on some other part of the world. That is really what is exercising most of us at the moment.

Q137 Joan Walley: If I may, I would like to move on to the whole issue of protected area networks and whether or not there needs now to be a new approach whereby we link up existing habitats in the future in order that we can adapt to climate change and whether or not we need to be creating new habitat areas. What kind of obstacles do you think there might be to having that kind of landscape approach across the country as a whole?

Joan Ruddock: We have adopted an ecosystem approach, so that we have moved away slightly—although we still have the priority species and the priority habitats and, obviously, the SSSIs—so that we do now understand that we have to look at everything on a larger scale, and that climate change, in particular, dictates that because of the change that will happen and happen at a more rapid pace. So we do support a landscape approach, and we are building that into everything we do. Natural England, of course, leads on so much of this work for us, and that has been totally accepted by them. I know there has been some talk about corridors and the Dutch example of corridors. I have certainly used corridors and I know the RSPB, when I worked with them, has talked about corridors, but I think we are not thinking here just in terms of producing continuous strips of water or continuous strips of land because, if you think about it, if you produce water, trying to connect one place and the next, then you produce a barrier for other species that cannot get across the water. We really have to be able to think holistically to see the whole landscape, and then if we believe (through the research of the type that I have indicated already) that species will not be able to remain—perhaps because of rising temperatures—in one part of the country, then can we see that there is habitat which is similar but at

some distance where those species might choose (and we cannot tell them where to go, obviously!). So trying to see and have a landscape approach is probably the best way of dealing with biodiversity needs and, of course, trying to maintain and conserve some of the landscape that otherwise might change to a complete detriment, both to biodiversity and, indeed, to human beings and our needs as well, if you think just of wetlands, for example.

Q138 Joan Walley: My colleague, Martin Caton, will come on in a moment to the issue of the Regional Development Agencies, but leaving those out could you tell us how you are working with other government departments, and, also, how you are working with the planning system as well?

Joan Ruddock: On the planning system, what we have actually done, first of all, is develop an introductory guide to valuing ecosystem services, and we think that is one of the ways to try to involve and interest people in the work that we do. For so many people who are involved in planning and involved in development, hard landscaping is at the heart of everything they do rather than looking at the natural environment very much. So there is a great deal of need to try to explain to people what it is we are about. Valuing ecosystem services is something which we think is very, very important. We have then got the NERC Act, as you know, which includes a duty on all public bodies, including planning authorities, to have regard to the conservation of biodiversity, and that has been in place for a couple of years and we plan to review how it is working next year. We think that will be very important indeed, because it is there and needs to be adhered to but we do need to research to see how well it is actually being adhered to, so we will be reviewing how well that works. We have also put all local authorities under a duty to report on their own performance on biodiversity, and that duty is in the new framework for local government. So every local authority will have to make a report. I am glad to say that, I think it is, 26 local authorities have adopted the biodiversity indicator as one of their priorities. That is completely new, quite ground-breaking and, again, it will be very important to see what kind of progress they make at a local level.

Q139 Joan Walley: That is only 26 out of how many?

Joan Ruddock: It is out of 300 and some odd, I think, from memory. Of course it is small but, again, if you think about where local authorities are starting from, and the fact that they have major, major considerations of every other kind and it is only since 2006 that they have even had to have any regard to it, for us to make it an indicator on which every local authority has got to report—so everyone has got to report and then they select their priorities—we actually think that putting 26 as a priority is quite an achievement. So, again, we will learn a lot and whatever we learn from them may help us in other ways. I am just being reminded that there are 198 indicators all together that local authorities have, one of which is biodiversity, on which they all have to report, but they have that huge choice; so to

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choose this, we think, is not a bad start at all. Of course, this is a framework which will result in the comprehensive area agreements which will start in the spring of next year. The Infrastructure Planning Commission is possibly something that people will have begun to worry about, and, again, that body has got to take its decisions, again, within the habitats regulations and the NERC Act biodiversity duty. So we are confident that we have everything in place; the questions as to how well everything is working, how much more we might need to do and how much more persuasive we need to be, are all completely valid questions. We have mechanisms in place.

Q140 Joan Walley: Is not one of the issues that there is not really a lot of expertise available across local authorities? I know, for example, in my own local authority area, until certainly last month there was no ecological support or expertise actually available to influence all the different aspects of delivery of services. So how are you going to address that? How are you going to make sure that that expertise is available at the local level, for not just the authorities which are choosing to adopt these agreements but the ones which have not even got it on their radar screens?

Joan Ruddock: We do not dictate to local authorities how they deal with the challenges that we present to them; it is up to them to recognise their need for acquiring expertise and, indeed, to find that expertise. I am not sufficiently informed to know whether there is a shortage in the country. If by any chance there is, then I hope very much that young people going to university today are going to try and do such work, because not only is it vital work and valuable work but, increasingly, it is going to be needed. I think there are career opportunities there.

Q141 Joan Walley: Should that not be something for Defra, maybe, linking up with education and looking at professional qualification courses as well, because at a future time of adaptation to climate change we are going to need this specialist advice?

Joan Ruddock: In terms of adaptation, I have a series of bilateral meetings around government and will be systematically meeting with the adaptation minister who has been appointed in every department. I have not yet had my education meeting but I am very happy to make this one of the points because I think it is entirely valid that we ought to be looking to see that we are producing a workforce sufficiently skilled to tackle both our environmental needs and adaptation, in particular.

Q142 Joan Walley: Finally, just so that we know what diversity there is, are there any plans from Defra to map across the country as a whole what is currently there? At the moment, obviously, concentration is just on protected habitats, but are there any plans to do a mapping exercise right the way across the country?

Joan Ruddock: I am going to receive some advice on that in a moment. "Is Defra going to do something?", the answer is, of course, that so much

of the work that is done on our priority species and habitats is actually done by volunteers. It is a brilliant partnership that we have. We have a biodiversity network of organisations that includes so many of the NGOs that provide volunteers, and so much of the work is actually done is by volunteers. For example, over 500 non governmental experts, many working on a voluntary basis, contributed to the recent review of the UKBAP priority species and habitat, which lead to the publication last year of an updated priority list. I just want to pay tribute to the fact that in this country we have a great culture of naturalists and people who are interested, and they do huge amounts of work. The countryside survey, apparently, is currently engaged—I am going to ask Martin Brasher to explain what mapping is going on.

Mr Brasher: Just to explain that there is a process of countryside survey which is done regularly which does not actually provide a map but it is a national collection of information. I think I am right in saying we are going out to renew that this autumn—the further countryside survey will be started—and that will provide the kind of information, not necessarily as a map, about what has changed in the countryside since the previous countryside survey. Of course, also, we would go to our agencies, Natural England and the Environment Agency, and so on, for information if we needed that.

Q143 Joan Walley: We were wondering whether or not satellite information could help, and whether or not that contributes to computer modelling, so that we could have that information that would help with that future landscape strategy. Any views on that?

Mr Brasher: I was reaching for this document which came out last week *Wetlands Vision*, which certainly used that sort of information to show changes over time. I am sure there is a place for that but things which come to mind for me—

Q144 Joan Walley: Perhaps you would like to write to us.²

Mr Brasher: We could have a look at that.

Joan Ruddock: If there is anything else that we can tell you we will be very happy to write to you on that.³ I should just say that UKCIP, the climate impacts team, are producing their probabilistic scenarios, for now until the end of the century, in November, and they will actually produce maps which have got down to 25-kilometre squares in which they will be telling us not an absolute prediction but the probability is and what the range might be of climate change down to that level, and that, clearly, is going to be incredibly important to people working in this field.

Q145 Martin Horwood: I am very interested in some of the things you have just been saying, which sounded like positive developments, but can we just explore how much these have been joined up with other bits of government? The Sub-National Review

² See Ev 80.

³ See Ev 80.

is obviously part of the framework for the new developing regional tier of government, and it is giving planning controls, essentially, to the RDAs (Regional Development Agencies) which, historically, do not really have a very good record on environmental issues other than putting environmental issues high up on their agenda, partly because their original *raison d'être* was economic development. The Sub-National Review seems to have a strong focus, really, on the basis of economic growth and setting performance for the RDAs on the basis of economic growth. Are you confident that biodiversity is going to be adequately protected at that level?

Joan Ruddock: I am confident that we have had sufficient input and a degree of influence over what is happening. It is true that the history is one of economic thrust, and that is entirely understandable, and that there has been a desire in government to increase the power of the regions in terms of developing economies. The implementation of the Sub-National Review does not have an emphasis on economic growth to the exclusion of all other considerations. We have made it clear, and the consultation document states, that regional strategies will be underpinned by sustainable development principles, and it is on that that we would rest our expectations of how biodiversity considerations are built in. They will also require a sustainability appraisal, and once the sustainability appraisal is done that is bound to take account—

Q146 Martin Horwood: That is quite reactive, though, is it not, Minister? Some of the important work you have been talking about, like the countryside surveys—are those being fed into regional spatial strategies?

Joan Ruddock: I do not know if we have an answer to that.

Mr Brasher: No.

Joan Ruddock: If they are not then it would be entirely reasonable to do so.

Q147 Martin Horwood: The one I am most familiar with is the South West regional spatial strategy which is being finalised this year (in fact, this summer), and as far as I know that is full of maps for housing; it has no maps for biodiversity and no spatial planning for biodiversity at all.

Mr Brasher: The countryside survey is a long-term exercise and I believe it can take three years in order to be carried out.

Q148 Martin Horwood: Is it going to be too late for the regional spatial strategy?

Joan Ruddock: There is bound to be comparable material that is already available. Let us look at it. I can see no reason why, if we have got (I am not in a position to say whether we have or we have not) material that ought to be fed into that, then we can make it our business to feed it in.

Q149 Martin Horwood: What about the important stuff you were talking about a minute ago about valuing ecosystem services? Is that being fed into regional climate strategies?

Joan Ruddock: I have to say to you that officials are working across government all of the time. In terms of our PSA delivery, that is our prime target for the way in which all of government works, which is clearly to deliver and protect our natural environment. That work goes on through a board, and that board has other government departments sitting on it, chaired by Defra. So all of the senior civil servants who then end up working in other areas are getting these messages and are constantly being told that this is what is expected of government departments in terms of delivery. So I cannot tell you whether particular documents are being exchanged at any point or between any departments, but what I can tell you is that we have no doubt that other government departments are aware of what is required of them, and the fact that this needs to filter down to all levels. As I said, we are going to review what has happened in terms of the NERC duty and, of course, in the case of the Sub-National Review we are dealing with something which is new, but they are, again, under a duty to help to contribute to the PSA 28, which is the healthy natural environment PSA that Defra leads on.

Q150 Martin Horwood: You have had a bilateral meeting with DCLG, have you not? You talked about having bilateral meetings with other departments.

Joan Ruddock: Indeed I have and we did discuss these things.

Q151 Martin Horwood: Did you discuss ecosystem services and spatial planning for biodiversity?

Joan Ruddock: We had a broad-ranging discussion which obviously was a Defra perspective on DCLG's plans. I would not want to reveal more than that.

Q152 Martin Horwood: The trouble is that many of these regional economic and spatial strategies are being finalised now and they are setting an agenda for twenty years hence. If these things have not been incorporated, if they have not been part of the planning process, are you saying that DCLG will now need to go back and tell its regional agencies to revise those strategies?

Joan Ruddock: When people start to put something on the ground, whether it is pouring concrete or building bricks, they have to have in mind all these considerations. There are tests in place. There is Planning Policy Statement 9 which they have to have regard to. If you have found deficiencies in documents or you do find deficiencies in documents, you may well be right. All I am saying is that we know what is expected of other government departments and they know what they are expected to do. We are not in a perfect situation. We are not in a situation where this has been at the heart of government for so long that every single person understands it and every document has the right

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words in it. I am acknowledging there could be imperfections in lots of places, in lots of documents, even in strategies, but at the end of the day things have been put in place and we will have to see in practice whether they turn out to be doing things in the wrong way or whether indeed they turn out to do things that are consistent with our PSA target.

Q153 Martin Horwood: You suggested in your memo to us⁴ that the planning system was currently failing to ensure that adequate biodiversity compensation measures were being taken because you talked about lots of ways in which they could be improved.

Joan Ruddock: They can.

Q154 Martin Horwood: Why do you think it is happening at the moment? Why do you think adequate biodiversity compensation measures are not being taken at the moment?

Joan Ruddock: I think it is because we are dealing with areas of new science and endeavour that people who have run government departments, been in government departments, been in local government, been planners and been developers have not had regard to in the past. They have not understood any of these things. They do not just come to them as an inspiration. We need to do the work. Defra has been doing the work. We have agreed the PSA around government. We have put in place Planning Policy Statement 9. We have got the NERC duty. All I can tell you is how much we have done. This is all work that has been done over a very, very few recent years. To expect that everybody has got the message and everybody is behaving appropriately would be unrealistic.

Q155 Martin Horwood: It is clear that you are doing important work, but I can tell you that there is at least one regional spatial strategy with which I am familiar in which essentially all the mapping is of maps of where houses are going to be built and nothing else, there is no landscape or biodiversity element to it whatsoever.

Joan Ruddock: I have heard what you said. Let me give you the assurance that I will personally look into this issue and have a discussion with the regional minister responsible and we will see. We can make this a mini test of how we are working. What I hope to find is that all the officials have all been saying the right things and talking to each other, but I will take it up with the minister.

Mr Brasher: There are at least three elements in this. One is that these duties and so on are in place and that is progress from five or 10 years ago. Secondly, the structures that the minister referred to are relatively new. PSA28 is relatively new and the structures for that are in place and that is collaborative working which I personally certainly see as helpful. There have been countryside surveys in the past and there is another one just about to be launched. You referred to the "Introductory Guide to Valuing Ecosystem Services" and that is an area

which is taking off in terms of people having a keen interest in it internationally as well as domestically and it is something that the UK is strongly behind.

Q156 Martin Horwood: If the RDAs are being given essentially economic performance targets, are they interested in it?

Joan Ruddock: That is the whole point about actually trying to produce some economic analysis of the value of ecosystems. Whereas we can endeavour to give people an understanding of the value of biodiversity and so on and so forth, being able to demonstrate that it has an economic value arguably may make more of an impact on some of the people who we are trying to give messages to. That is a piece of work that we think is particularly useful.

Q157 Martin Horwood: Would your hope and your expectation be that these kinds of regional strategies all over the country will be revised in the light of your work?

Joan Ruddock: I am not suggesting they need to be revised. I am simply saying that when they are put into practice they have to take account of all the things that I have just described.

Q158 Martin Horwood: I would like to ask you about the Community Infrastructure Levy. There has been a suggestion made by some of our witnesses that a guaranteed percentage of that should go to green infrastructure to ensure that that is something that is delivered on because otherwise the community benefits could be in transport and the built environment and so on. Would you support having 10% of the levy ring-fenced for green infrastructure?

Joan Ruddock: We would not at the moment. These decisions are going to be taken locally, not by central government. What Defra did was to ensure that the Community Infrastructure Levy could actually be used for biodiversity gain or for conservation and that was very important. That is another example of why it is new thinking, because in the past if you got a Section 106 it was going to be to build a community centre. People always thought community gain was going to be a building. Having moved it on to considerations of biodiversity, we think that local authorities and particularly local people may well want this to be a priority. The fact it can be used is the important thing and we will obviously want to keep this monitored, see how we go and then we could consider whether there was a need for a minimum, but it is far too early for us to have made that stipulation or tried to persuade other government departments that that should be the case.

Q159 Mark Lazarowicz: I want to continue on the theme of co-ordination across government. You have made it clear to us that your Department has made it clear to other departments what is expected of them, but the issue is how far they do that. Some of the evidence we have had suggested that, if anything, there has been something of a loss of focus

⁴ See Ev 60.

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on biodiversity issues across government in recent times. Evidence that has been put before us pointed to the conclusion there had been cuts in the budget of Natural England. Apparently there is an inter-ministerial group on biodiversity which has not met since your appointment a year ago. Natural England has highlighted DCLG's failures on brownfield biodiversity, minimising biodiversity impacts of new developments, incorporating biodiversity into the sustainable construction code, not delivering quality urban parks and green spaces and so on. That is obviously quite critical evidence. How can we really have confidence that the measures being put in place are having the right impact so far? What do you say to the suggestion that there has been a loss of focus on biodiversity recently rather than an enhanced focus on that area?

Joan Ruddock: I certainly do not think there has been a loss of focus on biodiversity. I would say exactly the opposite is true, that there has been a very strong focus on biodiversity and that we have reinvigorated the BAP process in a number of ways over the past year. I think what tends to happen is that when these things are absolutely new then clearly they receive a lot of attention and so people are very, very aware of what is going on and people think a great deal is being done when something starts up. What I have found over the last year is that when we have repeatedly had events, meetings and conferences, this is the area where there is least comment in the media on anything that we do. In fact, that particular wetlands report that Martin was showing you did get some publicity but I think it was very much from the point of view of the NGOs that were involved rather than the fact that it was so heavily supported by the government agencies at delivery. It is quite difficult to get people to appreciate just how much is being done. Last year there was a ministerial workshop with NGO partners on embedding the ecosystem approach and streamlining bureaucracy. We published the revised UK list of priority species and habitats in August last year. We launched on behalf of the UK Biodiversity Partnership "Conserving Biodiversity: The UK Approach" as a new strategic framework, setting out our shared purpose in tackling the loss and restoration of biodiversity in October last year. We agreed through the UK Biodiversity Partnership Standing Committee a forward process for action on the UK list of priority species and habitats. Only last November we appointed Natural England as our lead delivery body in England. Then we oversaw a process to identify the key conservation actions needed for each of the 1,149 species on the UK list of priority species and habitats. We published the list of habitats and species of principal importance for conservation in May of this year. Natural England is currently finalising a new framework for the delivery of priority habitats and species in England. We have not been inactive. There is a constant work scheme being undertaken and that is apart from all the other things I have said and the work on adaptation. We believe that we are doing a great deal. I know that people will always point to what is not being done, but if you look at the progress that

we have made, we have had more species and habitats that have improved as compared to those that have not. We have also put in place many other things around government. I know that there have been criticisms of the National Parks and the Areas of Outstanding Natural Beauty. As a result of that I have asked Natural England and the National Parks to re-examine the existing National Park biodiversity action plans and to make sure that they are delivering on their contribution to biodiversity. When I looked up to see what they were doing there were many, many things which were very positive, like the Chilterns, which have been involved in working with partners on chalk grasslands and Bowland, which has been restoring upland heathland. We can always say there is much, much more to be done, but we are continually active on every front as are our delivery bodies. As for the money being spent, yes, Natural England has had a somewhat reduced budget, but there is a massive amount of money, which means that the overall budget is constantly increasing and will constantly increase because we have got £2.9 billion which is in the agri-environment schemes. If we are taking a landscape approach, which we are, then we think putting money into the agri-environment schemes is the best way forward and Natural England agrees with that.

Q160 Mark Lazarowicz: What about this inter-ministerial group on biodiversity?

Joan Ruddock: On that you find a weak point because I have asked for a meeting. We have had a meeting set up on two occasions but unfortunately—and this happens around government—one or other of the other ministers has had to pull out. I am much exercised about this. I do want the committee to meet and we will meet and we will find another date. It is just very unfortunate that this has happened.

Mr Brasher: The inter-departmental group on overseas issues is made up of the FCO, the Department for International Development and the JNCC. A lot of the stuff we have been talking about so far would not be relevant to that meeting anyway.

Joan Ruddock: The lack of a meeting with the FCO and DfID ministers has impacted in no way whatsoever on everything we have spoken about this morning. It is not relevant to what we have been speaking about.

Q161 Mark Lazarowicz: I want to raise a significant point in relation to the PSAs which you have, rightly, laid great store by. Is it not the case that there is no individual PSA on biodiversity loss and that biodiversity is only accounted for in one PSA, and only then as one of five indicators? Should we not expect to see a greater presence of biodiversity in PSAs and perhaps a stronger individual PSA on biodiversity loss?

Joan Ruddock: The PSA that we have on a healthy natural environment for today and tomorrow could not be delivered without biodiversity considerations. It is absolutely at the heart of that PSA. No, we do not think it is necessary to have a separate one on that.

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Q162 Mark Lazarowicz: Should we not expect it to be more strongly reflected in other PSAs or focussed on other departments?

Joan Ruddock: I do not think so, no.

Q163 Chairman: Let us go back to the Biodiversity Action Plan for a moment. The RSPB sent us a memo⁵ saying that after the review of the plan was completed in 2007 additional priorities were identified but that defining action and taking the work forward had been painfully slow. Would you just like to comment on that?

Joan Ruddock: All I can say is that that is the view of the RSPB. As I have stressed all morning, this is complex work. One of the worst things we can do is rush at things and actually get it wrong. I do not think it is painfully slow in the sense that we have failed to put our backs behind it or give it enough attention. We have a very significant team of people who work on these issues. We have the major development agencies in terms of Natural England and the Environment Agency and we have very good relations with NGOs, including the RSPB. We are all aiming to get to the right place. If they regard it as painfully slow, well, that is their opinion.

Mr Brasher: It has taken a while, but that is not due to a lack of looking to take things forward at all. We have regular contact with the RSPB through the England Biodiversity Strategy and through the UK Standing Committee as well. It is a question of getting the right structures in place to deal with the problem. Yesterday I received a paper from Natural England with final proposals for taking this work forward in the new structure. They are going to be new structures and it does take a while to set them up. We are very grateful for the input of all sorts of people through the England Biodiversity Strategy, particularly the NGOs.

Q164 Mr Caton: Let us continue on the theme of government co-ordination. You have laid great emphasis this morning on the use of the ecosystem approach in getting government departments to take their impact on the environment into account. How is this going to work in practice?

Joan Ruddock: I do not think I can predict how anything is going to work in practice. We are dealing here with concepts, guidance, advice and frameworks. I cannot think of a particular example off the top of my head and say, "That's how that would work." I will look to Martin to see if he has any idea, but I think that is a hypothetical question which I do not think it is easy to answer. Does he agree?

Mr Brasher: I agree, yes. It may seem as though we are placing a lot of store on the PSA mechanisms but we think we should be because the PSA mechanisms are new. A little while ago you were saying about biodiversity not featuring more prominently in those. One could look at that the other way and say that we are very pleased indeed that they feature at all. There are only 30 PSAs across government and PSA28 is on a healthy natural environment for now

and for the future. Biodiversity is an indicator within that and so too are challenging targets to do with indicators and certainly to do with clean air, water and so on and this is all part of getting the ecosystems right, which will help biodiversity to flourish. The PSA mechanisms are across government. I cannot say to you for sure that I guarantee that the ecosystem approach will feed into the discussions of the PSA, I am not on that delivery board, but that is the sort of mechanism that we have now which we did not have a year ago.

Q165 Mr Caton: The reason I asked my question is because Natural England told us that some important departments, such as BERR and DCLG, do not appear to be doing the work needed to take the ecosystem approach forward. Is that your perception?

Joan Ruddock: I am not in a position to answer for what goes on in other departments. I have been at pains to illustrate what we have put in place, the fact that other departments sit on the board with us and people are in constant dialogue. I cannot make a judgment about what has been said and I cannot answer for another department.

Q166 Mr Caton: Do you not see the risk that this ecosystem approach will not be effective in ensuring that departments adequately value the environment as the relative values given to ecosystem services might not be large enough to prevent damaging decisions from being taken?

Joan Ruddock: We would hope to prevent damaging decisions being taken through the appraisals that I have already indicated, have to be taken into account through PPS9. Those are the ways in which you would try to prevent damaging decisions being taken. That is where we expect to be able to do that. Whether people have got it into their heads how they ought to approach this in order that they should never put up something that might have a damaging effect is a different matter. We work constantly to try to ensure that that is the case. There should be, we hope, safeguards in place to ensure that if proposals that could create damage come up they will be stopped because of the potential damage they will do. I really think we are dealing here with a lot of hypothetical questions. You have to have a particular case to say, "That is how that would happen and that is what we would do." Let me just give the example of eco-towns, which I know have been quite controversial, where we are having very close contact with DCLG to ensure that these considerations are built into the eco-town planning so that we can ensure that there will be standards which will avoid significant adverse impacts on any of our internationally and nationally important sites for wildlife, for example, and which will lead to no net loss of UK BAP priority habitats and species in the locality. That is work that is underway.

Mr Brasher: The ecosystems approach material is quite difficult. Even though it is very close to our hearts in this Department, it has taken a number of us quite a while to understand it fully. We have had training and been present when there have been

⁵ See Ev 32.

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launches and that kind of thing. It will take a while for it to feed through into other departments as well. There is an action plan taking forward the ecosystems approach work and some of the actions in that are shared with other departments. We do need to keep working on engaging with them and explaining what is actually quite a difficult concept. We have tried to embed the ecosystem notion. We can do that at my sort of level and we can do it through the PSA Delivery Board, but that is newly established. I do not mean to say this is a negative thing at all. I am just saying that in a number of these areas we are moving on to some quite interesting concepts and we have to work out how best to take them forward, and the valuation of biodiversity is one of them and the ecosystems approach is another one.

Q167 Mr Caton: I can understand the logic of the ecosystems approach in trying to encourage people whose background is in economics to put a valuation on our environment, but is it realistic? Is there any way of making an objective valuation of a species, for instance?

Joan Ruddock: I missed a point that you were making in that argument, which was that if we were to put a value then perhaps, when compared to other values, it might be too small. This would not be the only consideration. What we are endeavoring to do is to try to get people to understand the value that there is in ecosystems, but it is not in order that we can then say, "Well, just add up that column of figures and then add up that column of figures and come to a judgment," but it is an attempt to get people to understand that the natural environment, albeit that it has an intrinsic value in itself and it has a spiritual value and a cultural value --- It is much more than that and that is what we need economists to understand because you will know, as I know very well, that if we do not understand this and we squander our natural environment there will be huge monetary implications, apart from all the other disastrous and awful things, but financially there are huge issues that arise and huge amounts of money has to be applied to try to then mitigate some of the effects that have occurred because of destroying the environment.

Q168 Martin Horwood: You are starting to talk about some of the "softer" values to ecosystems and you mentioned spirituality. There are things like beauty and the work that has been done on the importance of the countryside and green space because of mental health. In the end these are going to be almost impossible things to quantify in economic terms. Is there not a risk that by trying to quantify things through the ecosystem services approach with an economic objective in mind you are almost conceding the ground to the economists and playing their game? Is it not more important to try and set indicators which are not economic in form and are just trying to recognise the value of some of these things in their own right?

Joan Ruddock: I do not think that you are choosing one over the other. I think that for all of time people have said, "Don't destroy my view. Don't destroy the place that I walk with my children. Just go somewhere else. Look the other way." This has not meant in any sense that in many cases society as a whole has been willing to put any kind of total value on the spiritual aspects of the natural environment. There are some cultures, few remaining in the world now, where the whole of the society values nature beyond everything else and respects society beyond everything else, but that has not been true of industrialised countries for hundreds of years. Just valuing the spiritual nature or otherwise of the landscape and of nature has not been sufficient to hold back the tide of development and we have all benefited from the development that has occurred in our country and our standard of living is based on that. All we are trying to do is to say, taking none of that away because that is all there but it is not often sufficiently valued, let us also look at what it is going to cost us if we destroy our environment. I think that is a really sensible thing to do. There is some spectacular work going on which I have not got time to discuss here, but other people in other companies are also doing amazing work on the value of ecosystems.

Q169 Mr Chaytor: Minister, you referred earlier to the international pressures on biodiversity which were beyond our capacity to influence, but does that apply to the UK Overseas Territories?

Joan Ruddock: We clearly have some responsibility for the Overseas Territories. There are some things which we do and, if I may, I will just take a minute to say what they are. There is an Overseas Territories Environment Programme which was established to help the Overseas Territories implement their environment charters and environmental management more generally and that is funded by the FCO and DfID, not by Defra. In the first phase of that work, which was 2004-07, a total of £3 million was spent on biodiversity conservation. Funding in the current phase is £0.5 million per annum from each department over the next three years. We are obviously concerned and we do work with DfID and the FCO and that is why I said I was very concerned that we had not had our meeting because I wanted to meet with their ministers.

Q170 Mr Chaytor: This inter-ministerial group has never met, has it?

Joan Ruddock: Yes. It met last year but it has not met this year.

Q171 Mr Chaytor: How many times has it met since it was formed?

Mr Brasher: I think it has met four times.

Q172 Mr Chaytor: Over how many years?

Mr Brasher: Over about four years. The intention was that it would meet something like every six to nine months. That was the original thought when it

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was first set up. It clearly has not met even as often as that. It is not the case that it was supposed to meet every fortnight.

Joan Ruddock: Have officials met?

Mr Brasher: Officials are in touch. We still have an officials group. Yes they have and yes they do.

Q173 Mr Chaytor: How frequently has the officials group met?

Mr Brasher: I do not think we meet regularly in that way. We had a meeting in December, for example. We have *ad hoc* contact apart from that. We exchange emails.

Q174 Mr Chaytor: You will see the Committee's concern that if the inter-ministerial group is there to co-ordinate the activities of three departments then even meeting once every nine months is not really going to secure very much co-ordination, is it?

Joan Ruddock: First of all, let us just put on the record again that there is an FCO portion of the OTP Fund and that is a ring-fenced element within the larger Overseas Territories Programme Fund and that is a £6.5 million programme. Money is being transferred. Is there expertise? Is there support? The answer to that is yes. The JNCC works with the Overseas Territories and gives them advice and support. There are examples about what Defra is doing and what funding has gone through other sources, but I just need to make it very clear that it is the Overseas Territories Environment Programme that is funded by the FCO and DfID.

Q175 Mr Chaytor: So the responsibility for local environmental policy remains with the government of the Overseas Territories?

Joan Ruddock: Of course.

Q176 Mr Chaytor: Is that a realistic division of labour given the fragility of their economies and the lack of capacity and very limited resources that the governments have access to?

Joan Ruddock: We must not say they have all got fragile economies. Some of them are richer than we are per head of population. They are not totally dependent on funding from ourselves. The JNCC Annual Report, which is coming out shortly, has a whole section dealing with the Overseas Territories and Crown Dependencies. What we have tried to do is to give support through what is called the Darwin Initiative. I do not know if the Committee is aware of the Darwin Initiative. This is a grants programme. We have contributed £1.5 million in Darwin Initiative grants to overseas territories in recent times and £79,000 in the past year for two projects. I have just launched the next round of Darwin funding which is at least £3 million a year for the next three years and at that I stressed that we would particularly welcome applications from the overseas territories. I understand the Committee has got a lot of criticism to make on that. All I can do is say this is really for FCO and DfID. We have a small part to play in it. We are playing our part and we have actually tried to say, "Let us see if we can do more and use the Darwin Initiative." We have also set up

the Conservation of Albatrosses Group which we are behind, we are the driving force there and we have provided voluntary funding. We are doing various things, but you may have a point to make about wider co-ordination.

Q177 Mr Chaytor: I think the sense is that there is a series of *ad hoc* responses but there is not an overall programme of action. Would that be a fair criticism?

Joan Ruddock: There is an overall programme of action which is in the Overseas Territories Environment Programme. In terms of what we have been able to do, when we have our meeting I think we should be asking ourselves the questions that you have posed: "Do we think this is sufficiently well coordinated across government? Do we think that the overseas territories are getting the maximum result from whatever funding government is able to give them? What more do we need to know?"

Q178 Mr Chaytor: Do you think the respective roles of the three departments are clearly understood or is there an issue over the definition of roles that needs to be considered as well?

Joan Ruddock: At the moment government departments that have a responsibility are the ones that fund. Those two things are inevitably linked. I have explained where the direct funding comes from. If there were to be any transfer of functions in terms of any other department to do more—you might have Defra in mind—then clearly it would require a transfer of funding. That is not a discussion that I am aware is on the table. What we need to do is to get a meeting as soon as possible and I can assure you that that is my intention.

Q179 Chairman: Does the apparently more relaxed attitude towards Genetically Modified crops, which the Government now favours, have any implications for biodiversity?

Joan Ruddock: I think you will be more than aware that when we undertook our field studies what we found is that there were some biodiversity effects from some of the crops, not all of the crops. We have always said that any decision that we take has to be based on sound science. We have not rushed to have Genetically Modified crops grown in this country. However, there is renewed interest. The renewed interest is more towards seeing if it is possible to produce crops that might be possible in the future to grow in areas that have been affected by climate change. It was said right at the beginning of the production of Genetically Modified crops that it would be really important to find crops that could survive droughts. Well, as far as I am aware we still do not have those particular crops, but I think that is where there is great interest. We all accept that our climate is now changing and that we cannot stop that change for the next 30 years of temperature rise at least and 100 years of sea level rise at least, so looking to see if you could grow crops in heavily salinated areas or in drought areas could be of some significance. I think it is considered that that is where

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perhaps genetic modification might go. In terms of whether it has an effect, sometimes it appears it does and sometimes it appears it does not.

Q180 Joan Walley: I would like to ask you about international biodiversity loss. In terms of the joint action that Government is taking in conjunction with other departments, what is the prospect in terms of the role that the UK can play in respect of halting biodiversity loss internationally?

Joan Ruddock: We play a very active part in the Convention on Biological Diversity and a CBD was recently held which I attended. What we agreed there is that we would provide £100,000 towards the working group to look beyond 2010 because that is clearly the importance. In order to work beyond 2010 we do need the best analysis of what we have achieved up to 2010. We will be gathering our reports to ensure that we carry out our duty in terms of reporting to the international community how we have progressed in trying to meet the 2010 target in the UK and that will be done and clearly that will join in with the devolved administrations as well.

Mr Brasher: The way the CBD works is through major conferences every two years or so with workshops in between. We support those strongly. We are expecting to host an *ad hoc* technical expert group in November on climate change. As for the other conventions that we are party to, the

Convention on Migratory Species and the Convention on International Trade in Endangered Species, we are prominent members in all of those and probably punch above our weight in terms of the input we make, in terms of the voluntary contributions that the minister referred to, in terms of chairing working groups and that sort of thing. Darwin is a global scheme as well. This time we have said we would encourage applications from overseas territories, but it is a global scheme which has reflected very well on the UK, but far more important than that, it has done a lot of practical conservation since 1992 when it was launched.

Joan Ruddock: Can you remember how many countries we have projects in?

Mr Brasher: It is 146 countries.

Joan Ruddock: It is 146 countries we have had projects in. I have to tell you, there is huge enthusiasm and respect for us in the international community because virtually nobody does that sort of thing. It means collaboration between UK scientists and the scientists of the country where the project is. We now have involvement not just with the natural environment but with livelihoods as well, where people's livelihoods depend on the natural environment. It is quite wonderful work and we are very proud of it.

Chairman: Thank you very much indeed for your time.

Supplementary Memorandum from Defra

When I appeared before your Committee on 15 July there were two issues on which I said that I would take some follow-up action. One was Joan Walley's query (Q142-144) about mapping biodiversity across the country, and the second was Martin Horwood's question (Q155) about regional spatial strategies. The answers are as follows:—

On Joan's point, we have programmes in place in the UK to map biodiversity across the country as a whole at different levels of detail, including the use of data from satellites.

As part of Countryside Survey 2007 we are currently working with the Natural Environment Research Council and other partners to update the national Land Cover Map (LCM). The LCM is a digital dataset constructed by a combination of satellite data and Ordnance Survey digital maps which will show the distribution of broad habitat types (eg Crops, grassland, heath and woodland etc) at a field-by-field resolution across the whole of the UK. The next LCM is due for completion in 2009. Further details are available at http://www.countrysidesurvey.org.uk/land_cover_map.html

The Countryside Survey also provides information about the extent, composition and condition of habitats from a representative sample of one kilometre squares. This field survey provides detailed ecological information not available from satellites. The results of the field survey completed in 2007 will be published later this year. Further details are available at http://www.countrysidesurvey.org.uk/field_survey.html

In addition, Natural England has produced comprehensive maps of known semi-natural habitats across the whole of England based on targeted survey and intelligence from local conservation bodies and biological recording organisations. This information is made available through Natural England's "Nature on the Map" webpages <http://www.natureonthemap.org.uk/>.

Species records are largely collected by National Schemes and Societies, such as Butterfly Conservation, or by Local Record Centres, both of which gather information through large networks of volunteers. Access to species records for the UK, including maps of their distributions, is provided by National Biodiversity Network which has been supported by Defra. Further details are available at <http://www.nbn.org.uk/>.

In the marine environment, the broad overview of habitats is provided by the UKSeaMap <http://www.jncc.gov.uk/page-2117>. The UKSeaMap provides details of seabed landscape and water column features for UK seas. The Data Archive for Seabed Species and Habitats (DASSH) provides access to datasets via an on-line catalogue of both metadata and data via this Web site and via the mapping tools on the National Biodiversity Network (NBN). Defra is a major funder of both UKSeaMap and DASSH.

As far as possible, and subject to licensing issues, Defra aims to make these data available to the public and to other research and voluntary bodies where they may be used to raise awareness and inform decisions that may help to conserve biodiversity.

On Martin's questions, he referred in particular to "one regional spatial strategy with which I am familiar in which essentially all the mapping is of maps of where houses are going to be built and noting else". I assume that he was referring to the South West regional spatial strategy (RSS) since this is the one which covers his constituency.

The position on this is that the draft RSS, prepared by the SW Regional Assembly and submitted to the Secretary of State in June 2006, contained a significant number of references to landscape and biodiversity, both in the policies covering sustainable development as well as in specific policies covering the enhancement of the region's distinctive environments. Following the report of the independent panel that examined the draft RSS in public sessions in Spring/Summer 2007, the Secretary of State has published her proposed changes for consultation.

In this latest version (published 22nd July 2008) there is a free-standing section (7.2) on the theme of "protecting and enhancing the region's distinctive environments: conserving and enhancing the South West's environmental assets" which sets out the importance that is attached to these matters in the draft revised spatial strategy. It includes a number of maps, including a nature map, and supporting text. Many of the references to and policies for the protection and enhancement of the region's landscape and biodiversity have been retained from earlier drafts—and some strengthened (for example, the policy for the South East Dorset area now includes a specific reference to protecting internationally significant habitats). Independent consultants have also undertaken a habitats regulation assessment of the strategy, and their recommendations have been taken into account.

I should add that our statutory agencies, Natural England and the Environment Agency, have a chance to comment on the content of all RSSs as they are being developed and will have raised any concerns they have with regard to landscape or biodiversity for the strategy. In addition, the RSS will have undertaken a strategic sustainability assessment (incorporating the requirements of the Strategic Environmental Assessment Directive) as it was developed, which again would have highlighted any shortcomings over landscape or biodiversity impacts of the strategy.

I hope that this answers Martin's question. If of course he was referring to a different spatial strategy then please let me know, but on the basis of this one I am satisfied that these issues have been properly taken into account and that the contact between the necessary officials has been as it should be.

18 August 2008

Written evidence

Memorandum submitted by Dr Alan Feest, University of Bristol and ecosulis ltd

- In order to register biodiversity loss it is necessary to be able to measure change in biodiversity.
- Current definitions of biodiversity lead to it being equated with Species Richness which implies that all species are the same.
- The EU and UK are using an indicator system to register biodiversity change but almost none of these indicators have been validated.
- Metadata analysis of survey data collected in a standardised way allows far more information to be assembled and measurements of “Biodiversity Quality” to be made such that they may be tested for significance of change.
- Examples of how assessment of Biodiversity Quality can show how biodiversity is changing are given.
- Responses to the specific questions of the Inquiry are given illustrating that without the voluntary sector the UK response would be considered to be less than required to achieve the 2010 target.

A. *The definition of biodiversity; what is biodiversity?*

The international definition of biodiversity refers to the variability of genes, species and ecosystems. Practically genes are only of importance in very restricted populations or in agricultural breeds as most wild populations are genetically highly heterogenous. Ecosystems are clearly understood and are based on the vegetation structure and composition of the sites. Their extent is easy to map but unfortunately two apparently similar ecosystems can have very different non-plant species compositions due to the influence of, for example, human interference or the length of time since the last natural disturbance. Therefore, the most usually studied part of biodiversity is the species content which has links with both the genetic and ecosystem components. The CBD definition reference to variability is normally equated with species richness (the number of species in a unit area) but this has the problem that it infers that all species are equal. Therefore, a better definition is required and Feest (2006) proffers the idea of “Biodiversity Quality” as being a more utilitarian definition. He defines this as the balance of a small range of measurable properties of the species group studied of a site. These properties are: Species Richness, Even-ness/dominance, Population, Biomass, and Species Conservation Value plus any more specific indicator such as sensitivity to nitrogen deposition.

I therefore suggest that a fundamental improvement in the consideration of biodiversity will be gained by this change in approach where a range of properties of the species of a site are measured and tested for statistical significance. Fortunately the requirement for a standardised sampling procedure to establish comparable biodiversity quality values has already been fulfilled in the case of birds and butterflies. It is for this reason of standardised sampling that the EEA has chosen these two groups of organisms as indicators of biodiversity (along with 24 others of varying relevance and none with any validation). See fig 2. for a linkage diagram of the EEA indicators.

B. *Using Biodiversity Quality Indices*

Retrospective metadata analysis of butterfly data collected by De Vlinderstichting (Netherlands Butterfly Conservation) has been very successful in the conversion of existing data into biodiversity quality data. The European Environment Agency commissioned ecosulis plc to produce a report establishing whether there is a possible linkage between two of their candidate biodiversity indicators, namely butterflies and nitrogen deposition, using the biodiversity quality approach. The results of this research established that yes there is a linkage in that all species are in decline in an environment receiving excess nitrogen except those favoured by nitrogen deposition (nitrophilic). The nitrophilic species were expanding. This relationship was detected in all biodiversity quality indices/parameters except Species Richness where lost nitrophobic species were replaced by new nitrophilic species (see fig 1.)

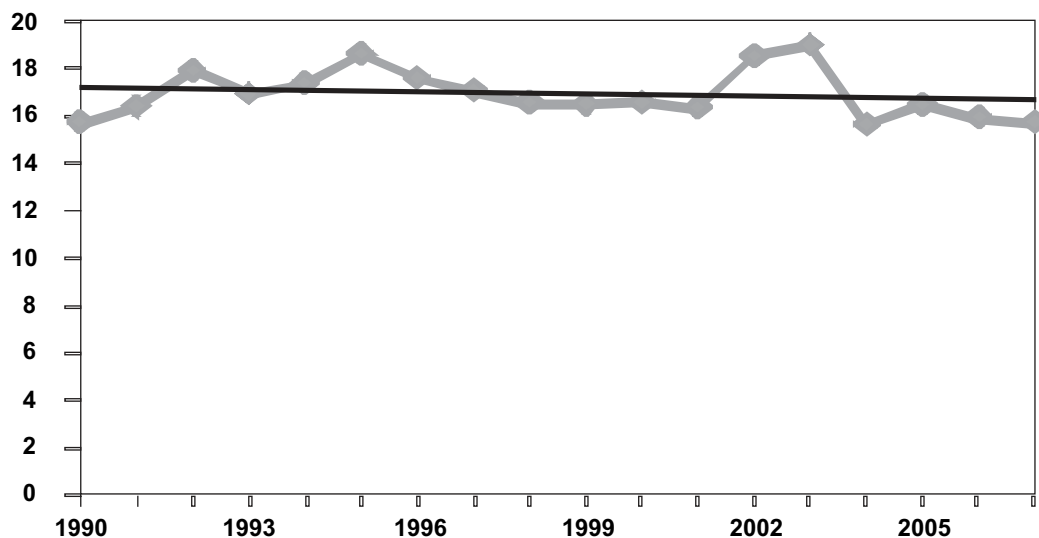


Fig. 1. Over a 15 year period Species Richness of butterflies in Coastal Dunes in the Netherlands shows no decline and yet the Nitrophobic rare species are being lost to be replaced by more common generalist species. Has biodiversity declined?

Using properly constructed simple sampling methodologies Feest (2006, 2007) has managed to conduct a full biodiversity quality analysis on a range of organisms including macrofungi, bryophytes, beetles spiders and moths. This important improvement is consequent on using a standardised derivation of measured biodiversity indices so that differences between sites can be measured statistically. Two macrofungal survey sites reported here (Weston Big Wood and East End Wood) were compared by t-Test and F Test and gave the following results for the data on a) numbers of fruit bodies b) Species Value Index and c) Species Biomass Index:

	<i>t-test</i>	<i>F Test</i>
Fruit body density	p = 0.353	p = 0.002**
Species Value Index	p = 0.135	p = <0.001***
Biomass Index	p = 0.710	p = 0.028*

From this it can be seen that whilst the mean values do not differ significantly (t-test) the variance of the mean value does in each case (F Test). Examination of the data would show there is a greater variance in the Fruit Body Density and Species Value Index for Weston Big Wood and a greater variance in the Biomass Index for East End Coppice. This adds further to the understanding of biodiversity quality of the two sites. The same statistical approach could be used to compare the changes in butterfly biodiversity quality illustrated in Table 1. This examination of data for difference can also be conducted through time to determine biodiversity quality trends.

Table 1

BUTTERFLY BIODIVERSITY VALUE INDICES FOR A LIMESTONE GRASSLAND SITE IN THE NETHERLANDS SAMPLED IN 1994 AND 2003

	<i>1994</i>	<i>2003</i>
Species Richness	27	28
Shannon-Wiener Index	1.890	2.215
Simpson Index	4.161	6.059
Berger Parker Index	0.361	0.292
Density (population size)	2102	2091
Species Value Index and standard deviation	4.148 +/- 3/689	3.786 +/- 2.273
Biomass Index (based on wingspan)	9228	9983

It can be seen (and is verifiable statistically) that the indices do not vary over the ten year period and the site can be said to have a stable butterfly biodiversity.

QUESTIONS FOR RESPONSES

UK POLICY AND PROGRESS

1. The Government is not, as far as we can tell, on target to meet its 2010 biodiversity target since the only two species groups about which we have any standardised information: birds and butterflies, show a series of losses. All other species groups are not being sampled in a coherent enough way to be able to make judgements (see above).

2. Whilst there is a structure for reporting biodiversity it is largely based on inadequate sampling and utilises a series of indicators of which very few have been validated against actual measurements of biodiversity. Until meaningful standardised sampling is instigated then this will remain to be the case. Experience with the EEA where a large number of pragmatic indicators are being proposed (see fig. 2 above) is that almost none of them are in any way validated as being related to biodiversity. Initial work on nitrogen and butterflies indicates that this is possible if the species group is sampled well.

3. Without the extensive support of the volunteer public the UK biodiversity effort would be seen to be fractured and not adequate particularly given the extensive cuts to the budgets of the supporting government organisations/agencies eg Natural England, Environment Agency etc.

4. As an example of how well biodiversity is incorporated into public policy the place of ecology in Environmental Impact Assessments (EIAs) shows that where it is taken seriously good projects and satisfactory outcomes result but all too often the ecology is left to the end, rushed and superficial. In the majority of EIAs the ecology is observed to be the weak point. The position of ecology in Strategic Environmental Assessments SEA's is as yet unclear but there is an ideal opportunity for biodiversity monitoring in the requirement for post development monitoring that is in the legislation.

KEY THREATS

5. Nitrogen deposition does not seem to have been recognised as a critical threat to invertebrates at least. Dutch experience shows that for butterflies at least nitrogen deposition is far more important than Global Climate Change (GCC). This is due to the cooling effect of additional growth of plants in response to additional nitrogen. In the diagram above (Fig 2.) the other critical factor is the extent of habitats which the UK has a lower proportion than most UK countries and much of that is in poor condition as registered by the reports of the condition of SSSIs in the UK. Fortunately, the voluntary sector is extending its landholdings to support the habitats of interest in the UK with some major schemes eg The Great Fen in Cambridgeshire. This does not compensate for the extensive loss to development of semi-natural habitat across the bulk of the UK So nitrogen deposition and habitat loss are the major causes of decline of biodiversity in the UK and GCC is a long way behind at the moment.

6. The Invasive Non-native Species Framework Strategy seems to lack fundamental coherence in that the possibility is that all species that are not currently found in this country should be considered as candidates. Why is the strawberry tree considered native (it grows in SW Ireland) and the Sycamore is not (it grows in France). How has the strategy helped in limiting the spread of the Harlequin Ladybird which could be a very serious threat to our native Ladybirds? Why has not the small red-eyed damselfly been regarded as a Non-native Invasive? It would appear that the strategy can only really be applied to plants and then often not successfully.

7. No current policy initiatives are anywhere strong enough to slow or halt GCC so the warming and extreme weather events are to be expected. The major effect will be on invertebrates as they are poikilotherms and will have enhanced life activities. Most invertebrates (which constitute the majority of biodiversity by numbers of species) will be favoured but a few Northern specialists will not. The only mitigation is to ensure that enough "wild" land is available for colonisation (see above). Currently Odonata (dragonflies) Zygoptera (damselflies) and Orthoptera (grasshoppers and crickets) are showing clear evidence of colonisation of the UK and across the UK.

8. My experience with consultants compiling Environmental Impact Assessments (EIA) is that ecology is placed at the end of the priorities and that it is frequently the last part of the EIA compiled despite common sense dictating that it should be done first if only to get enough time to sample/assess a site for a year.

The disastrous effect of spreading topsoil on any site (it is so loaded with nutrients and weed seeds that it is expensive to maintain and does not create a habitat that is of use to any other than generalist species) is barely even mentioned in any official documentation.

The UK's top invertebrate sites are in the Thames Gateway area (well known to me as a child); for example the best site for bumble bees in the UK is a brown-field site that is the remains of an oil refinery. A site where dredged material from the Thames Estuary is tipped on Canvey Island, which is a wonderful invertebrate site. Invertebrates are the bulk of biodiversity by numbers of species and they are particularly favoured by the low nutrients status and warmth generated by brown-field sites. This is barely recognised in government policy. We need to engineer low nutrient status sites to enhance biodiversity.

RESOURCES

9. How can you ask if resources are adequate under scenario where Defra cut the Natural England budget to almost non-existence (and continues to cut their budget)? If biodiversity mattered then the budget would have been ring-fenced but it was not.

The whole of the scientific world was aghast at the thought of closing down Monk's Wood Research Station for rather small savings. If biodiversity really mattered this would never have happened (it also showed the most cynical use of consultation processes which demonstrated contempt for the consultees).

The government in the UK is again saved by the voluntary sector which appears to be better resourced than the statutory bodies. Surely this should indicate the political support there would be for any political party that showed it understood these biodiversity issues and a solid commitment despite the periodic difficulty eg dismissing out of hand the possibility of Bristol Channel Barrage on conservation grounds.

PROTECTED AREAS

10. Much of the provision for biodiversity in the UK is done by the voluntary sector and it is just as well as we have only a very small area of SPAs (Special Protection Areas) in the UK (and we had to be reminded that our provision was inadequate!). One might ask why is it that we have been so slow in providing Marine Protection Areas given the benefit they provide for fishing?

RECOMMENDATIONS

1. Protect and boost the funding for biodiversity monitoring in the UK this is easiest done by separating out the biodiversity protection functions of the UK administration from the vicissitudes of being associated with Defra.

2. Establish a long-term monitoring programme for biodiversity quality of groups of organisms other than birds and butterflies based on rational sampling processes. An example of this is to be found in the Swiss biodiversity monitoring programme.

3. Link UK indicators with those being established in the rest of Europe.

4. Concentrate on the two central factors determining the possibility of halting the loss of biodiversity: extent of habitat and nitrogen deposition.

19 May 2008

Memorandum submitted by Betty Lee

Biodiversity loss will continue for as long as planners, the Environment Agency, CCW and agriculturists do not work together, with commitment, to halt this problem. The Forestry Commission/Forest Enterprise does good conservation work but with insufficient manpower.

Efforts by conservationists tend to be restricted mainly to training, survey work, leaflet production and management of relatively small areas. This work is under resourced so that the results of the training and surveys are not always capitalised on, while in the real world farmers and developers continue relentlessly to have far greater—but negative—impacts on the wildlife in our countryside. While excellent work is being done by conservationists and naturalists to help particular species and habitats, often of very special importance and rarity, the danger is that they are isolated.

Connectivity should not be just a theoretical exercise while at this moment agricultural activities and development continue to destroy wildlife corridors. There is an urgent need to identify and protect these corridors. We could enforce waterway bank protection with minimum width fenced 3m buffer zones, using new legislation if necessary. This would be of enormous benefit for water quality, fishing, soil preservation and wildlife. Crucial hedge lines, woodland and other habitat strips must be identified and protected and improved. Culverts are cheap to install when building new roads but the cost is born by wildlife when their safe passage along a valley is destroyed. Wildlife walkways and tunnels are poor compensation for a bridge which really does minimise damage to wildlife flow along the valley. Imagine butterflies crossing the A55 while following a valley—Russian roulette! Floods are the costly delayed response to cheap culverts getting blocked—and to deforestation and soil compaction due to over grazing.

I see continued deterioration in the fencing-off of the little wooded dingles, which provide essential wildlife corridors in NE Wales over the 27 years I have been monitoring badger setts. These are often our last remnants of old woodland yet sadly not only are they not regenerating, but I often see them reduced in size, when I GPS the boundaries, to provide more open farmland, even when the valley sides are very steep. Grants could be used instead of farming subsidies to reward conservation minded land owners, who in the past have been given insufficient rewards for their efforts. This would counter the need to plough every last inch in order to make a living.

Grants should be based on payment by results. If a landowner can maintain rich biodiversity on his land he should be rewarded accordingly. Too many landowners do not have enough incentive to follow through best practice. For example, agents of landowners are not often supervised adequately so they may spray slurry into rivers and crush lapwing eggs, even when they have been asked to be careful (real examples). If records were kept of river purity, species, good habitat management there could be a biodiversity grading which would be linked to grants.

Strong measures over Europe, land and sea, are needed. Marine reserves will never work until they are totally protected. It has been shown that total protection zones, on a large enough scale—and implemented in time—can not only recover but also act as reservoirs which export marine wildlife and have a great financial benefit to the local economy. The EU should reward landowners for ethical and sustainable farming. We should not be taxed to provide subsidised food which, a recent documentary showed, people waste since it is cheap. Yet it is so costly to the environment.

Development is relentless; a battle may be won to save a species rich site but the war is never won thanks to the appeal system.

Brownfield sites, in my experience are far better for wildlife than greenfield monoculture deserts. These sites are often the last refuge and food supply for wildlife: they may be unsightly but at least they are free from chemical spray.

RESOURCES

We do not need food with enormous air mile costs, nor do we need four or five far flung holidays a year. Even though this has a huge impact on biodiversity and climate change our government is lemming-like in encouraging us to squander our resources at an alarming rate!

REINTRODUCTIONS

We are behind our European partners in bringing back the beaver. This harmless animal is a keystone species and improves habitat for other wildlife, such as otters and water voles. The web of wildlife is complex and interrelated so the knock on effect of bad or good practice can have unexpected results. Otters are coming back but are raiding fish farms because of the decline in eels and the come back is also limited due to poor habitat. Beavers' habitat improvements are good for fish and so otters and fishermen benefit as well.

In conclusion, we need to continue to protect our pockets of wildlife and continue to address their connectivity to avoid more local extinctions. As soil erosion continues and the cost of wheat rockets, our fuel supplies are running down. Over population and the demand for bio fuels is putting wildlife under risk as never before. Yet once that has degenerated, like the sacrificial miner's canary, what hope is there for us? We need urgent action! Not more elusive surveys—we know enough to remedy the decline but do we have the will?

19 May 2008

Memorandum submitted by the Welsh Association of National Park Authorities (WANPA)

The National Park Authorities in Wales—collaborating as the Welsh Association of National Park Authorities (WANPA)—are grateful for this opportunity to respond to the above consultation.

BACKGROUND

The three Welsh National Park Authorities collaborate as WANPA to respond jointly to policy initiatives impacting Wales' three National Parks.

The National Parks have two statutory purposes in the 1995 Environment Act:

- Conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park.
- Promote opportunities for the understanding and enjoyment of the special qualities of the Park by the public.

In fulfilling these purposes, the National Park Authority has a duty to:

- Seek to foster the economic and social well being of the local communities within the National Parks.

The special qualities of the three National Parks are recognised and admired both by local residents and external users. National Park Authorities are rightly regarded as leaders in landscape management.

RESPONSE TO THE CONSULTATION EXERCISE

Officers from the three National Parks have contributed to this response. Where possible and where relevant we have responded to each individual question.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

No—All available evidence (eg Condition monitoring and assessment of Natura 2000 sites and SSSIs indicating many features in unfavourable-declining condition; RSPB State of Birds Report, 2008; MONARCH study of impacts of climate change; WWF State of the Oceans Report; Charting Progress, An Integrated Assessment of the State of UK Seas, DEFRA 2005) overwhelmingly indicating continued loss and decline of habitats and species in UK.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?*

- The biodiversity monitoring and reporting process is still heavily reliant on volunteers with appropriate skills and knowledge. This is a dwindling resource and could negatively impact on our ability to monitor and assess progress. There are also insufficient resources available for professional staff to monitor biodiversity and report on progress, particularly for habitats and species in the wider countryside and outside protected sites. Organisations such as NATUR in Wales are looking to address this issue.
- Biodiversity indicators can be arbitrary particularly as data upon which to define them tend to be inadequate. The reasons for this are outlined above—ie not enough expert knowledge in local areas to contribute to the monitoring/surveillance process.
- The Biodiversity Action Reporting System (BARS) has only been taken up patchily, afflicted by the usual aversion to database management within nature conservation. Within Wales, uptake is better, with training provided on behalf of the Wales Biodiversity Partnership to south Wales LBAP officers for example.

3. *Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?*

- No—devolved administrations in the UK have led to a fragmented and incoherent approach to the formulation of policy and its implementation (this is particularly a problem in the marine environment). The NERC Act 2006 “Biodiversity Duty on Public Bodies” is very welcome but is far too weak as it only requires public bodies to “have regard for biodiversity”. Even if this duty were implemented robustly, it would not address the key factors affecting biodiversity and causing the major declines in species populations and degradation of habitats (eg modern farming practices and their impacts on biodiversity in the wider countryside).
- The structure that has been created places far too much emphasis on the bureaucratic process and insufficient emphasis on outputs and outcomes. UK plc is almost entirely focussed on designations and protected species at the expense of wider biodiversity. Statutory bodies no longer “do” nature conservation, are starved of the means to deliver effective conservation, and are given corporate targets that will not necessarily deliver wider biodiversity targets.
- Some policies and legislation are useful but if they’re not recognised by or enforced by the relevant authorities then they’re at best only useful locally and at worse they’re wholly ineffective. The same operational climate still prevails, wherein conservation agencies and charities and specialist conservation and project-based staff exist because they’re tasked with undoing the damage caused by other aspects of public policy and legislation, all of which are much better funded. The best way for the public and third sector to be made effective would be for national and devolved administrations to remove these orthogonal, institutionalised obstructions; ie, stop wasting public money by continuing to damage nationally treasured assets.
- The UK Biodiversity Action Plan has been ineffective because it is inefficient and process driven—it has not galvanised enough significant action amongst those who would not be working for biodiversity anyway, it hasn’t changed cultures, and it doesn’t have sufficient political weight to significantly affect other national policies. At best the UK BAP can only deliver mitigation and small improvements because it does not have sovereignty over the plans and policy programmes that represent the major threats to biodiversity.

- Within Wales, the Assembly Government's requirement for every local authority to field a Biodiversity Champion, ideally at Member level, has not run for long enough to have any real impact and is certainly too late for Countdown 2010.

4. *How well is biodiversity protection incorporated into the policy-making process?*

- See above. Also, to emphasise again, incorporation is fine, paying attention to it and resourcing it is quite another matter.

How well will the Ecosystem Approach Action Plan address this issue?

- In Wales there is no Ecosystem Approach Action Plan, although one or two areas within Wales (eg National Parks) are hoping to develop their own in the absence of any strategic Wales-wide action plan. In the meantime, Britain remains very poor at ecosystem management. Only time will tell if the orthogonal obstacles are removed in order that everyone works together on this.

Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

- No—because the tendency has been to focus upon sites and site features and not on the ecological processes that support the biodiversity infrastructure. Paradoxically, elements of the conservation profession have used designated sites as political weapons to demonstrate how well or poorly Britain is doing. These sites are at best genetic reservoirs; at worst, there are too few of them and they're in the wrong place to make any significant contribution to ecosystem management. So developing a focus on ecosystems could undermine some of the weapons used by some quarters on the one hand, whilst drawing attention away from designated sites on the other.

KEY THREATS

5. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?*

- The combined effects of habitat fragmentation and climate change are two of the biggest problems facing wildlife. Habitat patches have become ever smaller and more isolated, causing local extinctions, disrupting natural processes and making it ever more difficult for species to move around the landscape. Climate change will accelerate these effects, as some populations may need to move to stay within climate ranges, or face extinction. Others might be able to remain in situ but are unable to because ecological quality there is too low.
- Modern agricultural practices continue to have a major negative impact upon biodiversity, from continued intensification of land use (and biofuels and biomass present a new potentially significant pressure) through to the neglect of marginal, but usually semi-natural, land. Fisheries policy and implementation is the major factor in the decline in the biodiversity of the marine environment. It remains to be seen whether or not the Marine Bill will adequately address these issues. Water abstraction for unsustainable consumption continues to rise, with no public link made between this and biodiversity conservation.
- The Government needs to be far more proactive in addressing these specific issues through:
 - i) Ecosystem based agri-environment schemes which can also be extended to habitat targeting, and aimed at conservation of soils, water and carbon.
 - ii) Government needs to re-define economic progress to include the biodiversity and ecosystem services on which it depends—a state of the environment GDP—otherwise biodiversity will always be subjugated by conventional economic growth targets.

6. *Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

- Climate change may force us to re-evaluate what constitutes native and non-native species as individual habitat and species climate spaces change. Habitat connectivity models currently being promulgated, with insufficient empirical evidence to support them, might also be a prime mechanism for the spread of undesirable invasive species. If we are serious about tackling invasives there is going to have to be not only a “strategy”, but also the funds with which to act upon its recommendations. We have fought and lost numerous battles against individual species in our present piecemeal, under-funded fashion, eg grey squirrels, American mink, rhododendron. Some of these species will become better adapted in the face of climate change but also add to the difficulties faced by many native species when times are hard.

7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

- Climate change, including abrupt climate change, is of course not new; what is different this time is that climate change comes accompanied by many other human pressures on the environment and its inhabitants. Collectively these pressures reduce the options for natural adaptation precisely when those options are most needed. In other words the “chronic” (ie long term and widespread) impact of climate change makes it even more important to sort out the ‘acute’ problems (ie the clear and present ones), which range from habitat fragmentation to energy-hungry food production to fuel poverty. So climate change adaptation will be served by a full range of conservation measures, not just those which are usually associated with climate change adaptation. But addressing these interacting symptoms will put huge claims on the NPAs’ finite resources and the underlying problems need to be attacked in the most effective way.
- Significant/rapid change in the Parks’ landscape character is probable; either from unchecked climate change and/or from measures deployed to offset climate change. However, the latter are more potentially reversible. Relevant authorities will need to find ways of retaining landscape values and utility even as landscape character changes. This will require an understanding of those values (the European Landscape Convention is significant here), an understanding of the scope and deployability of the mitigation and adaptation assets within those landscapes (eg by county councils or regional development agencies). This will require a dynamic interpretation of Park purposes and a tolerance to new emergent landscapes.

8. Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?

- Planning policy as a whole is not very relevant to most of the issues affecting biodiversity, but where planning policy is relevant, it is not fit for purpose. Eg the concept of green field sites is based upon open areas and limiting urban sprawl not on the quality of habitats and the health of species populations in the wider countryside. The growth imperative requires projections about how many new houses we need and how many new airport terminals we need rather than looking at environmental capacity and developing policy from that baseline. Planning policy such as TAN 5 (as revised) still view biodiversity in terms of how it will be affected by or can be enhanced within a development site, as a consequence of planning permission; biodiversity is still subjugated. A new approach is required.
- Given that the UK will fail on Countdown 2010, a different approach is required where development must instead be environment-led and biodiversity led. For example, Local Development Plans should include policies and zones FOR biodiversity restoration, water conservation, wetland restoration, flood control, woodland development and carbon sequestration. Where necessary, development should play second fiddle in order to restore ecosystems.

RESOURCES

9. Are there adequate resources for biodiversity protection and enhancement?

- No—Modern, standard farming and fishing practices still lead to ecosystem exploitation and degradation, and these practices are underpinned by Government policies and finance. Resources allocated to biodiversity protection and enhancement can never do anymore than slightly offset the pressures and losses derived from these activities. The way in which CAP is implemented in the UK favours large scale industrial farming at the expense of small scale mixed farms where pastoralism was the dominant regime. The community infrastructure which we rely on to deliver all of these biodiversity targets has been decimated, so in effect our tools for delivery have been taken away. This will also have major implications with regard to the responses to food and energy security of supply threats following Peak Oil.
- The statutory agencies with responsibility for achieving biodiversity targets in national environment strategies have been severely hampered by resource cuts making them unfit for purpose.
- There is a huge gap between the action, and therefore resources, that is required to halt biodiversity loss and the current situation where “business as usual” pertains.

PROTECTED AREAS

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

- The protected area network is not up to the job of maintaining biodiversity because the health of the protected areas depends upon the areas in between them. Evidence (particularly from the Netherlands) demonstrates that corridors don't work on their own, the wider countryside must provide the connectivity between individual protected areas. In that scenario we will have a functioning pastoral ecosystem. In the meantime, however, we must continue to conserve our remaining sites (ie what's left of our precious semi-natural resource) and to link them up as much possible, and to create more semi-natural habitats. This work is more urgent than ever before and is made harder by the fact that designated sites, such as SSSIs, were not and are not selected on the basis of their role within a functioning ecosystem.

28 May 2008

Memorandum submitted by the Butterfly Conservation

SUMMARY

- Butterfly Conservation welcomes this inquiry into the crucial topic of biodiversity. Butterflies and moths respond very quickly to environmental change and are good indicators of the health of the environment and the effectiveness of government policies.
- Will we meet the 2010 target? The answer for butterflies and moths is definitely no. Although good progress has been made for some species, notably through Species Action Programmes and agri-environment schemes, the overall trend for butterflies and moths is still one of steep decline.
- Biodiversity monitoring and reporting. The process is fairly effective for butterflies and moths as reasonable data are available. The adoption of butterflies as a government indicator has been a positive step.
- Frameworks for protecting biodiversity. The UK Biodiversity Action Plan has been extremely effective at galvanising action for Priority Species and has fostered a positive partnership between the government and voluntary sectors. The biggest problems are the lack of clarity over roles and either insufficient funding or lack of continuity of funding.
- Ecosystem approach. This is useful to ensure that the environment is properly valued, but we do not believe that it has been well understood outside of the environmental sector. The conservation of butterflies and moths requires action at a landscape scale, which has already necessitated us to take an ecosystem approach.
- Biodiversity loss and Government measures. The key drivers of the loss of butterflies and moths are habitat loss, changing habitat management, and habitat fragmentation. Climate change will add a further threat to some species.
- These causal factors have been well known for decades and appropriate measures have been developed to address them (eg SSSIs), but not on a sufficient scale to halt the losses. Important habitats outside of SSSIs continue to be lost and suffer from insufficient or inappropriate management.
- There is evidence that agri-environment schemes are beginning to slow the decline of some Priority butterflies. However, the schemes need to be improved to help Priority Species and more adequately funded to influence a greater percentage of key sites as well as improving the overall landscape matrix.
- Impact of climate change. This has already had a profound impact on butterflies and moths with some species spreading north and new species arriving every decade. However, many species are not able to respond because their habitats are so limited and fragmented. It is thus even more urgent to manage existing habitats appropriately and to link habitats together by targeted restoration.
- Planning Policy. The NERC biodiversity duty on planning authorities has still not been given sufficient priority within the planning system. The new BAP habitat of Open Mosaic Habitats on Previously Developed Land is clearly under threat and there is a conflict between its conservation and government stated policies on developing Brownfields.
- Resources. Current funding is insufficient to address the scale of the problem facing biodiversity. Greater resources are needed for effective schemes such as the Higher Level Stewardship Scheme and Species Action Programmes. Additional and more secure funding is needed to ensure effective monitoring of key groups and habitats.

- UK protected areas network. The existing network is essential to maintain a core number of sites, but is insufficient by itself. All remaining semi-natural habitats are important to the survival of biodiversity, as is the structure and composition of the intervening landscape matrix. Stronger measures are needed to ensure that all these habitats are conserved and managed adequately. Climate change makes all these actions more urgent.

A. INTRODUCTION: BUTTERFLIES AND MOTHS AS INDICATORS

a) Butterfly Conservation is the UK based charity whose aim is the conservation of butterflies, moths and their habitats. Most of our work is within the UK, though we work across Europe through a separate organisation, Butterfly Conservation Europe, which we helped establish in 2004.

b) Butterfly Conservation is an active member (and currently holds the chair) of the Biodiversity Working Group and Wildlife and Countryside Link and welcomes the Environmental Audit Committee inquiry into biodiversity.

c) Butterfly Conservation has been working in partnership with Defra and other government agencies for over a decade to help halt the loss of biodiversity and we are the “lead partner” for the majority of butterflies and moths (Lepidoptera) identified as priorities within the UK Biodiversity Action Plan (currently over 150 sp). We have built up considerable expertise over this time as well as compiling some of the largest databases on butterfly and moth distribution and trends available anywhere in the world.

d) Butterflies and moths respond very quickly to environmental change and are a very well recorded group of insects. They are thus very good indicators of the health of the terrestrial environment as well as the effectiveness of government policies on land use and biodiversity. In 2006, butterflies were adopted as indicators within the England Biodiversity Strategy and separate indicators have been published for woodlands and farmland (mainly unimproved grassland). Butterflies have also been adopted by Defra as UK indicators.

e) Our submission covers only the butterflies and moths as other organisations are better placed to make more general comments. However, we believe the fortune of butterflies and moths is extremely important to the conservation of all biodiversity as they are such a well documented and species-rich group of insects, with over 2,500 species in the UK. They therefore represent other less well-known wildlife species.

f) The following sections are numbered according to the questions posed in the inquiry call for submissions.

1. *Is the government on course to meet its biodiversity target?*

1.1 In short the answer for butterflies and moths is definitely no. Although good progress has been made with some species, notably under government funded schemes such as the Species Recovery Programme and agri-environment schemes, the overall trend for butterflies and moths is still a steep decline. Over 100 butterfly and moth species were added to the UK BAP Priority Species list at the recent review, reflecting better knowledge of the scale of the problem.

1.2 The State of Butterflies in Britain and Ireland (Fox et al., 2006) showed that five of our 55 resident butterfly species have become extinct and over 70% of the remainder have declined over the last 25 years. The decline of some species was so severe that 15 new species were added to the Priority Species list in 2007, bringing the total listed to half of all UK species. Moreover, for many species the rate of loss has not changed over the last two decades, while for a few species the rate of loss has actually increased.

1.3 The report also shows that some species have responded well to conservation measures, including the Large Blue *Maculinea arion*, Adonis Blue *Lysandra bellargus* and Silver-spotted Skipper *Hesperia comma*. Several other species have shown good recovery at regional level. These positive results have been achieved following expert advice from Butterfly Conservation staff, sound ecological research into species habitat requirements, funding from agri-environment schemes for positive site management and restoration, funding for landscape scale projects (eg from the Lottery, Landfill and private Trusts), and good co-operation from landowners.

1.4 The State of Britain's Larger Moths (Fox et al., 2006) showed that 62 moth species became extinct during the 20th century and that overall numbers of 337 common species had declined by one-third over the last 35 years. Trends show a steady downward trend that has not slowed in recent years (Conrad et al., 2006). Seventy-one common species have declined by over 50% in the last 25 years and have been included as Priority Species in the recent UK BAP review for research and policy action only.

1.5 Overall 66% of widespread moth species are declining, a similar figure to butterflies, indicating a widespread crisis for biodiversity.

1.6 The decline of moths has serious implications for other biodiversity as they are important in the functioning of ecosystems, either as pollinators or prey for animals such as birds and bats.

2. How effective is the Government biodiversity monitoring and reporting process?

2.1 From a butterfly and moth perspective, the process is fairly effective as reasonable data are available. We believe that the adoption of butterflies as indicators in England, Scotland and at UK level has been a positive step. They are the first insect indicators to be adopted and fill an important gap in biodiversity assessment. Funding has also been supplied in England (under the Species Recovery Programme) and in Scotland, Wales and Northern Ireland, to develop a system of recording using both paid staff and volunteers to assess progress for Priority species.

2.2 The biggest problem is the short term nature of the funding for monitoring and inadequate funding to monitor all the Priority Species with sufficient rigour to assess changes over short periods (ie the three year reporting cycle).

2.3 For example, funding for the UK Butterfly Monitoring Scheme, which generates the EBS and UK butterfly indicators, is on a three year cycle but there are often gaps between cycles and considerable uncertainty over funding levels. This makes it difficult to plan ahead and maintain continuity of both staff and volunteers. At the time of writing there is no agreement signed with Defra to continue the scheme and produce the indicator for 2007 or 2008.

3. Are the policy and institutional frameworks effective at protecting biodiversity?

3.1 The UK Biodiversity Action plan has been extremely effective at galvanising action for Priority Species, including butterflies and moths, and has fostered a positive partnership between the government and voluntary sector with shared goals.

3.2 The biggest problem with the UK BAP has been the lack of clarity over roles and lack of sufficient funding to achieve success across all areas. The role of Lead Partners in the NGO sector has however been extremely positive because it gives a clear champion to urge action on the ground and has been a good lever to attract funds.

3.3 Despite the limited funds available, the UK BAP has benefited over half of the butterflies and moths listed (eg Parsons 2003).

3.4 Funding for the Species Recovery Programme via Natural England (and its equivalent in other agencies) is essential and will enable Butterfly Conservation and other NGOs to continue many conservation programmes. However, these have often been fixed at level funding, which will present problems to Butterfly Conservation to make up a growing deficit in future years and may result in a reduced effort when the challenges we face are growing.

3.5 The recent review commissioned by Defra (GHK Consulting, 2005) showed that £356 million was needed to implement the species actions within the UK BAP (2005 prices), a deficit of £285 million over actual expenditure. The addition of more species to the UK BAP list will add to this deficit.

3.6 The delivery of biodiversity at regional and local level is also highly variable, with very different attitudes and funding available. The biodiversity duty on local authorities under the recent NERC act also seems to be implemented at widely varying levels. For example, some local authorities employ specialist ecologists and provide funding for local records centres to inform their decisions, while others do not.

4. How well is biodiversity incorporated into the policy-making process and how well will the ecosystem Action Plan address this issue?

4.1 The ecosystem approach is useful to ensure that the environment is properly valued. However, we do not believe that the approach has been well understood outside of the environmental sector and it has not yet been incorporated into other government sectors.

4.2 The conservation of butterflies and moths requires action at a landscape scale, which has already necessitated us to take an ecosystem approach to our work. We run over 60 landscape scale projects, including one in the Culm grasslands of Devon which has brought over 700 ha of habitat back into favourable management by arranging 37 Environmental Stewardship agreements in key areas for the threatened Marsh Fritillary.

4.3 We are not clear how the ecosystem action plan will affect our practice on the ground but we hope it will influence all sectors of government.

5. What are the key drivers of biodiversity loss and is the Government addressing them?

5.1 The key drivers of the loss of butterflies and moths are habitat loss, changing habitat management, and habitat fragmentation. Climate change will add a further threat to some northerly distributed, montane and wetland species. Increased light pollution and pesticide use may also be a contributory factors to the decline of some moths.

5.2 Habitat loss has been addressed by designating some key areas as SSSIs and Nature Reserves, and through EIA regulations, but many sites are not protected and are still being destroyed. However, we believe that losses due to wholesale habitat loss have slowed considerably and this will not be the biggest threat in the future.

5.3 The main threat currently facing butterflies and moths is the steady degradation of their remaining habitats through a lack of management or through inappropriate management.

5.4 For example, butterfly numbers in woodlands have declined by 50% in the last 15 years (Defra, 2006). Declines have been documented in other groups such as woodland birds, plants and invertebrates. The principle reason is the lack of active management in most woods and the decline in coppicing as the principle form of woodland management (Asher et al., 2001; Warren & Key, 1991; Bulman, 2007).

5.5 These causal factors have been well known for decades and appropriate measures have been implemented, but not on a sufficient scale to halt the losses.

5.6 Good measures have included the designation of SSSIs and Nature Reserves, but these were designed to protect only a selection of the best habitats. Moreover, butterflies have continued to be lost from both SSSIs and reserves because they are often not managed appropriately or because they are too small in themselves to support viable colonies (Warren, 1993).

5.7 Important butterfly and moth habitats outside of SSSIs continue to be lost or suffer from insufficient or inappropriate management. On semi-natural grasslands the main mechanism to encourage better management is through agri-environment schemes. Evidence from the UK Butterfly Monitoring Scheme shows that these are beginning to slow the decline of some Priority butterflies (Brereton et al., 2005, 2007). However, the benefits mainly apply to species that require standard prescriptions and species that require more complex and varied management have not so far been helped. Butterfly Conservation is working with Defra to address this in the revised Higher Level scheme.

5.8 The decline of butterflies and moths in woodland has been addressed poorly within the government policy framework. The Forestry Commission have drawn up an Action Plan for Butterflies on Forest Enterprise land, but despite some good local efforts, Priority Species have continued to decline and become extinct on FE holdings. The situation should be improved under the current Conservation Strategy for Lepidoptera on FC land in England, 2007–17, but concerns remain over resource availability.

5.9 In private woodland, the chief mechanism for improved management is the Woodland Grant Scheme (WGS). However, grants for targeted management for biodiversity have been limited and the scheme does not provide the continuity of management needed to ensure long term species survival (eg Warren et al., 2001). Butterfly Conservation is currently working with FC on targeting the new WGS in areas where woodland species are in most urgent need of management, but the level of resources remains a major concern.

6. *Will the Invasive Non-native Species Framework Strategy prove effective*

6.1 Non-natives are not a big threat to butterflies and moths and those that are a threat, such as new specific parasites, are spreading due to climate change and would be impossible to control.

7. *What impact will climate change have on biodiversity?*

7.1 The impact of climate change on biodiversity is complex and varies from species to species. However, there is some good evidence from butterflies and moths about how species are responding.

7.2 Climate change has already had a profound impact on butterflies and moths. Many species are spreading north, some are moving their range uphill, and new species are arriving in Britain every decade (Fox et al., 2006; Parsons, 2003).

7.3 However, research has shown that many specialist species are not able to respond by moving northwards because their habitats are so limited and fragmented (Warren et al., 2001). In such cases, it is even more urgent to manage existing habitats appropriately and to link habitats together by targeted restoration.

7.4 Climate change will bring new threats to some species, especially those with a northerly distribution, montane and coastal species. These may require specific measures.

7.5 We agree with the overall strategy proposed by Defra (Hopkins et al., 2007) and hope that it encourages the establishment of effective ecological networks and targeted habitat restoration to enable species to adapt to climate change.

8. *Does Planning Policy adequately protect biodiversity?*

8.1 The NERC biodiversity duty on planning authorities has been a significant advance but we feel that it has still not been given sufficient priority within the planning system. More leadership is needed from central government on this issue.

8.2 The new BAP habitat of Open Mosaic Habitats on Previously Developed Land is clearly under threat and there is a conflict between its conservation and government stated policies that target the development of Brownfield land.

8.3 Where we have identified key sites, Local Authorities have been able to build conservation measures into development. However, more resources are needed to identify the key sites that have significant biodiversity value and ensure that they are protected under the planning system.

8.4 We are aware that semi-natural grasslands are still being destroyed despite the EIA regulations. We would urge government to look at strengthening these regulations.

9. *Are there adequate resources for biodiversity protection and enhancement?*

9.1 The short answer is that current funds are insufficient to address the scale of the problem.

9.2 Specifically, greater resources are needed for effective schemes such as the Higher Level Stewardship Scheme and Species Action Programmes.

9.3 Additional funding, and more secure long term funding, is needed to ensure effective monitoring of key groups such as butterflies and moths (see section 2.3).

9.4 The use of voluntary groups such as Butterfly Conservation is an extremely cost-effective way of monitoring over large areas. Over 10,000 volunteers are involved, adding enormous value to the government funds we receive as well as helping to spread the public understanding of biodiversity work. With modest support from government agencies, we can help deliver many elements of the UK BAP including monitoring and providing expert advice to maximise the biodiversity benefits from government-funded schemes.

10. *Is the UK protected areas network sufficient to maintain biodiversity?*

10.1 The existing network is essential to maintain a core number of sites in favourable condition for wildlife but is by itself not sufficient. All remaining semi-natural habitats are important to the survival of biodiversity, as is the structure and composition of the intervening landscape matrix (ie improved farmland and urban areas).

10.2 Stronger measures and greater resources are needed to ensure that all these habitats are conserved and managed adequately, and that the matrix is restored so that more species can breed within it or travel through it.

11. *Conclusions*

11.1 Considerable progress has been made in the conservation of biodiversity since the publication of the UK BAP. However the progress has inevitably been resource limited and has so far only achieved a partial success.

11.2 For butterflies and moths, it is clear from recent successes that we can halt their decline and could save many more species given additional resources and better targeting of existing resources.

11.3 Butterfly Conservation and its thousands of volunteers are keen to continue to work with government agencies to help achieve this and achieve our shared goal of halting biodiversity loss.

11.4 Finally, we are concerned that momentum is not lost after 2010 and that government continues to give priority to the crucial goal of halting the loss of biodiversity beyond this date.

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31 May 2008

Memorandum submitted by the Grasslands Trust

The Grasslands Trust is a registered Charity, formed in 2002. It is the only charity in the UK whose sole purpose is to conserve grasslands of importance for their wildlife, landscape, cultural and community values. We purchase threatened grassland sites and support other organisation to purchase them; campaign to improve the policy environment for threatened grasslands; work with local communities to cherish their local grasslands; provide expert advice to grassland owners on management to benefit wildlife; and raise the awareness of the public and decision-makers to the plight of grasslands in the UK. We work in partnership with a wide range of organisations, from within the Statutory, Voluntary and Local Government Sectors, as well as individual landowners, to deliver our aims.

The Grasslands Trust is an active member of the Wildlife and Countryside Link Biodiversity Working Group and a leading member of the UK Lowland Grasslands Habitat Action Plan Steering Group. We offer this evidence to the Committee based on our experience of working within the Biodiversity Action Plan (BAP) process and with relevant associated policy areas, such as the implementation of the Environmental Impact Assessment (Agriculture) Regulations, planning policy (specifically Eco-Towns), DEFRA's recent Environmental Stewardship Review of Progress, and a review, with Flora Locale, of the state of grasslands in Wales.

The comments below are confined mostly to England and Wales, as the Grasslands Trust does not yet operate in Scotland, Northern Ireland or the Overseas Territories.

EXECUTIVE SUMMARY

- The Government is not on course to meet the 2010 Biodiversity Target especially for priority grassland habitats.
- There are significant gaps in the information on extent and condition of priority grassland habitats outside of the protected areas network.
- The Ecosystems Approach and the BAP process are poorly connected.
- Key drivers of grassland biodiversity loss are still intensive agriculture and development, but abandonment is increasingly significant.
- The Environmental Impact Assessment (Agriculture) Regulations are failing to protect small grasslands.
- The current planning policy framework has the potential to deliver significant biodiversity benefits, but that potential is not realised.
- SSSIs are necessary but not sufficient to meet biodiversity targets.
- Resources need substantial increase, particularly for Local Wildlife Sites and habitat creation.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

1.1 The Grasslands Trust does not believe that the Government is on course to meet its 2010 biodiversity target. Wildlife and Countryside Link's progress assessment published in March 2008 showed no change in the state of all but two indicators originally assessed in January 2006, based on data from the 2005 Biodiversity reporting round. Of the two indicators that had changed, one "no BAP priority habitats or species still declining by 2010" had actually slipped from Amber to red/amber, while the other "95% of UK SSSIs and ASSIs in favourable condition by 2010" had improved from amber/green to green¹.

1.2 These figures are aggregated for all BAP species and habitats though. For grassland habitats the situation is considerably worse. In a written answer on 14 June 2007², the then Biodiversity Minister Barry Gardiner MP informed the House that the 17 priority habitats that were still declining included all the lowland grassland habitats and associated habitats where grassland is a significant component, namely lowland meadows, lowland calcareous grassland, lowland acid grassland, purple moor-grass and rush-pasture, lowland wood pasture and parkland, fens, and coastal floodplain and grazing marsh. Upland hay meadows were also listed as continuing to decline.

1.3 Although for most of these grassland habitats the 2005 reporting round indicated that the decline was now slowing, and it remains to be seen what the 2008 reporting round will conclude, it seems very unlikely that the decline will have stopped, let alone reversed, in the next two years.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?*

2.1 The BARS mechanism has the potential to be an effective way to collect biodiversity information at national and local level, but is dependant on the willingness, enthusiasm and above all the resources available for each contributor to provide useful input. This is particularly true of Local Biodiversity Action Plan partnerships, where insufficient resources prevent adequate reporting to BARS. This will then limit the accuracy of the data within BARS.

2.2 Unlike for many other priority habitats, for priority grassland habitats there are significant gaps in the data on extent and condition of grasslands, both in England and especially in Wales. This is in part due to grasslands traditionally having been the "Cinderella" of nature conservation, many grasslands having been ignored as uncharismatic or not supporting species with a high public profile. Also, small grassland sites can be difficult to access and identify, tucked away within farms on private land in remote parts of the country.

2.3 Significant areas of Wales do not have working wildlife site systems, so what little remains of the resources of priority grassland habitats is unmapped, unidentified and unprotected³.

¹ *Halting Biodiversity Loss by 2010: A progress assessment by Wildlife and Countryside Link. March 2008*

² *Hansard 14 Jun 2007 Columns 1199W & 1200W.*

³ *Manifesto for the Wild Meadows of Wales. Flora Locale and the Grasslands Trust. 2008*

3. *Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?*

3.1 There is a significant risk that the forthcoming devolution of the UK BAP structures, particularly the shift from UK habitat groups into country-based groups, will make a joined-up UK overview increasingly difficult to maintain.

4. *How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?*

4.1 At present the Ecosystem Approach and the Biodiversity Action Plan approach appear to be on parallel tracks. Does the Government intend to replace one with the other? Only landscape-scale action will ultimately achieve the aims of conserving biodiversity, particularly in the light of climate change and other ever-increasing pressures on the environment. While the economic value of services provided by biodiversity (as integral components of ecosystems) to society and the economy should be elaborated and where possible enumerated, it should not be forgotten that the intrinsic value of biodiversity is a concept enshrined within the Convention on Biological Diversity. There is a danger that a slavish adoption of the ecosystems services approach will devalue those species and habitats where an economic value cannot be placed on their conservation.

KEY THREATS

5. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?*

5.1 The Grasslands Trust believes the key drivers behind lowland grassland losses are:

- Neglect or abandonment.
- Agricultural intensification.
- Inappropriate management in particular overgrazing by horses.
- Development pressures from housing and infrastructure development, and associated recreational activities.
- Diffuse pollution threatens grasslands associated with low fertility soils.

5.2 While relatively few grasslands sites, compared to previous decades, are being wilfully destroyed by agricultural practices, there are still insidious losses associated with inappropriate management and abandonment. Small unimproved grasslands often do not fit into modern agricultural operations and are abandoned. Small fields also command high prices as horse and pony paddocks, and become heavily overgrazed, and this can be very detrimental to the wildlife that previously occurred there. Grasslands within urban areas or on the urban fringe are subject to recreational damage, such as from dog-walking, which disturbs wildlife such as ground-nesting birds, and also provides unwanted nutrients. Diffuse pollution from agriculture, and also nitrates associated with vehicle emissions, effectively adds low doses of fertiliser to grasslands, subtly changing their ecology to the detriment of grassland wildlife.

5.3 One mechanism the Government claims is effective in preventing losses of grassland habitats as a result of agricultural intensification is the Environmental Impact Assessment (Agriculture) Regulations 2006. This regulation implements the EC Environmental Impacts Assessment (EIA) Directive as it affects agriculture. Initially introduced in 2001, The Regulations were revised in 2006 partly as a result of the Better Regulation Agenda arising from the Hampton Review. The outcome of the revision has left the regulation effectively toothless to act against agricultural activities threatening priority grassland habitats.

5.4 One of the most serious loopholes introduced in the 2006 Regulations was a minimum size threshold of 2ha, below which the Regulations do not apply. This effectively gives impunity to landowners to destroy grasslands where there is less than 2ha of BAP quality habitat. Defra argued that fragments below 2ha were not significant, but evidence presented by English Nature at the time the Regulations were being reviewed showed that a significant number of priority grassland fragments that suffered damage from agriculture were below 2ha in size.

5.5 Another loophole within the Regulations relates to the quality threshold for protection: the BAP habitat definitions are restricted to unimproved grasslands, and the EIA Regulations apply these definitions strictly. So slightly semi-improved grasslands, which are still very important wildlife habitats, and in some counties are the only grasslands supporting wildlife outside of the protected areas network, are not subject to protection against agricultural intensification.

5.6 Finally the EIA Regulations do not apply to damage caused by horses or ponies, unless those animals are only using the grasslands for grazing. Most equestrian use includes feeding with hay, and therefore exempts such damage from the EIA regulations.

6. *What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?*

7.1 Climate change will have a significant impact on grassland habitats, partly because most grasslands, particularly in the lowlands, are so highly fragmented. Wildlife populations that will need to move in response to climate change will find it more difficult in fragmented landscapes than those with a high level of connectivity between habitats. Theoretically this problem can be alleviated with a landscape-scale approach, by providing linkages between existing grassland fragments, for example through habitat creation. In practice though, the funds which should be available to create the linkages ie Agri-environment schemes such as Environmental Stewardship or Tir Gofal, are inadequate to supply all the multiple objectives now expected of them. Indeed in England, Natural England proposes to focus 80% of its spending on Higher Level Schemes onto only 20% of the land—this will inevitably reduce the ability of this flagship scheme to deliver connectivity through habitat creation on the excluded 80%. Conversely, the widely available Entry Level Scheme, open to all landowners, does not provide funding for habitat creation and therefore cannot provide the connectivity needed. It is therefore unclear how Environmental Stewardship will deliver on its stated aims to enable wildlife to adapt to inevitable climate change, given its inability to support one of the key mechanisms for adaptation.

8. *Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

8.1 The Spatial Planning Policy Framework of Regional Spatial Strategies and Local Development Frameworks, coupled with effective use of Planning Policy Statement 9 and the Section 41 Biodiversity Duty on public bodies, does have the capacity to provide a greater level of protection for biodiversity than previous planning policy frameworks. However, this increase in protection will only happen if planning departments within local planning authorities are given the necessary training and encouragement to deliver such protection. And this will only happen with a substantial increase in the quality of guidance and encouragement provided to them from the Department for Communities and Local Government.

8.2 The Grasslands Trust believes there is a great opportunity to incorporate high quality grasslands within the green infrastructure of new developments and to increase the quality of existing green infrastructure within existing urban areas. The Eco-towns concept is a good example—we are working closely with the Town and Country Planning Association, RSPB, Natural England and others to develop guidance on green infrastructure for Eco-towns because there is considerable scope to create new grassland habitats within Eco-towns. It is unacceptable that any of the bidding Eco-towns should cause damage or destroy existing important grassland habitats during their development.

RESOURCES

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

9.1 Significant resources have been pumped into the SSSI network in England in recent years in order to meet the 2010 PSA target for to deliver favourable condition on SSSIs. Arguably this has been done at the expense of some biodiversity outside of protected areas, as sites that had previously been receiving agri-environment funding through Countryside Stewardship and Environmentally Sensitive Areas schemes (now called the Classic Schemes), failed to gain entry into the Higher Level Scheme, whose funds have been focussed on SSSIs. While Entry Level Scheme is available to all land-owners, the payments are less than half what would have been paid through the Classic Schemes, and it is unclear to what extent ELS provides biodiversity protection, but certainly little if any biodiversity enhancements, as previously discussed.

9.2 Local Grassland Projects such as Pastures New⁴ in Dorset have tapped into alternative resources recognising that the main supply of financial resources (ie Agri-Environment Schemes) is not sufficient in itself to deliver biodiversity for key areas. Pastures New uses resources from Local Area Agreements and support from Charitable Trusts to deliver a landscape-scale project, providing advice to grassland owners, paying for capital works such as fencing where Agri-environment resources are unavailable, and setting up a local project to help graze abandoned sites. Thus a relatively small additional resource can substantially enhance the quality of the products provided by Agri-environment scheme funding. This approach should be applied more widely across the UK.

9.3 Thus far Tir Gofal the Agri-Environment Scheme in Wales has failed to deliver significant biodiversity benefits and a timely review of this scheme is now underway. An added value approach such as described above would also help deliver biodiversity benefits from the forthcoming revised scheme.

⁴ <http://www.dorsetaonb.org.uk/text01.asp?PageId=308>

9.4 One source of resources that has not been effectively tapped for biodiversity protection and enhancement is the land-value uplift associated with a change from agricultural use to development land, as a result of housing or other development activities. It is now possible, as a result of PPS 9, for local planning authorities to require developers to incorporate green infrastructure, including habitat creation and enhancement for biodiversity, and that this be paid for from the “windfall” profits associated with land value uplift. Sadly this is not happening to any great extent at the moment, but with the forecast of three million new homes to be built by 2020, this is an opportunity to not only provide healthy living environments for those homes to be built within, but also to deliver habitat creation, restoration and maintenance targets for grassland and other priority habitats.

PROTECTED AREAS

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

10.1 SSSIs in England are at least improving in condition, as a requirement of the 2010 PSA target. There is no doubt that the actions to deliver the PSA target will have improved the status of some of the species and habitats on these SSSIs. Grassland within SSSIs is often not specifically mapped or recorded so it is difficult to ascertain to what extent improving SSSI condition per se has improved the state of grassland habitats or the species that depends on them.

10.2 The situation in Wales is far more serious—the most recent figures available from CCW show that most grassland in SSSIs in Wales is in unfavourable condition—78% of lowland acid grassland, 80% of lowland calcareous grasslands and 81% of lowland meadows were unfavourable⁵.

10.3 SSSIs will be an essential component of the network of sites needed to protect wildlife both from the existing pressures of agricultural intensification, abandonment, development, recreational use and pollution, and from the longer term threats associated with climate change. However, on their own they will not be sufficient.

10.4 A larger network of Local Wildlife Sites also exists with a much smaller degree of protection; and information on these sites is more scant than for SSSIs. Local Wildlife Sites deserve far greater attention than they are currently receiving, both in terms of assessing their condition, providing resources for their management, and ensuring their protection. Given that, at least in England, no more SSSIs are planned to be designated, except to satisfy the requirements of European Directives, it is even more important that Local Wildlife Sites are given greater attention.

10.5 It will also be necessary to restore sites currently not sufficiently valuable to be recognised as County Wildlife site quality, in order to buffer existing high quality sites from intensive agriculture for example, and to link existing high quality sites together. Unfortunately there are now fewer resources available to support habitat creation or restoration through Agri-environment schemes than there were previously. This situation needs to be reversed and truly landscape-scale projects developed, with sufficient funding, to create wildlife-rich landscapes, resilient to climate change.

11. In conclusion, The Grasslands Trust believes that Biodiversity, and especially grasslands, in the UK are still under threat. The Biodiversity process needs to be strengthened and integrated with the Ecosystems approach. More resources are needed and more imaginative ways of making the most of the available resources.

30 May 2008

Memorandum submitted by the Game & Wildlife Conservation Trust

1. SUMMARY

1.1. The Convention on Biological Diversity (1992) marked a new approach to conservation.

1.2. The UK Biodiversity Action Plan contained some ambitious targets—a proportion of which will not be met.

1.3. The key reasons for some underachievement are the slowness to change the Common Agriculture Policy, the late implementation of important agri-environment schemes and the lack of recognition that wildlife management (including appropriate predator control) makes a big difference for a number of vulnerable species.

⁵ *Sites of Special Scientific Interest in Wales. Current State and Knowledge. Report for April 2005–April 2006. Countryside Council for Wales*

2. CHANGING CONSERVATION POLICY

2.1. The Convention on Biological Diversity (1992) marked a sea-change in conservation policy. Prior to its conservation it was principally seen as a matter of species and habitat protection. This is evident in legislation such as the Birds Directive (1979) and the Wildlife & Countryside Act (1981). The convention recognises that this is not enough, and may sometimes be inappropriate. It also does not muddle conservation with animal welfare. The goal of the convention is to “... to achieve by 2010 a significant reduction of the current rate of biodiversity loss. . .”

2.2. The UK Biodiversity Action Plan set up in 1995 to follow this has the right aspirations, but perhaps, like the convention itself, appears to have become bureaucratic and complex.

2.3. The UK plan targets are ambitious so, unsurprisingly, by 2010 we expect a mix of successes and failures. Measured against the convention target of halting biodiversity loss however, we suspect the Joint Nature Conservation Committee is correct in assessing the overall indicators as either being positive or stable.

2.4. The reasons for some likely under-achievement in the UK plans are not because they are too ambitious or unrealistic, but often because some policies have been too slow to change.

2.4.1. The Common Agricultural Policy (CAP) which has been at the root of much Britain's wildlife loss did not change significantly until 2003.

2.4.2. Important improvements in agri-environment schemes did not come until 2005 with Environmental Stewardship

2.4.3. There is continued reluctance to accept that managing wildlife (including culling some species to favour others) can and should contribute to improving biodiversity.

2.5. As part of the UK Action Plan the Game & Wildlife Conservation Trust has led or jointly led on three species:

3. THE BROWN HARE

3.1. Widespread throughout England and Wales hare numbers dropped with the adoption of the new farming methods that replaced mixed farming with traditional ley rotations which were typical of the 1950s and 60s.

3.2. For hares, legal protection and local initiatives are almost meaningless. Measures to ameliorate modern farming in favour of wildlife are needed. Between 1998 and 2002 research by us (funded then by MAFF and English Nature) tested a set of arable options for Countryside Stewardship which showed that hare numbers did increase where these were adopted. Later these measures were put into the Entry Level Stewardship scheme in 2005.

3.3. Since the mid 1990s indicators of hare numbers suggest there has been a steady increase to about half the action plan target of doubling overall numbers. We cannot credit any of this improvement to agri-environment measures (they came too late), and we think it was caused by the introduction of set-aside which became mandatory in 1992. The loss of set-aside last year is likely to reduce hare numbers so the prospects of reaching the biodiversity action plan target by 2010 are receding.

4. GREY PARTRIDGE

4.1. This was once a widespread farmland bird that favoured traditional ley rotations with arable crops. Unlike the hare, which depends on a diversity of crops and grass, partridges were most affected by the introduction of herbicides which reduced the biodiversity within crops (ie the weeds and caterpillars). Numbers declined fast in the 1950s and populations became depleted and scattered. Recovery was always going to be more challenging than for the hare.

4.2. The 2010 target was set at 150,000 pairs (a comparatively low figure equivalent to the population remaining in the 1980s). Apart from some notable concentrations on sporting estates in East Anglia, the remaining birds are often scattered in small pockets across arable counties. The careful management of these small populations is critical and our efforts have concentrated on some 1,800 farmers who regularly count partridges and conserve them.

4.3. Contributors to our scheme have doubled the number of breeding birds on their land, but this has not yet affected the national trend monitored by the British Trust for Ornithology. Some options within the Entry Level Stewardship scheme are designed to help birds like the grey partridge, but unless farmers have a special interest in this game-bird they are unlikely to take these up as they are difficult and costly.

5. BLACK GROUSE

5.1. This is the rarest of our three species, but it was formerly widespread and present in most counties in 1900. Much of the decline in numbers and contraction in range occurred in the early part of the 20th century but continued into the post war era too. Consequently not all of its decline can be blamed on modern farming. Black grouse like fringe habitats between moorland and upland in-bye grazing, or between moor and woodland. Increased grazing and pasture improvement on the one hand, and plantation forestry replacing older systems of woodland management on the other, mean that transitional or fringe habitats get squeezed.

5.2. Our plan, in collaboration with Natural England, RSPB and others, is to maintain and increase the English population (mostly along the Pennines) and eventually increase its range, using mostly Countryside Stewardship and Environmental Stewardship schemes. This has been very focussed in and around the current and potential breeding areas of the black grouse. Progress has been good and the target population for breeding males has already been reached. It is feasible that we may be able to increase the breeding range in line with the target.

6. WHAT HAVE WE LEARNT FROM OUR EXPERIENCE?

6.1. Farming, forestry and other countryside policies should not work against nature conservation. Grants for forestry and subsidies to farming have done this in the past.

6.2. Instead competitive conservation funding needs to be available to farmers and landowners so they can conserve wildlife without significant loss of income

6.3. Farmers and landowners need help and guidance provided either by an agency or by voluntary bodies. Advice is more welcome than regulation.

6.4. Never overlook the importance of managing animal numbers. Controlling deer is widely accepted, but controlling some common predators like foxes, magpies and crows will improve populations of many vulnerable species. We know fox control is essential for improving numbers of black grouse and grey partridge, and has a huge effect on hare numbers.

7. THE IMPORTANCE OF MANAGING WILDLIFE

7.1. Our own Allerton Project at Loddington has shown some spectacular results using a combination of improved habitat, food supply and predator control simultaneously (see table)

7.2. This represents a near doubling of songbird numbers in the ten year period which, in terms of the national index of farmland birds equates to restoring their abundance to levels found in the 1960s. Importantly, this was not done on a bird reserve but on a modern farm where crop yields are as good as the national average.

7.3. This shows us that high yield crops do not necessarily exclude all wildlife provided that some other land (in this case set-aside) is managed specifically for wildlife and that there is some predator control.

7.4. On a wider scale it is evident that northern England's grouse moors support thousands of pairs of breeding waders like curlew, golden plover and lapwing. The almost unique fact about these moors is that the gamekeepers suppress numbers of foxes and crows which would otherwise take the wader eggs and chicks. If grouse management for shooting were to stop population of waders all along the Pennines and the North York moors would collapse. These birds would become rare—as they now are in south west England and Wales.

Table

Pairs of breeding songbirds at the Allerton project farm over 10 years. From 1992 to 2002 habitat was improved (mainly by using options under set-aside rules), extra winter food was provided (using pheasant feeders) and some predators (eg magpies) were controlled each spring.

	1992	2002
<i>Winners</i>		
Wren	47	141
Duncock	46	144
Robin	54	110
Blackbird	66	143
Song thrush	14	56
Chaffinch	135	229
Greenfinch	15	16
Goldfinch	3	14
Linnet	10	25
Bullfinch	6	12
Blackcap	19	38

	1992	2002
Chiffchaff	2	10
Willow warbler	28	47
Spotted flycatcher	8	14
<i>Unaffected</i>		
Skylark	36	37
Marsh tit	4	7
Blue tit	46	51
Great tit	21	31
Long-tailed tit	4	9
Yellow hammer	57	55
Whitethroat	25	45
Garden warbler	11	9
<i>Losers</i>		
Carriion crow	8	0
Magpie	10	0
Rook	55	25
Woodpigeon	30	0

8. AN ECOSYSTEMS APPROACH

8.1. Defra has proposed that in future it needs to take a holistic “ecosystem approach” to managing the environment. The term ecosystem has a well established biological meaning and this needs to be understood if this approach is to make any sense.

8.2. In Britain the original post-glacial climax vegetation was temperate mixed forest and an oceanic climate. Hence our fauna and flora were dominated by forest species which included man as a Mesolithic hunter. From some 6,000 years ago much of this was replaced by an agricultural ecosystem based on growing cereals and raising livestock. This agricultural system was derived from the grasslands of the Near East and a great many animals and plants we now have are open country species associated this. Man also converted the forest into managed woodland for fuel and timber. Managing the wildlife to suit his land-use, species were lost and others introduced.

8.3. It follows from this that wildlife management will continue to be necessary to retain what we have and that our aspirations to improve biodiversity will limited by land-use.

8.4. This mix of two basic ecosystems has consequences which may seem obvious but are often overlooked by those who argue for a natural “balance of nature” approach.

8.4.1. Because we have open-country as well as forest species, our biodiversity is potentially richer than if we had one or the other.

8.4.2. We cannot fully restore all the fauna associated with both ecosystems. This is likely to limit plans to re-introduce species that have been lost in pre-historic times.

8.4.3. Man has always intervened to protect his crops, his livestock and his game. We cannot stop doing this. Indeed if we want to restore the numbers and range of many species, we will need more wildlife management (including culling) not less. Species protection can potentially get in the way of this.

8.5. However, the biggest challenge for the future will be how to retain the biodiversity associated with both ecosystems in the face of intensifying land use—particularly in the arable sector.

9. HOW TO IMPROVE BIODIVERSITY IN THE FACE OF A RESURGENT ARABLE FARMING SECTOR

9.1. In the 1970s farming was driven by CAP production subsidy and in that sense the CAP was responsible for a considerable loss in biodiversity. This type of support has largely come to an end and we think the future for the CAP is as an agri-environment measure. In the UK this should consist of three programmes two of which we already have in place:

9.2. *Entry-Level Stewardship*. This should continue to be the base level support for managing the web of countryside wildlife habitats across farmland. Leaving aside hiccups when the programme started, the basic concept of a broad and shallow scheme articulated by Don Curry in 2002 is sound. While some have questioned whether or not the scheme delivers enough conservation value in terms of new habitat, one of its most important aspects is that it rewards those farmers who have already conserved habitats. Perversely previous schemes actually encouraged destruction followed by re-creation.

9.3. In future we want see this scheme more structured to get a better balance of options within farms. Further, we want additional mandatory measures which will compensate for the loss of set-aside. Probably this needs only be of the order of 1% of the farmed area.

9.4. Nevertheless farmers are put off by lots of burdensome rules, and (the now) poor rewards in relation to cereals prices. More money will be needed to ensure the broad and shallow concept is retained.

9.5. Higher Level Stewardship. This is a well designed follow-up to Countryside Stewardship and Environmentally Sensitive Areas schemes. It was intended to allow land-owners to develop more sophisticated schemes for their land. It was intended to be competitive but help from agencies was supposed to cut out poor applications at an early stage. It now seems that lack of funds means that Natural England will use the scheme to deliver its own conservation priorities through a system of designated target areas. This turns it into a top-down rather than bottom up scheme. It will go to support land of existing high conservation, landscape and amenity value rather than allow the possibility of significant enhancements on land of existing poor value.

9.6. *Ecological sensitive farming*: At present this is supported in a rather piecemeal fashion through the above schemes and other allowances. Broadly speaking, as we have pointed out, much of Britain's wildlife is adapted to farming. Thus many depend on open landscapes with a patchwork of crops and grass, along with seasonal mowing, grazing and cultivation. Brown hares, harvest mice, corn bunting, field fare, lapwing, corn crake, field cricket, hedge brown, meadow brown, corn marigold, corn cockle, meadow sweet - all these mammals, birds, butterflies and plants are associated with farming. Their very names give this away. The farming systems that have supported this biodiversity tend to be the traditional ones that have evolved gradually, relying more on natural fertility rather than solely artificial inputs. These farms may be organic, but are not necessarily. Example are:

9.6.1. Upland livestock farms including sheepherding and single suckle beef

9.6.2. Traditional mixed arable/livestock farming with a ley rotation where soil fertility is maintained as much by dung and grass/clover ley as it is by fertiliser.

9.7. We want to direct subsidies through agri-environment measures to support styles of traditional farming that are good for wildlife wherever they occur in the countryside—not simply in priority areas chosen by Natural England. Such a scheme should be non-competitive and open to all farmers that qualify.

10. CLIMATE-CHANGE

10.1. From the perspective of conservation, we think the only sensible response to climate change is to ensure that our countryside retains and increases its dense fabric of habitats (hedgerows, woods, streams, ponds, heaths and bogs) across the board sweep of our open land. This will allow species to shift their geographic ranges with changes in temperature and rainfall. Forecasting changes is problematic and we certainly should guard against using climate change as an easy explanation for declines that are in fact due to other causes.

11. THE NEED FOR BIODIVERSITY TARGETS AFTER 2010

11.1. We have emphasised the need to ensure that on a wide scale our major land-uses (eg farming and forestry) are modified by agri-environment measures to support a rich range of wildlife. There will however need to be more targeted measures to deal with specific species problems, whether it is mink control to save the water vole or fox control combined with styles of farming to ensure the survival of the stone curlew. We will need to have action plans over and above more sensitive land-use funded through agri-environment measures

12. CONCLUSION

12.1. Biodiversity in the UK is probably good—considering our population density and intensive land-use. However, much improvement is still possible and this will need to come not through better protection, but through better land management incentives and a greater willingness by authorities to permit and encourage the management of wildlife rather than leaving it to chance.

30 May 2008

Memorandum submitted by the St Helena National Trust

SUMMARY

1. This response from the St Helena National Trust is made within the context of section 9 of the Environmental Audit Committee's announcement of 29th April and refers only to the situation currently existing in St Helena. For information, the St Helena National Trust has two staff funded by the St Helena Government, one project officer funded by the projects managed and currently one temporary assistant.

2. Biodiversity monitoring and reporting processes are not comprehensive. Where we are able to give attention to this important discipline we are in the preparatory stages of putting systems in place.

3. Policies and institutional frameworks specific to biodiversity monitoring form part of the preparatory work outlined in 2 above and as such are also embryonic and incomplete.

4. The key driver for biodiversity protection is the plethora of alien invasive species. Some of these species, such as *Schinus terebinthifolius* [named locally “Wild Mango”] are exceptionally rampant, impossible to eradicate and extremely difficult to control. Wild Mango is of Brazilian origin and first recorded in 1860. It has now colonised large areas in most parts of St Helena.

5. The Land Development Control Plan for St Helena [2005] addresses conservation of the natural and built environments. The Plan proposes National Protected Areas, a Marine Biological Reserve and designation of Wetlands of International Importance. To date, no attention has been given to taking any of these proposals forward by Island Government institutions. The St Helena Government’s Planning Section is severely constrained. It operates with an establishment of three full time equivalents and is already over-stretched processing and assessing an increasing number of planning applications being submitted in anticipation of a positive decision on the construction of an airport on St Helena. A holistic approach to biodiversity is neither addressed in the Plan nor in any supporting planning documents.

INTRODUCTION

1.1 St Helena is an island of 47 square miles, over one thousand miles from the nearest continental land fall. The Island’s population is estimated at approximately four thousand. Facilities on the Island for horticultural, botanical or ornithological research and development are at best basic and more commonly non-existent. Over reliance is placed on visiting experts making brief visits to the Island to investigate specific matters and compiling a report with recommendations.

1.2 The Island benefits from DfID and FCO funding in the form of OTEP and sometimes OTEP grants. These grants are vitally important to conservation work in St Helena but by their nature, as short term funding for specific projects, cannot address the overarching policies, organisational structure, plans and financial resources required to adequately address the threat of alien invasive species to the Island’s biodiversity.

ACTIONS ADDRESSING BIODIVERSITY LOSS

2.1 There are two plans which have recently been officially sanctioned by the St Helena Government. Government approval does not include the financial resource to make the plan possible. One further project is in progress after the project bid won funding from the European Union. The fourth project described is eight years old and likely to continue for a further eight decades. The St Helena National Trust is involved with all four projects.

2.2 Increasing Regional Capacity to Reduce the Impacts of Invasive Species on the South Atlantic United Kingdom Overseas Territories is the EU funded project made possible after a successful bid through the European Commission’s EDF IX. This is a three year project in conjunction with the RSPB and is now in year two. The project covers five South Atlantic islands. There are three performance indicators. Two indicators are achieved if two of the five islands involved see demonstrable benefit to agriculture and nature tourism within three years of project completion. The third indicator is met if no new invasive species become established in any of the five islands in the five years following project completion.

2.3 The most significant tangible benefit this project has so far for St Helena is the completion of a baseline survey of the Island’s flora. This survey has been undertaken and supervised by experts from the Royal Botanical Gardens at Kew. The follow up to this survey will be a separate report giving advice and recommendations on how alien species can be controlled and endemic species protected and regenerated. Future benefits of this project includes local training in species eradication and control techniques, best practice training for customs officials in import controls, provision of training and education materials and development of strategic plans.

2.4 This project is the most comprehensive so far for St Helena and benefits have already been produced. However the existence on this Island after project completion of permanent and sustainable structures supporting on-going research and the development of techniques and skills is neither guaranteed nor sought in the performance indicators.

3.1 Species Action Plan for St Helena Wirebird is the first of the two projects recently sanctioned by the St Helena Government. This project is in conjunction with OTEP and the RSPB. The Island’s Agriculture & Natural Resources Division is also involved. The aim of this plan is to ensure an adequate area of the Island remains as suitable feeding and breeding habitat for the Wirebird so that the species has the ability to grow in numbers. The performance indicator is to remove the species from the IUCN list of critically endangered species.

3.2 This project brings together several strands of activity into the one strategic aim described above. The activities include the improvement of pasture land, mitigation measures to compensate for the reduction of Wirebird habitats consequent upon airport development and the establishment of the organisational structure required to manage the project and maintain for the long term the aims achieved by the project. The success of this project is based on preventing further loss of biodiversity.

3.3 Some of the activities envisaged in this project have funding sources proposed but not yet guaranteed. Other activities are unfunded. The involvement of the RSPB has led to some useful research on Wirebird behaviour, characteristics and predation threats. However, as is so often the case, as one knows more it becomes apparent how much more is needed to be known. Implicit is the unknown final research costs.

4.1 Protected Area Plan for the Central Peaks is the second of the two projects recently sanctioned by the St Helena Government. The work required for this completed preparatory project was funded by OTEP and will be co-ordinated by the St Helena National Trust and The Agriculture and Natural Resources Division when it progresses to a separate implementation stage.

4.2 The Central Peaks Plan is based on extending the Diana's Peak National Park to include all the cloud forest and wetland areas on the central ridge. The plan involves setting up an organisational structure for the management of the central ridge. The management aim is the conservation of the rich variety of endemic and indigenous flora and fauna in one strategic plan aimed at preventing further biodiversity loss. The plan now passes to the currently unfunded implementation stage.

5.1 The Gumwoods Project is a two year OTEP project now in its last year of funding. The funding assists in the reforestation of 630 acres of land which, prior to human habitation, was almost entirely forest but is now semi-desert scrubland. The aim of the reforestation work is to reclaim the semi-desert land which was once the Great Wood and is now the long term Millennium Forest project.

5.2 In the eight years of this project's existence ground clearance, propagation and planting of 10% of the land area designated as Millennium Forest has been achieved. Clearly this is a long term project which will last for decades to come. As previously stated, OTEP funding is entirely welcome and what has been achieved would not have been possible without this funding. However, the efficiencies which can be gained from long term planning are not possible with short term funding spanning only one or two years. Successful reforestation of this area will help significantly to stem biodiversity loss and hopefully encourage biodiversity expansion.

5.3 It is hoped the brief outline of these projects indicates the intense commitment existing in St Helena to conserve the treasure house of about eighty known rare endemic and indigenous species of flora and fauna. It is also hoped it is clear that the resources, skills and specialist knowledge available to the Island to achieve this immense task are at best difficult to obtain, and almost always transient and expensive.

CONCLUDING REMARKS

6.1 St Helena will welcome co-operation and assistance to achieve a respite in biodiversity loss. Realism dictates that a remote island with a population of less than four thousand and no wealth creating economy cannot undertake such a complex, sustained and mammoth task independently.

6.2 While admitting that reliance on others—and in particular the mother country—is unavoidable St Helena wants help to help itself. This can be achieved through more visiting specialists coming to the Island explicitly to establish or improve centres for research, technical knowledge, skills education, regulatory procedures and standards.

6.3 Funding for longer term projects would be invaluable. In this way achieving more permanent and comprehensive improvements more efficiently is a viable proposition. Bio-diversity loss and the advance of alien invasive species are inextricably linked. The survival of the endemic flora and fauna is in turn inextricably linked to the control of invasive species overall and hopefully the eradication of some.

6.4 Finally, much is hoped for after the completion of the Island's airport, assuming the decision to go ahead with the project is made. The foundation of St Helena's future rests; it is foreseen, on a successful tourism industry after airport construction. It is evident to all who know St Helena that a successful tourism industry also rests on the beauty and uniqueness of the Island. This in turn rests on St Helena's unique flora and fauna and its abundance of maritime fortifications and Georgian architecture. The fortifications, by the way, are literally crumbling away.

6.5 The Island of St Helena is in itself the tourism asset. To put it simply and starkly it is logical to link the advance of Wild Mango and similar invasives with reduced prospects for a successful tourism industry and that in turn with an airport which becomes a failed investment.

Memorandum submitted by the UK Overseas Territories Conservation Forum

SUMMARY

- The EAC and other select committees have already taken evidence concerning the globally important biodiversity of the UK's Overseas Territories (UKOTs).
- This understudied biodiversity includes numerous endemic and threatened species, and functionally important habitats and ecosystems, which contribute to the livelihoods and well-being of small, local communities; its protection is a responsibility of UK, in partnership with UKOT governments.
- Despite some progress, much remains to be done to address joint UK/UKOT government commitments made under the 2001 Environment Charters, and in fulfilment of UK's international obligations.
- Threats to biodiversity in the UKOTs from global phenomena (such as invasive species and climate change), and from local constraints (including inadequate resources, lack of government/NGO capacity, and weaknesses in environmental legislation and its implementation) are increasingly apparent.
- Unfortunately, HMG's approach to environmental protection and conservation of biodiversity in the UKOTs remains fragmentary and inadequate.
- This eleventh hour report may be the last opportunity to secure a radical reappraisal in the context of the 2010 Biodiversity Targets, without which the UK will be seen to have washed its hands of any serious intention of halting the loss of biodiversity in the territories over which it exercises sovereignty.

INTRODUCTION

1. The UK Overseas Territories Conservation Forum (UKOTCF or "the Forum") promotes the conservation of biodiversity, ecosystem services, and their contribution to the natural heritage and welfare of local communities, in the UK's Overseas Territories (UKOTs). Its member organisations include leading environmental bodies in the UK, the UKOTs, and the Crown Dependencies (CDs). The last (the Channel Islands and the Isle of Man) share many conservation challenges and aspects of governance with the UKOTs, including reliance on HMG to represent their interests internationally, under international conventions, including Multilateral Environmental Agreements (MEAs), and in related negotiations. The Forum and associated organisations have given evidence to earlier inquiries by the EAC and other select committees in relation to fulfilment of UK responsibilities in respect of the UKOTs.

ROLES AND RESPONSIBILITIES OF UK GOVERNMENT

2. Responsibility for local environmental policy is devolved to local UKOT governments (where these exist—see paragraph 20). However, as the Forum has stressed to EAC before⁶, it is entirely unrealistic to expect government and NGO bodies in these small communities to find locally all the human and financial resources required to monitor and protect their fragile natural environment. Consequently, local environmental legislation and its enforcement are often weak, including in critical areas such as spatial planning (see paragraph 16).

3. Under these circumstances, the UK Government might be considered to have (at least) a moral responsibility to support UKOT governments and those in other sectors to protect the biodiversity of these British sovereign Territories. In fact, HMG's liability has substantially more than a moral basis. The UK Government is accountable for UKOTs and their biodiversity under international conventions, and is also responsible for ensuring standards of good governance in the Territories (the latter being the subject of a current FAC inquiry). Both dimensions place a duty on HMG to encourage and to resource appropriately environmental monitoring, environmental protection and environmental democracy in the UKOTs.

4. It is disappointing that HMG did not respond more positively to the EAC's observation in its 2007 report on *The UN Millennium Ecosystem Assessment* (paragraph 133):

"Considering the UKOTs lack of capacity, both financial and human, we find it distasteful that FCO and DfID stated that if UKOTs are 'sufficiently committed' they should support environmental positions 'from their own resources'. The continued threat of the extinction of around 240 species in the UKOTs is shameful. If the Government is to achieve the World Summit on Sustainable Development 2010 target to significantly reduce the rate of biodiversity loss within its entire territory, the Government must act decisively to prevent further loss of biodiversity in the UKOTs."

⁶ UKOTCF submission to EAC inquiry on *Trade, Development and the Environment: the role of the FCO*, paragraph 6

5. The UKOTs' status as British sovereign territory renders them ineligible for important international funding mechanisms, such as the Global Environment Facility (GEF), available to other small island and developing nations. They are also excluded from many UK-based, charitable funding sources, including the Heritage Lottery Fund, which invariably (and erroneously) regard the UKOTs as "foreign". The UK Government has conspicuously failed to provide a significant, dedicated budget for conservation in the UKOTs, which might compensate for their exclusion from these other sources of funding. Defra's Darwin Initiative has occasionally funded projects in the UKOTs, but applications to this fund must compete with others based in myriad countries all over the world. The Overseas Territories Environment Programme (OTEP) jointly administered by FCO and DFID is a very welcome, important (and dedicated) source of support for small projects in the UKOTs. However, it is simply inadequate to meet their conservation needs.

6. The extent of HMG's under-funding of conservation in the UKOTs is apparent from its own figures, which estimate Government spending of least £460 million per year on biodiversity conservation in Great Britain and Northern Ireland. Its estimated spend on conservation on the UKOTs, however, is about £1 million per year, divided between all sixteen Territories (and nothing for the Crown Dependencies). One very conservative estimate is that there are at least twenty times as many endemic species in the UKOTs as in Great Britain and Northern Ireland (see paragraph 12). Using this as a factor to multiply the spending difference, it appears that HMG values its responsibilities to global biodiversity in its Overseas Territories about 9000 times less highly than it values its responsibilities to global biodiversity in the metropolitan UK. This appears to run counter to UK Government commitments under the Convention of Biological Diversity (CBD) and other MEAs.

ENVIRONMENT CHARTERS AND UPDATE ON THREATENED BIODIVERSITY IN THE UKOTs

7. Environment Charters signed between UK and most UKOTs in September 2001⁷ outline specific commitments on both sides, formalising joint responsibility for environmental protection and conservation of biodiversity. Locally developed strategies for Environment Charter implementation (where these exist) provide a basis for strengthening both the efficacy of, and democratic input into, environmental policies and practices in the UKOTs.

8. In 2004, at the request of various parties (including FCO, DFID and some UKOTs), UKOTCF started consulting on measures and reviewing progress towards Environment Charter implementation. By 2006–07, information had been gathered from 19 of the 21 entities that constitute the UKOTs and CDs. In early 2007, the FCO Minister's supplementary memorandum to the EAC inquiry on *Trade, Development and the Environment: the role of the FCO* referred to the forthcoming report:

"Your committee also asked about an assessment of the Overseas Territories Environment Charters. The UKOTCF is currently gathering information on the progress in implementing the Environment Charter Commitments for each Territory (or the equivalent for those Territories without Charters). The Forum intends to publish a progress report towards the middle of this year. The FCO will use that information, in consultation with Whitehall colleagues and the governments of the Overseas Territories, to carry out a review of the Environment Charters which have now been in place for five years."

9. Despite earlier indications (including the aforementioned to the EAC) that it would contribute to and use the Forum review, HMG later felt unable to provide information to this exercise, which they attributed to lack of resources. Unfortunately, therefore, consideration of fulfilment of commitments by HMG (both generally and specifically in those Territories governed directly by HMG—see paragraph 20) remained very incomplete, relying on information from some of the Territory governments and other bodies. That HMG does not have the resources to supply this information is a matter for concern in itself.

10. In August 2007, the Forum published its review⁸ (and plans to update this at intervals of two or three years). Predictably, the results were mixed, and the few summary points given here provide illustrative examples rather than a full overview. Overall, nearly six years after the Charters were signed, whilst some progress was apparent, a great deal clearly remained to be done. Some important elements require urgent attention. It is a matter of concern that the majority of territories have less than half the internationally recommended proportion of their land designated as protected areas. Eight territories are yet to designate their first Wetland of International Importance, as required under the Ramsar Convention. Disappointingly, one (Turks & Caicos Islands) has actually decreased the extent of protected areas since the Charters were signed, in order to allow more built development. There is still a great deal to be done in almost all territories to meet commitments to development planning, environmental impact assessment (EIA) and openness of these processes (see paragraph 16). A few territories have made good progress in biodiversity survey and monitoring, but much remains to be done in these, and particularly other, territories (see paragraph 11). Environmental issues are included in most, but surprisingly not all, school curricula—disappointingly, there are few cases of the Environment Charters themselves being taught.

⁷ See UKOTCF submission to EAC inquiry on *Trade, Development and the Environment: the role of the FCO*, paragraphs 3 and 4

⁸ <http://www.ukotcf.org/pdf/charters/INDICATORS0707e.pdf>

11. The flora and fauna of the metropolitan UK are amongst the best studied in the world. The biodiversity of the UKOTs is poorly documented in comparison. With baseline surveys as yet incomplete, it is hardly surprising that on-going monitoring of biodiversity in the UKOTs is generally poor. Resultant lack of information can give a falsely optimistic impression of the status of species and habitats—it is likely that species extinctions are occurring in the Territories without even being recorded. Nonetheless, available information clearly indicates the international significance of biodiversity in the UKOTs, and the threats to its survival.

12. The number of bird species endemic to (occurring nowhere other than) Britain is nil or one, depending on the taxonomic status of the Scottish Crossbill. However, there are at least 23 bird species endemic to UKOTs. A further 41 are “near endemic”, either because their area of occurrence is smaller than that of Britain but happens to fall across several small countries or territories, or because over 90% of their global population is found in a particular UKOT. Amongst terrestrial reptiles and amphibians, at least 23 species are endemic to UKOTs, and a further 24 nearly so, but none are endemic to Britain. For other taxa, despite incomplete study, more than 500 endemic invertebrates and more than 200 endemic plants have been described from UKOTs. The global biodiversity importance of UKOTs is not restricted to endemic species. For example, a majority of the world population of many species of seabirds (including about half the world’s breeding albatrosses) depend on UKOTs in the South Atlantic.

13. Rates of endemism would be even higher in the UKOTs, were it not for human impacts. At least 14 former endemic bird species are now globally extinct, and this figure is almost certainly an underestimate. In total, there have been at least 43 documented global extinctions of endemic species across all taxa in the UKOTs in historical times. Of even greater concern is the fact that these global extinctions are still occurring on UK territory. The St Helena Olive (an ancient endemic genus, not just a species) was lost in December 2003, when the last tree in cultivation died—the last wild individual had died in 1994. On the same island, just two individuals of the endemic Bastard Gumwood survive, and both were badly damaged in a storm in 2007; several other species, including He Cabbage (another endemic, single-species genus) are also on the brink of extinction, with just a few individuals remaining.

14. According to the IUCN, the UKOTs hold at least 240 globally threatened species: 74 classified as Critically Endangered (versus 10 in Great Britain & Northern Ireland); 49 classified as Endangered (versus 12); and 117 classified as Vulnerable (versus 37). Again, owing to incompleteness of study and lack of monitoring, these figures are undoubtedly underestimates.

15. Invasive species represent a major threat to biodiversity in the UKOTs. On Ascension Island, for example, despite the removal of feral cats (by the one conservation project in the UKOTs ever funded at full “recovery plan” levels⁹), other non-native plants and animals still represent a major problem. The UK response to the invasive species menace has been to develop a Great Britain (GB) Strategy (launched 28 May 2008). The sole provision relating to the UKOTs is to “ensure that the UK Overseas Territories and Crown Dependencies are kept informed of GB developments”¹⁰. This is unlikely to be a source of great reassurance to those in the UKOTs where invasive species threats are most pressing; the GB administrations felt that extending coverage fully to the UKOTs would make the Strategy “too broad”¹¹. Sadly, this approach is typical of UK Government reluctance to take fully into account the needs of the UKOTs in the face of global environmental threats. Similarly, in the current Marine and Climate Change Bills, HMG seems poised to overlook the needs of the Territories despite the urgent relevance to them of the issues concerned. Whilst it might not be appropriate to include UKOT considerations in the main body of such legislation, at the very least the infrastructure which they establish (expert groups, advisory committees, etc.) should be made accessible to UKOTs.

16. Rapid and poorly regulated development, particularly of tourism infrastructure, is a major contributor to environmental degradation in the wider Caribbean region¹², including its UKOTs. In the last year, local concerns have been raised over aspects of construction projects in all six wider Caribbean UKOTs. Complaints have included:

- i) approval of a major resort development on Beef Island, in apparent contravention of the 2003 Fisheries Regulations (British Virgin Islands, currently before the courts);
- ii) impacts on natural and other heritage features from developments which will increase numbers of hotel rooms by 700% (Anguilla, see local press reports);
- iii) inappropriate use of Special Development Orders, to circumvent normal planning procedures and accelerate hotel construction damaging to coastal woodlands, coastal defences and seabird nest-sites (Bermuda, see *Forum News* 31¹³ p.1); and
- iv) approval of development in designated National Parks and nature reserves, without available EIAs or public debate (Turks & Caicos Islands, see local press reports).

⁹ See UKOTCF submission to EAC inquiry on *Trade, Development and the Environment: the role of the FCO*, paragraph 8B

¹⁰ Key Action 12.3, Defra (2008) *The Invasive Non-native Species Framework Strategy for Great Britain*.

¹¹ *Conclusion to the Consultation on the Draft Invasive Non-Native Species Framework Strategy for Great Britain—Joint Government Response* (2008), section 2.03, paragraph 4

¹² Brown, N, Geoghegan, T & Renard, Y. (2007) *A Situation Analysis for the Wider Caribbean*. IUCN, Gland.

¹³ <http://www.ukotcf.org/pdf/fNews/31.pdf>

The latter, in particular, has resulted in concerns being expressed to the current FAC inquiry into good governance in the UKOTs.

17. Well managed, sustainable fisheries underpin the economies of the Falkland Islands, South Georgia & the South Sandwich Islands, and Tristan da Cunha. However, outside their Exclusive Economic Zones (EEZs), large-scale and illegal, unregulated and unreported (IUU) fishing pose a serious threat to marine resources. Some fishing methods result in by-catch of albatrosses, threatening the survival of some species. UKOT EEZs constitute a high proportion of the South Atlantic; those of Ascension, St Helena, and parts of those of Tristan da Cunha are not patrolled by fisheries vessels—something that experience elsewhere has shown to be essential for effective management. Consequently, potential income from licensing is being lost, and the UK's responsibility to conserve these marine ecosystems is not being fulfilled. The internal economies of the UKOTs concerned are not large enough to fund vessels (nor, in the case of Tristan, a suitable harbour) but HMG has proved unwilling to meet the needs. The current Marine Bill might provide opportunities to extend technical and other support to the UKOTs in this important area (cf. paragraph 15).

18. The threats posed by climate change to the biodiversity and small communities of the UKOTs, many of which are small, low-lying islands, are self evident¹⁴. The current Climate Change Bill might provide opportunities to extend technical and other support to the UKOTs in this important area (cf. paragraph 15). Climate change can also interact with other environmental threats. On South Georgia, climate warming and consequent glacier reduction is linking formerly isolated patches of unglaciated land. This is rapidly reducing the practicability of removing introduced rats, which threaten the endemic pipits and hugely important breeding seabird populations. DfID are to be congratulated on finding a means of linking Caribbean UKOTs to the work of the Caribbean Community Climate Change Centre, a regional GEF-funded initiative from which they would otherwise have been excluded. As yet, no resources have been found to link the same territories to the GEF-funded regional initiative on invasive species, managed by CAB International.

LACK OF A JOINED-UP APPROACH

19. Responsibilities relevant to environmental management in the UKOTs and CDs are currently spread across a number of UK Government departments¹⁵: FCO (policy lead on UKOTs), Ministry of Justice (policy lead on CDs), DFID (sustainable development, livelihoods, etc.), Defra (MEAs), DCMS (World Heritage sites), MoD (Sovereign Base Areas in Cyprus). This fragmentation of responsibility impairs effective communication (within Government, and with outside parties), hinders coherent policy development, and can result in unhelpful cycles of “departmental buck-passing”, which give the impression that no-one is prepared to accept responsibility. Even committees such as EAC, responsible for parliamentary oversight, must be prone to suffer the consequences of these arrangements. The difficulties posed to others (such as small NGOs in the environmental sector) are profound.

OVERSEAS TERRITORIES GOVERNED FROM WHITEHALL

20. A number of UKOTs do not have permanent human residents, and their governments consist of small numbers of appointees of HMG. (To some extent, these comments apply at least in part, to certain other UKOTs with very small permanent populations.) It appears to be the practice of HMG to distance its responsibilities even for these territories by creating the myth that they too are separate countries, and must fund conservation (and other) work from their own resources (see also paragraph 4). This is, of course, a nonsense and an even clearer indication of HMG's reluctance to fulfil international commitments it has made.

RECOMMENDATIONS

21. For the UK Government to make meaningful progress towards addressing (let alone achieving) the 2010 Biodiversity Targets in the UKOTs, the following are urgent requirements:

- i) Adoption of a genuinely joined-up approach across the various departments that have responsibilities relevant to environmental management in the UKOTs and Crown Dependencies (FCO, MoJ, DFID, Defra, DCMS, MoD).
- ii) Enhanced encouragement, oversight and support from HMG in the development and implementation of appropriate policy and procedures for spatial planning, environmental democracy, etc. by UKOT governments.
- iii) Renewed cross-sectoral effort to raise awareness of the biodiversity of the UKOTs, its global importance, and the UK's shared responsibility for its conservation, amongst public, officials and policy makers. UK Ministers and senior officials have consistently failed to recognise that the

¹⁴ Tompkins, E L, Cicholson-Cole, S A, Hurlston, L-A, Boyd, E, Brooks Hodge, G, Clarke, J, Gray, G, Trotz, N & Varlack, L. (2005) *Surviving Climate Change in Small Islands—A guidebook*. Tyndall Centre for Climate Change Research, University of East Anglia, Norwich.

¹⁵ See UKOTCF submission to EAC inquiry on *Trade, Development and the Environment: the role of the FCO*, paragraphs 9–12

UKOTs provide a rich source of potential “good news stories”—about people wishing to remain British, about the global importance of their biodiversity, about the UK helping small countries within its sovereign territory, and through the provision of examples of good practice in joint UK/UKOT conservation successes.

- iv) A dedicated HMG fund for full-scale conservation projects in the UKOTs. Such a fund would allow, for example, up-scaling of successful pilot work (including that supported by the current, modest OTEP fund¹⁶) to full species recovery plans, as would be normal practice in Great Britain and other countries. This is an area where Defra would be expected to take the lead in providing resources (although the Lottery Fund could contribute if it were to support projects in the UKOTs and CDs). In addition to species recovery plans, there are a range of project types in the UKOTs which urgently require funding on this scale, including:
 - baseline biodiversity surveys;
 - development of programmes for species/habitat status (and wider environmental) monitoring;
 - development of holistic approaches to environmental protection, linking (for example) environmental education, ecosystem management and sustainable development;
 - long-term institutional capacity building in government, and in NGOs and their co-ordinating bodies; and
 - work on major environmental issues, such as habitat degradation arising from unsustainable tourism, invasive species, climate change and fisheries management.

22. How much money is needed to support conservation in the UKOTs? Ironically, this is difficult to assess, because lack of funding has constrained collection of the very information on which a thorough analysis might be based. However, various reasoned estimates have been made. Combining information on conservation priorities and local capacity to deploy resources, a modest figure has been calculated to address the most urgent work. On this basis, RSPB estimate that £16 million per year is required from the UK Government to enhance conservation significantly in the UKOTs. This annual investment is tiny relative to most components of the domestic budget. Combined with appropriate encouragement to UKOT governments from HMG to strengthen local environmental protection policy, this could make a massive contribution towards addressing the 2010 Biodiversity Targets. It would also ensure that the UK discharged its responsibilities under international conventions, and would enhance the UK’s international environmental credentials. Conservation in the UKOTs is a good news story waiting to happen—for want of modest resources.

Memorandum submitted by the Royal Horticultural Society

SUMMARY

- The Royal Horticultural Society makes this submission as the principal gardening charity in the UK which has a significant leadership position on biodiversity in gardens.
- Urban land covers 11% of England and gardens are the point where most of the population have close contact and interaction with biodiversity.
- The inclusion of gardens in Biodiversity Action Plans would begin to acknowledge the significant contribution that gardens collectively make to biodiversity and would engage the much more of the population in the biodiversity debate and its conservation.
- The Invasive Non-native Species Framework Strategy may not be sufficient to conserve biodiversity as it does not embrace the considerable threat posed by the introduction of as yet unidentified alien plant diseases and pests that could devastate natural and cultivated habitats.
- The positive role that gardens and associated green space in urban developments can make to limiting biodiversity loss should be given greater attention
- Gardens are themselves collections of considerable plant biodiversity that has been brought together from around the world.

The following are the key points the Royal Horticultural Society wishes to draw to the attention of the Environmental Audit Committee:

1. The Royal Horticultural Society (RHS) is the principal gardening charity in the UK with 370,000 members, with the purpose of “the encouragement and improvement of the science, art and practice of horticulture in all its branches”. The influence of the RHS extends far beyond its

¹⁶ There is a need for an HMG commitment to continue the modest OTEP fund. Three times in less than a decade, UKOTCF has had to spend much of its available time arguing the need for (or for re-instatement of) a ring-fenced fund to help meet HMG’s commitment to conservation in the UKOTs. It would benefit conservation if the Forum did not have to redirect its efforts every two or three years to do this.

- membership with acknowledged leading and authoritative gardening publications, including RHS Online; a range of national Flower Shows, including Chelsea, that set the agenda for British horticulture, and four gardens around the country that attract over one million visitors per year.
2. The RHS has identified the biodiversity of gardens and the urban managed environment to be of major significance. The RHS is developing a leadership position on the role of gardens in the delivery of UK biodiversity objectives. The RHS therefore welcomes the opportunity to submit a memorandum to the Environmental Audit Committee setting out its views on the loss of biodiversity.
 3. The recent Natural England report “State of the Natural Environment 2008” (Natural England, 2008) acknowledged the significance of urban areas and gardens in particular in maintaining biodiversity in urban spaces. Gardens and urban spaces are particularly important as they are the place where most people have close contact with biodiversity.
 4. The UK is a densely populated and urbanised country with approximately 11% of land cover in England being urban. In urban areas, private gardens can represent 36–47% of green space (Gaston et al. 2005), but are seldom considered fully in strategies for urban biodiversity conservation. Beyond the urban fringe, gardens can offer equally valuable habitat diversity in a largely agricultural landscape. The Government’s commitment to halting biodiversity loss by 2010, and addressing biodiversity concerns in an increasingly urbanised environment, should take full account of the contribution that the country’s 14 million gardeners can make both individually and collectively.
 5. Private gardens are characterised by a mixture of native and non-native plants. Non-native garden plants make an important contribution to biodiversity. Eighty seven percent of non-native species in the average garden belong to native families and 50% to native genera (Smith et al., 2006) and up to a third of all UK invertebrate species visited a single garden in Leicester over a 15 year period (Owen, 1991). The RHS conference, “Gardens—Heaven or Hell for Wildlife?” in 2003, supported by the RSPB and Wildlife Trusts, demonstrated the strength of consensus on the important contribution gardens make to biodiversity. The results of a major study of garden biodiversity, the BUGS project, done by the University of Sheffield, funded by the Natural Environmental Research Council (NERC) reinforced this view.
 6. Gardeners can contribute significantly to the conservation of biodiversity in their own gardens, and to our understanding of biodiversity at a local level. The RHS has an active partnership with the Wildlife Trusts in the joint website (www.WildAboutGardens.org.uk) to engage gardeners and solicit observations of their garden wildlife. The online project has given rise to two successful books (Anon., 2006, 2007).
 7. The RHS encourages gardening with wildlife in mind, to develop an understanding and appreciation of biodiversity in the garden, and to represent gardeners’ interests in biodiversity.
 8. The RHS team of scientists based at the RHS Garden Wisley, maintain a diagnostic service to our members that provides valuable information on plant and animal diversity in UK gardens. Additionally, the advisory service to members identifies pests and diseases from gardens and makes recommendations for control. This service provides a national strategic function in also monitoring the introduction and spread of alien and quarantine plant pests and disease in the UK. The RHS works closely with the Plant Health and Seeds Inspectorate and the Defra Central Science Laboratory to deliver this function.
 9. The RHS is doubtful whether the Invasive Non-native Species Framework Strategy will prove fully effective in conserving biodiversity in part due to its limited focus on invasive plants and larger animals. It excludes plant pests and diseases as these are addressed in Plant Health regulations. A report commissioned by the RHS has identified a serious threat to biodiversity at the confluence of these strategies and regulations. Plant health regulations only cover known threats ie named species of invertebrate or pathogen. The ever increasing international trade in garden plants is introducing new, previously unidentified pests and diseases into the UK. Should these alien species “escape” onto our native flora considerable damage could result as demonstrated by the epidemic of Dutch elm disease in the 1970s.
 10. In the view of the RHS the UK Biodiversity Action Plan fails to represent gardens adequately as private and public gardens are not identified clearly as part of the “UK’s biological resources” and therefore not highlighted for protection. We believe that gardens need recognition for the important contribution they make to biodiversity and require nationwide protection.
 11. Current threats to gardens and their associated biodiversity are numerous and significant. These all have the effect of reducing garden size which in turn reduces the diversity of habitats that can be found in gardens. Diversity of habitats in the garden is central to an overall higher biodiversity. The key planning policies leading to reduced garden size include the new housing targets, existing gardens categorised as brown-field sites and therefore a priority for building development, trends in hard-landscaping (especially for purposes of parking cars) and the loss of trees due to house insurance company stipulations.

12. The RHS considers guidelines encouraging development on brownfield sites risk damaging biodiversity. This is for two reasons. Firstly, brownfield sites can be of biodiversity import in their own right—eg the case of the Black Redstart (bird) in London wasteland. Secondly, if gardens continue to have brownfield designation then their loss and fragmentation is very detrimental to biodiversity. The diversity of habitats within an average garden is not sufficiently compensated for by the replacement with smaller gardens or communal open space.
13. Where climate change impacts on habitat loss (eg coastal erosion, pond and wetland loss, decline in beech woodland in the south) and where flora or fauna are not able to migrate to more suitable habitats, gardens will become increasingly important in providing habitat refuges. Local initiatives may be taken by gardeners to help support threatened species. Garden habitats that are particularly useful in this regard include trees, ponds and the inclusion of vegetation with a diversity of structure. There are indications that non-native plants are of significant benefit to wildlife and a joint research project into the effect of natives and non-natives on biodiversity is being initiated by the RHS and other members of the Wildlife Gardening Forum.
14. Current legislative measures affecting gardens are largely due to drivers such as flood reduction rather than biodiversity and are insufficient.
15. Planning policy does not adequately protect biodiversity in gardens. Trees may receive some protection if they meet Tree Protection Order requirements but by and large garden trees, ponds and other vegetation have little protection.
16. Government plans for housing growth need to take more account of the collective contribution the associated gardens and green space could make to biodiversity. The appropriate structuring and management of these spaces could do much to limit the loss of biodiversity. As currently constituted, new gardens are not a replacement for greenbelt.
17. Local Biodiversity Action Plans rarely identify gardens as areas of importance or action. This omission needs redressing and organisations such as the RHS are ideally positioned to co-ordinate and educate gardeners on the importance of managing gardens for biodiversity.
18. Gardens are themselves collections of considerable plant biodiversity. Historically plant collectors have brought plants from all corners of the world to the UK where they have been propagated and cultivated. Some garden collections preserve biodiversity that is under threat elsewhere in the world.

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- 2 June 2008

Memorandum submitted by Vaughan Grantham

SUMMARY

- Halting the loss of Biodiversity requires action to effect land management on an extensive scale in a consistent manner.
- Agri-environment schemes must be a key delivery mechanism.
- LBAP have been relatively ineffective in halting biodiversity loss because they have great difficulty in influencing the management of private land, their actions tend to be small scale and are not well coordinated.
- The planning system places far too much emphasis on mitigation for protected species rather than on compensation for the loss of habitat.

NB. These comments are a personal view of issues I consider important and do not the question or numbering in the consultation.

1. When we consider how we can halt the loss of biodiversity I think we should remember the following basic ecology: The distribution and populations of all organisms is governed by the availability of conditions and resources. Conditions are relatively constant environmental factors such as climate or the chemistry of an environment. Resources are finite environmental factors such as food or suitable places to reproduce.

2. Any attempts to halt the loss of biodiversity will therefore only be successful if they include measures to affect the conditions and resources on which all biodiversity depends. This means manipulating ecosystems on an extensive scale and in a consistent manner across the UK if we are serious about halting the loss of biodiversity.

3. Some examples of action on an extensive scale are:

- The tougher regulation of water quality in recent years which has led to a considerable increase in biodiversity in our rivers.
- The Forestry Commission has recently begun a very welcome initiative to convert planted ancient woodland from conifers to broad-leaved. This will have positive benefits for biodiversity for generations to come.
- Agri-environment schemes also have huge potential to enhance biodiversity due to the extent of agricultural land use. The intensive use of fertilisers and pesticides in the second half of the twentieth century decimated a great deal of once common farmland biodiversity.

4. All are examples of central government controlling the management of land on an extensive scale. The positive benefits for biodiversity are achieved by measures being applied across the whole of the UK in a common manner, not on an ad-hoc local basis. This sort of “big government” is less fashionable politically than “community involvement” but is a lot more effective.

5. Local Biodiversity Action Plans and Partnerships have not been very effective in halting the loss of biodiversity. This is because of a number of serious weaknesses. The small local groups and individual who attend partnerships generally lack the power to affect land management, especially private land which is the majority of the UK. LBAP funding bids and projects tend to focus on what they can achieve easily. This tends to be awareness raising, survey work and small scale practical projects such as pond work and tree planting. Although these may make a contribution to biodiversity locally these practical projects affect only a tiny percentage of the LBAP area. Therefore, this approach cannot halt the loss of Biodiversity by 2010.

6. There is a problem with the lack of disaggregation of UK HAP and SAP targets to LBAPs. The distribution of LBAPs implementing various action plans appears to be rather erratic. I believe this is because the choice of actions plans is very much dependant on the interests and expertise of individual members. Clearly this is going to vary considerably between partnerships. One, less desirable result of this is a focus on species which are rare locally. This may simply be because they are on the edge of their range. On the other hand the core population in need of conservation in a neighbouring LBAP may not have a local plan. I am therefore strongly of the view that biodiversity work needs to be better co-ordinated at a regional, rather than a local level.

7. The UK targets for the condition of priority habitats are a good idea. However they would require a huge resource in terms of skilled surveyors to obtain the data.

8. In the planning system there is far too much emphasis on mitigation for protected species. To an extent this is understandable with species protected by EU Directive. However, the UK legislation (Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000) is more aimed at animal welfare than the planning system. Every year at least tens of millions of pounds are spent on consultants undertaking surveys of relatively common species. In my view this money would be far better spent on funding the creation and management of BAP habitats. I recommend that the Committee look at how the planning systems in Holland and Germany operate where there is a requirement for compensatory habitat measures.

2 June 2008

Memorandum submitted by the Horticultural Trades Association

INTRODUCTION

The Horticultural Trades Association (HTA) is the leading trade association for the ornamental horticulture and gardening industry. HTA membership includes some 1800 businesses representing the entire supply-chain—growers, retailers, suppliers, and landscapers. HTA grower members represent approximately 80% of UK ornamental production and include all major UK growers. HTA retail members include some 2500 retail nursery, garden centre and DIY multiple retail sites. HTA also operates the Association of Professional Landscapers, which represents landscapers, primarily operating in the domestic arena. The HTA is run by and for the industry and HTA performs a wide range of activities on behalf of our members and the industry.

SUMMARY

As requested in the invitation to submit evidence, this submission starts with a bullet-pointed summary of this response.

- The Government may be on course to meet parts of its 2010 biodiversity target but not all of the target.
- In our experience the HTA doubts the effectiveness of the monitoring and reporting process, questions how meaningful some of the indicators are, and believes that more work is needed to acquire data upon which to define targets and to assess progress.
- There is a need for more joined up thinking and action to protect bio-diversity whilst achieving a balance with the economic and societal needs of the UK.
- Whilst biodiversity protection is incorporated in some aspects of the policy-making process more could and should be done in this area.
- Key drivers of biodiversity loss in the UK are many and varied, including economic drivers, social drivers and conflicting needs of Government policy.
- The HTA has significant concerns at the Invasive Non-Native Species Framework Strategy.
- Climate change is likely to bring about new threats to UK biodiversity.
- Planning policy could do much more to protect and encourage biodiversity.
- Whilst the UK protected area network has played a significant role in maintaining biodiversity more work could be done whilst recognising the need to balance different demands on land use.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

1.1 Whilst the Government may be on course to meet parts of its 2010 biodiversity target it is clear to the HTA that not all parts of the target either can or necessarily should be achieved by 2010. One example of this would be the target for reducing peat use by 90%. The HTA is leading a cross-industry group—the Growing Media Initiative—to address the reduction of peat usage in horticulture. This group comprises representatives of growing media manufacturers, retailers, NGOs, growers and Defra. It is widely acknowledged that the industry as a whole has taken great strides in increasing the amount of peat-replacements used in horticulture. It is also widely acknowledged that the absolute UKBAP target for 2010 cannot be achieved for a number of reasons including the technical performance, price, availability and environmental impact of alternatives. The HTA is working closely with Defra and others to address these issues and will continue to do so.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?*

2.1 In our experience the HTA doubts the effectiveness of the monitoring and reporting process, questions how meaningful some of the indicators are, and believes that more work is needed to acquire data upon which to define targets and to assess progress. As outlined in paragraph 1.1 there are aspects contained within the UKBAP where a greater balance is needed between the needs of different players in any given sector, in order that indicators and targets are credible and meaningful. The HTA believes that the need for more and better data is recognised within Government. This can be witnessed by the emphasis given in the ongoing Defra consultation into a Soils Strategy for England. This consultation clearly stresses the need for research into the properties of soils and the risks to soils and therefore the biodiversity dependent on those soils. The HTA contends that without this research to fill knowledge gaps it is difficult, if not impossible, to define targets and assess progress which is meaningful and credible to all stakeholders.

2.2 The HTA is disappointed that the role of gardens in protecting, maintaining and enhancing biodiversity is almost totally ignored. The role of gardens should be given a much higher profile in the UKBAP. Private gardens and plantings around commercial sites have an enormous role to play. Research for Lantra—the land-based sector skills council found that there is an estimated 2.5 million private, domestic gardens in the London region, covering 319 sq kilometres (123 sq miles). These gardens contain two thirds of London's trees and collectively support a rich and diverse fauna and flora that makes a major contribution to London's sustainability and biodiversity.

3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

3.1 The HTA believes that there is a need for much more joined up thinking and action between different policy and institutional frameworks to protect biodiversity and recognise the other social, cultural and economic benefits of plants and planting. The HTA, through our “Greening the UK” campaign is working closely with a range of Government Departments and agencies at both national and local level to address this issue. These include DCLG, Defra, Natural England, the Town and Country Planning Association and others. This campaign has already seen around 60 local Councils agreeing to take action to increase green plantings and enhance maintenance of existing areas, with the protection of biodiversity being one of the drivers for action.

4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

4.1 Whilst biodiversity protection is incorporated into some aspects of the policy-making process more could and should be done in this area. One example of relatively good incorporation into policy-making would be the Environmental Stewardship schemes for agricultural producers. The HTA sees little evidence of such incorporation in other areas such as construction apart from the protection of a small number of high-profile species.

KEY THREATS

5. What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?

5.1 Key drivers of biodiversity loss in the UK are many and varied, including economic drivers, social drivers and conflicting needs of Government policy. Construction in general—roads, houses, economic developments—is a driver of biodiversity loss at local level but the HTA believes that this needs to be balanced against the needs of people as well. As mentioned in paragraph 3.1, the HTA is working to address this balance by encouraging a greater emphasis on enhancing habitats and therefore biodiversity in new developments. Whilst Government recognises this in some areas, such as funding for parks in the Thames Gateway project, Government could do much more to ensure that other developments are required to take action on biodiversity, rather than simply taking it into account.

6. Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

6.1 The HTA has significant concerns at the Invasive Non-Native Species Framework Strategy and the recently concluded consultation exercise. The HTA has had good constructive dialogue with regard to the non-native invasive species consultations and taken an active part on various committees since the strategy was started in 2001. The HTA along with the other participating organizations was instrumental in producing the report which was submitted to Defra in 2003. The HTA has provided support to these consultations in kind and has featured prominently in all reviews including a significant role in the production of the Horticultural Code of Practice. It should be noted that the HTA has taken a lead in ensuring that their members are fully updated on current regulations with regards to non-native invasive plants.

6.2 The scientific justification underpinning proposals within a Government consultation should be established and available prior to that consultation being published. The HTA considers that the strategy must not be based on anecdotal evidence and a lack of objective science.

6.3 The addition of the listed plants in the Review of Schedule 9 to the Wildlife and Countryside Act 1981 and The Ban on Sale of Certain Non-Native Species will have a significant impact on our members and the trade in general. The HTA is concerned that inclusion on Schedule 9 could lead to an adverse reaction to those plants from an uninformed consumer press. This could lead to economic damage to producers of those plants, through a loss of sales for no valid reason.

7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

7.1 Climate change will undoubtedly put increasing pressure on UK biodiversity. With increasing globalisation of trade we can expect to see greater risks of non-indigenous pests and diseases threatening UK biodiversity. Particularly for plant pest and diseases these risks are often not known at present. The HTA urges government to ensure that adequate resources are devoted to monitoring pests and diseases around the world and assess their potential risk to the UK taking into account climate change.

7.2 Understandably the major focus of action on climate change relates to reducing emissions. The HTA believes that there needs to be a much greater awareness of the positive role that plants can play in mitigation and adaptation. That is why we are investing members' money in sponsoring a three-year PHD studentship at the University of Reading investigating and analysing the role of gardening in climate change. The HTA believes that Government could do more in working with industries such as ours to fund such work.

8. Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?

8.1 The HTA firmly believes that planning policy could do much more not only to adequately protect biodiversity but also to positively enhance it particularly as regards plants and planting. The London Assembly has estimated that two-thirds of front gardens in the London area—an area equivalent to 22 times the size of Hyde Park— are already at least partially paved over, primarily to provide off-road parking spaces. This has clearly had a huge negative effect on protecting biodiversity, especially when taken in conjunction with the LANTRA research quoted in paragraph 2.2. Planning policy to restrict car-parking spaces in residential developments without taking into account the desire of people to own cars and permitted development rights to pave over front gardens is bound to lead to this conflict of interest. The recent announcement by Government in Future Water—A Water Strategy for England that permitted development rights to pave over gardens with non-porous surfaces will be removed is a welcome development. The HTA believes that greater action needs to be taken in planning policy to ensure greater use of plants and planting to deliver environmental and social benefits, including for biodiversity. Whilst there are some good examples in new developments around the country, in far too many developments there is little or no green space. Even where soft landscaping plans have been agreed with planning authorities as a condition for planning approval anecdotal evidence suggests that too often these plans are not seen through to fulfilment and that local planning authorities have neither the skills nor resource to ensure enforcement.

8.2 The HTA urges Government to put further measures in place to ensure that housing growth not only protects biodiversity but also enhances it. The HTA urges Government to insist that at least one of the final short-listed 10 candidate Eco-towns must be an exemplar for public and private green space, plants and planting and the enhancement of biodiversity. The Government should also reconsider the make-up of its' Eco-towns advisory group so that an acknowledged expert in landscape architecture and the role of plants in the built environment is included.

RESOURCES

9. Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?

9.1 The HTA believes that more can be done to protect and enhance biodiversity as outlined in our answers to the previous questions. However, we also believe that there is a need for greater prioritisation within the existing resource before Government provides more resources to biodiversity at the expense of activities elsewhere. The HTA believes that closer working between different parts of Government at an early stage would lead to less duplication of work and less conflict between different Departmental policies. This should lead to less waste thus freeing up resource.

9.2 The HTA has no remit in the UK Overseas Territories and is therefore not qualified to comment on this issue.

PROTECTED AREAS

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

10.1 Whilst the UK protected area network has played a significant role in maintaining biodiversity more work could be done whilst recognising the need to balance different demands on land use. Different interest groups will always place conflicting demands on any given situation. For example, growers wishing to abstract water from rivers for irrigating crops for economic reasons, whilst boat-yard owners wanting to keep as much water as possible in rivers for their own economic reasons. The HTA recognises that striking the right balance between maintaining biodiversity and allowing economic activity is not easy. The HTA is willing to help where we can in striking that balance.

May 2008

Memorandum submitted by the Minister for Environment, Sustainability and Housing, Welsh Assembly Government

EAC INQUIRY ON HALTING UK BIODIVERSITY LOSS

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

Despite the huge amount of positive progress that has been achieved to date, the target to halt biodiversity loss is most unlikely to be achieved by 2010.

Rather than being attributable to a lack of effort or resource, this is mainly due to the fact that the environment, and particularly biodiversity, has remained outside mainstream thinking and policy development.

The message from Malahide on 27 May 2004 stated that “biodiversity loss continues at an unprecedented rate” and that “this loss threatens to undermine economic and social progress”. Reinforced action was delivered from sectors already involved in nature conservation but this has been insufficient to counter the steady tide of non-sustainable development in other sectors.

2. *How effective is the biodiversity monitoring and reporting process?*

Biodiversity monitoring tools on land are well developed and effective although there are some gaps and an increasing need for improved data from the marine environment.

Biodiversity Action Reporting System (BARS)¹⁷

The Welsh Assembly Government has recorded all biodiversity-related Wales Environment Strategy actions on BARS. Local Biodiversity Action Plan partnerships have made use of BARS since 2004. Lead Partners, including CCW, reported on BARS for the 2005 UK BAP report and are currently improving and increasing their use of BARS throughout Wales. Since 2007 CCW Species Challenge Fund grants require recipients to use BARS; this will be rolled out to all other CCW grants for biodiversity action from 2008 in line with other UK grant givers.

Local Record Centres¹⁸

Local Record Centres (LRCs) are part of a wider network of organisations working under the umbrella of the National Biodiversity Network (NBN). Together these organisations co-ordinate and provide the data needed to support the delivery of the UK Biodiversity Action Plan and compliance with the Habitats Regulations.

The first of the four LRCs, the Biodiversity Information Service for Powys and the Brecon Beacons National Park (BIS) has been running successfully since November 2001. The second LRC in Wales is the South East Wales Biodiversity Records Centre (Sewbrec) which has been fully operational since August 2005. North Wales Environmental Information Service (Cofnod) has been fully operational since January 2007. West Wales Biodiversity Information Centre (WWBIC) has been fully operational since September 2007, which completes the coverage of Wales.

¹⁷ <https://www.ukbap-reporting.org.uk/default.asp>

¹⁸ <http://www.lrcwales.org.uk/>

3. *Are the biodiversity indicators meaningful?*

Biodiversity indicators are sufficiently meaningful to enable policy decisions.

The Environment Strategy for Wales Report on Progress outlines the current reporting of biodiversity in Wales. The main indicators that are used are in two categories. Outcome indicators report on the actual changes in biodiversity, and activity indicators track the inputs to improving management of habitats, which promote biodiversity.

Outcomes

Trends in Biodiversity Action Plan species and habitats

UK priority species and habitats are those that have been identified as being most threatened. Data are reported every three years. There are some gaps in information. For example the reporting of priority species shows that there is insufficient information for 26% of species in 2005, but this is a large improvement on the situation in 2002, when there was insufficient information on 45% of species. The reporting of habitats is more comprehensive.

Trends in wild bird index for all species and for farmed, woodland, urban, coastal and wetland species

This is based on work commissioned by DEFRA from the BTO and RSPB to produce long-term wild bird indicators for the regions of the UK and uses the results of the Common Bird Census (CBC). One problem is that there are too few CBC plots in Wales. However short-term trends can be presented using the UK method. In 2005, 269 plots were visited in Wales and the data shown represents the 58 species that were recorded in an average of at least 20 plots between 1994 and 2005. The less abundant species (including some key birds of farmed habitats) could not be included because of statistical considerations. Therefore these data are not representative of all birds in Wales. Also, at the start of the BBS in 1994, populations of many farmland and some woodland bird species had already shown steep declines in abundance at the UK-level and Wales-level over the previous 25 years. Short-term trends should always be interpreted with reference to this historic context.

Proportion of features (species and habitats) on Natura 2000 sites in favourable or recovering condition

The Natura 2000 sites in Wales includes the 90 Special Areas for Conservation (SACs) designated under the Habitats Directive and the 19 Special Protection Areas (SPAs) designated under the Birds Directive. Each site is designated for one or more conservation features, and the condition of these features is monitored on an approximate six-year cycle, in line with the UK Common Standards Monitoring framework. Under this framework, features are assigned a condition category reflecting whether or not they are in a desired state (favourable condition) or are recovering towards it.

Data for Wales are available from the Welsh Assembly Government website.ⁱ

4. *Is there adequate data upon which to define targets and to assess progress?*

There is generally adequate data on which to define targets and assess progress but gaps do exist.

The data on bird indicators exemplifies one of the recurrent issues in reporting at a regional level. For statistical analysis to detect change there needs to be a large number of plots. For example the Countryside Survey for 2007 has been expanded to about 120 sites in Wales, to enable meaningful assessment of habitats. Previous Surveys have been insufficient to allow reporting on a Wales basis.

It is important to recognise that the time required for land management to lead to improvement of biodiversity is of the period of several years. The habitat monitoring of Tir Gofal, the higher level agri-environment scheme in Wales, started in 2001–02 and it is only now that results are being analysed from re-surveys.

Currently other gaps in reporting are indicators to illustrate range and genetic diversity need to be developed and indicators that the wider environment is more favourable to biodiversity through reduced habitat fragmentation and increased extent and interconnectivity of habitats. DEFRA is leading a project to develop indicators for the latter.

5. *Are the policy and institutional frameworks effective at protecting biodiversity?*

Policy and institutional frameworks are improving and the existing Sustainable Development duty has been an incentive for Welsh Assembly Government to address the horizontal links between policy areas.

The 2010 target has been incorporated directly into Welsh Assembly Government Policy as Environment Strategy Wales Outcome 19ⁱⁱ.

Within Wales the implementation of the UK biodiversity action plan (UKBAP) is co-ordinated by the Wales Biodiversity Partnership (WBP). At present the Partnership meets three times a year and brings together organisations involved in biodiversity conservation in Wales. The Partnership provides advice to the Welsh Assembly Government on biodiversity matters and co-ordinate Wales-level biodiversity actions associated with the Environment Strategy and the UK BAP and to provide a leadership role and decision making on priorities for action on biodiversity in Wales.

6. Is biodiversity protection addressed effectively at local and regional levels?

Biodiversity protection at a local and regional level is improving.

Local authorities are a key target group for implementation of Section 40(1) of the Natural Environment and Rural Communities Act 2006 but the duty also affects a wide range of public bodies including fire, and police, health and transport authorities etc.

Welsh Assembly Government Officials have worked with the Countryside Council for Wales, Defra, Natural England, the Local Government Association, Wildlife and Countryside Link and others to developing guidance to support public authorities in complying with this duty.

During 2006, a Welsh Assembly Government officer contacted each local authority to explain the duty and identify a “biodiversity champion”. Meetings were held with the majority of local authorities and actions agreed.

Bullet point “biodiversity checklists” were developed by the WBP, approved by the Minister for Environment, Sustainability and Housing in July 2007 and subsequently endorsed by the Partnership Against Wildlife Crime in Wales and the Wales Local Government Association.

In Wales, most local authorities and national parks employ one or more ecological specialists to provide advice to planning, highways and other departments and many have service level agreements in place with the Local Record Centre. These roles directly support the making of appropriate decisions, reducing the risk of legal challenge and unnecessary damage to the environment.

7. How successful has the UK Biodiversity Action Plan been?

In Wales, each local authority or national park has its own Local Biodiversity Action Plan. This sets out the local actions necessary to conserve and enhance rare or threatened species and habitats. Individuals and representatives of statutory and non-statutory organisations take responsibility for these actions and act together as the Local Biodiversity Action Plan Partnership, which is central to achieving the 2010 target.

The role of co-ordinating the partnership is crucial and is undertaken by the Local Biodiversity Action Plan (LBAP) officer or biodiversity officer based within each local authority.

This system has been successful in generating local level action to protect and enhance species and sites across Wales. However implementation has been mixed and there is still more to be done to ensure that biodiversity gains are built in to all projects from the earliest possible stage.

8. Does Conserving biodiversity - the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

It does. The UK approach links directly with the Wales Biodiversity Framework <http://www.biodiversitywales.org.uk/English/Library/default.aspx?pid=1> and the Environment Strategy Wales, the chapter entitled “Distinctive Biodiversity, Landscapes and Seascapes” of which constitutes the Biodiversity Strategy for Wales.

9. How well is biodiversity protection incorporated into the policy-making process?

Biodiversity protection is enshrined in the Environment Strategy for Wales http://new.wales.gov.uk/topics/environmentcountryside/epq/Envstratforwales/about_the_strategy/?lang=en

This Strategy covers all of WAG policy areas and includes the high level outcomes of:

- The loss of biodiversity has been halted and we can see a definite recovery in the number, range and genetic diversity of wildlife, including those species that need very specific conditions to survive.
- The wider environment is more favourable to biodiversity through appropriate management, reduced habitat fragmentation and increased extent and interconnectivity of habitats.
- Sites of international, Welsh and local importance are in favourable condition to support the species and habitats for which they have been identified.
- Our seas will be clean and support healthy ecosystems that are biologically diverse and productive and managed sustainably.

These requirements are included in the Welsh Assembly Government Policy Gateway process, which impacts on all our policies.

The new Environment Strategy Action Plan, about to go to public consultation, highlights action on biodiversity as one of the key priority areas of work for coming years, and emphasises the role of a range of partners in delivering this. The Welsh Assembly is also about to publish a Community Strategy Advice Note on Environment to support Community planning partners in development of their Community Strategies, and biodiversity is one of the key opportunities highlighted in this for groups to take forward.

10. *How well will the Ecosystem Approach Action Plan address this issue?*

The Ecosystem Action Plan is led by DEFRA and covers England only. Development of the ecosystems approach in Wales requires an appraisal of options for policy and implementation, in terms of identifying synergies and conflicts and ranking how we decide on those options to maximise benefits. Effective use of resources to maintain and enhance ecosystems in Wales depends heavily on good spatial definition of the assets, their condition, and the opportunities and threats.

In Wales, the ecosystem services approach is integral to the design of the new agri-environment scheme, which will be introduced in 2010. It is planned to incorporate management of biodiversity, water quality and soil quality. The Woodland Strategy is also being revised and will adopt an ecosystems services approach.

11. *Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?*

DEFRA funds research for Wales and England, and WAG will be using outputs from the research for developing the evidence base, and developing ways to value ecosystem services. The latter task is an important framework for decision-making. A range of methodologies is available. As many ecosystem services are not traded in markets, and therefore remain unpriced, it is necessary to assess the relative economic worth of these goods or services using non-market valuation techniques.

WAG will use the approach set by DEFRA in its report "An introductory guide to valuing ecosystem services" published in December 2007, but recognising that both use and non-values in Wales may differ from those in England.

In taking forward this approach, WAG is setting up a pilot project with its partners in Wildlife Trust, CCW, EAW and FC to trial the ecosystem services approach in Pumlumon.

KEY THREATS

12. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?*

The Environment Strategy Consultation Document identified major pressures on biodiversity in Wales such as:

- Intensive use of land and water reducing both suitable areas for biodiversity and degrading the condition of habitats.
- Inappropriate management of habitats.
- Fragmentation of habitats due to pressure to use land for other purposes.
- Construction and development on land and at sea.
- Invasive non-native species.
- Agricultural intensification and food security impacts.
- Climate Change.

The vast majority of these pressures is caused by human activity, either directly or indirectly and pre-dates the effects of climate change, which will further damage the biodiversity upon which we rely. The key objective is to increase the resilience of biodiversity to all the challenges.

13. *Will the Invasive Non-native Species Framework Strategy prove effective?*

We believe that the Invasive Non-native Species Framework Strategy will prove effective. It was launched on 28 May 2008 and in addition the systems and processes described in the strategy, WBP have put in place a working group to lead action in Wales. This group works closely with the Invasive Non-native Species team at DEFRA to ensure synergy throughout GB.

14. *Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

Existing funding has been sufficient for the developmental stages. This has been supplemented, for example, by funding for specific projects such as £100k funding from the Welsh Assembly Government Department for Economy and Transport towards a £500k research programme on Japanese knot weed eradication, in partnership with Cornwall CC, SWRDA, EA, Railtrack and others at UK level.

Looking ahead it will be necessary to provide increased budget. This could be most effectively provided as a GB budget for Invasive Non-native Species that could be administered at a local/devolved level but directed at agreed actions within the GB Strategy.

15. *What impact will climate change have on UK biodiversity?*

Climate change is already beginning to cause a complex range of changes:

- Species turning up in unexpected places.
- Species disappearing even more rapidly.
- Increase in invasive non-native species.
- Changing management requirements as seasons shift and weather patterns change.

16. *How might the impacts of climate change be reduced?*

The ecosystem services approach can, by focusing on the fundamentals such as water and soil quality, have some positive effect for wildlife. However the role and importance of biodiversity within ecosystem services is not always clear and this approach alone is unlikely to be sufficient alone.

A concerted effort to build biodiversity benefits into all plans, projects and programmes so as to increase resilience and create stepping stones ad, where appropriate corridors and buffer zones is needed in addition to the ecosystem services approach.

17. *How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?*

Diversity—biological as well as social, linguistic and cultural diversity—is the lifeblood of sustainable development and human welfare. It is key to resilience—the ability of natural and social systems to adapt to change and is essential for nearly every aspect of our lives. We can not expect to tackle climate change if we don't look after the natural wealth of animals, plants, micro-organisms and ecosystems that make our planet inhabitable.

A robust natural environment will reward us by providing many ecosystem services in the face of climate change: flood defence, reducing soil erosion, buffering climatic extremes around settlements and so on. Action to help the natural environment to respond to climate change should be seen as key element of any plan to adapt and mitigate for climate change.

18. *Does planning policy adequately protect biodiversity?*

The land use planning system has a critical role in safeguarding wildlife and the environment on which it depends. It helps to ensure that development and growth are sustainable and is directed to appropriate locations. The main planning mechanisms for delivering this are, firstly, European and national planning policy, supplemented by the development plans which the 25 local planning authorities are required to prepare, setting out their policies for the future use and development of land. The second mechanism is the development control system whereby those wishing to develop land are required to seek planning permission from their local planning authority, or if refused permission, from the Planning Inspectorate. The development control system is an important decision making framework for the delivery of biodiversity protection, as it has to balance potential tensions between economic, social and environmental considerations.

Welsh Assembly Government Planning Division is responsible for preparing, with key stakeholders, the policy and technical advice needed. For example, the update of Technical Advice Note 5, on Nature Conservation, prepared with invaluable input from CCW, is nearing completion. This will reflect recently transposed requirements under the Habitat Regulations, the NERC Act and case law. The revised TAN 5 will be accompanied by a programme of training for all 25 LPAs to ensure that they fully understand the policy, what their statutory responsibilities are, and what risks they run if they fail to deliver them.

19. *Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity?*

Not yet. We encourage energy efficiency measures and fund a number of projects where these are being used. All general needs housing has to have a minimum of 40 square meters of garden, substantially more than the majority of new build homes for sale, and where practicable, flats also have to have a minimum space for creating a garden for residents. Where a local pond or particular habitat is disturbed through the development of social housing, the developing Registered Social Landlord (eg Housing Association) is encouraged to preserve the site and enhance it as far as possible with the engagement of the new tenants. This often involves local schools and wildlife organisations.

20. *Should there be a review of greenbelt policy, and what might the consequences be for biodiversity?*

There are no formal green belts in Wales. We do not believe a review of green belt policy in Wales would be productive since the key issue should be to ensure integration of the ecosystem approach with the planning system. Identification of green infrastructure and appropriate linking of these sites to the wider countryside, which in Wales would include large areas of peri-urban land, is already on-going via the Green Spaces programme.

21. *Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

Section 2.7 of Planning Policy Wales para 2.7.1 sets out clear guidance on the potential wildlife and heritage value of previously developed land.

RESOURCES

22. *Are there adequate resources for biodiversity protection and enhancement?*

So far an insufficient proportion of non-biodiversity related budgets have been used to secure biodiversity gains. We would recommend a two pronged attack in which devolved administrations improve and increase the use of cross cutting funds and a GB level fund is provided for BAP enhancement.

23. *Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

N/A

PROTECTED AREAS

24. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future?*

Although the EU legislation has traditionally provided an essentially static approach to nature conservation at odds with an increasingly dynamic environment due to climate change, there has been movement in recent years. Sweden's fully revamped series of Natura sites was accepted by the Commission leading the way to allow designation of modified sites and site systems across Europe.

There are two main weaknesses in the current system:

Deterioration of site condition and loss or movement of features due to climate change can not currently be addressed sufficiently quickly but this could be dealt with through adapted advice and guidance from the Commission.

There is a need to develop the resilience of the network through development of sites between and around the main sites. This might be addressed within current legislation by stronger implementation of Article 10 of the habitats directive and more consistent application of BAP protection at a local level.

25. *Are arrangements to protect sites effective?*

Generally speaking arrangements are effective for sites once they have been identified. However implementation of local wildlife sites guidance is still patchy so not all local authorities have yet established a full list of suitable sites for protection.

We are working with Defra and the other administrations to establish an ecologically coherent network of marine protected areas that will conserve rare, threatened and representative species and habitats to maintain and facilitate the recovery of maritime biodiversity and ecosystems. The overall aim is that the maritime environment recovers to a healthy, diverse and resilient state.

26. *Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

Yes. Much of this could be achieved by extending and building on the undoubted success so far of the BAP process and better incorporation of biodiversity gains into all policies, plans and projects from the outset.

This is not something that can be achieved by legislation alone but requires a sea change in our communication both within, between and outside public bodies.

REFERENCES

ⁱ <http://new.wales.gov.uk/desh/publications/enviroconvers/envioprogress092007/eswprogresse?lang=en>

ⁱⁱ http://new.wales.gov.uk/topics/environmentcountryside/epq/Envstratforwales/about_the_strategy/?lang=en

2 June 2008

Memorandum submitted by the Royal Botanic Gardens, Kew

EXECUTIVE SUMMARY

The Royal Botanic Gardens, Kew submits that:

The 2010 target adopted by the UK and EU has been useful in focusing attention on this important issue, as have other 2010 targets at global level.

The UK Government is not on course to meet its 2010 biodiversity target.

Many species and habitat types in the UK are still declining.

Some groups, especially fungi, are still so poorly known that they lack a baseline inventory for the UK, without which measures of change are problematic.

The UK biodiversity indicators are meaningful and useful but not sufficient on their own to give a full picture of progress towards the target.

Some level of success can be claimed for the policy and institutional frameworks currently in place but there is much scope for improvement, as evidenced by the fact that some species targeted by Biodiversity Action Plans are still experiencing significant decline.

More work is required to incorporate biodiversity protection into policy-making. In particular, the concept of conserving biological processes needs to be embedded in policy.

Climate change is already having an impact on UK biodiversity, but its eventual impact cannot yet be predicted with any level of precision.

Plant-based solutions are an essential element of the drive to combat climate change and the environmental challenges facing us all. RBG Kew and botanic gardens in the UK and UK Overseas Territories have the potential to make a greatly increased impact in countering the environmental challenge by saving threatened plants and habitats, and improving the quality of life for people.

Plant and fungal conservation activities in the UK and especially in the UK Overseas Territories are severely under-resourced and far from sufficient to enable achievement of the 2010 target to halt loss of domestic biodiversity.

Unpredictability and lack of continuity of funding present formidable challenges for plant conservation initiatives at a variety of scales, from high throughput seedbanking to implementation of conservation action plans for individual species endemic to UK Overseas Territories.

0 INTRODUCTION

0.1 The Royal Botanic Gardens, Kew (hereafter RBG Kew) welcomes the Environmental Audit Committee's Inquiry on this important issue. We will address several of the specific questions posed by the Committee from the perspective of plant and fungal diversity in the UK and UK Overseas Territories (UKOTs).

0.2 Our evidence refers not only to the UK and EU 2010 target of halting domestic biodiversity loss but also to related 2010 targets which apply at national, regional and international level. Documentation relating to these complementary but more detailed targets provides much of the evidence and policy recommendations on which our submission is based. In particular, we would draw the attention of the Committee to: the sixteen 2010 targets of the *Global Strategy for Plant Conservation* (GSPC; 2002), *Plant Diversity Challenge* (the UK response to GSPC; PDC; 2004) and *Plant Diversity Challenge: 3 Years—16*

Targets—1 Challenge (PDC progress report; a progress report on GSPC/PDC in the UK; 2007)¹⁹. We submit that the UK and EU 2010 target and the other complementary 2010 targets have been useful in focusing attention on conservation of plant and fungal biodiversity in the UK and, to a lesser extent the UKOTs.

0.3 We consider that significant progress has been made in some areas but that the target of halting loss of domestic biodiversity presents a considerable challenge which is unlikely to be met in its entirety given current trends and resources. In particular we draw the attention of the Committee to the paucity of resources available for plant and fungal conservation in the UK and especially in the UK Overseas Territories, the biodiversity of which is in many ways more significant than that of the UK itself.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

1.1 We submit that the Government is not on course to meet this target. While progress has been made towards meeting some aspects of the 2010 target of halting loss of domestic biodiversity, ample evidence exists that many species and habitat types in the UK are still declining. For example, *Change in the British Flora 1987–2004* (2006; Botanical Society of the British Isles) flagged up as particular areas for concern:

- the loss of species from infertile habitats, including calcareous grassland (species declining include *Gentianella amarella* [autumn gentian] and *Campanula rotundifolia* [harebell]) and dwarf shrub heath (eg *Pedicularis sylvatica* [lousewort] and *Platanthera bifolia* [lesser butterfly orchid]),
- the role of climate change in increasing ruderal/invasive species, potentially at the expense of native species, and
- eutrophication of aquatic environments.

1.2 *Change in the British Flora* also contains a wealth of information on individual habitats and species, including many examples where, even in habitats which are not declining overall, individual species are declining.

2. *How effective is the biodiversity monitoring and reporting process?*

2.1 The biodiversity monitoring and reporting process is complex and involves a range of different systems and measures. Together, these allow the assessment of many changes in biodiversity for well known groups of organisms (including many flowering plants), but for less well known groups (including many fungi) the situation is not so positive. Further research into the species in such groups present in the UK and their distribution is necessary before we can hope for effective biodiversity monitoring across the board.

2.2 The biodiversity indicators are only one way in which biodiversity monitoring and reporting take place, and it should be noted that many of the other sources of essential baseline data including *New Atlas of the British and Irish Flora* (2002) and *Change in the British Flora 1987–2004*, would not have come to fruition without substantial input from the voluntary/charitable sector.

Are the biodiversity indicators meaningful?

2.3 The biodiversity indicators provide a useful “broad brushstroke” assessment of where we are with regard to different aspects of biodiversity conservation. Some caveats relating to plants are:

- Indicator 2 (Plant Diversity) looks at broad habitat types only and does not appear to take account of declining species within these habitats.
- Indicators 3 and 4 (UK BAP Priority Species and Habitats) are useful, but by definition do not take account of all species/habitats.
- Indicator 5 (Genetic Diversity) recognises that “genetic diversity is an important component of biodiversity” but only deals with livestock breeds and collections of cultivated plants which themselves conserve only a very narrow genetic base. In the context of the 2010 biodiversity target, we believe that genetic diversity in wild species is more significant and that studies of genetic diversity in declining species are urgently needed to assess the effect on genetic diversity of loss of peripheral populations etc.

¹⁹ The PDC progress report is available at:
<http://www.plantlife.org.uk/portal/assets/News%20Sue%20Nottingham/PDC.pdf>
 The 10 recommendations in that report (q.v.) are all pertinent to the questions posed by the Committee.

Is there adequate data upon which to define targets and to assess progress?

2.4 As mentioned under 2.1 above, data are available for some groups eg many flowering plants (largely through the voluntary sector), but for some other groups the necessary baseline data are largely lacking. We do not yet have a full inventory of the fungi of the UK—many native species await discovery and documentation, but at current rates of progress, with declining resources for UK mycology, completion of the inventory cannot be anticipated this century. Even for the flowering plants, some habitats have not been monitored in sufficient detail (see comments in *Change in the British Flora 1987–2004* pertaining to montane and aquatic habitats, for example).

3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

3.1 There are multiple frameworks and there has been some success as a result of these in protection of biodiversity. However, the declines in species and habitats discussed indicate that the frameworks are not fully effective. Likewise, the UK BAP process has seen some successes, but not all species are included and even some that are included are still declining. Given increased levels of devolution, *Conserving biodiversity—the UK approach* is an appropriate document, but its identification of priority species and habitats (rather than all species and habitats) appears to be a step down from the 2010 biodiversity target. See also our comments about the biodiversity indicators proposed in *Conserving biodiversity—the UK approach* under 2.2–2.4 above.

4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

4.1 There is scope for biodiversity protection to be better incorporated into the policy-making process. Recommendation 3 of the PDC progress report states “Undertake a review of the mechanisms available to conserve important plants and fungi (the protected area network, agri-environment and forestry schemes) and where necessary focus these schemes to ensure they are working to stop plant and fungal diversity loss and to increase ecological resilience in the wider landscape”.

4.2 The importance of understanding and conserving biological process in addition to named taxa has been identified by the Plant Conservation Genetics Working Group of the interagency Plant Conservation Working Group and others. This is particularly relevant in complex groups such as *Sorbus*, *Hieracium* and *Euphrasia* in which hybridisation, changes in ploidy etc. are ongoing processes. Preserving ecosystem function/services in the habitats where these taxa grow will be essential in allowing these natural processes to continue, and we believe that the concept of process needs to be embedded in policy.

KEY THREATS

7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

7.1 The impact of climate change on UK biodiversity is not possible to predict with any certainty, but Box 3 in *Conserving biodiversity—the UK approach* reports on worrying scenarios with climate change posing a significant risk to 5–25% of UK BAP species targets. Despite the lack of certainty, it is clear that climate change is already having an impact, with many ruderal/alien species extending out from their historical strongholds and, conversely, native species with narrow habitat requirements being further marginalised.

7.2 Recommendation 3 of the PDC progress report states “Support large, landscape-scale conservation initiatives that allow for the conservation of plants and fungi and their habitats in the face of climate change. Focus specifically on those that link up important places for plant and fungal diversity in the UK—thus optimising population size and extent of critical species, conserving genetic diversity, improving habitat condition and restoring resilient and functioning ecosystems”. To our knowledge this has yet to be implemented.

7.3 RBG Kew submits that plant-based solutions are an essential element of the drive to combat climate change and the environmental challenges facing us all. Over ten years, through this Programme, Kew and its global partners will make a greatly increased impact in countering the environmental challenge by saving threatened plants and habitats, and improving the quality of life for people. This represents a major step-change in the scale of activity and delivery of conservation outcomes.

7.4 RBG Kew plans to work with Defra, and other partners and supporters, both nationally and internationally, to develop and deliver the Breathing Planet Programme which comprises seven key actions:

1. discovering, collating and accelerating global access to essential information on the variety and distribution of the world's plant and fungal species through fundamental science, enhanced collection programmes, systematics, data capture, GIS science and novel identification tools such as web-based floras and DNA barcoding;
2. identifying plant and fungal species and regions of the world most at risk of losing their wild diversity, by applying cutting-edge IT and GIS approaches to enable priority setting for conservation programmes targeted at saving the most vulnerable areas first;
3. helping implement global plant and fungal conservation programmes such as creation of new sustainably managed areas through established and new partnerships in countries richest in diversity and geographical extent of remaining wild vegetation;

Together these actions will help retain the Earth's major remaining carbon sinks.

4. extending the Millennium Seed Bank's global partnership programmes to secure in safe storage 25% of the world's plants by 2020, targeting species and regions most at risk from climate change such as alpine endemics, coastal species and those endemic to desertifying lands;
5. establishing a global network of scientists and practitioners in restoration ecology to use seed banks for the urgent repair and re-establishment of damaged native vegetation;

These two actions will help recover lost plant productivity and carbon sequestration.

6. expanding plant and fungal diversity knowledge and Kew's innovative science programmes to the identification and successful growth of locally-appropriate plant species under changing climatic regimes on agricultural, urban and suburban lands;

This action will help plant-based adaptation to climate change to succeed.

7. using the high public visitation, web and media opportunities provided by Kew and partner botanic gardens to deliver enjoyable, inspiring experiences that inform people world-wide about plant-based mitigation and adaptation strategies to cope with climate change and other significant environmental challenges facing us all.

RESOURCES

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

9.1 Plant and fungal conservation activity in the UK is dependent to a large degree on the voluntary/charitable sectors, where resources are limited and restrict the level of activity undertaken. The importance of providing resources to these sectors and of training sufficient people in the necessary skills is flagged up in Recommendations 9 and 10 of the PDC progress report.

9.2 RBG Kew and partner organisations in the voluntary/charitable sector have invested substantial resources into banking the seed of the UK flora. Kew's Millennium Seed Bank holds c. 96% of the UK's plant species diversity (the highest proportion of the native flora banked of any country in the world), and many rare and threatened species from the UKOTS. However, enhanced government support is now urgently required to enable the seed bank to continue to operate at a scale proportionate to the severity of the threat posed by habitat loss and climate change. Priorities include further banking of UKOTs flora and expanded UK collection programmes to ensure that adequate genetic diversity is conserved in the bank.

9.3 Activity in the UK Overseas Territories is still at a remarkably low level, given the global significance of the biota in some of the UKOTs. Many taxa are only known from a single UKOT or have populations of global significance in the UKOTs. Already there are documented extinctions of endemic taxa of plants (and other major groups of organisms) in the UKOTs. St Helena, where only fragments of native vegetation survive and many of the endemic species are on the verge of extinction, is an example of the parlous state of biodiversity in the OTs (Fay *et al.* 2007, Curtis's Bot. Mag. 25: 243–250).

9.4 RBG Kew is active in plant and fungal conservation work in the UK and the UKOTs, providing scientific expertise to support effective conservation management as well as engaging in training and capacity building activities to enable local staff and other stakeholders to develop sustainable biodiversity action plans. Such work forms part of Kew's statutory obligations and is an institutional priority. However, demand for these services greatly exceeds our ability to deliver, in the context of year-on-year decreases in grant-in-aid from Defra.

9.5 Our work with partners in the UKOTs has given us a broad understanding of the resource levels and needs of these communities with respect to plant and fungal conservation. RBG Kew recently submitted evidence on this subject to the House of Lords Select Committee on Science and Technology in the course of their Inquiry into Taxonomy and Systematics. The main points of our evidence are outlined below in some detail, as we consider the needs of the UKOTs as among the highest priorities to be addressed by Government if the challenge presented by the 2010 target is to be taken seriously.

9.6 UKOTs plant diversity—context

9.6.1 UK Overseas Territories support critically important UK biodiversity. The diversity and endemism of plants and fungi found in the UK Overseas Territories is far greater and more biologically important than that of metropolitan UK. The island of St Helena alone has 50 endemic plant species recorded from a native flora of about 60 species of vascular plants. In many cases the endemic species is the sole member of their genus (monospecific), thus representing unique phylogenetic lines.

9.6.2 In most UKOTs we still have not fully documented the flora and so do not know the full extent of their plant diversity and endemism. A best guess is that across all 16 UKOTs there are at least 180 endemic species of vascular plants—orders of magnitude more than metropolitan UK where most of the endemism is taxonomically below the species level.

9.6.3 UKOTs also support critical assemblages of plant species at habitat and ecosystem level which provide important ecological services, contributing to human well-being, local economies and climate amelioration including forests, mangroves, coral reefs, sea grass beds.

9.7 UKOTs Capacity needs

9.7.1 The most critical issue for UKOTs is their lack of in-Territory botanical conservation expertise. Most Territories do not have any locally-based, trained botanical expert who can lead the documentation and conservation of their unique flora. Instead, most Territories are heavily reliant on international partnerships and external funding. In those Territories that do have a degree of locally-based expertise (eg St Helena, Cayman, Turks and Caicos Islands, Bermuda) it usually comprises one person—often a private individual not formally linked to the local agency responsible for biodiversity. Most local people do not see attractive career options in botanical and related environmental professions.

9.7.2 It is vital that we build on systems to encourage young locals to train for and to see career opportunities in botany, horticulture, and environment. There is a huge need to build local capacity.

9.8 Access to information housed in metropolitan UK

9.8.1 Most of the information and materials needed by UKOTs to document and conserve their flora are not available locally. They are housed in biodiversity institutes largely in the metropolitan UK eg RBG, Kew, Natural History Museum, London and RBG, Edinburgh. They include herbarium specimens and botanical literature.

9.8.2 RBG Kew has a programme of repatriating electronic data to the UK Overseas Territories. Herbarium specimens from UKOTs are being located, digitised and made available both on the Web and on DVD to be sent to UKOTs. However, this is largely being done by volunteers and as project budgets allow and so is relatively slow-paced.

9.9 Development of in-Territory Reference Collections

9.9.1 Virtually none of the UKOTs has active, functioning herbaria. In some cases there are small collections which are inadequately stored in rooms lacking climate control and which are not actively curated eg Montserrat, Cayman. These collections are deteriorating. Falkland Islands has a small herbarium but no curator. As part of a recently completed Darwin Initiative project, a small herbarium was established in the British Virgin Islands and housed in an air-conditioned room in the J.R.O'Neal Botanic Garden, managed by the BVI National Parks Trust, the agency responsible for terrestrial biodiversity management. Sadly, just as this was being implemented the botanic garden manager died suddenly. All developments have stopped until a suitable replacement can be found. The delay in filling this post is due to the lack of local capacity.

9.9.2 RBG Kew has an active programme of collaborative plant diversity documentation in many of the UKOTs eg Montserrat, TCI, St Helena, Falkland Islands, BVI, and Ascension. In all cases, plant material is collected in duplicate with one set retained at Kew until local facilities are established and the reference collection can be repatriated to each Territory.

9.9.3 Training is required for those staff that will run the herbarium. Kew offers a Diploma Course in Herbarium Techniques, both at Kew and in regional centres, depending on demand. Several people from UKOTs have attended one of these courses.

9.10 Inadequate access to funding

9.10.1 Because of their status, Overseas Territories of the UK, are ineligible for many of the funds available for biodiversity conservation. In the UK the only dedicated fund is the small grants Overseas Territories Environment Programme (OTEP). Defra's Darwin Initiative has also provided significant funds to projects based in the UKOTs. However the stop-start nature of endeavours supported by such short-term

funding sources is particularly problematic in the UKOTs context, where continuity of effort often depends on a single committed individual. The extinction of at least one endemic plant species (*Nesiota elliptica* in St Helena) can be ascribed to lack of continuity in conservation efforts in UKOTs.

9.11 The Global Strategy for Plant Conservation

9.11.1 The UK Overseas Territories were not included in Plant Diversity Challenge, the UK's response to the Global Strategy for Plant Conservation, adopted by the CBD.

9.11.2 In order for UKOTs to implement the Global Strategy for Plant Conservation and halt loss of their domestic plant diversity, each Territory needs easy access to reference specimens and literature housed in a fully functional herbarium that is adequately staffed and financed, together with facilities and expertise in in situ conservation, seed banking and habitat restoration.

2 June 2008

Memorandum submitted by Hertfordshire Natural History Society Recorders Group

SUMMARY

1. The government is unlikely to meet its biodiversity targets as these appear to have been given a low priority and insufficient funding allocated to relevant organisations such as Natural England and CEH to carry out the work required.

2. Our national audit is inadequate. As a consequence the rate of biodiversity losses is likely to be an underestimate.

3. Generally habitats do better than species, although conflicting targets from eg Local Authorities means that planning requirements often take priority over nature.

4. DEFRA as the guardian of the majority of "biodiversity" related work is inappropriate. As an organisation it is too large, has conflicting responsibilities and its remit is far too wide to be effective in this area. It lacks the expertise to carry its ecological duties.

5. There is no evidence that the value of ecosystem services is reflected in decision making.

A response to the questions posed is given by the County Recorders Committee of the Hertfordshire Natural History Society.

ABOUT THE HERTFORDSHIRE NATURAL HISTORY SOCIETY

The Hertfordshire Natural History Society (HNHS) was formed in 1879 and its aims of promoting natural history within the County of Hertfordshire. The Society is a registered Charity (no. 218418) and is managed by a management committee that has responsibility for the proper fiscal management of the Society and to meet the aims and objectives of the Society. HNHS holds lectures, seminars, discussion groups, field visits and training along with a range of social activities. Publications include the Hertfordshire Naturalist (a peer reviewed Journal) and a biannual newsletter "Fieldnotes". In addition we publish the Annual Hertfordshire Bird Report and range of books relating to species groups such as the Hertfordshire Bird Atlas, The Moths of Hertfordshire, The Dragonflies and Damselflies of Hertfordshire and The Mammals, Amphibians and Reptiles of Hertfordshire. Next year we hope to have a new Hertfordshire Flora and the Geology of Hertfordshire.

HNHS was the moving force behind the founding of the Hertfordshire and Middlesex Wildlife Trust in 1963 and we retain close links with the trust.

The Recorders Committee has 23 members who do species level recording for the County for 26 groups of organisms and one member who records the geology. The recorders have close links with the Hertfordshire Biological Records Centre to whom we feed biological records and submit the information that forms the Counties Red Data Book (RDB) species list, ie those species that are threatened or endangered. The recorders also feed their records to National Recorders for their group of organisms and participate in the field training sessions to encourage member of the public to develop an interest in Hertfordshire wildlife. As an organisation we are mindful that our County recorders membership is an aging one and that there are few younger people coming through with the skills required to identify organisms to species level accurately. Few new graduates have the necessary taxonomic skills as this is no longer provided at undergraduate level to any depth. Field and training courses may locate interested persons but the lack of a national skills base is cause for concern.

GENERAL COMMENTS

When dealing with issues relating to Biological Diversity the term “Biodiversity” is thrown around with little appreciation for the fact that to even begin to assess our biodiversity we need to carry out an inventory. Without a full inventory there is no way of assessing what we have or whether species are declining or increasing—so the key question of halting biodiversity loss becomes obsolete, impossible to assess. In practice targets are set for those groups where there are reasonable levels of information.

To be able to carry out an inventory we need taxonomists—and we are no longer producing graduates who have developed these skills. There are certain groups (birds, butterflies, odonata) where the organisms are easily identifiable, but others such as diptera (flies) lichens and insects generally do not attract as much interest. There are many groups of organisms where there are a handful of people in the UK who could be considered expert in species identification (mostly ageing) and there are very many species that are not mentioned in the UK BAP, despite being RDB species. This is because the information is scarce / under recorded. We are fortunate in Hertfordshire in that we have a relatively large number of recorders; on a County scale this is unusual. County recorders are a key resource feeding information to Biological Records Centres (BRCs) and National lists. Although we encourage and welcome participation from members of the public—there are concerns as to accuracy of the records being submitted. Verification of records is always required.

Government action relating to Biodiversity is perverse. Of particular note are the cuts to funding. The closing of CEH Monks Wood is a key example. Long term data sets collected and collated at Monks Wood are under threat and conciliatory words regarding the protection and continuation of this long term recording is met with disbelief by most ecologists. Many of the staff with essential & irreplaceable skills have become demoralised and turned to consultancy or taken early retirement—this is a national loss we cannot afford. Such action suggests that Government puts Biodiversity issues at a low priority—all talk, no action, or inappropriate action. Tinkering with Natural England has also been to the detriment of the countries biodiversity responsibilities. The assessment of SSSIs for example that they are undertaking cannot be realistically met with the staffing levels and funds they have available. Funds appear to be available for Quangos and other committees, when what is really needed is people on the ground.

POLICY AND PROGRESS

1. Is the Government on course to meet its 2010 biodiversity target?

No. The EU Gothenburg Agreement in 2001 looked to halt biodiversity loss by 2010. Instead of halting the decline we continue to see species and habitat losses.

2. How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?

There is insufficient data with which to work with. This is a reflection on the lack of taxonomists with the required skills to identify at the species level across all groups. If one examines the UK BAP the species listed they give a tiny fraction of those currently at risk. It is the inadequate nature of the information that concerns many ecologists as these gaps are not being closed. The monitoring/reporting is piecemeal and there are too few resources available to cover what needs to be done. For instance, the review of SSSI's is mostly done by Natural England—they just don't have the staff to cover this and these particular targets will be missed. There is insufficient data on species—particularly in relation to what might constitute an “indicator”. As to those that are being used as target species / groups it is usually only approximate population numbers, area and trends that is being examined.

The indicators (Biodiversity Indicators in Your Pocket (2007) DEFRA) are useful in that they use well documented groups of organisms such as birds and butterflies—but takes a very broad brush approach with many assumptions made as to how useful some of these organisms are as indicators. If you don't know what you have you can't assess progress! Habitat information is generally better than species information—though there are issues with habitat fragmentation and minimum areas required, particularly by faunal groups.

There is little or no work on species life history tables for example—these provides essential conservation data in addition to identifying key mortality issues and how each years cohort is doing (stable, increasing or decreasing). This is because the work is often tedious to collect and for many species falls out side of the three years of a PhD studentship. As one of the few who work in this area I know that there is little or no funding available, and certainly not from the main biological funding sources! Modelling is more likely to be funded over hard species data which is considered more “natural history” information rather than hard science. Interestingly, there is a great demand for species life history tables!

3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

No, no and no. DEFRA is the main body dealing with much of this and is not the place for it. It is too large, has too much within its remit and cannot hope to cover what is needed and doesn't have the expertise. In addition DEFRA has conflicting responsibilities, both on the policy and funding side. Natural England has some responsibility but with current staffing levels, its Biodiversity remit is unrealistic. BAPS are just a snap shot of what is there—not a full inventory of all species at risk (habitats are generally better catered for than species). At local & regional levels, well, Biological Records Centres could be helpful here—but again, not all Counties have them and most are not well supported. Many of the organisations that take a lead on biodiversity issues are not government supported (eg RSPB). Joined up thinking is more of a buzz phrase than actual approach. Some organisations, such as JNCC, pull information together well, but base line data is missing in many areas. Essentially, we really don't know what we have for many groups of organism—so have taken the approach that we will use what we do have. Butterflies and birds are useful, but as previously mentioned, don't give the whole picture. As to protection—unless we know we have an “at risk” species (and often only BAP species are of interest) nature takes second place to commercial interests. Only high profile species or habitats are likely to get full protection.

4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

Again, industry comes first- only need to look at the East of England plan for new build to see this. Looks good on paper, in the real world doesn't seem to be making an impact on decision makers as they have conflicting targets to meet! Unsure about the use of the term “ecosystems services” that is currently prevalent. It appears to be an attempt to put a monetary value on nature. Regarding the UK Strategic framework—the document “Working with the grain of nature” a biodiversity strategy for England, one of the principles of the ecosystem approach (which came out of the 5th meeting of the Convention on Biodiversity in Nairobi in 2001) was to decentralise management to the lowest appropriate level. Good in theory, but where is the training to support this? It also highlights that our own survival and economy is dependent on our protection of our environment and biodiversity. This should mean that where there is a biodiversity interest, for instance in a planning issue, that the biodiversity interest should take priority. Unfortunately it usually doesn't.

With regards ecosystem services there seems to be no evidence that there is progress here. An example is the concern over bee populations and Colony Collapse Disorder (CCD). CCD has been experienced in the USA where over 60% of bee colonies have collapsed. This phenomenon has also been experienced in Germany, Sweden, Spain, Portugal, Greece and France. The French, Swedes and Germans are taking it very seriously. The cause is yet unknown, disease, a fungus and agrichemicals are all potential culprits and there are indications that the workers are deserting hives in areas where electromagnetic fields are found. In the UK we have a government spokesperson stating that we have no problems with CCD, yet one of the largest bee keepers in London states he has lost 30 out of his 42 hives recently and there are similar reports from other bee keepers in London and from Scotland, Wales and the north of England. It cannot be emphasised too highly that the loss of bee colonies is going to have a devastating effect—not just on the flora of the UK but on the farming industry! This is an ecosystem service we cannot do without—yet it would appear that we will again react rather than be proactive.

KEY THREATS

5. What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?

A lack of planning control—appears to be the case that industry and societal needs take priority. A lack of expertise in taxonomy means that rarities are being missed / not known about. The training, recruiting and provision of a career structure for taxonomists to address this problem is not being addressed.

A lack of commitment. The government's actions would indicate they are not serious in addressing the problems. Lots of committees exist—but they don't carry out the much needed inventory.

6. Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

Some good information coming through—but doesn't go far enough. Regulation insufficient—only need to see how the fish trade have lobbied to bring in exotics in to the UK for the aquarium trade and the consequence has been an increase in alien species in UK rivers. See Dr. Gordon Copp's work (CEFAS) on risk assessment for alien fish.

As to eradication—if we examine the non native crayfish problem where alien species are wiping out our native white clawed crayfish through disease vectors (crayfish plague) and by out-competing with our native species, there is little hope of removing them. The Environment Agency & other bodies survey, research, trap—to no avail, there is no solution to this problem at present. The zebra mussel is another example—colonies clog pipes and cost a fortune to clear.

We do it too late. Our border & import controls are inadequate—unlike Australia & New Zealand where this issue is taken very seriously. Again, an example of ineffective management—and where commercial interests win out.

7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

The effect climate change will have on biodiversity is that we will see some species expand their ranges and some retract. We are also more likely to see alien species increase. An example of a current concern is mosquitoes. It's rather ridiculous to ask how the impact of climate change can be reduced, we are doing nothing to mitigate it! Our national carbon footprint is increasing not reducing—and until politicians take hard decisions this is unlikely to change. Species will either have a wide tolerance to the climatic changes or not. If not, they will face extinction.

8. Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?

In theory this is in place, in reality- as mentioned before- there are conflicting targets for these decision makers. Houses & industry will always come before nature. We have seen little of real ecological value in these proposed eco-towns. They tinker at the edges to gain planning permission. These areas need to be small scale, all buildings could be carbon neutral, incorporating gray water use & reuse and be as self sustaining as feasible. There is little innovation with these settlements and they are often too big—& in need of a high level of infrastructure (road, schools etc). Greenbelt is valuable land (as are gardens!) and has a purpose! As to brownfield sites, they should be fully surveyed (by competent ecologists) in advance of planning.

RESOURCES

9. Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?

No! There are few people around with this type of expertise & no commitment to training. Resources are often committed and spent at committee level rather than on the ground. Can't really speak on overseas. Some support via organisations like British Council.

PROTECTED AREAS

10. Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?

Generally OK for SSSI's, NNR's SPAs etc- but there are exceptions to the rule. Fragmentation of habitats and lack of wildlife corridors is problematic & most of the work being done to remedy these deficiencies comes from Wildlife Trusts, RSPB etc. rather than government. This has real implications for certain species survival—metapopulation theory can be important here, and has been used to good effect, for example, in the Southampton area with increasing water vole populations. Linking habitats is essential for the conservation of a number of at risk species populations.

2 June 2008

Memorandum submitted by Plantlife International

- Plantlife International does not believe that the UK is on track to meet the 2010 biodiversity target, including its commitment to the Global Strategy for Plant Conservation.
- Government resources for biodiversity action are inadequate, and do not reflect public opinion and commitment.
- The UK BAP process faces new constraints to delivery, precisely at a time when dedicated action on priorities identified would ensure considerable progress towards halting biodiversity loss.

- Plant and fungal diversity must be recognised for its fundamental importance in maintaining life on earth, and conserved accordingly.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

1. No, the Government is not on course to meet its 2010 biodiversity target for the following reasons:
2. Since the EU Gothenburg agreement in 2001 to halt the loss of biodiversity by 2010 the UK has shown a mixed commitment to meeting this target. Positive demonstrations of commitment include the UK's response to the Global Strategy for Plant Conservation (GSPC)—Plant Diversity Challenge (PDC)²⁰—and subsequent activities such as the identification of the UK's Important Plant Areas (IPAs).
3. Last year “Plant Diversity Challenge: 3 years—16 targets—1 challenge”²¹ recommended the UK undertake a review of the schemes available to conserve important plants and fungi (including the protected area network, agri-environment and forestry schemes) and where necessary re-focus these schemes to ensure they are working to stop plant and fungal diversity loss and to increase ecological resilience in the wider landscape. Without this overhaul and focus the UK will not meet its GSPC commitment.
4. The most recent assessments of plant status in the UK indicate the continuing threatened nature of our flora. Status and trend information from The New Atlas of the British and Irish Flora²² showed that one-third of native plants had declined in range. Plants associated with arable fields showed the greatest declines, followed by those of dwarf shrub heath, calcareous grassland and montane habitats. The GB Red List of Vascular Plants²³ published in 2005 identified 345 threatened species, equating to one-fifth of all native flowering plants. Similar Red Lists outline 163 threatened bryophytes, 176 threatened lichens and 11 threatened stoneworts, bringing the total number of threatened plants, according to IUCN criteria, to 695. 48% of new BAP Priority Species are either plants or fungi, however with plans to implement new BAP unlikely to emerge before Spring 2009 clearly the UK will not have halted this aspect of biodiversity loss by 2010.

5. Lack of necessary commitment is also evident in the protected sites network which is also equally operating below optimum recovery levels. The first Common Standards Monitoring²⁴ report in 2006 showed only 52% of flowering plant and fern features on SSSIs to be in favourable condition; this figure increases only slightly to 55% for non-flowering plants and fungi. Comparison figures for plant and fungi features on Natura 2000 sites showed an even worse picture with only 46% and 33% respectively in favourable condition.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?*

6. It is difficult to assess how effective the BAP reporting process (through BARS) is, as we can only make an assessment on the available data from the first round of reporting in 2005, which proved difficult for many to complete. There remains considerable confusion over where responsibility for reporting through BARS lies within the complex hierarchy of LBAPs and Lead Partners, especially following devolution.
7. Another key issue comes from the fact that monitoring of priority plant species relies heavily on the volunteer sector, and it is usually down to BAP Lead Partners and specialist societies to co-ordinate and support their volunteer networks. Insufficient resources are available for this support and monitoring is therefore not effective at the UK level. One of the main conclusions of the 2005 UK BAP reporting round was that “...there remain significant gaps in monitoring information for UK priority species ...especially outside of designated sites”. The situation is worse for plants and fungi, the trend for which was unknown for 21.6% of species.
8. The JNCC-led UK Surveillance Strategy aims to address some of these issues, but there still remains the need for a much more efficient, strategic and adequately resourced UK monitoring programme. With the significant increase in the number of UK BAP species (especially fungi and lower plants), the need for adequate resources is even more critical.

²⁰ Defra, DoE Northern Ireland, National Assembly of Wales and Scottish Executive (2004) Plant Diversity Challenge—the UK's response to the Global Strategy for Plant Conservation.
The Global Strategy for Plant Conservation was adopted by the Conference of the Parties to the Convention on Biological Diversity in 2002.

²¹ Plantlife International, JNCC, Royal Botanic Gardens, Kew (2007) Plant Diversity Challenge: 3 years—16 targets—1 Challenge. Progress in the UK towards the Global Strategy for Plant Conservation. JNCC, Peterborough, UK

²² Preston, CD, Pearman, DA & Dines TD (eds.) (2002) New Atlas of the British and Irish Flora. Oxford: Oxford University Press. See also: Preston, CD, Telfer, MG, Arnold, HR, Carey PD, Cooper, JM, Dines TD, Hill MO, Pearman DA, Roy, DB, Smart, SM (2002) The Changing Flora of the UK. London, Defra.

²³ Cheffings, CM, & Farrell, L. (Eds.), Dines TD, Jones RA, Leach SJ, McKean, DR, Pearman, DA, Preston, CD, Rumsey, FJ, Taylor I. (2005) The Vascular Plant Red Data List for Great Britain. *Species Status* 7: 1–116. JNCC, Peterborough, UK.

²⁴ Williams, J M, ed. 2006. *Common Standards Monitoring for Designated Sites: First Six Year Report*. Peterborough, JNCC.

9. There is only one indicator in the “UK Biodiversity Indicators In Your Pocket” (BIYP) that relates directly to plant diversity. Currently this indicator is assessed solely using Countryside Survey data, and whilst this shows overall plant diversity to be deteriorating it does not adequately portray trends such as those for birds, butterflies and bats. On the whole, the use of indicators to assess success provides a diluted and skewed picture of progress.

10. For example, the new PSA in England to “secure a healthy natural environment for today and the future” does not include a breakdown indicator relating to plant diversity. It is inappropriate to use a single measure of breeding birds as a proxy for wider biodiversity, as there is no real evidence to suggest a direct link between the status of bird populations and those of plants in their associated habitats.

11. Further incentives are required to ensure adequate data is collated regularly on flowering plants, lower plants and fungi to enable changes in trends associated with land-use to be tracked, reported and responded to accordingly. A significant aspect of this requirement is the need to develop botanical skills, expertise and capacity across the UK, the increasing absence of which, particularly in relation to lower plants and fungi, are already severely hampering current monitoring and reporting processes.

12. Plantlife have been running the Common Plants Survey since 2000, engaging the public in an annual survey of 65 common species, designed to complement the Countryside Survey—in 2008 over 1,500 survey packs have been sent out. This provides the only nationwide botanical species survey in the country.

13. A BIYP indicator on trends in genetic diversity of livestock breeds and cultivated plants is under development, however we believe that a focus on the genetic diversity within wild native plants provides a better measure of the progress towards halting biodiversity loss. The 2005 UKBAP reporting round illustrated that 9% of priority species were mainly threatened by intrinsic factors, which include inbreeding / poor reproduction / recruitment / isolated populations. This reflects the lack of, or declining, genetic diversity of native populations and their isolation, resulting in inbreeding and eventual loss. We must measure the impact this has on the genetic integrity of native species, including the effect changes in genetic diversity have on ecosystem functionality. Delivery of target 8 of the GSPC—linking ex situ and in situ conservation—will be vital in this respect.

3. a. *Are the policy and institutional frameworks effective at protecting biodiversity?*

14. From a botanical perspective we consider policy and institutional frameworks inadequately protect plant diversity. “PDC: 3 years—16 targets—1 challenge” highlighted how those GSPC targets requiring action across UK policy sectors have not successfully progressed compared to those targets led by the research and conservation sectors. Examples of inadequate protection include:

15. The Wildlife and Countryside Act (WCA) (1981): Habitat destruction continues to pose the main threat to plant diversity²⁵, however, at present Section 13 of the WCA does not protect the places where plants grow—it is an offence to kill a plant, but not to destroy its habitat. This is compounded through the SSSI site selection guidelines which state that there should be “a presumption for selecting... all sites with viable populations” of Schedule 8²⁶ species. However, species listed on Schedule 8 only qualify as those which are vulnerable to collection and not habitat neglect or mismanagement.

16. Since the introduction of a PSA SSSI target in England there has been a drastic halt to the notification of new sites as all statutory agency effort is focused on attaining favourable condition of the existing network. This has left many important species and areas for biodiversity unprotected. In Scotland, legislative changes to enable a more straightforward approach to altering SSSI citations has been welcomed as a mechanism to increase protection for biodiversity in the existing SSSI network.

17. Schedule 9²⁷ of the WCA currently operates differently in Scotland, England and Wales, and the legislative instruments to ban the sale of non-native invasive species, while welcome, are taking too long to set up and lack cross border cooperation. Other legislation also needs to be assessed for its role in tackling non-native invasive species, including for example, the Weeds Act (1959).

18. Unimproved permanent grassland can be of the most botanically important farmed habitats in the EU. The cross compliance standards should provide better protection for permanent grasslands. For example, Plantlife are concerned that further loss of semi-natural grassland is inevitable in the UK unless measures for its protection are significantly strengthened. Of particular concern is the threat to parcels of land less than 2ha, which are currently unprotected by cross compliance due to a loophole in the Environmental Impact Assessment (Agriculture) (England/Scotland) (No.2) Regulations 2006 which means that Environmental Impact Assessments are not required before potentially damaging activities are undertaken.

²⁵ Habitat change is attributed as the main factor affecting native species in *The Changing Flora of the UK* (2002) Preston *et al*

²⁶ The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

²⁷ Schedule 9 of the Wildlife and Countryside Act lists animals and plants which may not be released into or caused to grow in the wild

b. *How successful has the UK Biodiversity Action Plan been?*

19. The UK BAP process has been the major driver in focusing the conservation of our most threatened biodiversity across the UK since its inception in 1996, and is crucial to the delivery of GSPC target 7 (conserving threatened species). Governmental and non-governmental partnership delivery of dedicated species and habitat action plans provided the framework to achieve SMART targets, levered in public support and additional resources, and was the key to BAP success stories. However, the UK BAP currently supports 190 plants representing just 27% of our threatened flora, considerably below the 60% required of GSPC target 7.

20. The new BAP priority species list represents a marked improvement towards GSPC target 7 with 69% of threatened plant species now included. Recently, however, a succession of drawn-out BAP review processes (targets, species and habitats) have taken the momentum out of the BAP process and had a deadening effect on the level of volunteer involvement and enthusiasm. When coupled with the effects of devolution we are entering a period of uncertainty for biodiversity delivery.

21. The forthcoming BAP Reporting round will count towards the UK's measure of progress towards the 2010 target, however this assessment will only refer to "old" BAP priorities thereby providing an artificial measure of progress towards the 2010 target.

c. *Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?*

22. Conserving biodiversity—the UK approach, is an excellent step towards synergising conservation frameworks, including the GSPC, at the UK level. However, we urgently need to translate the principles of joined-up action across devolved administrations into real, working situations. Presently country-level frameworks to deliver biodiversity strategies and BAP are effectively being developed in isolation.

23. Plantlife are concerned that political will for countries to be self-sufficient in their delivery of biodiversity objectives will strain limited expert resources, especially considering that the majority of these lie within GB and/or UK-level voluntary societies and small NGOs, and that this will present barriers to effective species and habitat recovery programmes, landscape-scale and connectivity initiatives.

d. *Is biodiversity protection addressed effectively at local and regional levels?*

24. The inclusion in the Nature Conservation (Scotland) Act and the NERC Act of a biodiversity duty on public bodies is welcome, although its effectiveness in addressing the loss and decline of biodiversity remains unproven. In Wales, the Wales Biodiversity Partnership is using a dedicated liaison officer over the next year to advise local authorities on how to implement the duty. However, without widespread government guidance to all public bodies on how to meet this duty, and its relation to delivering UK and national biodiversity strategies, the duty will remain untested and largely unused.

25. Local delivery is essential for effective biodiversity conservation and LBAPs have a key role to play. However, the LBAP network suffers from a lack of standardisation, limited coordination, patchy coverage and poor resourcing. We must ensure that all parts of the UK are covered by an LBAP, which is sufficiently well resourced to deliver on the ground action for national biodiversity priorities.

4. a. *How well is biodiversity protection incorporated into the policy-making process?*

26. Focusing on agriculture provides examples of inadequate incorporation of biodiversity protection into policy-making. GSPC target 6 requires production lands to be managed consistent with the conservation of plant diversity.

27. The biodiversity benefits of set-aside have been well documented²⁸ therefore the recent loss of this agricultural feature in the UK, without mitigation measures in place, is a massive failing for biodiversity protection. In December 2007 Defra statistics estimated that there would be a 40% reduction in the area of arable land that will remain uncropped in 2008. This level of intensification experienced over one year is a direct result of the 0% set-aside rate teamed with very strong cereal prices. In addition to biodiversity loss, there will be impacts on soil erosion and damage to soil structure in intensive systems. These pose greater risks of flooding through run-off, and increased water contamination from nitrates and pesticides.

28. Agri-environment schemes are also failing to deliver the widest biodiversity benefits they should be capable of. Arable plants are the most threatened group of plants in the UK yet the uptake of the cultivated margin options that meet the needs of these has been very low—to date less than 5% of 25,000 ELS

²⁸ Defra Agricultural Changes and Environment Observatory Research Report June 2007. Institute for European Environment Policy Feb 2008 Report <http://statistics.defra.gov.uk/esg/ace/set-aside1.htm>

agreements have included suitable options for rare arable plants. In Wales, only 2% of all 2,925 Tir Gofal agreements include options that deliver all the needs of arable plants. Moreover, the total area of land on which they are applied is very small, just 3033 ha (2.2% of land under Tir Gofal).

29. The multi objective nature of Environmental Stewardship (ES) delivery, particularly the Higher Level Scheme (HLS), limits the available funds and scope to deliver for biodiversity as those farmers who can only “conserve biodiversity” cannot get into the scheme. This provides particularly limited scope for large arable farmers who may well be able to deliver for birds, insects and plants but can only gain points for delivery of one species-type. The highly selective nature of HLS delivery, focusing on delivery of the PSA targets for farmland birds and SSSIs into favourable conditions, means that this important biodiversity delivery mechanism is failing the needs of our most threatened groups of species.

30. Meeting the PSA target for farmland birds will not meet all the needs of other biodiversity, as there is no real evidence to suggest a direct link between the status of bird populations and of plants in associated habitats. Indeed often the artificial management techniques implemented under agri-environment schemes for farmland birds (eg bird seed mix, Skylark plots) specifically do not improve conditions for other species (eg plants and insects).

b. How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

31. A healthy natural environment—one that supports functioning ecosystems and the wealth of services provided—is by definition an environment that is rich in a diversity of wildlife. It should naturally follow, therefore, that a measure of the status of the species and habitats of even our rarest species should be considered vital in assessing the health of our environment. We must be very careful not to de-value certain aspects of our biodiversity because of the difficulties involved in outlining their economic-value, instead adopting the precautionary principle as we continue to understand ecosystem functionality. Indeed, the first guiding principle of the climate change report published last year by Defra²⁹ is to conserve existing biodiversity “the richness of future biodiversity, in a changing world, will depend upon the diversity we conserve today”.

32. We must support large, landscape-scale conservation initiatives that allow for the conservation of plants and fungi and their habitats in the face of climate change. Focusing specifically on linking up important places for plant and fungal diversity in the UK will optimise the population size and extent of critical species, conserving genetic diversity, improving habitat condition and restoring resilient and functioning ecosystems.

33. The ecosystem approach must retain biodiversity conservation as its core, as vegetation types have a critical role in providing ecosystem services. For example, the maintenance of sand dunes and salt marshes as soft coastal engineering can mitigate the erosive impacts of anticipated sea-level rise³⁰. The maintenance and management of natural and semi-natural, catchment and in-stream vegetation to regulate water-flow, are important activities. The nature of vegetation in the catchment can alter the flow regime in a river³¹.

34. The UK’s sustainable use credibility will come under further scrutiny with the Economics of Ecosystems and Biodiversity (TEEB) report which will document the impact of biodiversity loss on the global economy. As a major global consumer the UK needs to do much more to determine its impact on biodiversity and ecosystems outside of the UK. We must upgrade our environmental standards relating to the origin of plant products, including food and energy, on the UK market.

35. The current biofuel and land-use debate is an example highlighting the challenge of the ecosystem approach. Biofuel premiums and the availability to sow industrial crops on set-aside land in the past threatens arable biodiversity through greater intensification, something that is only set to rise with the strong energy crop market and grain price. We therefore welcome the Commission’s proposal to abolish the energy crop premium.

²⁹ JJ Hopkins, H M Allison, CA Walmsley, M Gaywood & G Thurgate (2007) Conserving biodiversity in a changing climate (Published by Defra on behalf of the UK Biodiversity Partnership)

³⁰ A small archipelago of artificial islands have been constructed just off the Norfolk coast to encourage dune accretion at the northern end of Winterton and Horsey Dunes SSSI; lying just to the north of Great Yarmouth, this dune system protects the Broadlands from incursion from the North Sea and is entirely natural in origin.

³¹ Dodds, W K. 2002. Freshwater Ecology: Concepts and Environmental Applications—certain vegetation types are better able to attenuate run-off close to the point of origin than others. Vegetation in rivers also has significant effects—this effect is important in upstream flow attenuation and therefore the reduction in flood risk in the lower reaches of rivers; removal of such vegetation can exacerbate flood risks downstream as “natural retention of sediment and slowing of floodwater does not occur, thus increasing the severity of floods”. The value and vulnerability of river vegetation is illustrated in IPAs such as the River Tweed and River Axe IPAs, both of which support vegetation of the *Ranunculus fluitantis* and *Callitriche-Batrachion*.

KEY THREATS

5. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?*

36. Plantlife identifies poor habitat management and continued habitat destruction as the single most important causes of ongoing biodiversity loss, and Government is simply not doing enough to address these. On protected sites and land under agri-environment schemes management can be addressed, although even these areas fail priority species in many cases—for example, delivery of appropriate management for Pink Waxcap fungi and arable species is very poor within Tir Gofal. Outside protected areas or agri-environment schemes, very little protection is available, even for UK BAP priority species. Since many of the new UK BAP plant species are widespread but in continuing decline, it is essential that new mechanisms are developed to afford a greater level of protection in the wider countryside. The situation is even worse for non-priority species (such as Cowslips and Betony), and it is species such as these which the public come into contact most regularly and therefore will use to gauge the health of the countryside. It is also essential that new and existing policies, such as the Government's residential and building policies in Southern England, take account of biodiversity loss.

37. Another major driver of change is diffuse eutrophication—the deposition of atmospheric nitrogen on sensitive habitats. Many studies, including *The New Atlas of the British and Irish Flora* and *Change in the British Flora*, identify the massive decline of nitrogen-sensitive species in our flora yet this issue simply doesn't receive the profile it needs. With 60–80 kg of nitrogen being deposited on each square meter of land each year from the air it is little surprise that habitats are becoming dominated by a small suite of aggressive, highly competitive species³².

38. Other key drivers of biodiversity loss include climate change and invasive non-native species (see answers to question 6).

6. *Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

39. The GB Invasive framework strategy represents a step in the right direction. However, in order to be effective it needs to be underpinned by an implementation plan that coordinates action at all scales by enables participation by all sectors, including government, business and other stakeholders and the public.

40. This plan must be adequately resourced: tackling the impact of non native invasive species is crucially important but the sheer scale of effort required, means that effective, targeted and coordinated action is required. GSPC target 10 calls for management plans to tackle the most problematic invasive species.

7. *What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?*

41. The impacts of climate change on the UK's biodiversity will only be reduced by ensuring viability and resilience within populations, in an integrated landscape which facilitates species movement through integral habitats with appropriate buffering. Isolation and fragmentation of semi-natural habitats across the UK continues to limit severely the ability of ecosystems to cope with increasing levels of environmental change. The development of ecological networks and a commitment to landscape-scale planning is critical for plants and will enable the linking of core areas for biodiversity and facilitating species migration and dispersal.

42. The conservation of Important Plant Areas in the UK embraces this approach through work to identify Zones of Opportunity in which habitat restoration and creation can best be targeted to achieve connectivity. However, for this to become a reality, biodiversity must become a key consideration in all policy making, particularly planning. For example, Strategic Environmental Assessments must include, in future, a requirement to ensure that biodiversity is not damaged by proposed operations, instead it is buffered and strengthened.

43. We still poorly understand how species, especially plants, will respond to climate changes. We must therefore make policy decisions with sufficient timelines to monitor processes and allow for flexible solutions to provide the most sustainable and effective systems.

³² Duckworth, J & Costley, J, *Junk Food For Plants—how nutrient pollution is threatening the UK's wild flora*, Plantlife International 2002

8. *Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

44. Fragmentation of habitats and the loss of functionality in ecosystems can often be related directly to a lack of integration in land-use planning. The planning sector has a crucial role to play in ensuring no further loss of biodiversity. We are therefore greatly concerned that the Planning Bill flies in the face of an integrated ecosystem approach by removing the process of robust examination of the impacts of major infrastructure projects.

RESOURCES

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

45. Biodiversity action is inadequately resourced across the UK, and the situation is worsening. The past year has seen significant cuts in Government funding to Statutory Nature Conservation Agencies such as Natural England and Scottish Natural Heritage at a time when environmental issues are supposedly core to Government policies.

46. In Scotland for example, there are no government grant schemes to support biodiversity action at a local scale, agency budgets have been cut or limited, hitting biodiversity delivery and agri environment scheme proposals, while still in the early stages, are likely to be highly over subscribed with biodiversity likely to lose out. Delivery of projects to protect national biodiversity will be more difficult to run, given the splintering of funding sources and the decline in national resourcing. There is an extremely urgent need to reassess our ambitions and need the meet international targets with the amount of resourcing that is being made available.

47. In England the HLS budget for 2007–08 is £30 million, with £16 million to be targeted at farms with SSSIs and £14 million for the remaining “multi objective” schemes. However, there are still many farmers that are having good agreements rejected who could delivery benefits for biodiversity and ecosystems. In addition, while Natural England has made a three year commitment to support its partnerships with key species conservation organisations such as Plantlife, the financial support it estimates will be available for this period will be unchanged from levels set in 2007. This leaves the voluntary sector bearing an escalating burden of the cost of conserving the UK’s biodiversity—a burden it is already bearing under increasing strain.

48. Approximately half of the new BAP priority species are plants or fungi. There are only five staff positions across SNH, NE and CCW dedicated to botanical interests. Increasingly NGOs and voluntary societies, such as those represented in the Plant Link UK network, are supporting and subsidising biodiversity action which the UK Government has international obligations to deliver. The non-governmental sector and public commitment to biodiversity is highlighted by the 8.4 million people who are members of NGOs within the Wildlife and Countryside Link network. In comparison, the Government’s resource commitment to halting biodiversity loss is woefully inadequate.

PROTECTED AREAS

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

49. A further constraint to the achievement of both BAP targets and GSPC targets 7 and 5—the latter relating to the protection of Important Plant Areas— is the appropriate management and condition of protected sites. In the first Common Standards Monitoring report published in 2006, the results showed that the number of flowering plant and fern features in favourable condition were below average for species features, a pattern repeated for lower plants and fungi. This is a significant concern, especially considering that only a fraction of rare and threatened flowering plants are mentioned on the relevant SSSI citations and very few citations include lichens, bryophytes, algae and fungi. So whilst, for example, the latest official figures on progress towards the PSA SSSI target in England claim that 80% are favourable-recovering, this figure masks the real picture and the target itself ignores the gaps in our SSSI network including several Important Plant Areas with lower plants features. Assessments in Wales are more realistic, with 68% of SSSIs in unfavourable condition³³.

³³ 47% of SSSIs in Wales were assessed in response to a Welsh Assembly Government question 2006

50. Clearly we need to ensure that protected areas are managed appropriately for all of the threatened species and habitats present upon them. This will require adequate resources to be made available and effective communication to conservation officers and land managers.

June 2008

Annex 1

GLOBAL STRATEGY FOR PLANT CONSERVATION, PUBLISHED BY THE SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY

<http://www.cbd.int/gspc/>

Global objectives and targets for 2010:

Understanding and documenting plant diversity:

- i. A widely accessible working list of known plant species, as a step towards a complete world flora;
- ii. A preliminary assessment of the conservation status of all known plant species, at national, regional and international levels;
- iii. Development of models with protocols for plant conservation and sustainable use, based on research and practical experience;

Conserving plant diversity:

- iv. (At least 10% of each of the world's ecological regions effectively conserved;
- v. Protection of 50% of the most important areas for plant diversity assured;
- vi. At least 30% of production lands managed consistent with the conservation of plant diversity;
- vii. 60% of the world's threatened species conserved in situ;
- viii. 60% of threatened plant species in accessible ex situ collections, preferably in the country of origin, and 10% of them included in recovery and restoration programmes;
- ix. 70% of the genetic diversity of crops and other major socio-economically valuable plant species conserved, and associated indigenous and local knowledge maintained;
- x. Management plans in place for at least 100 major alien species that threaten plants, plant communities and associated habitats and ecosystems;

Using plant diversity sustainably:

- xi. No species of wild flora endangered by international trade;
- xii. 30% of plant-based products derived from sources that are sustainably managed;
- xiii. The decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care, halted;

Promoting education and awareness about plant diversity:

- xiv. The importance of plant diversity and the need for its conservation incorporated into communication, educational and public-awareness programmes;

Building capacity for the conservation of plant diversity:

- xv. The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of this Strategy;
- xvi. Networks for plant conservation activities established or strengthened at national, regional and international levels.

Annex 2

FURTHER INFORMATION

Plant Diversity Challenge—the UK's response to the Global Strategy for Plant Conservation. Defra, DoE Northern Ireland, National Assembly of Wales and Scottish Executive (2004)

Plant Diversity Challenge: 3 years—16 targets—1 Challenge. Progress in the UK towards the Global Strategy for Plant Conservation. Plantlife International, JNCC, Royal Botanic Gardens, Kew (2007)

New Priorities for Arable Plant Conservation. Still, K & Byfield AJB Plantlife International (2007)

A Sustainable Future for Europe: The European Strategy for Plant Conservation 2008–14. Planta Europa (2008). Developed by the Planta Europa Network and the Council of Europe.

Memorandum submitted by the Woodland Trust

1. The Woodland Trust welcomes the opportunity to respond to this consultation. The Trust is the UK's leading woodland conservation charity. We have four main aims: no further loss of ancient woodland, restoring and improving woodland biodiversity, increasing new native woodland and increasing people's understanding and enjoyment of woodland. We own over 1,000 sites across the UK, covering around 20,000 hectares (50,000 acres) and we have 300,000 members and supporters.

SUMMARY

- The Government is unlikely to meet the 2010 biodiversity commitment as more species are now under threat than at the inauguration of the UK Biodiversity Action Plan (BAP).
- Biodiversity monitoring is only as effective as the information gathered, yet given the complexity of the ecological systems being analysed it is impossible to monitor all species. This makes it important to have surrogate measures for environmental health, of which the areas of both ancient semi-natural woodland including wood pasture and parkland and semi-natural open ground habitat are the most appropriate.
- Despite a recognition that conserving biodiversity is a Government priority the legislative and policy frameworks are still failing to protect important habitats including ancient woodland, wood pasture and parkland and ancient trees.
- Defra's embracing of an ecosystem approach is welcomed and it is imperative that the action plan is delivered upon by all Government departments whose actions can impact on biodiversity.
- There are multiple drivers for biodiversity loss in the UK, many of which are occurring outside designated sites, and thus conservation strategies must be applied more widely and beyond site boundaries.
- Climate change impacts on UK biodiversity are unpredictable and even modeling, such as MONARCH cannot help improve certainty. Landscape scale principles build upon protecting our existing wildlife resource and far greater investment should be channeled towards reconnecting landscapes that offer the greatest opportunities for putting wildlife on a sustainable ecological footing. Climate change brings an increased urgency to adopt the ecosystem approach.
- Planning policy is failing to protect the environment. There is a sense that economic development always takes precedence over environmental protection and that the UK Sustainable Development Strategy is not being applied.
- Unfortunately at a time when climate change makes it essential that adequate investment is allocated to sustaining the environment, the Defra settlement within the CSR actually represented a cut in real terms. This is already having a detrimental impact on Defra and its subsidiary agencies.
- The UK protected area networks are only a starting point for protecting biodiversity (a means to an end not an end in itself) and much greater effort is needed at a landscape-scale level, beyond designated site boundaries.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

2. Most headline indicators demonstrate that the Government is not on target to meet its 2010 commitment. However there is simply not enough evidence on declining species from which Government can draw a reliable picture. Much research is dedicated to "charismatic" species such as birds, yet there is little examination into invertebrates, lichens and fungi. The most serious consequence of this is that declines in other sub-groups may go unnoticed or be far worse than those in Government circles expect.

3. The previous PSA target was to move 90% of Sites of Special Scientific Interest (SSSIs) into favourable condition, and this has in most instances been achieved. However we do not believe it is the most suitable measurement of biodiversity because SSSI condition assessment takes no account of change in adjacent land-use or climate change. Also the PSA gave no indication of loss of non-designated wildlife sites such as ancient woodland, wood pasture and parkland.

4. Decline of biodiversity is often complex and linked to activity that is occurring outside of SSSIs and other areas of conservation importance. Landscape scale principles seek to build upon the tradition of site and species-based conservation by increasing focus on how habitats complement one another, creation of new habitats, re-connecting landscapes, making land-use more sympathetic to help species move more easily, and taking action across whole countries and regions. Importantly the Woodland Trust's landscape-scale principles³⁴ seek to demonstrate how society can benefit from a healthy natural environment. This is very much in line with Defra's ecosystem approach and services agenda, which we fully support. However this agenda has been introduced too late for 2010.

³⁴ See Annex One, Woodland Trust Landscape Scale Principles.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and assess progress?*

5. Bio-monitoring can only be as robust and accurate as the information that is gathered and fed into the reporting cycle. It is impossible to measure all species in decline and as stated above there are likely to be species in decline such as fungi and lower plants that we do not know about. The Government should make use of broader habitat-based surrogates such as the area of semi-natural woodland (ASNW) including wood pasture and parkland, semi-natural open ground habitat (SNOGH) and cumulative core area (CCA), as well as the species-based surrogates for birds, bats, butterflies and plants already used in the 2010 indicators. The area of woodland by BAP priority habitat type (2010 indicator 4) is not well understood and as such a surrogate of broadleaf woodland (from the National Inventory of Woodland and Trees) is more commonly used. Ancient woodland, our most biodiverse and irreplaceable woodland, can also be quickly assessed from the Ancient Woodland Inventories providing ongoing losses are recorded and the inventory maintained, as is the intention of PPS9, Biodiversity and Geological Conservation, but which is not yet happening. If these habitat-based surrogates were deployed it would give a better reflection on the increasing scale of fragmentation and habitat loss, which is something that must be reversed if we are to have any chance of halting biodiversity loss and if Government policy is to return biodiversity onto a sustainable footing.

6. It is widely recognised that we do not have an inventory of wood pasture and parkland outside of Northern Ireland, and neither is there any assessment of the sustainability of the ancient and veteran trees contained in such sites. There is therefore no baseline against which to judge biodiversity loss.

7. Activity and reporting through the Biodiversity Action Reporting System (BARS) is still problematic. There is double counting in the system, and a lack of iteration between the LBAP and UKBAP. Government must be careful that the limited funding available is not simply channelled into managing BAP data and indicators, rather than using monies to deliver action on the ground.

3. *Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?*

8. The policy and legislative frameworks are insufficiently robust to offer genuine protection to biodiversity, something that is best indicated by the amount of woodland under threat from development. Woodland is one of the most widespread semi-natural habitats in the UK and due to its complex structure it provides home to wide range of wildlife. Indeed ancient woodland contains more rare and threatened species than any other terrestrial habitat in the UK and is recognised in PPS 9 for its importance in supporting many priority species. However the Trust is aware of 598 cases³⁵ where ancient woodland, a scarce and irreplaceable source, is coming under threat from development. From this it can reasonably be concluded that policies that protect biodiversity are not being enforced. There are numerous other cases that demonstrate the policy and institutional frameworks are far too weak to prevent loss of habitats and species in the face of development.

9. The UK BAP remains an important starting point from which wider landscape-scale issues should now be addressed. The embedding of an ecosystems approach at Defra demonstrates real progress, but all departments and their agencies should recognise that they too are responsible for ensuring successful implementation.

10. It is incumbent on all devolved administrations to deliver on the BAP commitments and the wider ecosystem approach. Life itself depends on the natural environment (for drinking water, food, and clean air) and its protection should be at the heart of all Government agendas. Disconcertingly the targeting of the Northern Irish PSA has now altered the criteria for success to the following: “To reduce significantly the loss of biodiversity by 2010, and the halt of biodiversity by 2016”³⁶. This is clearly a change from the EU Ministerial Agreement to halt the loss of biodiversity by 2010. The aim may have been watered down out of pragmatism, yet it could be very damaging if for political expedience existing commitments were continually jettisoned. The implementation of the sub-national review in England, which will transfer planning powers to the economically driven Regional Development Agencies, is another example where environmental concerns are being sidelined in pursuit of development.

³⁵ Woodland Trust, *Woods Under Threat* Department, (May 2008).

³⁶ Office for First Minister and deputy First Minister, *Programme for Government 2008–11*, (2008), p. 52 at <http://www.pfgbudgetni.gov.uk/finalpfg.pdf>

4. *How well is biodiversity protection incorporated into the policy-making process? How well does the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of eco-system services are reflected in decision-making?*

11. The embracing of the eco-systems approach by Government is a definitive step forward and marked genuine progress. Unfortunately it is most unlikely that the Ecosystem Approach Action Plan will be implemented in time to achieve the 2010 target. However this should not detract from the importance of an Ecosystems Approach, something which makes it all the more vital to ensure that the policy prescriptions are shared by all Government departments.

12. The eco-systems agenda can demonstrate that biodiversity has an intrinsic value and is integral to delivering the “services” upon which society is dependent such as air purification, enhanced soil quality and flood alleviation, clean water, pollinated crops and timber.

13. As the amount of ancient woodland and other habitat threatened by development demonstrates, there is clearly inadequate emphasis given throughout the decision-making process to ecosystem services and to biodiversity protection. To achieve the vision in PSA 28, Secure a healthy natural environment for today and the future, a host of departments that previously did not have environmental protection as a core indicator, should now have their success or otherwise inextricably linked to the delivery of the ecosystem approach.

KEY THREATS

5. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them*

14. There are multiple drivers of biodiversity loss in the UK, most probably compounding the impact of each other. The most pressing and long term threats are often happening beyond site boundaries, such as climate change, the results of infrastructure development destroying or further fragmenting sites, both air and water borne pollution, and the negative edge effects from intensively managed land. The UK is still suffering from a legacy of habitat removal and fragmentation making it more challenging to restore biodiversity without ambitious actions at a landscape-scale beyond designated site boundaries.

15. The ecosystems approach could link together the diverse policy areas, not always under Defra’s remit, that drive biodiversity decline, and more importantly afford Government an opportunity to arrest it. However if the UK is to reach its commitment, far more determined action is required to both protect semi-natural habitats and where possible, buffer and extend them and ensure the wider countryside enables species to disperse, survive and adapt the rigours of climate change.

16. An ecosystem approach is necessary because the causes of biodiversity loss are so many and often happen outside site boundaries. Climate change also brings with it an increased urgency to embrace an holistic ecosystem approach to conservation strategies. These drivers demonstrate that Government should protect all important sites, increase the rate of habitat creation and restoration, make wider land-use more sympathetic so that wildlife is better able to disperse, guarantee that these actions are implemented nationally, regionally and locally and ensure that the ecosystem services we derive from the natural world are understood and reflected in the priorities of all Government Departments.

6. *Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

17. As it stands, the Invasive Non-native Species Framework will not prove effective. It is near impossible to prevent all invasions and there is no guaranteed methodology to predict those species that will become invasive. Climatic uncertainty makes gauging invasions even more challenging. If the Government are to be successful they need to identify a lead agency and specific funding for tackling invasions. Their strategy for identifying areas most at risk, rapidly assessing whether there is a need for action, and then if appropriate, targeting early action to eradicate the invasion will not be successful without this leadership and funding. Government cannot achieve this alone and any plausible strategy will need the engagement of all stakeholders including those in the business sector.

7. *What impact will climate change have on UK biodiversity? How might the impact of climate change be reduced? How can potential change mitigation and adaptation measures and biodiversity protection be effectively managed?*

18. The impacts of climate change are uncertain and it is vital that policy is not directed towards a preferred future in the hope that this construct becomes reality. The Modelling Natural Resources Responses to Climate Change (MONARCH) study, to which the Woodland Trust was a contributor, demonstrated that those species with northerly distributions will lose suitable climate space in the UK leading to fragmented habitats and decreased populations. This could be balanced by southern based species if they are able to migrate northward, and therefore policy must now be directed at a landscape-scale level, to allow species to move to more suitable habitats.

19. In March 2008 the Trust hosted a conference on adaptation to highlight some of the tensions between mitigation and adaptation strategies, in particular how the burgeoning biofuel industry may impact negatively upon wildlife. The Trust has also contributed towards Defra's guidance on conserving biodiversity in a changing climate. This argued for direct management to reduce impacts, promotion of the dispersal of species, increase available habitat, promotion of the conditions for natural ecosystems functioning, optimise sectoral responses to climate change, and continue to reduce pressures not linked to climate change.³⁷

20. Climate change makes full adoption of an ecosystems approach an urgent requirement.

8. *Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for huge housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

21. Both PPS 9 and the supplementary guidance to PPS 1, Delivering Sustainable Development, recognise the value of biodiversity and the habitats upon which it is dependent for survival. Ancient woodland is an especially important habitat for wildlife given its longevity and this was recognised in PPS 9 which stated that "Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland".³⁸ However, as the Woodland Trust's own casework demonstrates, these guarantees are not restricting development on environmentally important areas. PPS9 also recognised the importance of aged and veteran trees many of which are being lost before Local Planning Authorities become aware of the threats to them. Without a TPO to protect them they can be legally cut down before a planning application is submitted.

22. The Trust contests many cases where ancient woodland is under threat from development. One example was Bramley Frith where a National Grid power station cited in ancient woodland was expanded despite the irrevocable damage this will now cause to the wildlife inhabiting the site. In the final ruling of the Judicial Review little credence was given to PPS 9 and the importance this placed on protecting ancient woodland. If Government is to deliver the type of landscape-scale action implicit in the ecosystem approach and needed to return biodiversity onto a sustainable footing and allow society to derive the services upon which it is dependent, the protection for biodiversity already afforded in the rhetoric of the planning system must be applied more rigorously.

23. Biodiversity loss necessitates protecting and restoring habitats, and where possible expanding them to benefit both wildlife and people. It is therefore unfortunate that the Planning Bill passing through Parliament will relax controls on development thus risking further damage and loss. The recommendations of the sub-national review, which might be legislated for in the next Parliamentary session, will place planning controls in the hands of the Regional Development Agencies who have traditionally given little regard to environmental protection. This adds to the sense that economic development takes precedence over the social and environmental concerns.

24. Development on brownfield sites can negatively impact on biodiversity because these areas of scrub land have often developed into sanctuaries for wildlife. West Thurrock Marshes is an example where development was granted on brownfield land. In the final ruling little emphasis was given to the environmental impact of development, and the decision could now undermine the protections afforded to biodiversity in both PPS 9 and section 40 of the NERC Act. Previously agreed controls should be exercised to oppose development where it may impact negatively on the biodiversity, irrespective of whether the land is classified as "greenfield", "greenbelt", or "brownfield".

RESOURCES

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

25. Unfortunately there are not adequate resources being channelled into delivering the BAP, with a recent report indicating that there was a short fall of £300 million per annum, and that was for previous rather than new BAP priorities. If the Government is serious in its intentions to halt the loss of biodiversity there is a need for an eco-systems approach and cross-sectoral support.

26. The Trust is also concerned by the cut in the Defra settlement and the likely consequences this will have on the BAP. At a time when climate change exerts greater pressure on the Defra budget it is unnerving that little is actually committed to biodiversity protection, restoration, and enhancement.

³⁷ Defra, *Conserving biodiversity in a changing climate: guidance on building capacity to adapt*, (2007), at <http://www.ukbap.org.uk/Library/BRIG/CBCCGuidance.pdf>

³⁸ Department for Communities and Local Government, *PPS 9 Biodiversity and Geological Conservation*, (May 2006), p. 6, at <http://www.communities.gov.uk/publications/planningandbuilding/pps9>

PROTECTED AREAS

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and in the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

27. Sites of Special Scientific Interest (SSSIs) are vital building blocks in protecting biodiversity; however they were only designed to be representative samples and therefore do not pick up all valuable semi-natural habitats. Unfortunately the previous PSA target of “favourable condition” is wildly subjective and open to manipulation. Often condition assessments are grossly fallible and sites are not in favourable condition when analysed in the context of climate change and the impact of adjacent land-use.

28. It should not be assumed that biodiversity will be placed on a sustainable footing by directing vast sums of public money into SSSIs. This may be the starting point, but by isolating wildlife within SSSIs, the opportunity for landscape scale action is lost, and neither will it enable species to migrate in the face of irrevocable climatic change. Habitats have never been static, and yet the Government’s approach to SSSIs assume not only a stasis but also that the surrounding countryside is being managed sustainably. As demonstrated, land-use outside of designated zones has a great effect on wildlife and if this is not addressed may undermine opportunities for arresting biodiversity decline.

29. The approach to managing non-native species within SSSIs is unsustainable and demonstrates little pragmatism or understanding of the inter-relationship between species and habitat.

30. Article 10 of the EU Habitats Directive³⁹ asks that Member States endeavour to improve ecological coherence by managing sustainably those landscape features outside Natura 2000 sites which are important for species migration and dispersal. Managing SSSIs alone will not be sufficient to achieve the spirit of the Directive and there should be greater ambition in Government thinking. Disappointingly Article 10 has never been transposed into the UK’s Conservation (Natural Habitats, &c.) Regulations 1994. The Trust’s landscape-scale principles argue for action across countries and regions rather than focusing solely on isolated nature reserves. Action on this scale is necessary to enhance SSSIs and afford greater opportunity to reconnect fragmented landscapes and enhance biodiversity.

Annex One

THE WOODLAND TRUST’S LANDSCAPE-SCALE PRINCIPLES

The UK’s fragmented landscapes and likely rates of climate change threaten the survival of our natural world. These principles aim to create sympathetically managed landscapes that allow as many species as possible to adapt and move in response to change.

We should:

- Focus conservation of individual species on those believed to be fundamental to wildlife habitats. Individual species can also be used to promote wider protection, restoration or creation of wildlife habitats.
- Conserve all ancient woods and other wildlife habitats not just selected sites.
- Consider how wildlife habitats complement one another and accept that they have never been static. It makes no sense to try to prevent change, especially in the face of climate change.
- Restore all ancient woods and other wildlife habitats planted with non-native conifers.
- Create new wildlife habitats where nature is best-placed to survive, such as in areas where ancient woods and other wildlife habitats are concentrated.
- Protect existing ancient woods and other wildlife habitats from damaging uses of neighbouring land by creating new wildlife habitats alongside them.
- Help species move across landscapes more easily by using the wider countryside less intensively. This means more than just creating new wildlife habitats that physically link existing ones. Most rare or declining species are usually unable to move far, but more sympathetic wider landscapes may increase the one-off chances of individuals travelling a long way.
- Think big! Take action across whole countries or regions. Just creating large isolated nature reserves, while we continue to use land unsympathetically around them, will not help most species move in response to change.

³⁹ European Union, *EU Habitats Directive (92/43/EEC)*, (May 1992), at (<http://www.proact-campaigns.net/infoandlinks/id10.html>)

- Make sure society also benefits from action for nature. For example, improved air and water quality, flood alleviation, high quality food and timber, better health, soil conservation, employment opportunities and recreation. It will only be possible to undertake the scale of action required for nature if it also works for people.

June 2008

Memorandum submitted by The British Association for Shooting and Conservation

SUMMARY

1. Thank you for the opportunity to provide BASC's view for the Committee's consultation. We have not chosen to answer the 10 questions posed but to provide the overarching challenge facing all those who are hoping to meet the 2010 targets and those that follow it. We will also take the time to briefly explain the role of the shooting community plays in biodiversity conservation and how BASC is engaged.

2. BASC's view is that the biodiversity process needs fuller engagement from the primary land users and influencers to deliver a greater proportion of the 2010 targets. Agriculture is the principal land use in the UK and they are bound by economic and policy (CAP) drivers that outweigh the requirements needed to achieve our commitments to the Convention on Biological Diversity. There are number of success story's which have relied upon the farming community and this view in no way diminishes these contributions.

3. Looking to other land users and influencers of privately held land then shooting community is of principal importance to the UK's biodiversity. BASC would refer the committee to a study titled 'The economic and environmental impact of sporting shooting'⁴⁰ which looks at shooting in the UK during 2004, as evidence to show that sporting shooting is an highly significant and cost effective tool to increase and sustainably use biodiversity resources.

4. Hunting is a strong motivator for private landowners to manage land extensively. In so doing they provide the right habitat not only for the species they hunt but also a huge range of wildlife that has similar requirements. Therefore in deciding on the course of action to avoid loss of biodiversity, shooting sports and other forms of hunting should be actively promoted and built into policy.

5. For example the study referred to estimates that shooting is worth £1.6 billion to the UK economy. It has been shown that the sport influences the management of over two thirds of the UK and spends over £250 million on conservation every year. There are significant social benefits of shooting sports which means that its contribution to biodiversity conservation fits the model of sustainable development as it has the economic, social and environmental benefits and balances required.

6. To demonstrate and expand this relationship of shooting sports achieving biodiversity targets BASC has three demonstration projects to show the extent of shooting's influence of land and its ability to engage with the established Local Biodiversity Action Plan Process. The projects are based in Cheshire, North Wales and the Somerset Levels and there are two others in development. These projects are known as Green Shoots projects after BASC's biodiversity action plan called Green Shoots.

7. These local projects have been funded by private funders or statutory agencies and have opened up access to between 20% and 46% of the area of the LBAP for conservation work. This has resulted in significant increases in biodiversity. For example the Environment Agency is detecting recovering in the water vole population on the Somerset Levels as a result of the mink control network trained and managed by the BASC project officer. Cheshire has its first evidence of indigenous dormouse for over 100 years.

8. The projects work because the shooting community have three elements which are the prerequisite of a success for conservation project. These are a local contact is found who has a strong interest in conservation, access to privately held land and the will/ability to influence its management.

9. It is BASC's view that shifts in policy or funding which results in an increase in these attributes across those managing the UK's countryside will be the most significant driver to increase biodiversity conservation. The output would be increased conservation work on privately held land happening automatically and a larger resource of participants for governmental and non-governmental organisations to recruit into specific projects or initiatives that they are running.

2 June 2008

⁴⁰ The Economic and Environmental Impact of Sporting Shooting. A report prepared by PACEC on behalf of BASC, CA, and CLA and in association with GCT. Ref: H: 301-04BASC-REP-Main-Finalr1. <http://www.shootingfacts.co.uk/>

Memorandum submitted by the British Ecological Society and the Institute of Biology

SUMMARY

- A lack of base-line data across a range of taxonomic groups impedes the ability of ecologists to assess the Government's progress towards the 2010 biodiversity target. Greater resources are needed to allow a more comprehensive assessment to be undertaken. This must include investment in the training and development of systematists and taxonomists. Consideration should be given to developing ecosystem-function based, rather than species based, indicators.
- Biodiversity conservation is often seen as in conflict with the economic drivers of development. Defra and others must increase efforts to work with the ecological and economic community on developing a robust framework for assigning economic values to biodiversity and ecosystem services.
- Considerations of biodiversity and ecosystem services must be built in to planning decisions, with the development of a spatially explicit environmental asset inventory and model of ecosystem goods and services: maps of natural capital at a resolution sufficient for making decisions at scales, starting with national planning all the way down to individual dwellings.
- Ecological networks are based on understandings arising from key ecological theories but the evidence base for the beneficial effects of networks is limited. There is consensus on the need for better evidence in relation to the effectiveness of enhanced connectivity across the landscape for biodiversity conservation. Until further evidence is available, the precautionary principle must apply and interventions adopted to create networks.
- We suggest that an independent assessment of the effectiveness of all relevant Government Departments and agencies, including in the devolved administrations, of conserving biodiversity, be undertaken. The Royal Commission on Environmental Pollution might be an appropriate body to take on this piece of work.

COMMENTS AND RECOMMENDATIONS

Q1. Is the Government on course to meet its 2010 biodiversity target?

1. A major stumbling block in assessing progress to meet the 2010 biodiversity target is the lack of availability of adequate base-line data. Only a very few indicator groups are well sampled. For example, the national BAP mentions only three species of freshwater invertebrates (the Southern Damselfly, Freshwater Pearl Mussel and Native Crayfish). But the Tricoptera (Caddis Fly family) have at least seven species listed in the IUCN Red Data Book 1, indicating that they are extremely endangered.

2. Two groups for which data is available, birds and butterflies, show a series of losses. Species of farmland birds have seen severe population declines since 1970, with declines too in farmland bird species. Three quarters of the UK's butterfly species have declined in distribution over the last 25 years, with habitats specialists faring the worst. In 2006, habitat specialists were at 76% of their 1976 baseline. Wider countryside generalists have declined since 2003 to 80% of the 1976 baseline. The past 20-40 years has shown major declines also in bumblebees, arable plants and amphibians. The 2005 BAP recorded positive upward trends in 38 species, but declines in 68.⁴¹

Q2. How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?

3. As we allude to in our answer above, biodiversity monitoring and sampling is adequate for only a very small subsection of taxonomic groups, compromising ecologists' ability to report on progress towards the 2010 target. For some groups, the available data is fairly good; for example birds, butterflies, and vascular plants. In its recent report on the state of the natural environment, Natural England called for better surveillance of mammals, fish, invertebrates, lower plants and fungi, a vital step towards better understanding the species which we have, and may be losing.

4. As we noted in our joint response, together with the Biosciences Federation, to the House of Lords Select Committee's inquiry into 'the State of Systematics and Taxonomy Research', systematics and taxonomy is fundamental to assessing biodiversity. Specialist institutions are seeing a decline in systematists and the majority of the skills base in taxonomics is now held by amateurs in local recorders groups. Without sustained investment in the development of a robust skills-base in systematics and taxonomy, biodiversity monitoring and reporting will be severely compromised. The threats to many species may be underestimated if few people can identify and record them. Once more, we recommend that Defra recognise the strategic role of systematics and taxonomy in delivering key policy priorities.⁴²

⁴¹ State of the Natural Environment. Natural England, 2008

⁴² The Biosciences Federation, the Institute of Biology and the British Ecological Society, Systematics and Taxonomy: Response to the House of Lords Science and Technology Select Committee. February 2008.

5. Indicators should be linked to ecosystem services and ecosystem function. The designation of SSSIs should not be linked to the presence of a particular indicator species, given the shifts in range expected from species under pressure from climatic change.

Q3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

6. The BAP process has encouraged conservation thinking to move out from a focus on protected sites. It has led to recognition of the scale of the challenge. The recent BAP review was carried out more rigorously than the first assessment and has indicated the size of the problem we face. The review resulted in an approximate doubling of the number of priority species, the addition of new BAP habitats such as many marine habitats, open mosaic habitats on previously developed land, oligotrophic and dystrophic lakes and ponds, and the extension of some habitats (eg Chalk rivers now form a subset of the broader habitat Rivers)⁴³.

7. In the context of these recent results, it is concerning that limited and patchy resources are available for the BAP process, due to budget cuts at Defra and its agencies. This model of funding seems to have led to bursts of activity relating to individual habitats and species in the past, without provision available for long term, concerted, efforts.

8. A member of the BES reports that his local council has indicated little enthusiasm at the local level to engage with the BAP process; “The policy framework exists...[but] there has been no enthusiasm for allocating resources and a timetable for LBAP production since it was first raised in 2001”. Worryingly, another member informs us that the East Riding of Yorkshire Council is only this year (2008-09) developing a BAP. This is highly concerning and indicates that more needs to be done to encourage local delivery of BAP priorities.

9. There is some indication from our membership that the BAP process has become overly bureaucratic in some areas, with few links between regional and local initiatives, hampering efforts to translate the BAP into real results for biodiversity.

10. Indications too are that the BAP process is largely implemented by voluntary groups. Biological Records Centres could prove useful to the BAP process but these are largely understaffed and under-funded. As we indicated in our response to Q2, recorder groups face difficulties in recruiting members with the requisite taxonomic expertise needed to accurately identify less well-known species. Without sustained investment in training and development of taxonomists and systematists, the UK BAP process will remain incomplete.

11. In order to protect biodiversity, we need to go beyond conservation in situ, by adopting ecological restoration of degraded ecosystems to provide new spaces for native and migrating species. We draw the Committee’s attention to a recent briefing note by the Science and Policy Working Group of the Society for Ecological Restoration International, on “Opportunities for Integrating Ecological Restoration and Biological Conservation within the Ecosystem Approach.”⁴⁴

Q4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

12. Indications are that biodiversity is often overlooked by the policy-making process in favour of industrial or economic considerations, which take precedence. Feedback from ecologists involved in Environmental Impact Assessments (EIA), through work with contractors, indicates that “where it is taken seriously, good projects and satisfactory outcomes result but all too often the ecology is left to the end, rushed and superficial.”

13. One example of where biodiversity conservation has been taken into account, and has worked very successfully, comes from Wales, with the development of the A477 Sageston to Redberth Bypass. The bypass cuts straight through optimal foraging and dispersal grounds for the Greater Horseshoe Bat (*Rhinolophus ferrumequinum*), protected under UK and EU legislation. Following the EIA process, a team of ecologists and engineers worked together to develop a series of lures, to divert bats away from the road, coupled with poor quality habitat directly adjacent to the road, to prevent bats from foraging. The development of a network of tunnels concomitant with the bats dispersal routes has led to a highly effective solution, with no bat/ vehicle collision recorded since the scheme was implemented in 2003.⁴⁵

⁴³ UK Biodiversity Action Plan, Species and Habitat Review Report, 2007.

⁴⁴ Society for Ecological Restoration International (2008). Opportunities for Integrating Ecological Restoration and Biological Conservation within the Ecosystem Approach www.ser.org.

⁴⁵ Wildlife Crossing Structures: Planning, Placement, Monitoring. (2005) ICOET Proceedings, p369—379 http://www.icoet.net/ICOET_2005/proceedings/06IPCh9-369-379.pdf

14. Perspectives from ecologists working on woodlands indicate that the incorporation of biodiversity concerns into policies relating to these areas is good. Biodiversity is strongly reflected in the recent (2007) England Forestry Strategy⁴⁶ and in 'Keepers of Time', the Defra/ Forestry Commission policy on ancient woodlands (2005)⁴⁷. The protection of ancient woodlands and veteran trees was recently incorporated into planning guidance to local authorities as part of PPS9 (2005)⁴⁸.

15. Defra is to be commended for the development of the Ecosystem Approach Action Plan, which provides a useful framework for addressing the traditional neglect of the value of ecosystem services in policy-making. However, this will only be effective if relevant Government Departments, including HM Treasury, the Department of Health, Department of Transport, DCLG, all parts of Defra and the devolved administrations, incorporate the Approach into policy formulation, assessment and implementation. Defra and others must increase efforts to work with the ecological and economic community on developing a robust framework for assigning economic values to biodiversity and ecosystem services.

Q5. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?*

16. The key drivers of biodiversity loss in the UK are: land use change; climate change; nitrogen deposition; biotic exchange and increasing atmospheric CO₂ (Sala et al. 2002).⁴⁹

17. Agriculture involves 70% of the UK landscape (Hails 2002) so represents not only a threat to biodiversity but also an opportunity for its conservation, and of sustainable food production. Intensive farming has led to declines in a number of bird species over the past 20 years. Benton et al (2003) have suggested that reversing declines in farmland birds requires enhanced heterogeneity, from within fields to whole landscapes⁵⁰. In light of this, the decrease in the proportion of set-aside land this year (2007–08), from 500,000 to 255,000 Hectares, is of concern. This is projected to impact negatively on a range of species, including the stone curlew, white-tailed and other bumblebees (BAP species) and a variety of arable weeds⁵¹.

18. Similarly concerning is PPS3, which allows building on 'used' brownfield sites, has led to the subdivision of large gardens in many areas of the country, a concern both for residents, who now face high density dwellings in semi-rural areas, but also in terms of a loss of green spaces for wildlife in these regions⁵².

19. The Climate Change Bill and draft Marine Bill represent two examples of where the Government is taking steps to address the causes of biodiversity loss, which is to be commended. It is very encouraging that the draft Marine Bill contains provision to develop a network of marine protected areas to encompass 14–20% of the coastline. The draft Bill currently states that 'benign' activities will be allowed in most of these areas, with provision for more stringent protection where necessary⁵³. It is vital that decisions on which areas to conserve, the extent of the protection afforded, and the size of the network, are decided with regard to the best available scientific evidence, in order to maximise the benefits for the UK's coastal biodiversity.

20. The Ecosystem Approach Action Plan too offers an encouraging step in the right direction. However, the factors affecting biodiversity loss cut across all Government Departments, from Communities and Local Government to Transport and the Department of Trade and Industry. For example, the Highways Agency is responsible for almost 30,000 Hectares of land, between highway fences, the road way and the soft estate. Through the Highways Agency Biodiversity Action Plan, the Agency has committed to working with Natural England, the Environment Agency and others to deliver its own BAP.⁵⁴ Feedback from one of our members' in the Hull area suggests that a £36million local grade junction has been developed with little regard to its biodiversity value or the development of wild habitat, with only grass and shrub plantings. Action plans and strategies to address biodiversity loss must be cross-departmental, reflecting the Government's commitment to meeting the 2010 biodiversity target.

Q6. *Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

21. An excellent summary of the damage caused to native species, and to the UK economy, by non-native invasive species, along with a discussion of the Invasive Species Framework Strategy for Great Britain, can be found in the POSTnote on the subject, authored by the British Ecological Society's most recent POST Fellow⁵⁵.

⁴⁶ A Strategy for England's Trees, Woods and Forests (2007) Defra.

⁴⁷ Keepers of time: A statement of policy for England's Ancient and Native Woodland. Defra/ Forestry Commission. [http://www.forestry.gov.uk/pdf/anw-policy.pdf/\\$FILE/anw-policy.pdf](http://www.forestry.gov.uk/pdf/anw-policy.pdf/$FILE/anw-policy.pdf)

⁴⁸ Planning Policy Statement 9: Biodiversity and Geological Conservation (2005) Office of the Deputy Prime Minister.

⁴⁹ Sala, O.E et al (2000) Biodiversity—Global biodiversity scenarios for the year 2100. *Science* 287 (5459): 1770–1774

⁵⁰ Benton, T.G., Vickery, T.A., Wilson, J.D. (2003) Farmland biodiversity: Is habitat heterogeneity the key? *TREE* 18 (4): 182–188

⁵¹ A World Apart, *The Guardian*, 7 May 2008, <http://www.guardian.co.uk/environment/2008/may/07/wildlife.conservaion>

⁵² Planning Policy Statement 3: Housing, 2006. <http://www.communities.gov.uk/publications/planningandbuilding/pps3housing>

⁵³ Defra, Draft Marine Bill for England, April 2008 <http://www.official-documents.gov.uk/document/cm73/7351/7351.pdf>

⁵⁴ Highways Agency, Biodiversity Action Plan <http://www.highways.gov.uk/aboutus/1153.aspx>.

⁵⁵ POSTnote 303. Non- Native Invasive Species, April 2008.

22. Without a CCTV camera on every hedge it's very hard to enforce existing legislation against releasing non-native species into the wild, therefore there is a vital need for resources to support public education programmes to raise awareness of the problems posed for the UK through the release of non-native invasive species. Particular attention should be paid to those most serious pests and those for which a simple change in people's behaviour could be most effective. These could include the need to suitably dispose of aquaria plants such as *Elodea Canadensis*. It is very encouraging that provision for education, as a means for prevention, is included in the Invasive Non-Native Species Framework Strategy.

23. We are supportive of the Invasive Non-Native Species Framework Strategy and the measures proposed to cover prevention through to eradication and control seem sensible. It is somewhat concerning that the introduction to the Strategy states that "where appropriate, and subject to adequate resources and technical capability, contingency planning and improved capacity to act decisively will enable rapid responses. . ."⁵⁶ We could not find figures for the cost of the invasive species initiative: this vision can only be achieved however if adequately resourced.

24. An example from Swansea Borough Council provides an illustration of how local-level solutions, involving eradication programmes coupled with educational initiatives, can prove effective. Swansea employs a full-time Japanese Knotweed officer, reflecting the pernicious nature of this invasive organism, has conducted research into the spread of the weed and has run local education campaigns to highlight the public to the need to dispose of the weed properly, and how to identify it. Local legislation, through by-laws and planning applications, has also targeted resources into combating this invasive alien species.

25. Eradication programmes provide better value for money when populations of invasive non-native species are small. This can only be accomplished by an early warning and detection system. There are concerns amongst our membership that recent cuts to Defra budgets mean that groups involved in fulfilling this function now have limited resources to do so.

Q7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

26. All indications are that climate change will have a tremendous impact on UK biodiversity, although not all of it necessarily negatively. Climate change will lead to significant species turnover and the shifting of species' ranges. Our landscapes may appear unaltered for a considerable period, but the species within them will become increasingly stressed and/ or prone to disease. As these species die, new ones will replace them. New species assemblages will arise due to changes in climate; some stable, some transitory. In most cases, UK ecosystem types are migrating northwards with warming temperatures.

27. Mitigation of climate change impacts should include the sensitive management of existing sites, to ensure that non-climate change impacts on species are reduced, whilst ensuring that the quality and area of habitat available to species in the countryside is enhanced. Provision must be made for the northwards spread of many of the UK's species. In our answer to Q10 we explore the use of the precautionary approach in relation to the development of ecological networks to mitigate some of the effects of climate change on species.

28. Only with a truly holistic ecosystem-based approach to conservation and land-use can adaptation, mitigation and protection methods be reconciled. It is vital that all Government Departments adopt Defra's Ecosystem Approach Action Plan.

8. Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?

29. All indications from our members are that ecology is placed at the end of the list of priorities when compiling Environmental Impact Assessments, signaling a rushed, hurried 'shoe-horning' of biodiversity and ecosystem function considerations into the development process. Biodiversity does not have the same profile and influence as other drivers of local authority action, despite, in relation to some ecosystems, such as woodland, the presence of good guidance which could help (PPS9). Local authorities should be required to report periodically on the consequence of their planning decisions on biodiversity.

30. Ecosystems, ecosystem functions and the goods and services they provide, are, in the words of one member "virtually invisible to the planning regime". Planning tends to be predicated on the notion of an infinite capacity, with little heed paid to biophysical limits and constraints. The wider impacts of development beyond site boundaries must be taken into account in a way in which they are not currently.

31. Planning decisions, including those concerning transport infrastructure, do not take the true value of ecosystem services into account. Much more work is needed by Defra and others to assign economic values to these services before the approach can be implemented effectively.

⁵⁶ Invasive Non-Native Species Framework Strategy for Great Britain (2008), p5

32. As the Institute of Biology previously stated in its response to the Environmental Audit Committee's inquiry into eco-towns, we believe that the planning regime is currently unfit for the purpose of taking full account of environmental impacts of house-building on our environmental assets. The eco-town initiative, although a step in the right direction, falls well short of what could be achieved given a spatially explicit environmental asset inventory and model of ecosystem goods and services—ie maps of natural capital at a resolution sufficient for making decisions at scales, starting with national planning all the way down to individual dwellings. This remains the case. Both the British Ecological Society and Institute of Biology recommend once again that a spatially explicit map of the UK's environmental assets is developed, taking into account ecosystem services and their valuation. Although data is as yet of too low a resolution to allow development at the scale of individual dwellings, maps could be produced at the hydrological catchment level.

33. Again, to reiterate the Institute of Biology's response to the Committee's inquiry into eco-towns, green belt designations are a crude tool, and do not offer a full degree of protection from development. Having said this it is likely that intensively cropped Green Belt land provides fewer ecosystem services than properly developed sustainable urban development—but neither should be assessed in isolation. Green Belt development should be subject to the same rigorous biophysical test as suggested above for urban development. The urban/rural divide is invisible in terms of ecosystems and their functions and we once again recommend that Government recognises this in developing and implementing policy for land use in general.

Q9. Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?

34. Feedback from members suggests resources are inadequate. Cuts to the budgets of Defra and Natural England will undoubtedly have a negative effect on resources available for this agenda. As the Institute of Biology recorded in its response to the House of Lords Select Committee inquiry on the 'State of Systematics and Taxonomy Research', when approached for feedback on how the Department was progressing with implementing the actions stemming from the 2002, 'What on Earth' report from the House of Lords⁵⁷, Defra stated that "as a result of the tight financial situation at Defra . . . systematics [has fallen] below the threshold to command the necessary resources."² In light of our comments in response to Q4, this is highly concerning. Sufficient resources should be found to support those who can record and monitor biodiversity; trained professionals and amateur Biological Recorders groups.

35. The British Ecological Society is a member of the UK Overseas Territories Conservation Forum and would like to register its support for the Forum's response to this inquiry. The UK Overseas Territories and Crown Dependencies offer a wealth of biodiversity, with very many endemic species. Despite this, Government protection for the Territories seems woefully inadequate, leaving them open to unregulated tourism and development⁵⁸. The flora and fauna of the Territories are poorly documented; because of this biodiversity loss is largely unquantifiable. Many of the economic activities of the Territories depend on the integrity of their biologically diverse environment, for example fishing and tourism.

36. Along with the UK Overseas Territories Conservation Forum, we recommend that the Government increase its level of support and funding for conservation initiatives in the UK Territories and Crown Dependencies. Conserving biodiversity here offers a tremendous opportunity for the UK to meet the 2010 biodiversity target. The expansion of the Overseas Territories Environment Programme (OTEP), run by the FCO and DFID, to encompass larger environmental initiatives in the Territories, could offer a very welcome step forward. Combined with this, there must be a concerted effort to raise awareness of the biological importance of the UK Overseas Territories to the UK, and the Government's responsibility for this, amongst policy-makers. Government departments with responsibility for the Overseas Territories must work together to create a truly joined-up approach to conservation, in order for this to be at all effective.

Q10. Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?

37. Feedback from woodland experts indicates that the condition of woodland SSSIs is generally better, and better known, than in the past, but that there is still variable coverage of different habitats in different parts of the country (for example, a much higher proportion of ancient woodland is protected in Cambridgeshire than in Sussex).

38. There are varying reports as to the effectiveness of wildlife corridors and other linear habitats—most notably edge-effects within the corridor and species-specific behavioural responses to such habitats. In terms of the current understanding of the ecological community, it would be premature for the British Ecological Society to advocate specific adaptation strategies. The effectiveness of particular measures should be evaluated on a case-by-case basis in relation to species-level conservation whilst research continues. We

⁵⁷ House of Lords Science and Technology Select Committee (2002) What on Earth? The Threat to the Science Underpinning Conservation.

⁵⁸ Biodiversity on the far-flung outposts of Europe. Hindmarch, C. (2007) *Biologist* 54 (2): 80-85.

recommend that the Environmental Audit Committee refer to POSTnote 300 on Ecological Networks, which provides a comprehensive overview of current scientific uncertainties surrounding ecological networks and connectivity, including the use of the precautionary principle to govern measures which should be taken in the absence of definitive evidence.⁵⁹

39. In considering the enhancement of the connectivity of the UK landscape it is important to adopt a risk-based approach, examining how these interventions could assist the movement of invasive non-native species, and facilitate the spread of emerging wildlife diseases. How do the threats posed by non-native invasive species and disease compare to the benefits which might accrue to biodiversity in the UK with increased connectivity? It is at present too early to make a reasoned scientific case for or against either strategy and we can only recommend that further research is undertaken to resolve these uncertainties.

ADDITIONAL COMMENTS

40. Many of the agencies dealing with biodiversity are under substantial resource pressures. It might therefore be helpful if there were some independent assessment, in all the countries that make up the UK, of the effectiveness, of the overall efforts to protect biodiversity, including those aimed at valuing it fully for decision-making and trying to clarify its role in maintaining the ecosystems on which we all depend. Since the overall impacts of human activity on biodiversity might be very broadly considered as a form of pollution, perhaps the Royal Commission on Environmental Pollution might be asked to conduct such an assessment.

THE BRITISH ECOLOGICAL SOCIETY

The British Ecological Society (BES) is the learned society for ecology in the UK. Founded in 1913 and with over 4,000 members worldwide, the BES supports ecologists and promotes ecology; the study of living things and their relationship with the environment in which they live.

INSTITUTE OF BIOLOGY

The Institute of Biology (IOB) is an independent and charitable body charged by Royal Charter to further the study and application of the UK's biology and allied biosciences. It has 14,000 individual members and many specialist learned Affiliated Societies. It is a member of the Biosciences Federation, established in 2002 to represent the UK's biological expertise.

OPENNESS

The British Ecological Society and the Institute of Biology are pleased for this response to be made publicly available and both organisations will be placing a copy on their respective websites once we have the Committee's permission to do so. Please direct any queries relating to this response to:

1 June 2008

Memorandum submitted by the Association of Local Government Ecologists

SUMMARY

Despite the many positive measures to conserve biodiversity including a number of notable successes in recent years, ALGE feels that the UK Government is not on course to meet the 2010 target of halting biodiversity loss. The main reasons include:

- Biodiversity legislation and policy focuses predominantly on the protection of sites and species. A dual approach that seeks to protect important habitats but also creates greater opportunities to create new biodiverse landscapes outside protected areas is required.
- The failure to systematically value ecosystem services that biodiverse landscapes provide society.
- The lack of a national spatial strategy for adaptation of biodiversity to climate change.
- The lack of comprehensive, systematic and up-to-date comparative field data on habitats and species, particularly at the local and regional scale.

⁵⁹ POSTnote 300 (2008), Ecological Networks, <http://www.parliament.uk/documents/upload/postpn300.pdf>

- A lack of statutory biodiversity performance standards for public bodies including local authorities.
- Recent cutbacks to agencies championing nature conservation.
- The relatively limited ability of environmental stewardship schemes to deliver the scale of biodiversity improvements required.

POLICY AND PROGRESS

1. *Is the Government on course to meet its 2010 biodiversity target?*

1.1 Whilst ALGE supports the many positive attempts to conserve biodiversity through legislation, policy and the development of the UK Biodiversity Action Plan system it appears unlikely the Government will meet the 2010 biodiversity targets without a policy shift and increase in resources that gives greater weight to creating opportunities to enhancing biodiversity comparable to the effort placed on protecting the UK's existing important resources. Evidence from our members suggests that whilst opportunities exist to create more biodiverse landscapes outside the protect areas network, these are not being realised, partly due to the already limited resources being allocated to maintain and enhance statutorily protected sites.

1.2 Halting biodiversity loss will require significant changes to the management of the landscape outside designated areas. Whilst the ELS and HLS provide one means of helping achieve the scale of change required, an increase in resources appear to be needed if a halt in biodiversity is to be achieved. Giving greater recognition and valuing the natural eco-system services landscapes can provide to society through better protection and manage could potentially provide significant benefits. Greater integration and more cost-effective means of achieving sustainable land management in both the rural and urban environments could provide significant benefits and opportunities for biodiversity enhancement.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?*

2.1 Evidence from our members suggest a lack of inadequate systematic, comprehensive and comparative field data is being collected on habitat losses (and gains) on which to make an accurate judgement of the state of biodiversity in the UK, or to set targets at the local and regional level. Data collected on a national basis, has limited value locally whilst locally collected data collected on a comparative basis data has the potential to meet local, regional and national needs. Traditional habitat survey methods, often providing the baseline on which comparisons of change are evaluated, tend not to easily translate into current biodiversity priority habitat definitions. Currently there is no statutory requirement for any agency to collect biodiversity data, although significant amount are collected at a County or district level by Local Authorities, Wildlife Trusts and Local Record Records Centres). Many gaps in coverage exist and no formal systems for collating information nationwide. Although Natural England has been collating information on UK Biodiversity Priority Habitats in England, which is being used to set regional biodiversity targets, such data can be inaccurate and as it is not derived locally has limited use to inform local decision making.

2.2 For species there is a large variation in the data collected. Some groups such as birds are regularly monitored, largely due to volunteer effort, but for other groups such as invertebrates and some mammals there is no comprehensive recording system. Local Biodiversity partnerships and or Local Record Centres do not generally have the resources to undertake comprehensive surveys of biodiversity species.

2.3 The national biodiversity reporting system, BARRS, whilst laudable in its intended purposes, requires significant effort from local biodiversity partnerships, with very limited benefit locally. ALGE members experience suggests further development is required before it becomes widely adopted as an effective means of monitoring the delivery of biodiversity targets.

3. *Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?*

3.1 The UK Biodiversity Action Plan has been successfully in raising the profile of biodiversity and the natural environment in certain sectors. The system of designating important sites is also largely effective in preventing harm from development activities. Protection and enhancement of biodiversity through the planning and development control process, has also been made much more possible through the publication of PPS9. However the effectiveness of PPS9 is not being monitored or checked—in particular, whether or not its recommendations are being incorporated into Local Authorities' LDFs.

3.2 The NERC duty for public bodies is a step in the right direction, but the wording of the duty—"to have regard to biodiversity" rather than to further the aims/objectives of the UK BAP—is weak and the duty itself is undefined. Until recently, the lack of biodiversity performance indicator for local authorities

has influenced the degree to which local authorities have dealt with biodiversity. Increased effort will be required to ensure as many authorities as possible adopt the performance indicator as improved protection and management of local wildlife sites provide an important mechanism to help deliver the 2010 target.

3.3 The Entry Level and Higher Level Stewardship schemes for environmental improvement in the agricultural sector appear limited in their effectiveness at enhancing biodiversity in the wider countryside. In part this is an issue about the scale of funding and targeting. For example, the criteria for ELS are minimal and whilst a step in the right direction appear unlikely to make any significant difference to habitat extent in the wider farmed countryside.

3.4 HLS is largely targeted at SSSIs. In some parts of lowland Britain such as East Midlands and East of England there are few SSSIs, and the few that are present are small and widely dispersed. HLS is having no impact at all on wider biodiversity in these areas. To do so it will need to be targeted more widely at habitat networks and Local Wildlife Sites.

3.5 There is no national spatial policy or plan for biodiversity adaptation to climate change, although many regions are tackling this. For example, unlike the Netherlands, we have no defined national habitat network; UK focus is still on protected sites and species, rather than ecosystems and biodiversity in the wider landscape.

4. How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

4.1 Due to guidance such as PPS9, biodiversity protection is being incorporated into some local and regional planning documents, such as LDF core strategies. However, the linkages with other local plan documents, such as SPDs on employment land, are still being missed. The manner in which protected species legislation operates raises questions as to whether the cost benefits for biodiversity achieved are worthwhile given the scale of resources currently invested in dealing with protected species affected by the planning system. Evaluating whether greater benefits from the investment being spent on dealing with protected species is urgently required to ascertain whether the potential exists to deliver greater benefits for biodiversity in the long-term.

4.2 The Ecosystem Approach could potentially provide benefits for conserving biodiversity as it provides a means of valuing the natural process occurring in biodiverse landscapes that benefit society whilst recognising the need to conserve biodiversity for its own sake. However, its adoption into decision making may require placing different assumptions on how we determine conservation priorities in the UK. For example, in large urban locations, gardens can contribute significantly in supporting biodiversity but also have the potential to ameliorate the heat island effect as urban temperatures increase as a result of our changing climate and can help in absorbing surface water in extreme events. The Ecosystem Approach should complement the existing systems and not be seen as an alternative.

4.3 Progress is being made in ensuring the value of ecosystem services is reflected in decision making, for example in Green Infrastructure policies, but progress is slow and more research into understanding how the approach can be adopted into policy and practice within central and local government policy and decision making is urgently required.

KEY THREATS

5. What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?

5.1 Habitats loss from intensive agriculture and the use of pesticides and inorganic fertilisers remain a key driver in causing loss and the ability to recover past losses in rural areas.

5.2 Local Wildlife sites are key biodiversity recourse. However they have no legal protection, beyond the limited protection given in the planning system. Consequently biodiversity can be lost due to changes in management practices or equally lack of management over which there is no control. Invasion by non-native species such as Japanese knotweed and Himalayan balsam can result in major losses of biodiversity in certain important localities.

5.3 Although a relative strong policy framework is in place to address biodiversity loss though the development regime, the potential for development to deliver significant gains, regardless of whether a proposal impacts on biodiversity does not appear to be fully realised. Examples where adequate enhancement, mitigation and compensation for loss has been achieved appear to be still comparatively rare, and are usually associated with protected sites and species.

5.4 Small scale developments can have result in a cumulative loss of local biodiversity, through for example the loss of small habitats that on their own are not significant or through the general “tidying-up” of areas such as the removal areas of scrub or bramble.

5.5 Developments of all scales may also have indirect impacts on biodiversity that are not fully understood. The increase in lighting on sites, for example, affects the feeding of some bat species and other nocturnal feeders.

6. *Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?*

6.1 The invasion of non-native species is a major cause of concern. However the Framework will be ineffective unless adequate resources are made available and responsibility for tackling outbreaks or co-ordinating joint working is clarified. There is for example, no single agency is responsible for controlling the spread of invasive aquatic species such as Floating Pennywort.

6.2 The response time is too slow—for there to be any chance of eradication following discovery of an outbreak of an invasive species, action must be swift and intensive while the species is still relatively contained. Belated action is likely to be ineffective and possible a waste of resources. For some species the control effort required is now enormous. Japanese knotweed, for example is a major problem in many areas and will require a river catchment approach to eradicate it. In many areas there are insufficient resources to undertake such large scale schemes.

7. *What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?*

7.1 The impacts of climate change on biodiversity in the UK are unclear. The most effective means of adapting to this unknown change will be to increase the amount of land in the wider countryside managed for nature conservation through landscape-scale restoration of biodiversity; to identify, conserve, enhance and create habitat networks; and to address habitat fragmentation and lack of connectivity.

8. *Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?*

8.1 See 3.1 and 5.3 above.

8.2 There can be a conflict between some planning policies and the need to protect biodiversity. In planning eco-towns all aspects of sustainable development need to be considered including impacts on biodiversity, both directly and indirectly. If such sites are to provide exemplars of sustainable development they should be setting the standards for development and adopting emerging policy, for example understanding the contribution ecosystem services could provide to make them sustainable.

8.3 Greenbelt is a primarily a landscape designation and does not necessarily include areas of existing biodiversity value. Areas outside the greenbelt can have higher biodiversity value than areas within. In addition, biodiversity is not necessarily protected by current greenbelt policies—for example, the creation of recreational facilities such as golf-courses and sports pitches can damage habitats, but are permissible in green belts. Biodiversity policies and the impact of each potential development site on biodiversity sites, habitats, networks and species should be considered alongside greenbelt policies.

8.4 Many post-industrial brownfield sites have become valuable for biodiversity and development on such sites can harm wider biodiversity. Guidelines encouraging development on brownfield sites does risk biodiversity. As above, biodiversity policies and the impact of each potential development site on biodiversity sites, habitats, networks and species should be considered against other policies, and development on these sites should be carefully evaluated where particular important biodiversity resources occur. In some instances the loss of Greenfield sites to development maybe preferable for biodiversity than the loss of a Brownfield site.

8.5 The classification of gardens as “previously developed” encourages the loss of backland and gardens to development. This will cause loss of biodiversity, especially in urban areas where gardens are one of the most important habitat types. The emerging Greater Manchester Ecological Frameworks has, for example, identified gardens as a key biodiversity resource. In parts of the UK, several UK BAP species (House Sparrow, Starling, Song Thrush, Bullfinch, for example) are associated with large gardens, and may be threatened by loss to development.

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

9.1 Resources are inadequate. Local Biodiversity Partnerships are key mechanisms to facilitate biodiversity action on the ground but the vast majority struggle for funding. Although funding received from Natural England over the last three years has been a lifeline in England, it has not been sufficient to fully fund project delivery.

9.2 Local authorities have a key role to play in biodiversity conservation, but funding for local authorities to conserve biodiversity on their own land and within their administrative area often limited, and a number of local authorities still do not employ biodiversity specialists or have access to expertise. Biodiversity services within local authorities, being non-statutory, can be vulnerable to budget-cuts and savings.

9.3 Recent funding cuts and loss of staff and biodiversity expertise in Government agencies such as Natural England could have a serious impact on biodiversity conservation in England.

9.4 Resources are urgently needed to initiate landscape-scale projects to address climate change adaptation and biodiversity decline in the wider countryside, especially in the English lowlands. Currently many such projects are dependant on an ad hoc regime of grants and complicated partnership funding arrangements. Their long-term future management must be in doubt.

9.5 Collection of field data and co-ordination of records is seriously under funded, with many County-based local records centres struggling to survive and manage data. Recent funding from Natural England has again been a lifeline but it is limited in terms of amount and duration; is currently only available for two years. Field surveys are needed to provide information for monitoring and to inform decision-making, yet there is no core funding available to local authorities or other organisations for doing these.

9.6 The ELS and HLS environmental stewardship scheme for agricultural land are inadequately funded and appear to deliver the level of landscape-scale change in the wider countryside required.

9.7 Local Wildlife Site systems are crucial components of local biodiversity action plans and spatial strategies for conservation and climate change adaptation. Local Authorities have the main responsibility for these systems. Resources to set up, administer and monitor these systems are not part of LA core funding, and as a result many systems are under-resourced and struggling.

PROTECTED AREAS

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

10.1 The current series of statutorily protected sites and areas is inadequate now, especially in the lowland UK where SSSIs are generally small and widely dispersed in a sea of intensively-farmed land of low biodiversity value. This is partly due to the policy of SSSIs being a representative suite of habitats, rather than a means of protecting all land of special biodiversity value. To be effective, protected sites need to have wide buffer zones and connectivity to a wider habitat network.

10.2 In addition Natural England can be slow to designate new SSSI, even where existing value has been demonstrated. Botany Bay Wood in Greater Manchester, for example, was identified as a potential SSSI prior to 2002 but has yet to be notified.

10.3 The effect of climate change on SSSIs provides a significant challenge. Some SSSIs on habitats at the limit of their range will be especially vulnerable and may not be sustainable.

10.4 Potentially, the series of non-statutory protected sites (Local Wildlife Sites) goes some way towards addressing the issue of biodiversity protection in the wider countryside, and in buffering and connecting SSSIs. Local Wildlife Sites can be an effective method of protecting sites in development areas within the planning process. However, for them to be an effective method of site protection in the wider countryside, these sites must be accounted in environmental stewardship schemes, especially HLS.

10.5 Work is desperately needed to address fragmentation of habitat, especially in lowland Britain. The expectation that ELS and HLS would help to deliver landscape change in the wider countryside has yet to be realised.

2 June 2008

Memorandum by submitted by the Joint Nature Conservation Committee

SUMMARY OF KEY POINTS

1. Substantial progress has been made over the past 20 years in halting or reversing declines in biodiversity across the UK, especially in the terrestrial and freshwater environments. Many factors have contributed to this success, including the establishment and management of protected areas, implementation of the UK Biodiversity Action Plan, and application of agri-environment measures.

2. In the marine environment, the status of biodiversity is less well understood but there is likely to be an ongoing decline in components of many marine ecosystems. A number of initiatives are now in place to gather better data on the status of marine habitats and species, to establish a network of protected areas, and to ensure that biodiversity conservation is supported by the wider marine policy framework.

3. The globally significant biodiversity of the UK's Overseas Territories is severely threatened. A substantial increase in resources is needed to enable the Territories to counter habitat transformation, non-native species and other drivers of biodiversity loss.

4. One of the main challenges facing Government over the next decade will be to address the indirect drivers of biodiversity loss identified by the Millennium Ecosystem Assessment and to effectively integrate biodiversity conservation into other policy sectors, such as energy, transport and trade. The Ecosystem Approach, and associated tools such as economic valuation of ecosystem services, has an important part to play here.

5. The Invasive Non-native Species Framework Strategy contains the key elements for tackling the negative impacts of non-native species upon biodiversity in Britain. However, implementation will be challenging, and additional resources will be required to deliver tangible benefits.

6. Climate change is predicted to become a major driver of biodiversity loss in the UK. Robust approaches to both mitigation and adaptation will be required, supported by adequate resources. There will often be "win-win" scenarios, whereby measures to protect biodiversity will also provide climate change benefits and other ecosystem services. However, some mitigation and adaptation activities may lead to biodiversity loss and it is important that full impact assessments are undertaken.

7. Global biodiversity may be adversely affected by UK activities such as trade, tourism and development aid. These issues merit increased attention to ensure that the UK makes a full contribution to achieving the global 2010 target.

8. Biodiversity conservation is a devolved responsibility in the UK but there remains an important UK co-ordination role, to which JNCC will make a major contribution.

HOUSE OF COMMONS ENVIRONMENTAL AUDIT COMMITTEE INQUIRY

HALTING UK BIODIVERSITY LOSS

The Joint Nature Conservation Committee (JNCC) is the statutory adviser to Government on UK and international nature conservation, on behalf of the Council for Nature Conservation and the Countryside, the Countryside Council for Wales, Natural England and Scottish Natural Heritage. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems.

1. *Is the Government on course to meet its 2010 biodiversity target?*

1.1 The UK has signed up to 2010 biodiversity targets at both global and EU levels. However, in common with other countries, the UK contribution to each target has not been specifically and quantifiably identified. In line with the framework agreed by the Convention on Biological Diversity, the UK has developed a suite of biodiversity indicators that collectively represent the most important facets of the two 2010 targets.

1.2 The most recent publication of these indicators (*Biodiversity Indicators in Your Pocket 2008*⁶⁰) suggests that the UK is generally making good progress towards the 2010 targets. However, the indicators do not define the point at which the targets can be regarded as having been met.

1.3 JNCC has collated and assessed information from a wide range of sources to provide a comprehensive summary of the current status and trends in UK biodiversity⁶¹.

1.4 Recent trends in *terrestrial and freshwater biodiversity* are generally encouraging:

- i. between 1960 and the mid-1980s about 30% of habitats and species suffered declines, largely attributable to habitat loss caused by agricultural intensification, increased land drainage, canalisation of water courses, eutrophication and other pressures that were all most pronounced in eastern and southern Britain;
- ii. these declines had largely levelled out or been reversed by the 1990s but not without notable exceptions, including many upland ecosystems and losses attributable to eutrophication. These improvements are attributed to a reduction in lowland habitat loss, measures to improve both water and air quality, and a range of conservation-related measures; and
- iii. impacts attributable to climate change have recently become apparent, and look likely to account for more than half of the changes we will see to UK biodiversity after 2010.

⁶⁰ www.jncc.gov.uk/biyp

⁶¹ www.jncc.gov.uk/pdf/comm07N03.pdf

1.5 Much less is known about the state of biodiversity in the *marine environment*. Available information suggests that:

- i. as a result of the general intensification of fishing since the 1970s there is likely to be an ongoing decline in components of many marine ecosystems, in particular commercially-exploited fish and fragile seabed communities;
- ii. populations of most cetaceans, seals and seabirds appear to be viable and generally stable; and
- iii. warming of the UK's seas induced by climate change is contributing to many of the marine changes seen since the mid-1980s.

1.6 The biodiversity of the UK's *Overseas Territories* (which is of global significance) continues to suffer significant declines:

- i. there have been 39 recorded extinctions in the UK Overseas Territories (including one since the 2010 target was adopted) and two species are extinct in the wild; and
- ii. in the 2004 IUCN Red List, 80 species categorised as critically endangered occur in the UK Overseas Territories along with 73 endangered species and 158 vulnerable species. Many of these species are endemic and so are found nowhere else in the world.

2. *How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?*

How effective is the biodiversity monitoring and reporting process?

2.1 The UK has obligations to report on biodiversity arising from a variety of international wildlife conventions and EU directives. These reporting arrangements are diverse, and the UK Government, with the support of JNCC, is seeking to harmonise them and make them more efficient. The UK also aims to ensure that reporting is focused on biodiversity outcomes rather than activities.

2.2 The UK has a very extensive biodiversity monitoring and reporting process in the terrestrial/freshwater environment involving a large number of public and voluntary bodies. JNCC is developing a surveillance and monitoring strategy for terrestrial biodiversity on behalf of the wider UK biodiversity community and aims to contribute this to a similar strategy being developed by the Environment Research Funders' Forum for the environment as a whole. The strategy has identified gaps in detecting biodiversity change, identifying the causes, and meeting the reporting needs of legislation and policy. These gaps could be met by improvements to habitat surveillance, and to aspects of some species surveillance, most significantly plants, invertebrates and fungi. The strategy aims to guide survey and monitoring effort to ensure that it is adequately balanced across requirements, different requirements can share solutions, and the identified gaps are, where possible, filled.

2.3 Monitoring in the marine environment is currently far from sufficient to report on biodiversity status and trends. The situation is not even across the marine environment: monitoring is generally better addressed (though with notable gaps) for seabirds, seals, (commercial) fish and plankton, whilst seabed habitats (particularly away from the coast) are very poorly addressed. As a contribution to the UK Marine Monitoring and Assessment Strategy, JNCC is leading the development of a strategy for monitoring biodiversity in the marine environment.

2.4 There is no comprehensive process for biodiversity monitoring and reporting across the Overseas Territories. However, some effective monitoring is in place. For example, in the south Atlantic Territories monitoring of breeding population trends is undertaken for most albatrosses.

Are the biodiversity indicators meaningful?

2.5 Biodiversity indicators are meaningful if interpreted and used in conjunction with other sources of information, including biodiversity research outputs, survey and monitoring data, and biological recording undertaken by volunteers. JNCC is involved in a number of projects to make this information more widely available, eg the National Biodiversity Network⁶². Understanding the causes of change in indicators is essential if good policy decisions are to be taken.

2.6 At present, the suite of UK biodiversity indicators is too limited in scope to provide a sufficient measure of progress across the UK biodiversity resource as a whole. To address this, Defra is undertaking further development work to improve the scope and value of the indicator series.

⁶² www.nbn.org.uk

Is there adequate data upon which to define targets and to assess progress?

2.7 Within the UK, targets for priority habitats and species have been set since first publication of the UK Biodiversity Action Plan in 1995. The targets have recently been revised to take account of new information, including updated status and trend data, and to determine the country contributions to each UK target. Progress towards the targets has been reported in 1999, 2002 and 2005 and will be reported again in 2008.

2.8 Good information is available to assess the conservation status of many priority habitats and species; in 2005, 40% of habitats and 60% of species were judged to have adequate monitoring data (or would have by 2008). However, in a significant number of cases (eg many marine habitats and species) available data are insufficient to set targets and report on progress with confidence.

3. Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

Are the policy and institutional frameworks effective at protecting biodiversity?

3.1 Within the UK there is a complex policy and institutional framework directly concerned with biodiversity conservation. This comprises components operating at various geographical scales: global, European, UK, national (ie countries within the UK) and local. These components are implemented through a range of practical conservation and related programmes, including protected areas, species protection measures and agri-environment schemes.

3.2 There have been some notable successes, as evidenced by the halt in the decline of many components of terrestrial and freshwater biodiversity since the mid-1980s (see 1.4 above). However, some major challenges remain, notably:

- i. integrating biodiversity conservation into other sectors, as a key component of sustainable development;
- ii. achieving a step change in marine nature conservation, eg through establishing a network of marine protected areas and greening the EU Common Fisheries Policy;
- iii. supporting the UK's Overseas Territories and Crown Dependencies in contributing effectively to global biodiversity targets; and
- iv. ensuring that the impacts of UK activities on global biodiversity (eg through trade, tourism and development aid) are identified and mitigated or removed.

Is biodiversity protection addressed effectively at local and regional levels?

3.3 We have no comments on this question.

How successful has the UK Biodiversity Action Plan been?

3.4 The UK Biodiversity Action Plan (BAP) has been a success in driving progress towards the targets set for priority species and habitats: 57% of species and 60% of habitats have shown an improvement in status. The BAP has also provided the broad partnership and co-ordinating function necessary to embed the principles of biodiversity conservation across a wide range of sectors and interest groups.

Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

3.5 The focus of Conserving biodiversity—the UK approach is, quite rightly, on devolved implementation of biodiversity conservation that is tailored to the differing circumstances of each part of the UK. However, there is an explicit acknowledgement that a co-ordinated UK approach may sometimes be beneficial, eg in developing strategies for surveillance/monitoring and research, undertaking reporting, and setting common standards. JNCC has a key role to play in this respect.

4. *How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?*

How well is biodiversity protection incorporated into the policy-making process?

4.1 The biodiversity strategies for England, Scotland and Northern Ireland and the environment strategy for Wales each provide a framework for integrating biodiversity conservation into other policy areas. Good progress has made in some cases, such as agriculture, but in other areas achieving this integration in practice continues to prove challenging, eg policies on transport and energy do not fully address biodiversity concerns or indeed wider sustainable development principles.

How well will the Ecosystem Approach Action Plan address this issue?

4.2 The Ecosystem Approach is a key tool for achieving sustainable development. We believe that the Ecosystem Approach Action Plan will provide a sound platform on which to develop a robust approach to sustainability within Defra and across Government. By focusing on ecosystem values and environmental limits the Action Plan adopts an approach which enables the goods and services provided by the environment to be clearly expressed to policy-makers. This should help all Government departments to ensure that positive and negative environmental impacts on the natural environment are fully taken into account in policy development.

4.3 The Action Plan is important internationally as it provides a strong signal to other countries that the UK is committed to the implementation of the Ecosystem Approach (as required under the Convention on Biological Diversity), and that it can be incorporated successfully into national and local planning. The Action Plan is unique globally and lessons learnt will provide extremely useful information to other governments and organisations internationally on implementation of the Ecosystem Approach and the incorporation of environmental values into policy and decision-making processes.

Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

4.4 Work on the valuation of ecosystem services is critical to the wider adoption of the Ecosystem Approach Action Plan. Although research on valuation has been undertaken, applying it to real policy decisions (as is currently being done with the Marine Bill) is novel, and the lessons learnt will be invaluable. We strongly support Defra's continued work in this area, in particular the dissemination of practical techniques for valuation across Government.

4.5 At present, our knowledge of how to value ecosystem services, the relationship between components of biodiversity and ecosystem services, and the impacts that ongoing changes to biodiversity might have on ecosystem services are all too poorly understood to allow policies to incorporate biodiversity requirements as much as they should. Work to address these gaps in knowledge is an urgent priority.

5. *What are the key drivers of biodiversity loss in the UK, and is the Government addressing them?*

5.1 The Millennium Ecosystem Assessment identified five direct drivers of global biodiversity loss: habitat change, climate change, invasive species, over-exploitation and pollution. Each of these is relevant to the UK, although the relative importance of each factor varies between ecosystems.

5.2 1.4 and 1.5 above summarise recent changes in UK biodiversity and their drivers, and more detail is available in the paper referenced in 1.3.

5.3 The condition of interest features on protected sites in the UK is monitored by the country nature conservation bodies following common standards agreed by JNCC. The results of the first six-year round of monitoring on terrestrial and freshwater sites found habitat change due to under-grazing (lowlands) and over-grazing (uplands) to be the biggest threat, followed by invasive species, water quality and management, and air pollution⁶³.

5.4 UK Biodiversity Action Plan reporting in 2005 identified habitat loss/degradation, infrastructure development, invasive species and climate change as the main current or emerging threats to priority habitats and species⁶⁴.

5.5 Fisheries, through over-exploitation, bottom-trawling and bycatch of non-target species, remain the most significant driver of biodiversity loss in the marine environment. Other factors include pollution, non-native species, construction and aggregate extraction, although the effects of these drivers are generally localised.

⁶³ www.jncc.gov.uk/page-3520

⁶⁴ www.ukbap.org.uk/library/Reporting2005/UKBAPReport05.pdf

5.6 In the Overseas Territories the main threats to biodiversity are habitat transformation (often as a result of development, much of which is associated with tourism) and alien invasive species (many of which out-compete or predate native species).

5.7 In general, the mechanisms necessary to address the direct drivers of biodiversity loss in the UK already exist. However, we re-emphasise that significant challenges remain (see 3.2), including securing adequate resources (see 9.1).

5.8 The Millennium Ecosystem Assessment also identified five indirect drivers of global biodiversity loss, which are the root causes of the direct drivers of loss: human population change, changes in economic activity, socio-political drivers, cultural factors and technological change, manifested in the UK by a desire to increase standards of living (with associated increases in the consumption of energy and natural resources) coupled with a steadily increasing population. Addressing these indirect drivers is hugely challenging, and can only be achieved by robust application of the principles of sustainable development across all sectors of the economy and society. The UK Government's sustainable development strategy, *Securing the future*, represents an important move in this direction, although implementation of the strategy remains incomplete.

6. Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

6.1 We believe that the GB Invasive Non-native Species Framework Strategy contains the key elements for tackling effectively the negative impacts of non-native species upon biodiversity in Britain (separate arrangements apply to Northern Ireland for dealing with non-native species on an all-Ireland basis).

6.2 It is difficult to pass judgement on the success of the strategy at present because of the relatively short phase of implementation. However, it is clear that successful implementation will require enhanced resourcing to enable Government agencies and others to respond effectively to newly-arrived problem non-native species and to manage the existing suite of damaging non-native species.

6.3 We recommend that the commercial sector and non-governmental organisations should be more fully incorporated within the co-ordination process (notably by widening the membership of the GB Programme Board responsible for non-native species), and that there is a clear process for taking rapid decisions when needed to deal with newly-arrived problem species. The delivery of improved eradication and control measures at a catchment and regional level will depend upon establishing effective partnerships.

6.4 Detecting newly-arrived problem non-native species requires better surveillance than is currently in place. The proposed surveillance scheme led by the Biological Records Centre, the British Trust for Ornithology and the Marine Biological Association should deliver this when it is properly established. Surveillance results will improve decision-taking and targeting of eradication and control measures.

6.5 An important role for the strategy is to ensure that information exchange and integration are properly co-ordinated at European and global levels, because contributing to a more strategic approach at these levels will assist effective implementation within GB.

6.6 Dealing with non-native species in the marine environment poses some particular issues (eg vector of introductions) for which a terrestrial or even freshwater approach may not be valid. Prevention of marine invasive non-native species is paramount, especially since eradication programmes are unlikely to be successful; any effort of co-ordination and co-operation at all levels (country to global) should be strongly promoted.

6.7 The Overseas Territories and Crown Dependencies have not been included in the GB Strategy, and no similar strategy has been developed for them. However, the prevention, control and eradication of invasive species is a high priority for many of the Overseas Territories.

6.8 Most Overseas Territories do not have adequate regulation or resources to prevent further invasions and to undertake eradication programmes. There have been some success stories, for example an FCO-funded feral cat eradication project on Ascension Island in the south Atlantic has led to the successful return of nesting seabirds to the main island. However, many problems remain and will require substantial funding to be addressed. For example, the Tristan Albatross and other seabirds are severely threatened by non-native mice. The eradication of mice is potentially feasible but will cost approximately £2 million.

7. What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

What impact will climate change have on UK biodiversity?

7.1 The long-term effects of climate change on biodiversity are potentially enormous. For example, at a global level the Inter-governmental Panel on Climate Change has estimated that if mean temperature increases about 2–3°C above pre-industrial levels, 20–30% of plant and animal species assessed are likely to be at increasingly high risk of extinction.

7.2 Within the UK, some changes attributable to climate change have already been observed and others are indicated by modelling studies. These include:

- i. changes in the timing of seasonal events such as flowering and hatching, potentially leading to problems such as lack of food for certain species;
- ii. changes to species ranges, abundance and the habitats they occupy due to shifts in climate conditions; and
- iii. indirect impacts resulting from changes to land use (eg new crop types, and shifts between arable and livestock farming).

How might the impacts of climate change be reduced?

7.3 Climate change mitigation, through a substantial reduction in greenhouse gas emissions, will deliver benefits for biodiversity, as well as society more widely. In this context, co-ordinated international action is essential, and we support the strong leadership shown by the UK Government in pressing for a robust post-Kyoto agreement.

7.4 We welcome the UK Climate Change Bill but believe that the target to reduce CO₂ emissions by 60% by 2050 is inadequate and that there is a compelling case for an even more ambitious mitigation target. We are therefore glad to see the proposal that the Committee on Climate Change will review the target and will also consider the implications of including other greenhouse gases, and emissions from international aviation and shipping.

7.5 Whatever efforts are made to reduce greenhouse gas emission, past emissions mean that several decades of climate change are inevitable. Adaptation to unavoidable climate change is therefore essential. Key to this will be the maintenance or restoration of interconnected, dynamic and resilient ecosystems and their associated species that are best able to adapt to a changing climate. Actively restoring and managing ecosystems so they maintain these qualities will reduce their vulnerability to climate change. It will also be important to reduce other drivers of biodiversity loss (see section 5) if climate impacts are to be minimised.

7.6 Adaptation needs to be mainstreamed into all sectoral policies through cross-governmental agreement and action. Action is required at all levels of government, business and society to embed climate change adaptation into policies. We welcome Government's intentions to develop a national framework for climate change adaptation.

How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

7.7 In many cases, climate change mitigation, adaptation and biodiversity conservation will be complementary and mutually reinforcing. For example, protection and restoration of peatlands and semi-natural forests as components of extensive semi-natural ecosystems will protect vulnerable habitats and species, support climate change mitigation through carbon sequestration, and enhance resilience to the impacts of climate change, as well as providing other ecosystem services. However, successful implementation of this approach will require appropriate financial structures to be put in place (eg paying farmers to manage carbon) and a better understanding of the ecosystems being managed.

7.8 There are circumstances where climate change and biodiversity objectives are in conflict. For example, there is good evidence that cultivation of certain biofuel feedstocks causes significant damage to biodiversity (eg palm oil in south-east Asia). This highlights the need for a full impact assessment to be undertaken for proposed mitigation and adaptation measures to ensure there are no hidden negative consequences for biodiversity and the environment more widely.

8. Does planning policy adequately protect biodiversity? Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity? Should there be a review of greenbelt policy, and what might the consequences be for biodiversity? Do guidelines encouraging development on brownfield sites risk damaging biodiversity?

8.1 JNCC has no comments on this question.

9. *Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?*

Are there adequate resources for biodiversity protection and enhancement?

9.1 It is clear that available resources are not currently sufficient to meet all the requirements of biodiversity conservation in the UK. Activities that would benefit from increased funding include:

- i. marine nature conservation, especially to undertake survey and monitoring, to establish and enforce marine protected areas, and to underpin a system of marine planning;
- ii. the prevention, control and eradication of non-native species; and
- iii. redirecting land use management to a system that rewards farmers for providing ecosystem services.

Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?

9.2 The Overseas Territory governments and non-governmental organisations working in the Territories fund a number of biodiversity conservation projects. In addition, the UK Government funds environmental projects in the Overseas Territories through a joint DFID/FCO fund (the Overseas Territories Environment Programme, OTEP), worth approximately £1 million per annum. Defra has provided support for specific projects through the Darwin Initiative and other mechanisms.

9.3 JNCC has increased its support for nature conservation in the Overseas Territories over the past two years, using core funding provided by Defra and project funding from OTEP. In 2008–09, the budget for Overseas Territories work was approximately £200k.

9.4 The initiatives noted above are very welcome, but the budgets involved are generally small and/or are only intended to support short-term projects.

9.5 In 2007, RSPB produced a report, *Costing biodiversity priorities in the UK Overseas Territories*⁶⁵, which estimated that £16.1 million per annum would be needed to address biodiversity conservation priorities in the Overseas Territories between 2007 and 2011, far in excess of the resources currently available. At the request of the Inter-Departmental Ministerial Group for Biodiversity, JNCC has recently undertaken an exercise, in consultation with government officials in the Territories, to identify and cost nature conservation priorities in the Territories.

9.6 The main conclusions from this exercise are:

- i. the conclusions of the RSPB study are broadly correct;
- ii. the highest priority actions are a) to establish baseline information, through survey and monitoring, to inform decision-taking, b) to enhance capacity, and c) to eradicate/control invasive species;
- iii. although the situation varies from Territory to Territory, there is a generic lack of resources (money and staff) to implement these actions;
- iv. funding mechanisms need to be able to address long-term resource and capacity needs such as additional staff, long-term monitoring programmes, and measuring the effectiveness of projects; and
- v. a mechanism is needed to provide funding for “big spend” “high biodiversity value” projects (eg eradication of invasive non-native species).

10. *Is the UK protected area network up to the job of maintaining biodiversity, now and into the future? Are arrangements to protect sites effective? Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?*

Is the UK protected area network up to the job of maintaining biodiversity, now and into the future?

10.1 Protected areas are an important mechanism for conserving biodiversity but have to be complemented by other measures, including wider environment initiatives and targeted action for threatened habitats and species.

10.2 The UK network of terrestrial and freshwater protected sites generally comprises the best areas for biodiversity. While there are some gaps in coverage, the suite of sites is substantially complete. The network of protected areas in the marine environment is much more limited, and Government is actively pursuing a programme to extend this network to meet international and European commitments.

⁶⁵ www.rspb.org.uk/Images/ukotfinancingcons_tcm9-158352.pdf

10.3 The network of protected areas in the UK has been broadly successful in meeting its aims. Habitats and species within protected areas appear to have declined much less than those in the wider environment. Current indications are that 66% of habitat features and 75% of species features in designated areas in the UK are in favourable or recovering condition⁶⁶.

10.4 However, the UK protected area network is not sustainable, especially in the face of climate change, without complementary wider countryside measures to support the coherence of the network. This will require initiatives to improve connectivity between sites (linear features and stepping stones, allowing the migration and dispersal of species), reduce habitat fragmentation, and ensure drivers of biodiversity loss do not operate at unsustainable levels.

Are arrangements to protect sites effective?

10.5 The European and national legislative framework and associated policies for terrestrial site management and protection are generally robust and effective. However, the relevant legislative and policy provisions to secure the appropriate protection of marine interests is less robust, primarily due to the implementation of the EU's Common Fisheries Policy.

Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?

10.6 See 10.4 above.

3 June 2008

Memorandum submitted by the Environment Agency

1.0 INTRODUCTION

Background

1.1 The Environment Agency welcomes the opportunity to contribute evidence to this Inquiry. We have an important role to play in helping Government deliver its international and national commitments to biodiversity, including the 2010 target of halting the decline in biodiversity loss.

Our role in biodiversity

1.2 We deliver biodiversity through: (i) controlling pollution to air, land and water; (ii) regulating water abstraction; (iii) maintaining and creating wetland habitats as a result of our flood risk management activities; and (iv) local partnership projects with fisheries and wildlife organisations⁶⁷. We have a lead role for 39 species and five habitats associated with water and wetlands under the UK Biodiversity Action Plan (UKBAP).

1.3 Our evidence concentrates on those questions where we have a particular mandate.

2.0 A SUMMARY OF OUR RESPONSE

2.1 Major advances have been made to protect biodiversity in the legislative and policy framework, but there is still a continuing decline in some habitats and species.

2.2 Recent improvements in the condition of Sites of Special Interest (SSSIs) in England are the result of co-ordinated action from several sectors, this needs to continue.

2.3 The protection and restoration of designated sites needs to be accompanied by parallel action to deal with environmental pressures brought about through increasing pressures in the wider countryside. This will also reduce the impact of climate change on the natural world.

2.4 The Biodiversity Action Plan (BAP) process has been successful in raising biodiversity issues across Government, getting the business sector engaged and focusing targeted partnership action towards some high profile species and habitats. It has been heavy on planning, but, in the absence of adequate funding and legislative backing, relatively light on action, with a few notable exceptions.

⁶⁶ www.jncc.gov.uk/page-3520

⁶⁷ *Creating a Better Place for Wildlife: how our work helps biodiversity*: (2006) Environment Agency

2.5 An overall biodiversity strategy beyond 2010, setting out clear goals and the wider benefits to society is needed. Effective legislation and policies, well-targeted incentives for land managers and innovative use of major funding sources to yield multiple benefits will all be needed to implement such a strategy successfully.

2.6 To improve effectiveness in the future a clearly focused, properly funded and targeted programme of action is needed, akin to the successful Public Service Agreements (PSA) remedies programme for SSSIs. This will ensure that sectors responsible for action are clearly involved in understanding why and how they can reallocate resources to help. Government should provide the lead in the same way as it has done for SSSIs.

3.0 OUR RESPONSE TO SPECIFIC QUESTIONS

GOVERNMENT'S PROGRESS TOWARDS THE 2010 BIODIVERSITY TARGET

Is the Government on target to meet its 2010 biodiversity target?

3.1 Only partly. Prospects are good for achieving the target for 95% of SSSI land in England to be in "favourable" or "unfavourable, recovering" condition by December 2010, although this may be difficult to achieve for rivers, lakes and wetlands, where the recovery processes take longer. We are playing a full part, for example contributing 24,637 hectares of SSSI remedies in 2007–08.

3.2 Despite this, the most recent report on the status of habitats and species of European importance found in the UK is less encouraging. Only 53% of habitats and 44% of species are considered to be in favourable or recovering condition throughout their range⁶⁸.

3.3 Overall improvement in air and water quality over the past two decades in particular has resulted in some notable examples of species recovery, including the recent return of salmon to the Mersey, and dolphins and sea-horses to the Thames estuary. However, habitat fragmentation, diffuse air and water pollution and the effect of non-native species continue to threaten a wide variety of vulnerable habitats and species such as chalk rivers, native white-clawed crayfish and freshwater pearl mussel.

How effective is the biodiversity monitoring and reporting process?

3.4 There are some excellent examples of monitoring and reporting for specific species. The otter population has been a very effective monitoring tool in tracking their recovery from pesticide pollution. In England, the presence of otters at sampling points increased from 5.8% in 1977–79 to 34% in 2000–02⁶⁹; in Wales there was an increase from 20% in 1977–88 to 71% in 2002⁷⁰. National monitoring of breeding and wintering birds and butterflies that use an "Atlas" approach also provide trend patterns that policy-makers and the public can easily understand.

Are the biodiversity indicators meaningful?

3.5 The farmland bird index is useful in highlighting the biodiversity declines of some species caused by the effects of agricultural intensification. The slow, partial recovery of farmland bird populations underlines a continuing need for environmental incentives for farmers to help improve biodiversity. With the potential loss of set-aside land this recovery may not continue.

3.6 Environmental monitoring (eg our water quality monitoring in rivers and estuaries) is an additional indicator but is not a direct substitute for biodiversity survey data as a measure of trends in the health of our environment. This applies particularly to those species which are very vulnerable to changes in habitat, such as salmon and eels for which we have good information based on catch returns and fish-counter technology⁷¹.

Is there adequate data upon which to define targets and assess progress?

3.7 The amount and reliability of biodiversity data is improving. Local Biological Records Centres and the National Biodiversity Network (NBN) could play a particularly important role in protecting the natural environment by providing information required for planning decision-making, but lack proper support.

3.8 Establishing a realistic baseline is important. Targets for BAP habitat creation (eg Saltmarsh and reedbed) are usually based on restoring/preventing the deterioration of all existing sites and/or restoring a proportion of previous extent, but the lack of detailed habitat inventories means that there is often uncertainty over the baseline. The time lag between taking action and the biological response is also a confounding factor in determining when a target has been achieved. This is particularly true for rivers, lakes and wetlands, and the organisms that are dependent upon them.

⁶⁸ 2nd UK report on implementation of the Habitats Directive (article 17 report), Joint Nature Conservation Committee (2007).

⁶⁹ Fourth Otter Survey of England, Environment Agency (2003).

⁷⁰ Otter Survey of Wales, Environment Agency (2004).

⁷¹ The annual assessment of salmon stocks and fisheries in England and Wales 2007, Environment Agency (2008).

3.9 The underlying principle of the WFD in setting ecological objectives for inland and coastal waters in response to environmental pressures represents a major change in the traditional approach to target-setting. Monitoring whether these ecological objectives are being achieved will be far more meaningful than before.

Are the policy and institutional frameworks effective at protecting biodiversity?

3.10 Many organisations contribute to the delivery of biodiversity protection. Recent legislative changes notably the Natural Environment and Rural Communities Act 2006 have helped to “raise the bar” by putting a specific biodiversity duty on Ministers and statutory organisations, including local government. However, such organisations often lack the resources, guidance, information and expertise to undertake these duties properly.

3.11 Private organisations also have a role to play. The national environment programme within the Periodic Review of Water Prices has been a powerful policy lever for securing investment by water companies. During 2000–10 almost £1 billion will have been spent investigating and tackling problems related to damage caused by water abstractions and pollution.

3.12 Over 1,700 kilometres of river and 150 wetlands of European and national importance have benefited from this investment and the work has been heavily influenced by our Review of Consents programme for the Habitats Directive and the SSSI remedy programme in England. We will be pushing for further improvement work as part of the next Review period, covering 2010–15.

3.13 The Marine Bill should help to address current shortcomings in legislation protecting marine biodiversity.

Is biodiversity addressed effectively at local and regional levels?

3.14 Implementation of Regional and Local BAP strategies is constrained by insufficient funding. The recent inclusion of biodiversity duties on local planning authorities has been a welcome move, but they are not effectively resourced to carry this out.

3.15 The link between Regional Spatial and BAP Strategies provides a considerable opportunity to improve action for biodiversity, particularly now that most Regions have produced nature maps that show not only the existing resource but also areas where there are opportunities for improvement.

3.16 Under the WFD, River Basin Liaison Panels that advise on the 11 river basin district plans in England and Wales provide a good opportunity for co-ordinating national measures and local action for improved ecology in river catchments and coastal waters. We have played our part in local initiatives to improve biodiversity. In the last five years we have taken part in 1,600 biodiversity projects. More than 1,700ha of habitat has been created and £112 million of partnership money spent.

How successful has the UK Biodiversity Action Plan been?

3.17 It has successfully raised the profile of biodiversity by identifying priorities and providing the basis for quasi-legal protection of a large number of hitherto unprotected species.

3.18 It has galvanised support and provided a recognisable business-like focus for those inside and more importantly outside the biodiversity profession. However, the effort invested in developing species and habitat action plans has not always been matched by action, mainly due to a lack of available resources.

3.19 Because the UKBAP was never a fully-funded implementation programme, it relies disproportionately on “voluntary” contributions. The £300 million funding gap identified by the RSPB⁷² means that better ways of using existing budgets to benefit biodiversity are needed.

Does “Conserving biodiversity—the UK approach” address the need to have a joined up approach to biodiversity protection with the devolved administrations?

3.20 It sets out a compelling case for sustaining biodiversity across the UK, particularly in the context of climate change. The marine environment is probably the best example for underlying principles to be applied across all the administrations.

3.21 Devolution and the development of separate country groups for England, Scotland, Wales and Northern Ireland has introduced a more complicated UKBAP process, but responsibility for delivery has been placed much closer to source. Similarly, there are timescale differences between England and Wales for achieving favourable or recovering condition of SSSIs (2010 and 2015).

⁷² RSPB press release: <http://www.rspb.org.uk/news/details.asp?id=tcm:9-183730>

How well is biodiversity protection incorporated into the policy-making process?

3.22 Within Defra and the wider Defra family (including Natural England, Environment Agency and Forestry Commission) biodiversity is now well incorporated into policy-making.

3.23 Linked to this, specific operational targets for biodiversity improvements and gain now appear in the corporate plans for relevant delivery agencies such as ourselves.

How well will the Ecosystem Approach Action Plan address this issue?

3.24 The Action Plan clearly demonstrates why maintaining or restoring functioning ecosystems is important in securing socio-economic and biodiversity benefits in the longer-term.

3.25 However getting the approach understood and adopted by non-specialists will mean using simple language and specific high-impact examples. Current terminology is too technical and abstract for most people to understand.

KEY THREATS

What are the key drivers of biodiversity loss in the UK and is the Government tackling them?

3.26 Habitat fragmentation and loss, diffuse air and water pollution, over-exploitation of resources (eg water abstraction, mineral extraction, over-fishing) and the impact of non-native species are all critical threats. Sometimes these threats interact and are amplified by the effects of climate change, for example excessive sedimentation caused by the loss of soils to rivers and lakes during intense storms, and resultant eutrophication. The loss of non-rotational set-aside is an added, recent threat. The UKBAP and the emerging River Basin Plans⁷³ flag threats relating to specific species and/or areas of the country.

3.27 As historical problems, such as poor water quality, have been tackled others (particularly urban and rural diffuse pollution, agricultural intensification, increasing development pressure) have a proportionately larger impact. The response needs to be a combination of new voluntary action facilitated by education and advice, legislation and powers, strategic planning and economic incentives.

Will the Invasive Non-native Species Framework Strategy prove effective?

3.28 The Framework Strategy provides much-needed clarity and a clear basis for co-ordinated action to tackle the most important priorities. The various working groups already established have helped to focus attention on the highest threats, encouraged swift and co-ordinated effort and improved public awareness.

Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

3.29 New Regulations and proposals for further restrictions (eg ban on sale of the most pernicious species; new fisheries legislation on the Aquatic Animal Health Directive and Alien Species Regulations) together with high profile campaigns (such as that run by the Cornwall Knotweed Forum) should help to reduce the risk of deliberate or accidental introductions.

3.30 A costed implementation plan setting out who is responsible for doing what in the GB strategy is needed. The single biggest constraint is adequate resourcing for action and research.

What impact will climate change have on UK biodiversity?

How might the impacts of climate change be reduced?

3.31 Generic impacts and changes that are already happening are well catalogued^{74,75}, although there is still uncertainty about the response of individual species.

3.32 Short-term impacts can be managed by (i) reducing existing pressures such as pollution, over-exploitation of natural resources, and unsustainable land-use (ii) habitat fragmentation can be addressed by creating and expanding ecological networks. Protected sites should be restored and maintained as relatively unimpacted core refuge areas in the landscape to allow plants and animals to maintain their distribution or move in response to climatic change.

⁷³ Significant Water Management Issues have been identified for each River Basin District.

⁷⁴ Ecos, 28, 1079 (2007) Climate chaos—helping nature cope.

⁷⁵ MONARCH, a synthesis for biodiversity conservation, UKCIP (2007)

How can the potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

3.33 A Strategic Environmental Assessment approach across inter-dependent policy sectors (eg energy, transport, housing, biodiversity) is essential to avoid problems such as those associated with bio-fuels.

3.34 The hierarchical principles of avoiding damage, minimising unavoidable harm, restoring damage caused, and mitigating/offsetting residual loss need to be applied to protect biodiversity.

Does planning policy adequately protect biodiversity?

3.35 A key planning objective in PPS9 is “to conserve, enhance and restore the diversity of England’s wildlife and geology by sustaining, and where possible improving, the quality and extent of natural habitat”. It is widely acknowledged by nature conservation organisations that planning policy is particularly effective in protecting internationally and nationally important habitats and species, but is less effective for non-statutory local wildlife sites. Such sites and species need stronger protection through planning policy.

Are effective measures in place to ensure that Government plans for housing growth (including eco-towns) enhance rather than damage biodiversity?

3.36 It is unclear whether biodiversity will be effectively safeguarded under the new plans as many are in very early stages of development. The Environment Agency along with Natural England is advising on growth points and eco-towns. In some cases new growth points, eco-towns or other new housing will be proposed for greenfield areas with little or no biodiversity interest, and this represents a significant opportunity to enhance biodiversity overall as part of the housing or new community design—for example “green grids” proposed in parts of the Thames Gateway.

RESOURCES

Are there adequate resources for biodiversity protection and enhancement?

3.37 There is insufficient money to help safeguard and enhance populations of European Protected Species, local wildlife sites, BAP priority habitats and species elsewhere. This gap needs to be addressed because local wildlife sites in particular will be increasingly important refuges in an adaptation strategy for climate change. Better and more targeted use of agriculture funding, particularly shifting funds from Pillar 1 to Pillar 2 for CAP⁷⁶ could and should be a key lever in closing the current funding gap.

PROTECTED AREAS

Is the UK protected area network up to the job of maintaining biodiversity, now and into the future?

3.38 For internationally and nationally important terrestrial habitats and species the current network is adequate although more action is still required to improve and maintain site condition. As our knowledge of climate change improves, designation criteria and the adequacy of the existing network may need to be reviewed. Designation of Marine Protected Areas will belatedly help to plug a large gap in the protected area network.

Are arrangements to protect sites effective?

3.39 The condition of SSSIs in England has improved dramatically in the past 5 years following the introduction of a coordinated and targeted remedial work programme. A similar programme is now being implemented in Wales.

3.40 Some outstanding legislative and policy blockages still need to be resolved, such as tackling Common Land; powers and resources needed to deal with diffuse pollution from agriculture and adequate resourcing of measures.

⁷⁶ Beyond the Pillars: Wildlife and Countryside Link’s policy perspective on the future of the CAP, March 2008

Is more work needed to reduce habitat fragmentation and to link up those semi-natural habitat areas that remain?

3.41 Yes. This is the single biggest challenge and one that will make or break the climate change adaptation strategy in relation to biodiversity in protected sites and beyond.

3.42 An overall strategy is needed, underpinned by good science, practical experience and economic incentives for those affected. As many organisations will be involved, clear leadership and adequate resources are essential to coordinate a programme of action that will transcend environmental, agricultural, development and climate change policy areas.

3.43 Strategic planning tools such as the Wetland Vision for England⁷⁷, and practical on-the-ground examples (eg the Great Fen project) can demonstrate how theory can be put into practice. The biggest challenge remains availability of funding. This will only be freed up if policy and decision-makers in other sectors are convinced about the benefits of building biodiversity into their plans and projects.

6 June 2008

Memorandum submitted by The Natural History Museum

1. The Natural History Museum (NHM) maintains and develops its collections and uses them to promote the discovery, understanding, responsible use and enjoyment of the natural world. Our science explores the diversity of the natural world and the processes that generate such diversity. NHM is one of the world's leading institutions for systematics and taxonomy: these are areas of science that are intrinsic to the scientific understanding, monitoring and conservation of biodiversity.

2. The expertise of 350 NHM scientists and its natural history collection of 70 million items are the basis for international integrated research on the natural world; provision of collections access to many scientists; development; provision of information resources; and education and public engagement. Its broad role as a museum is inseparable from its science: it enables the NHM to take innovative approaches to public engagement in science and the natural world. It combines skills and pursues collaboration to meet constantly changing needs in many countries.

3. NHM research is centred on taxonomy and related disciplines. It describes what organisms exist and how they interact; where they are; and how diversity changes and develops. This work integrates taxonomy with other areas of research. Our research framework⁷⁸ summarises the wider scientific questions to which taxonomy contributes in the Museum and through collaboration: these include biodiversity conservation and loss.

4. The Museum's work enables natural diversity to be described and understood. Research and monitoring for biodiversity, ecosystem services and climate change relies on taxonomy in investigating diversity, monitoring changes, and modelling vulnerability; policy-makers need information that is underpinned by taxonomy; capacity building and training involve taxonomic expertise; public initiatives and engagement routinely involve taxonomy.

5. The Museum has recently made a submission to the inquiry of the House of Lords Select Committee on Science and Technology on the state of systematics and taxonomy research: the subject of the House of Lords inquiry is directly relevant to some of the concerns of the present inquiry.

SUMMARY

- The NHM, with a very small number of other institutions, provides expertise, infrastructure and information that provide an authoritative taxonomic framework for description, naming and identification that is a fundamental resource for understanding biodiversity and without which conservation information could not be organised or success of conservation action evaluated.
- Collections and collections information, including those of the NHM, have proved valuable in some areas in quantifying the range and rate of loss of species with reference to historical patterns.
- New technologies for information management and for automated identification are being introduced that should make monitoring of biodiversity more rapid, to cover more species and enable the involvement of a wider public.
- NHM has provided support to a number of biodiversity action plans and initiatives in the form of information, research expertise and monitoring.

⁷⁷ Wetland Vision web-site: <http://www.wetlandvision.org.uk/>

⁷⁸ <http://www.nhm.ac.uk/research-curation/science-directorate/science-policies-strategy/assets/researchframework.pdf>

- The role of amateur scientists can expand considerably. Research and investment in new approaches to involvement and provision of resources are being pursued and applied in the NHM and elsewhere.
- The NHM would support greater co-ordination in this area and request clarification for the responsibility of delivery.

POLICY AND PROGRESS

How effective is the biodiversity monitoring and reporting process? Are the biodiversity indicators meaningful? Is there adequate data upon which to define targets and to assess progress?

6. Accurate description, naming and identification are essential to biodiversity science and as a basis for conservation action. The NHM is the UK's specialist institution for taxonomy of many groups of plants and animals: it provides collections, scientific expertise, information resources and tools, and training. National user-needs assessments for the Convention on Biological Diversity (CBD) Global Taxonomy Initiative (GTI) make identification a priority: the scale and diversity of international demand is significant. The NHM produces authoritative databased resources of scientific names—linked to common names—that are required by many users for policy, scientific and legal purposes.

7. In the UK the NHM has provided the species dictionary for the National Biodiversity Network (NBN)⁷⁹, the UK coordinating mechanism for biodiversity monitoring that provides a single focus for access to biodiversity records from a wide range of agencies and organisations for conservation and other users. The NHM also works internationally on standardisation of terminologies and data standards through the organisation Biodiversity Information Standards⁸⁰.

8. The NHM assessed UK taxonomic needs for biodiversity conservation⁸¹ in 2006 in its role as UK focal point for the Global Taxonomy Initiative and developed a database⁸² on UK expertise (primarily description and identification) in 2002: similar exercises on expertise have been conducted by agencies in other countries/Australia, for example. The taxonomic needs assessment was developed in consultation with representatives of DEFRA, the National Biodiversity Network, the Joint Nature Conservation Committee (JNCC), the Centre for Ecology and Hydrology (CEH) and the Royal Botanic Gardens in Kew and Edinburgh. Almost 100 questionnaire responses from UK stakeholders were used to inform the assessment.

9. The following types of information, listed in order of importance, were identified in the 2006 UK taxonomic needs assessment as being important for biodiversity conservation but not sufficiently accessible:

- Habitat requirements of animals/plants.
- Information on local species distributions.
- Information on regional species distributions.
- Geographic Information system (GIS) data.
- Information on name changes.
- Lists of invasive alien species.
- Specialised identification services (taxonomic).

10. The assessment went on to propose further action from both biodiversity conservation and taxonomic sectors to:

- facilitate the generation and delivery of the taxonomic information needed for biodiversity conservation in forms appropriate for users;
- develop ways to translate the interests of stakeholders, including conservationists, environmental managers, statutory agencies and commerce, into the research priorities of both taxonomic research institutions and funding bodies;
- identify those urgent taxonomic information needs that correspond with a genuine gap in UK taxonomic expertise, as opposed to a failure in information management or dissemination; and
- foster best practice in the dissemination of taxonomic information, and passing on of taxonomic skill to stakeholders eg through online information services, field guides, courses, qualifications.

NBN, UK Biodiversity Partnership, UK Biodiversity Research Advisory Group (BRAG), and a number of other initiatives and organisations have been acting to address these needs. The NBN species dictionary has been important in providing taxonomic information to biodiversity conservation and there is ongoing development of taxonomic information resources and training through collaboration: some of this is

⁷⁹ <http://nbn.nhm.ac.uk/nhm/>

⁸⁰ <http://www.tdwg.org/>

⁸¹ http://www.bionet-intl.org/opencms/export/sites/default/tnaPages/tna-resources/docs-ghana/UK_Taxonomic_Needs_Assessment_Public.pdf

⁸² <http://www.nhm.ac.uk/research-curation/biodiversity-museum/global-taxonomic-initiative/register-of-uk-taxonomic-expertise/index.html>

mentioned below. Communication on research priorities and information needs does take place, but there is concern on whether this is sufficient: this is an issue being addressed in part by the Lords inquiry mentioned above.

11. Biodiversity conservation and management require the ability to monitor and predict changes in diversity in biological communities. There are continuing challenges in making identification and naming resources available to conservationists in appropriate forms, particularly for rare or difficult organisms, or on a large scale. There is growing acknowledgement that traditional tools in the form of keys, guides and checklists are invaluable but that they can be supplemented by new technology. DNA barcoding is a relatively new approach being developed that allows biological samples to be assigned to species by non-experts. The NHM is active in research and development for particular groups such as UK plants and insect groups. While it does not replace the expert taxonomist, it should make that knowledge more easily available to a wider spectrum of users. Parallel advances in molecular systematics, biodiversity informatics and microfluidics raise the prospect of an integrated identification and information system, accessible even to non-experts via a hand-held device. DNA barcoding has the potential to bring accessible molecular diagnostics to bear on global biodiversity: it is already being used in lab-based identification and—mosquitoes in particular. We anticipate revolutions in DNA barcoding and automatic identification that will enable more rapid and responsive characterisation of diversity: these will need a continued engagement with descriptive taxonomy. The NHM among the leaders in European and International networks such as the Consortium for the Barcoding of Life (CBOL)^{83,84} to provide new methods and tools that will be of importance in monitoring biodiversity on larger scales. In conservation terms, this can be of importance in regulating wildlife trade, but should eventually provide the basis for rapid field identification of organisms. The potential for use in conservation is still under debate⁸⁵ but it seems likely that it will enable more rapid identification of monitoring samples, particularly for the more difficult groups and microbes, and where specialist taxonomic expertise is not readily available.

Are the policy and institutional frameworks effective at protecting biodiversity? Is biodiversity protection addressed effectively at local and regional levels? How successful has the UK Biodiversity Action Plan been? Does Conserving biodiversity—the UK approach address the need to have a joined-up approach to biodiversity protection with the devolved administrations?

12. The NHM acts as Lead Partner for a number of species within the UK Biodiversity Process—both at the national level (eg. *Trichomanes speciosum*—Killarney Fern⁸⁶; *Tortula freibergii*—Freiberg's Screw Moss⁸⁷; *Ditrichum plumbicola*—Lead Moss⁸⁸, and others) and locally (eg Black Poplar LBAP for Greater London). The Museum plays a role in facilitating progress, reporting (and often survey and research too). In addition, members of staff sit on the steering groups of other national SAP's. This role includes both expert advice and survey and then monitoring of particular species, sometimes funded under contract to the countryside agencies (eg. survey work for CCW on *Petalophyllum ralfsii*—Petalwort; Agency Biodiversity grant funded, eg. *Ditrichum plumbicola* in Wales; or from funds from particular landowners, eg. *Zygodon forsteri* surveys for the Corporation of London plus workshops for staff on identification and management). Some of this work has generated good publicity, for example the case of the no longer celibate *Zygodon gracilis* in the Yorkshire Dales National Park.

13. NHM has a more applied research role—our molecular laboratories have provided detailed information on the status of several critical species: as a consequence of contract work undertaken for SNH we could show that Perthshire Beard Moss (*Didymodon mamillosus*) was merely a growth form of a common species and thus not worthy of BAP listing. Likewise work performed in conjunction with staff at the RBG Edinburgh showed that *Athyrium flexile*—thought to be our only endemic fern species and thus of very high conservation priority—was merely a fascinating ecotype of the more widespread *A. distentifolium*.

14. NHM collections have proved valuable in beginning to quantify the range and rate of loss of our species, a feature necessary to support the anecdotal evidence. Data for rare species is not always good and historical collections can be important in defining former ranges. This has supported revised IUCN threat categories for all of the British Vascular Plants (The Red List). In turn this has been used as the starting point for the revision of the UK BAP list and NHM staff are on the JNCC-convened Species Status Assessment group and UK Biodiversity Research Working Group to deliver this to Government. We have played a similar role at the local level in the revision of species of conservation concern listings for Greater London through our role in the London Biodiversity Partnership.

15. The NHM has had UK Biodiversity co-ordinator posts funded by English Nature/Natural England which played a significant role in raising awareness of the BAP process both within the specialist societies (which were not fully-engaged previously) and in the wider public and new audiences. Major surveys of BAP

⁸³ <http://www.e-taxonomy.eu/>

⁸⁴ <http://www.barcoding.si.edu/>

⁸⁵ see, for example Hollingsworth, P (2007) DNA Barcoding: potential users. *Genomics, Society and Policy* 3(2) 44–47. <http://www.gspjournal.com/>

⁸⁶ <http://www.ukbap.org.uk/UKPlans.aspx?ID=615>

⁸⁷ <http://www.ukbap.org.uk/ukplans.aspx?ID=613>

⁸⁸ <http://www.ukbap.org.uk/UKPlans.aspx?ID=266>

species were facilitated, promoted and in some cases performed by NHM staff. Public engagement with the Ramblers Association for the Elm-Map initiative led to valuable data being gathered on host trees for BAP lichens and invertebrates.

16. NHM is very active in initiatives to develop the role of amateur scientists in taxonomy, biodiversity research and in monitoring. These amateur scientists may already be operating within specialist interest groups or there may be opportunities to involve new groups in studying, monitoring and taking responsibility for the natural world. An example of amateur involvement is the Anglers' Monitoring Initiative⁸⁹ of the Riverfly Partnership (of which the NHM is a partner). NHM, with resources from Natural England, has worked over many years with anglers to provide training and information to help them monitor river flies and to provide information that helps protect the water quality of watercourses and conserve their riverfly populations.

17. Amateurs as Experts⁹⁰ is a ESRC-funded programme that has examined the interactions between volunteer naturalists, biodiversity scientists and policy makers involved in the UK Biodiversity Action Plan process. The project looked at the "knowledge politics" in initiatives to enroll new players (from amongst 100,000 active UK amateur naturalists and other publics) into the formal UK biodiversity policy process. Until this project started, the UK biodiversity policy community had little experience of carrying out social experiments or of analysing and assessing their progress, benefits or problems. Using ethnographic methods, the study monitored the processes, clarifying social and knowledge dynamics and fostering interaction between social and natural scientists and policy actors. This collaboration between Lancaster University and NHM has yielded results that have been incorporated into new programmes for public involvement in biodiversity action, such as the new Open Air Laboratories Network (OPAL)⁹¹ supported by the Big Lottery Fund.

How well is biodiversity protection incorporated into the policy-making process? How well will the Ecosystem Approach Action Plan address this issue? Has there been enough progress in ensuring that the value of ecosystem services are reflected in decision-making?

18. The Millennium Ecosystem Assessment (MEA) said "A major obstacle to knowing (and therefore valuing), preserving, sustainably using and using equitably the benefits of the biodiversity of a region is the human and institutional capacity to research a country's biota."⁹² Similarly GTI: "The lack of taxonomists, of collections, of libraries, of field guides and other identification aids, the difficulty in accessing information, coupled with the overwhelming number of species, both described and undescribed, make up the "taxonomic impediment" to implementation of the Convention on Biological Diversity."⁹³

19. On a UK scale, the recent NERC Science Theme Report on Biodiversity⁹⁴ says "Systematics and taxonomy are essential underpinning for any work on biodiversity. There are a number of challenges and opportunities for systematic biology including e-science, DNA barcoding, and providing increased human capacity to reverse declining taxonomic expertise." NERC is currently consulting on implementation and NHM is active in discussion over how its expertise and resources can be organised to help secure research and conservation goals with respect to biodiversity. Other organisations set out objectives for research on biodiversity and ecology with implicit reliance on taxonomic research, tools and information systems⁹⁵: these ambitions to investigate biodiversity at different scales and with respect to ecosystem function require continuing effective engagement with the NHM and other institutions.

KEY THREATS

Will the Invasive Non-native Species Framework Strategy prove effective? Is there adequate regulation and resources to prevent further invasions and to undertake eradication programmes?

20. The NHM, with BioNet, has recently completed a global needs assessment⁹⁶ for invasive species for the Global Invasive Species Programme, with funding from the DEFRA-managed International Sustainable Development Fund. This is being launched at the current Conference of the Parties to the Convention on Biological Diversity. The main needs identified are:

- lists of names of invasives, including taxonomic names, synonyms and vernacular names, to be created, maintained and made available;
- pathway and distribution mapping and modelling, and threat assessment, to be facilitated by specimen- and observation-based data on invasives captured and made available through a global system;

⁸⁹ http://www.riverflies.org/index/riverfly_monit.html

⁹⁰ <http://www.lancs.ac.uk/fss/projects/ieppp/amateurs/index.htm>

⁹¹ <http://www.nhm.ac.uk/nature-online/british-natural-history/opal/index.html>

⁹² Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, DC. <http://www.millenniumassessment.org/en/index.aspx>

⁹³ Guide to the GTI 2007 CBD <http://www.cbd.int/doc/publications/cbd-ts-30.pdf>

⁹⁴ NERC Science Theme Report: Biodiversity November 2007

⁹⁵ UKBRAG (2007) Research needs for UK Biodiversity. DEFRA

⁹⁶ http://www.bionet-intl.org/opencms/opencms/tnaPages/project_tna_ias.html

- modelling tools to be developed and made available;
- sustainable identification services for invasives at appropriate geographical levels facilitated and supported;
- identification tools in appropriate format and language, including high numbers of images, created and their availability improved;
- reference collections established and maintained at appropriate institutions nationally or regionally;
- improvement of understanding of taxonomic needs associated with management of invasives by all parties; and
- access to taxonomic information to be considered at the planning stage of management and control programmes and measures to ensure this built into plans.

21. In addition to providing identification resources and expertise for invasive species monitoring in the UK, the NHM has been active in research and monitoring of invasive species. For example, the Chinese mitten crab is having a significant impact on our environment and over the past century has invaded numerous European waterways, damaging riverbanks and changing local habitats. The NHM conducts research on crab populations and provides information to the public on its website⁹⁷.

What impact will climate change have on UK biodiversity? How might the impacts of climate change be reduced? How can potential conflict between climate change mitigation and adaptation measures and biodiversity protection be effectively managed?

22. Responses to the global biodiversity crisis and to the challenge of climate change will need a transformation in the nature and volume of taxonomy that will require resources and effective development of international strategy. This must develop “industrial scale” acquisition and analysis of taxonomic data, development of skills and information use to meet the needs of those involved in responses. The NHM has collaborated with European partners to set out a vision for this future⁹⁸.

RESOURCES

Are there adequate resources for biodiversity protection and enhancement? Has the Government addressed the need to provide additional support for biodiversity protection in the UK Overseas Territories?

23. The NHM has received good support from the Department of Culture, Media and Sport in recent years—funds are allocated at the discretion of the Trustees and the scientific activities receive a constant proportion of the budget. There has been very substantial capital investment in collections facilities over the past 10 years.

24. Other resources from UK agencies and research funders, European Union sources and commercial enterprises are secured on a project basis, some mentioned in examples above: these funds enable a larger critical mass of expertise and activity to be maintained, a substantial proportion of which is relevant in various ways to biodiversity conservation.

25. The 2006 UK taxonomic needs assessment, conducted by the NHM and mentioned above⁹⁹, focused on needs for biodiversity conservation. It addressed the needs of Overseas Territories and Crown Dependencies in the same way as for the UK. The following four types of information for Overseas Territories were seen as being both “very important” and “not accessible”:

- habitat requirements of animals/plants;
- distribution maps;
- GIS data; and
- identification keys.

June 2008

⁹⁷ <http://www.nhm.ac.uk/nature-online/life/other-invertebrates/chinese-mitten-crabs/chinese-mitten-crabs.html>

⁹⁸ <http://www2.bgbm.org/EditDocumentRepository/Taxonomy21report.pdf>

⁹⁹ http://www.bionet-intl.org/opencms/export/sites/default/tnaPages/tna-resources/docs-ghana/UK_Taxonomic_Needs_Assessment_Public.pdf

Memorandum submitted by Country Land and Business Association

The CLA is the leading national organisation representing and supporting businesses in rural communities, and covering all aspects of land use and management. Our members own and run more than 250 different types of businesses in rural areas including; agriculture, forestry, fisheries, renewable energy, food, conservation, access, tourism, recreation and other rural businesses.

SUMMARY

- The agricultural industry regards its role in protecting and enhancing biodiversity very seriously. Not only do land managers participate in government funded schemes but they also invest a large amount of their own time and money into environmentally sensitive management of their land and this has helped to stabilise the loss of biodiversity in the UK. It is crucial that the government works closely with land managers to ensure this trend can not only be continued but be built upon.
- Agri-environment schemes have been running for 21 years within England and deliver a huge amount towards biodiversity, but their integrity is under threat. The CLA demands recognition for the environmental goods and services produced by agri-environment schemes and calls for a continued commitment from government in investing in these schemes. The CLA also strongly recommends that the government not only increases payment rates for the delivery of the many different environmental goods and services paid for through the schemes but also looks at ways to increase the funding available under the schemes.
- The proposed removal of set-aside from the Common Agricultural Policy (CAP) must be viewed alongside the wider changes that are occurring within the countryside. Namely the wide-scale participation of land managers in agri-environment schemes. The CLA stresses that continued government support for these schemes is vital if the biodiversity gains are to be realised. We strongly advise the government to consider all of the additional land now under environmentally sensitive management and to offer land managers more options within the current agri-environment schemes to build on the benefits of set-aside before turning to regulation and thus undermining the positive achievements made by land managers to date.
- There is a need for a joined up approach to the way biodiversity issues are addressed across the devolved administrations. Both in the way that environmental payments are made and also in the approach taken to biodiversity issues whereby the action of a policy could have consequential effects on the other countries, for example the re-introduction of native species.
- The “Ecosystem Approach” should ensure integrated approaches are used to tackle key issues and to recognise that people are an integral part of this approach. The CLA wants to see the government engaging with the public to facilitate their understanding and future support of this approach as public awareness is lacking and can cause conflicts in the way that public money is used. Secondly there is no agreed mechanism for putting a monetary value on environmental goods and services that land managers produce and the CLA would strongly support more work in this area.
- Whilst the Ecosystem Approach published by Defra in 2007 acknowledges that people are a core part of the strategy, it falls short of acknowledging that viable rural communities are essential for the delivery of environmental goods and services. The CLA would like to draw the committee’s attention to the current situation in the Uplands, where the loss of viable communities has resulted in undergrazing of valuable habitats and a subsequent loss of biodiversity. It is imperative that the government thinks of a “living and working countryside” when developing its policies.
- The key threats to biodiversity loss include climate change, the introduction of invasive non-native species (and the re-introduction of native species) and the change in direction of governments support to “biodiversity” payments. For example, the early changes to the ES scheme in England, and the change in policy direction whereby Natural England chooses not to build on the positive environmental gains from “classic agri-environment schemes” but instead focuses on new areas to restart this process, has built a scepticism of the future of such schemes in the agricultural industry. Similarly the lack of funding available for sensitive woodland management is a key issue.
- The CLA feel it is vital that the government implement mitigation and adaptation strategies to climate change that allow the land management industries to deliver all society demands in the form of food, energy and environmental goods and services.
- Although the UK now has a non-native strategy which seeks to address how invasive species will be controlled, more work is needed as to how this work will be funded. Care must be taken to ensure future legislation does not create an economic burden for land managers.
- The function of the planning system is not to protect biodiversity but to achieve the correct balance between environmental, social and economic considerations. Legislation is not always clear in what is expected when addressing biodiversity concerns or can be too onerous.

- The CLA welcomes the introduction of an Uplands Environmental Stewardship Scheme to reward land managers for the delivery of environmental goods and services in this fragile countryside. However we must stress that UELS is only an intermediate step to stop the loss of communities and hence biodiversity from these fragile areas. More needs to be done to create viable markets for products from the Uplands so that a viable, sustainable system can be achieved.
- Within the current network of protected sites there are examples where these are no longer worthy of protection. The CROW amendments to the Wildlife and Countryside Act provided for the introduction of regulations allowing sites to be delisted and Defra drafted proposals on this for consultation in 2005. The CLA calls for action on these proposals, which will ensure public money is directed in two fundamental ways namely at those sites actually delivering the core environmental goods and services, and on a “habitat scale” basis to enable biodiversity to spread and move and adapt to a changed environment.

POLICY AND PROGRESS

1. Defra have developed a set of 51 indicators to assess changes in the state of biodiversity in England. Only one indicator, relating to coastal and marine priority species habitats, shows a clear negative trend (The state of the countryside 2007¹⁰⁰).

2. The agricultural industry is responsible for managing 70% of the UK countryside. More than 50% of this is now managed under an Environmental Stewardship scheme whereby land managers are rewarded for managing the land in an environmentally sensitive manner. Similarly a large number of woodlands are in certified woodland management (UK Biodiversity Indicators¹⁰¹). Land managers also voluntarily participate in programmes such as the Voluntary Initiative (VI) whereby they commit to send their staff on chemical “spray” training courses, calibrate their machinery to reduce “spray drift” and may also agree not to use particular chemicals within particular catchments (based on information provided by the water companies).

3. All of these initiatives/schemes have helped stabilise and in some cases reverse biodiversity loss as can be seen by the indicators for the agricultural sector. For example the decline in farmland bird specialist species has now stabilised, there has been a significant increase in rivers meeting good biological quality and their associated species such as otter numbers are at an all time high. Similarly 83%¹⁰² of Sites of Special Scientific Interest (SSSIs) are meeting the UK’s Public Service Agreement target (PSA) of achieving 95% of SSSIs in favourable/recovering condition by 2010.

4. There is concern that the Commissions decision to set a zero set-aside rate and the subsequent recommendations to remove this completely from the Common Agricultural Policy (CAP) in the recent Health Check, has made some conservation bodies extremely nervous. However the CLA would urge the government to consider the additional gains that have been bought through Environmental Stewardship schemes across the UK. More land managers than ever before are able to participate in the schemes and build greater environmental measures within their land management. These schemes are still in their infancy and the true amount that they can deliver cannot be accurately gauged. The CLA stresses that continued government support for these schemes is vital if the biodiversity gains are to be realised. We strongly advise the government to consider all of the additional land now under environmentally sensitive management and to offer land managers more options to build on the benefits of set-aside before turning to regulation and thus undermining the positive achievements made by land managers to date.

5. Since its introduction, the UK Biodiversity Action Plan (UK BAP) has always been one of the main priorities for agri-environment schemes across England and Wales with public money directed at rewarding land managers for sensitive management of BAP priority habitats and for following specific management prescriptions to enhance the countryside for BAP species. Similarly the government developed Public Service Agreement (PSA) targets in 2002 with specific biodiversity targets. This provided a clear steer to its agencies over where to direct public funding.

6. The reform of the Common Agricultural Policy (CAP) in 2003 decoupled payments from agricultural production and instead rewarded land managers for basic environmental management detailed under the Single Payment Scheme’s (SPS) cross compliance regulations. At the same time England and Wales launched agri-environment schemes which were designed to be accessible to all land managers with one of the key objectives to protect biodiversity. Over 50% of England’s farmland is covered by the Environmental Stewardship (ES) scheme¹⁰³ thus indicating the success of the scheme and land manager’s commitment to halt biodiversity decline to date. The CLA calls for the government to keep these schemes “appealing”. The scheme is urgently in need of a payment review and any future changes to the schemes structure must be in consultation with the agricultural industry to ensure that they fit with farming systems and deliver the environmental outcomes demanded.

¹⁰⁰ The State of the Countryside 2007. Commission for Rural Communities.

¹⁰¹ UK Biodiversity Indicators—updated 2008. Joint Nature Conservation Committee

¹⁰² SSSI Condition summary. 9 April 2008. Natural England. Available from: <http://www.english-nature.org.uk/Special/sssi/reportAction.cfm?Report=sdr115&Category=N&Reference=0>

¹⁰³ State of the Natural Environment 2008. Natural England

Devolved Administrations

7. There is a need for a joined-up approach to biodiversity protection across the devolved administrations. In terms of agri-environment payments the devolved administrations apply different rules and incentives to the schemes. In England, land managers are expected to enter the whole of their holding into a scheme and they are financially rewarded for the environmental benefits that they produce. Environmental Stewardship aims to deliver a range of environmental goods and services including options to both address biodiversity in the form of habitat management but also to protect the wider environment which in turn helps create a more healthy environment in which biodiversity can thrive.

8. In Wales farmers are expected to maintain and protect 5% of their holding as a wildlife habitat but payment is made on a tapered scale. This system does not seek to incentivise the delivery of wider environmental goods and services outside of biodiversity and sends out a negative message regarding the value of land-managers contribution to managing for biodiversity.

9. Similarly the devolved administrations can implement policies which may have a knock-on effect on their neighbours. For example, Scotland has decided to support the re-introduction of the European Beaver whilst Wales and England have not yet reached a decision. The problem with this approach is that we are unsure as to what effect the beaver may have on biodiversity and rural business within the UK and if England or Wales were to decide against the re-introduction, there would be legal issues surrounding the protection or destruction of these species within the devolved administrations. A species welcomed in one country could be regarded as a pest in the others. The CLA would recommend that any re-introduction of extinct native species should be subject to a nationwide consultation rather than individual consultations within the devolved administrations and that any re-introduction strategy be jointly made across the UK.

Ecosystem Approach

10. The CBD has defined its Ecosystem Approach as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way, and which recognises that people with their cultural and varied social needs are an integral part of ecosystems”¹⁰⁴. Various initiatives within the agricultural industry are already following some of the principles of this approach. For example the Catchment Sensitive Farming Delivery Initiative (CSFDI) seeks to address agriculture's effect on water systems from a catchment scale and considers the interactions between various parts of the ecosystem. Similarly the Environmental Stewardship scheme in England seeks to influence the way in which land managers consider the wider environment both on their own holding and in the wider countryside by providing land management options that address the interactions between soil, water and biodiversity and by providing advice through the Higher Level Stewardship scheme (HLS) to manage land in contiguous blocks to maximise the delivery of ecosystem services from the land.

11. However the ecosystems services approach is not well known by the public and when public money is being used to reward farmers for the delivery of particular goods and services that are for the wider benefit of society but at present have no commercial market value, it is important that the government engages with the public to facilitate their understanding and future support. Similarly more work needs to be completed considering the value of environmental goods and services so that land managers are adequately rewarded for all that they deliver. The UK agricultural industry is highly regulated and in order for the government to engage land managers within this approach, the key must be to keep schemes and regulation as simple as possible.

KEY THREATS

12. A large number of biodiversity indicators have been developed from data available since 1970. At that time the agricultural industry was going through a revolution whereby the government incentivised production to meet the food needs of Europe. This meant extensive, mixed agricultural systems were lost and their associated flora and fauna was significantly affected. However the reform of the CAP in 2003 has ensured that policy now addresses protecting and enhancing our wider environment.

13. Outside of agricultural policy mechanisms the loss of UK biodiversity can also be attributable to the lack of understanding and control mechanisms of invasive non-native species, the changes in our environment due to climate change and the increased fragmentation of semi-natural habitats due to changes in land use, including those not associated with agriculture such as housing developments.

14. More recently the concern regarding global food security and the need for renewable sources of energy has become increasingly important. The Commissions decision to set a 0% rate of set-aside in 2007. This has caused the agricultural industry to react and some areas of set-aside land have been put back to production with some organisations concerned about the loss of the external environmental goods associated with this land. Changes to ES, including the loss of options two years after its implementation and a highly target approach to HLS, set alongside increases in arable products is making land managers

¹⁰⁴ <http://www.cbd.int/ecosystem/default.shtml>

carefully consider their future when their ES agreement ends. Similarly pastoral land managers are choosing to reduce livestock numbers and many semi-natural habitats now suffer loss in biodiversity due to under grazing and the subsequent scrub encroachment.

Climate Change

15. Climate change is a significant threat to biodiversity. The government commissioned a project known as MONARCH¹⁰⁵ to model the effects of climate change on a broad range of species and habitats. It is thought that flora and fauna in the northerly distributions will be squeezed into smaller refuges¹⁰⁶. As climate zones shift flora and fauna species will be forced to migrate and those in fragmented landscapes will be at greatest threat. However it is important to remember that biodiversity is not static and some species will not be compatible with the changed climate in the UK.

16. Similarly climate change will not only affect the types of crops and agricultural system in the UK in terms of what can be grown, it will also affect what society demands from the land in terms of food and energy production. We are already seeing a rise in market prices for some agricultural goods and the changes the market is therefore having on land-use (as detailed earlier in set-aside discussions). These complex interactions are difficult to model as are the opportunities and threats this might offer to biodiversity. The CLA, National Farmers Union (NFU) and Agricultural Industries Confederation (AIC) Climate Change Task Force is reviewing the climate change evidence and its impacts on farmers and growers. The joint-industry report (*Part of the Solution*¹⁰⁷) focussing on adaptation and mitigation was recently launched.

17. It is vital that the government implement mitigation and adaptation strategies to climate change that allow the land management industries to deliver all that society demands in the form of food, energy and environmental goods and services. At present a large amount of funding is directed at protecting and managing designated sites. However it is important for the government to recognise that connectivity between these sites through the wider countryside through the use of wildlife corridors is essential to allow biodiversity to move. Land managers have an enormous role to play in both mitigating and adapting to climate change and government must engage and reward them for the delivery of non-marketable environmental goods and services. It may wish to look at forming strategic partnerships with other industries such as the water companies, to find a way to fund the delivery of all the environmental goods and services requested from land managers.

Non-Native Framework Strategy for Great Britain

18. Related to climate change it is expected that many new non-native species will arrive on the UK shores. It is estimated that damage caused by invasive species worldwide amounts to almost five percent of the world economy with several billion pounds spent annually on control in Britain¹⁰⁸. The UK's new Non-Native Framework Strategy seeks to provide a risk assessment framework whereby non-native species arriving in the UK are assessed and if identified as a potential threat mitigation measures including eradication are implemented. It is vital that land managers are engaged within this process since they are responsible for managing 70% of the countryside.

19. Whilst the CLA is in broad support of a number of measures included within the strategy, we feel more focus needs to be given to the invasive species already present in the UK whose control are a significant cost to many land managers and would make the recommendation that the re-introduction of any native species that has long since been extinct, be subject to the same risk assessment as non-native species. The strategy makes no mention as to how its implementation will be funded. Care must be taken to ensure future legislation does not create an economic burden for land managers. We assume that DEFRA's response to the consultation on adding additional species to schedule 9 of the WLCA (species it illegal to release into the wild) will be issued soon.

Other threats to biodiversity

20. The CLA would also like to highlight the problems currently being seen in the sensitive uplands of the UK. The move to decoupled production through the CAP has seen many graziers take livestock from our upland terrain and many conservation bodies are now reporting "under-grazing" as a more serious threat than "overgrazing" in these areas. Similarly many recreational users are reporting an increase in scrub and bracken and are averse to continuing their activities in these areas. This highlights the absolute importance of active management of our most sensitive habitats whether through farming or shooting interests. It is vital that a living and working countryside be achieved whether for biodiversity, rural communities or wider environmental goods. Policy and legislation must not work in isolation to address the critical issues facing the countryside today.

¹⁰⁵ http://www.ukcip.org.uk/index.php?option=com_content&task=view&id=330&Itemid=9

¹⁰⁶ Burroughs, W. (ed). 2003. *Climate into the 21st Century*. World Meteorological Organization

¹⁰⁷ *Part of the Solution* (2007) Climate Change Task Force Report published by the NFU in conjunction with AIC and CLA

¹⁰⁸ *Invasive Non-Native Species Framework Strategy for Great Britain*. 2008. Defra

Planning policy and protection of biodiversity

21. The function of the planning system is not to protect biodiversity per se. Rather, as explained in Planning Policy Statement (PPS) 1 “Delivering Sustainable Development”, the aim is to achieve the correct balance between environmental, social and economic considerations—ie the three pillars of sustainable development. Having said that the first paragraph of PPS 9 notes the aim of its key principles is “to ensure that the potential impacts of planning decisions on biodiversity and geological conservations are fully considered”.

Housing growth and eco towns

22. The impact on biodiversity from eco towns is unclear. The CLA believe all proposed eco-towns must be the subject of a planning application, Strategic Environmental Assessment and Sustainability Appraisal only then will we know if they will enhance rather than damage biodiversity. If an eco-town proposal is not the subject of a planning application and full environmental assessments, then we will not be able to test in advance whether it will enhance biodiversity rather than damage it.

Green Belt

23. Green Belt policy was never conceived to be about the protection or enhancement of biodiversity so there is no need for a review in this respect. We note that PPS 9 makes no reference to green belt.

Brownfield development

24. We do not consider the guidelines encouraging development on Brownfield sites at risk of damaging biodiversity. Rather they achieve the correct balance between the need for development and the need to conserve biodiversity.

25. The guidance in PPS3 that encourages development on Brownfield sites states, in annex B, “there is no presumption that land that is previously-developed is necessarily suitable for housing development...” whilst para 41 of PPS3 reinforces this by stating that local planning authorities and regional planning boards “will need to consider sustainability issues as some sites will not necessarily be suitable for housing”.

26. The guidance in PPS9 states that where Brownfield sites have “significant biodiversity and geological interest of recognised local importance, the aim should be to retain and incorporate it into the site”.

European sites

27. Generally sites established under EU regulations achieve very high levels of biodiversity protection. Part IV of the Habitats Regulations makes the determination of planning applications subject to the requirements of the Habitats Directive.

28. The obligation to carry out an “appropriate assessment” of an application for development in a Natura 2000 site is onerous. Case law on what such an assessment involves is to the effect that the operation can only go ahead if there is no scientific doubt that it will not have an adverse effect on the integrity of the site—clearly a difficult test to satisfy.

29. We appreciate that, under Art 6 (4), the government can permit a development having an adverse effect on the site to go ahead if there are imperative reasons of overriding public interest (“IROPI”). However, the obligation if a member state decides that they do, it must take “compensatory measures”.

30. Detailed guidance on the application of Art 6 is provided in a number of DG Environment publications.

Sites of Special Scientific interest

31. Biodiversity is well protected within SSSIs. In our experience the requirement in paragraph 7 of PPS 9 that SSSIs “should be given a high degree of protection under the planning system” is strictly applied by every planning authority. This protection does not just apply to development within the site itself, but also to development that is likely to have an adverse impact on it.

Protection of species

32. The planning system also provides a significant degree of protection for individual species. As with protected sites, the requirement in paragraph 16 of PPS 9 that planning authorities should take measures to protect species of principal conservation importance is strictly complied with. In many cases, we suggest, the level of protection goes too far.

33. For example, if there is a suggestion that bats or dormice are present in, say, old farm buildings that the owner wishes to convert, the costs the owner will be obliged to incur in establishing the presence of the species and, if so, carrying out mitigation or accommodation works will make the development unviable.

RESOURCES

34. The CLA welcomes the move within England to an agri-environment scheme whereby land managers are able to voluntarily participate and be rewarded for environmentally sensitive management of their land. We are also in support of the government's initiative to encourage some farmers into Organic Farming through conversion payments in the Organic Entry Level Stewardship Scheme.

35. However we are concerned that some farmers who have committed often more than 10 years of their time as well as significant financial resources to meet the environmental land management requirements of the 'classic' agri-environment schemes may no longer be rewarded for the work that they have done. We hear that Natural England's highly targeted approach to Higher Level Stewardship (HLS) which has most recently had a bias to holdings with a SSSI interest, are struggling to spend their available budget on the scheme and are either throwing money at agreements within their new target areas or stopping those in a target area from being offered any more "capital works" grants. It seems a ridiculous situation that Natural England is prepared to lose the benefits of many years of public investment in some areas of land, where there will often be a high level of eco-service benefits and instead start again in new areas. Similarly if a land manager has been offered a HLS agreement, regardless of whether it is in or out of a target area, Natural England have agreed that this holding has something positive to offer. It is ridiculous that they are throwing money at some holdings which could make a more significant effect to environmental good somewhere else.

36. The CLA appreciates that Natural England needs to use efficiently and effectively the limited HLS resources at their disposal, however we are very concerned about some of the principles being used to achieve the current targeting map and also about the way this map is already being used by regions. We are extremely concerned that if this approach is wrongly used it will prevent "buy-in" to the scheme by land managers. We would urge the government to continue investing in the schemes but to also continue to invest in the environmental goods and services that they have already produced through public spending in the "classic schemes" so that the reverse in biodiversity loss within the countryside can be realised. One way to achieve this could be an enhanced ELS scheme (in addition to ELS and HLS) whereby farmers receive higher rewards for more onerous management and also have access to some capital grants. The CLA would support such an initiative.

37. Finally the CLA are pleased that the government has chosen to create a new Uplands Entry Level Stewardship Scheme (UELS) for the Severely Disadvantaged Areas (SDA) within England. This new scheme will reward farmers in these difficult areas for managing environmental features and will hopefully help to slow the loss of graziers from this fragile countryside. We advise the government that the scheme must be kept simple in order for high uptake and we are pleased with proposals to offer land managers advice. However we must stress that UELS is only an intermediate step to stop the loss of communities and hence biodiversity from these fragile areas. More needs to be done to create viable markets for products from the uplands so that a sustainable system can be achieved.

38. In addition to public provision, account should also be taken of the extent to which the private sector protects and enhances biodiversity, particularly on land that is managed for game. To take one example amongst many, as the Commission noted in its "Guidance document on hunting" 2004, "Some of the most important wildlife sites in Europe have survived the pressures of development and destruction due to the interests of game management. For example the United Kingdom has the largest areas of heather moorland anywhere in Europe largely due to its value for grouse hunting, which provided a strong basis from preventing the loss of this habitat from commercial afforestation and other threats".

39. We would refer the committee to the Game Conservancy Trust's 2005 publication "Nature's Gain" for more information on this point.

PROTECTED AREAS

UK protected network

40. The present network of protected sites is more than satisfactory in terms of its extent. However there are a number of small "fragmented" sites and on an, all be it small, number of occasions we have been informally been told by both Natural England and CCW staff of sites that should never have been designated.

41. The Countryside and Rights of Way Act 2000 (CROW) amendments to the Wildlife and Countryside Act provided for the introduction of regulations allowing sites to be delisted when they are no longer worthy of protection. We supported this on the basis that it would better allow money, time and other resources to be directed to features that really are worthy of protection. In March 2005 DEFRA consulted on the possible introduction of regulations. However there has been no further action on this. There should be.

42. The CLA would like to highlight that habitat scale is extremely important in protecting and allowing biodiversity to spread, particularly in a changing climate. We are extremely concerned that a large amount of time and resources is spent in protecting a large number of “island” biodiversity sites. Land managers have an important role to play in providing important “environmental” links between these sites to ensure the survival of biodiversity. Continued efforts need to be made to extend and protect the areas of semi-natural habitat rather than focussing on protecting isolated sites with limited opportunity to react to changes such as those caused through climate change. This approach will only work where sufficient funding is available and a greater degree of flexibility needs to be adopted when dealing with these sites. Government, conservation bodies and land managers must work together if the loss of biodiversity is to be reversed.

43. We are worried about the effectiveness of the arrangements for protecting sites. The way in which designations are drafted in practice often lack focus and precision. As such it is frequently difficult for land managers to readily appreciate what features of the site are protected and what are not.

44. The list of Operations Likely to Damage (OLDs) should provide a comprehensive list of what operations require consent. Unfortunately the lists are so loosely worded that the land manager is often unsure what requires consent and what does not.

45. There are particular problems with “catch all” OLDs that effectively require consent to be obtained for any operation. We suggest that if more time and effort were spent on the initial designation, the easier it is to ensure that the special features warranting protection actually are protected and resources properly targeted.

46. We also suggest there would be considerable benefit in the conservation bodies and the legal profession doing more to raise awareness amongst the purchasers of protected sites of what ownership involves in practice.

47. Of course anyone purchasing land should ensure they understand everything that is involved, but in our experience, so far as SSSIs go, they do not. For example, whilst the vast majority of new owners of moorland know to check whether planning permission is required to lay a private road, few know that doing so on a SSSI will generally require consent from the conservation body. As a result of situations like this, misunderstandings arise and what should be a partnership between the conservation body and the land manager becomes a confrontation.

48. On Natura 2000 sites the restrictions applied by Natural England on carrying out activities that do not constitute development are disproportionate. The restrictions in Art 6 (3) set out above concerning appropriate assessments do not just apply to development but to any “plan or project”. The guidance from DG environment in “Managing Natura 2000 sites” makes clear that the intention is to regulate activities that have a similar impact to development but which, not coming within the definition of development, do not require consent. It refers to mineral extractions and other activities that damage or destroy the semi natural character of the site.

49. However, in the last year, Natural England has decided that any activity requiring consent necessitates an appropriate assessment, even such innocuous activities as wildfowling. This imposes an unreasonable burden on the applicant and is an unnecessary drain on Natural England’s resources. From a conservation perspective it ignores activities that do not require consent but that can have a far more significant effect, such as the use of speed boats.

June 2008

Memorandum submitted by Northern Ireland Biodiversity Group

I am writing on behalf of the Northern Ireland Biodiversity Group which is a body appointed by the Northern Ireland Government (Minister for the Environment). Briefly, it is tasked with the role of monitoring the delivery of the Northern Ireland Biodiversity Strategy, compiling progress reports, and advising on issues and problems.

Please take this submission as evidence of our interest in your work, and as a guide to some of the key issues affecting biodiversity delivery in Northern Ireland.

Summary of key points:

- Role of Northern Ireland Biodiversity Group.
- Northern Ireland’s target of halting biodiversity loss is focused on 2016—different from GB.
- NIBG’s first report raised serious concerns about government delivery mechanisms, lack of planning and prioritization, low public awareness, and concluded that unless a major upgrading of work for biodiversity took place, there was little chance of meeting its target.

- Since 2005 some upgrading of biodiversity work, and planning for it has occurred, but key issues remain concerning resourcing, delivery by local authorities, monitoring, the effectiveness of agri-environment schemes, and marine biodiversity.
- We conclude that whilst welcome developments have taken place, we cannot at this stage be confident of meeting the 2016 target, let alone that of the UK/EU of 2010.

1) ROLE OF NORTHERN IRELAND BIODIVERSITY GROUP (NIBG)

The NIBG was established in 2004 and has regularly met since then, involving farming, fishing, education, voluntary bodies, business and industry, and local authorities. We have engaged with all departments in the Northern Ireland Government (particularly Department of the Environment, Department of Agriculture, and Environment and Heritage Service) as well as a range of other sectors. Our terms of reference are:

- Monitor and moderate the delivery of actions under the Biodiversity Strategy.
- Monitor and moderate the development and implementation of N Ireland Biodiversity Action Plans.
- Advise Government on promotion of awareness and involvement in biodiversity conservation within other sectors.
- Work with RoI Biodiversity Forum to ensure all relevant cross border/all Ireland mechanisms deliver conservation and restoration of biodiversity on an all island basis.
- Help to ensure that there is successful partnership leading to biodiversity results on a UK, All-Ireland, and EU level.
- Submit a report to the Executive every three years on progress with implementation of the Northern Ireland Biodiversity Strategy.

2) NORTHERN IRELAND BIODIVERSITY STRATEGY

The Northern Ireland Biodiversity Strategy was signed off by the then Minister of the Environment in 2002, which represented a considerable lag behind the timing of the UK Biodiversity Action Plan. We can supply a copy of this Strategy either in electronic or hard copy form if the Committee wishes. The target to halt biodiversity was also set out on a longer timescale than that of other parts of the UK, namely operating over a 15 year period from 2001–16 (some work had already commenced before the Strategy was agreed). This means that strictly speaking, and irrespective of other factors, the UK will not meet its 2010 target because of Northern Ireland's timescale in which work is not planned for completion until 2016.

3) NIBG 2005 REPORT ON DELIVERY OF THE NORTHERN IRELAND BIODIVERSITY STRATEGY

The 2005 report, NIBG's first, focused on delivery mechanisms, recognizing that most action plans were at too early a stage to show real progress. There were major concerns about the process of delivery. Key elements were:

3.1 Whilst all departments had signed up to delivery of the Strategy in the context of their functions, most departments had done little or nothing to implement their commitments. Exceptions were Department of Agriculture (DARD), some sections of Department of the Environment (DoE), and Environment and Heritage Service (EHS). In the majority of other cases there was almost no staff awareness, low prioritization, little or no planning or resourcing of biodiversity responsibilities, and few lines of accountability.

3.2 There was inadequate monitoring and co-ordination, and resourcing of actions both at policy levels and at species/habitat action plan levels. This was essential if we were to ensure progress towards targets, refine delivery mechanisms, and detect real changes in the landscape and seas.

3.3 We welcomed work to develop local biodiversity initiatives, with the appointment of a strong network of grant-aided local biodiversity officers. However, there was no assurance from most authorities of long term commitment to delivering on local strategies after the grant-aided work had finished.

3.4 There were very low levels of public and community interest or awareness of Northern Ireland's biodiversity and the need for its restoration.

3.5 We concluded that it was unlikely that the target of halting biodiversity loss by 2016 would be achieved. A major change in practices and attitude by central and local government was needed if the situation was to be turned round. In short, we stated it could no longer be "business as usual".

Copies of NIBG's 2005 report are available in electronic and hard copy form, and we would be happy to supply these if the Environmental Audit Committee wishes. Our next report is scheduled for 2009 (delayed slightly by agreement with the Minister to align with UK reporting), and this will focus more on actual delivery for species and habitats and wider biodiversity.

4) ISSUES AND DEVELOPMENTS SINCE 2005

A number of the above concerns to NIBG are in the process of being addressed, by both Northern Ireland Government, and particularly DoE and EHS. Work on developing public awareness has also taken place. More specifically, areas of progress (with commentary) include:

4.1 Development of Departmental Biodiversity Implementation Plans relating to the functions of almost all departments and agencies. These include clear target-related actions linked not only to the N Ireland Strategy, but also to the recent EU Communication on biodiversity. They include lines of accountability, and an annual reporting mechanism that has the support and agreement of the Head of N Ireland Civil Service, and the Minister for the Environment. These developments are welcome, but NIBG will be monitoring closely their actual success in bringing real changes to biodiversity in the field, and the extent to which they are fully built into the business plans and operational ethos of these bodies.

4.2 The drafting of the NI Biodiversity Strategy took place before climate change issues were identified to the extent they are now. As a result, little or no reference was made to climate change, which now represents a considerable weakness in the Strategy. By incorporating the EU Communication which seeks to address issues of climate change and biodiversity, the situation has been redressed somewhat. However, it would be a significant improvement if biodiversity work in Northern Ireland addressed climate change issues more directly and urgently.

4.3 A Review of the Wildlife (Northern Ireland) Order 1985 is in process at present and NIBG very much welcomes this. A key element, amongst many, is a proposed requirement placed on all public bodies to further biodiversity delivery consistent with their functions. Currently Northern Ireland is the only part of the UK (and island of Ireland) that has no such requirement. We also hope that revision of Planning Policy Statement 2—Planning and Nature Conservation, will also build in strong mechanisms to embed biodiversity into decision making.

4.4 Establishment of Biodiversity Delivery Groups, relating to key ecological portfolios, eg agriculture, native woodlands, coastal and marine etc. These co-ordinate delivery, bring together relevant experts to identify issues and share best practice, and monitor detailed progress of action plans, for both habitats and related species. The performance of these groups has been patchy however, and some concerns have been raised that a lot of time has been spent in deciding what to do rather than doing it—particularly in the context of the 2016 target.

4.5 A major public awareness campaign (“It’s in our Nature”) succeeding in raising awareness and understanding, but unless this is followed through by further work, implying allocation of more resources, it will not achieve a real long term change.

4.6 Housing developments in the countryside have been the subject of a recent planning policy statement (PPS 14) that has imposed restrictions on the number of rural dwellings being built in certain areas. These measures would in time have benefits for biodiversity in relation to water quality and infrastructure issues. However this statement has been challenged, and is currently being reviewed. A substantial relaxation could have significant adverse implications particularly for biodiversity and implementation of the Water Framework Directive which places considerable emphasis on good ecological status of water bodies.

4.7 NIBG has welcomed a considerable range of work undertaken by DARD on agri-environment measures, and a substantial number of farms have engaged with the various schemes. However, we have expressed concerns that that these schemes have not fully brought about real recovery; in one presentation we learned that measures in upland grazing habitats had halted biodiversity loss (as measured in invertebrate numbers and diversity) where they were applied (compared with other areas which continued to decline) but had not brought about any recovery.

4.8 There has been a recent revision of these agri-environment measures, and in particular alignment to EHS’s Management of Sensitive Sites scheme; it is early days yet, and we will be seeking more detailed information. However it seems likely that this could have considerable benefits for biodiversity through better and more effective management of ASSIs.

5) MONITORING OF ACTUAL BIODIVERSITY PROGRESS

A major area of concern as NIBG begins work on its 2009 report, is the accessibility of the data that are essential to understanding what progress is actually being made for biodiversity, and to identifying appropriate measures where progress is failing. This is still under discussion with DARD, DoE and EHS and may be resolved, but here are several aspects to this that seem to be fundamental:

5.1 Inadequate resourcing of habitats and species. This is not to say that substantial work is not being done, via the N Ireland Countryside Survey, monitoring of designated sites, and monitoring of certain key species. However, as discussions following the publication of the recent EHS “State of the Environment Report for Northern Ireland” identified, the situation is unknown for a worryingly large proportion of species and habitats. Even with the data that is being held, access to it and meaningful interpretation is not easy.

5.2 Furthermore, there have been widespread concerns that EHS is inadequately resourced to monitor and manage its key sites. The designation programme, fundamental to conservation of the more specialist species and habitats, is also under pressure through lack of resources.

5.3 Currently we are not aware of any specific programme in DARD for monitoring priority species and habitats in a manner consistent with the UK priority lists. As agriculture still dominates some 80% of the land surface of Northern Ireland, this is a potentially enormous concern. However, there are meetings planned that hopefully will clarify the situation.

6) MARINE HABITATS AND SPECIES

As with other parts of the UK, knowledge and understanding about conserving marine biodiversity lags behind its terrestrial counterpart. In Northern Ireland this is particularly the case, and it is known that the impact of fisheries, even in designated sites like Strangford Lough, has severely damaged benthic communities. At the same time, present survey work is identifying species not only new to Northern Ireland but actually new to science. However, this work is also under-resourced, and in a wider respect, other aspects of conservation of marine biodiversity seem always to receive a low priority rating than that on land. At this time, it is difficult to conceive any possibility of achieving either the UK/EU target of 2010 or Northern Ireland's of 2016 without a fundamental upgrade of work to conserve our marine biodiversity.

7) CONCLUSION

Northern Ireland welcomes the Inquiry by the Environmental Audit Committee. This submission has identified that some progress has been made in Northern Ireland towards establishing a robust process in delivering for biodiversity. We are monitoring the effectiveness of these developments, to ensure real delivery for species and habitats, and to date we do not believe real delivery can be demonstrated. We have a range of serious concerns about resourcing of biodiversity work, adequacy of monitoring, co-ordination of agri-environment work with biodiversity needs, and inadequacy of work for marine biodiversity.

If these issues are not addressed urgently, it is unlikely that Northern Ireland will meet its own target of halting loss by 2016, let alone the UK/EU target of 2010. Indeed, it will not have sufficient data to convincingly demonstrate success or failure in any case.

June 2008

Memorandum submitted by the Wildlife and Countryside Link

1.0 INTRODUCTION

1.1 Wildlife and Countryside Link (Link) brings together 40 voluntary organisations concerned with the conservation and protection of wildlife and the countryside. Our members practice and advocate environmentally sensitive land management, and encourage respect for and enjoyment of natural landscapes and features, the historic environment and biodiversity. Taken together, our members have the support of over eight million people in the UK.

1.2 In January 2006, Link published a challenge to Government setting out what the 2010 biodiversity commitment means, what needs to happen and how progress should be measured¹⁰⁹. We promised to look at progress on an annual basis and have since published two annual assessments.

1.3 According to our traffic light report, there has been little progress against the five performance indicators included in our original leaflet¹¹⁰. There has been no tangible improvement in protecting our best marine wildlife sites and the assessment of progress on action to make space for biodiversity remains unchanged.

1.4 We welcome the Committee's inquiry into the target to halt UK biodiversity loss by 2010 (the "2010 target") and the opportunity to submit our concerns and suggestions. As several of our members have made separate detailed submissions to the Committee, Link will not be submitting a single coalition response. However, members felt it useful to highlight a number of key points which we all share and this document is supported by the following 11 member organisations:

- Buglife—The Invertebrate Conservation Trust.
- Bat Conservation Trust.
- Butterfly Conservation.
- The Grasslands Trust.
- Herpetological Conservation Trust.

¹⁰⁹ http://www.wcl.org.uk/downloads/2006/Halting_Biodiversity_Loss_by_2010.pdf

¹¹⁰ http://www.wcl.org.uk/downloads/2008/Link_2008_assessment_2010_progress_20Mar08.pdf

- Plantlife International.
- The Mammal Society.
- Royal Society for the Protection of Birds (RSPB).
- Whale and Dolphin Conservation Society (WDCS).
- The Wildlife Trusts.
- Woodland Trust.

2.0 SUMMARY OF KEY CONCERNS AND RECOMMENDATIONS

2.1 The 2010 target has successfully raised the profile of biodiversity conservation across Europe. The target to halt biodiversity loss was clearly ambitious and has not been achieved. Each of our organisations has presented data to demonstrate the continuing decline of biodiversity in the UK and the Overseas Territories. A decline, that despite considerable effort by a consortium of organisations from statutory to voluntary, demonstrates an insufficient response to date and reflects the scale of the pressures facing biodiversity in the UK.

2.2 It is important that the momentum that has undoubtedly been generated by the 2010 target and the Biodiversity Action Plan process (as the fundamental mechanism to guide implementation) should not be lost post 2010 and we look forward to working closely with Government to ensure consistent, attainable targets for the short to medium term.

2.3. Many of the changes that need to occur are cross sectoral. Biodiversity needs to be embedded across all Government departments, particularly in the development and implementation of appropriate policies, through reform of agricultural support (through the Common Agricultural Policy)¹¹¹ and re-enforcing the planning system to both protect key sites and positively encourage habitat expansion.

2.4 While we endorse the Ecosystems Approach we feel more needs to be done to ensure the BAP process is better integrated as a key tool for the delivery of thriving ecosystems. This should be delivered through better use of the planning system, clear targets, and improved advice/guidance to public bodies backed up by an effective Natural Environment and Rural Communities (NERC 2006) biodiversity duty.

2.5 Our efforts need to be increased in response to climate change, which is already adding further pressure on biodiversity. We need to plan for adapting to climate change by securing healthy populations of wildlife today whilst preparing for future changes in the distribution of species and the composition of habitats¹¹². Imperative to this will be ensuring that the natural environment is placed at the core of the UK's climate change adaptation framework.

2.6 It is clear from this that we need to maximise the use of existing resources and to free up new resources if we are to halt biodiversity loss in the UK and in the Overseas Territories, and abroad where we can improve our international leadership on nature conservation.

2.7 It is time for biodiversity conservation to be used as a key test of sustainability.

June 2008

Memorandum submitted by BioDiplomacy

Introductory Note: BioDiplomacy is a diplomatic/environmental consultancy established by Iain Orr in 2002, after retiring from the UK Diplomatic Service. His career had a strong China focus, including a secondment to the Hong Kong Government 1978–81 as deputy political adviser, when Hong Kong was still a dependent territory. In his final job in the FCO he worked on environmental issues and was responsible for implementing parts of the 1999 White Paper on the overseas territories, including negotiating the 2001 environment charters between HMG and the overseas territories. He is a director of the Global Islands Network, a member of the International Small Islands Studies Association and a council member of the UK Overseas Territories Conservation Forum.

SUMMARY

A prime cause of the neglect by HMG of the rich biodiversity of the overseas territories is lack of joined-up government. Select committees are part of this problem because they allow themselves to be fobbed off with partial replies from different departments.

¹¹¹ http://www.wcl.org.uk/downloads/2008/Link_Beyond_the_Pillars_11Mar08.pdf

¹¹² JJ Hopkins, H M Allison, CA Walmsley, M Gaywood & G Thurgate (2007) *Conserving biodiversity in a changing climate* (published by Defra on behalf of the UK Biodiversity Partnership)

DETAIL

1. Other submissions to this and other select committees have documented that the biodiversity of greatest global importance for which the UK is responsible is that found in its overseas territories. If the whole of the metropolitan UK were to disappear, that would have little impact on global biodiversity and the 2010 target—some specialized ecosystems and a tiny number of endemics. By contrast, if the UK's overseas territories were to disappear—including their marine areas: their combined EEZs are ten times that of the metropolitan UK—the 2010 target would instantly become unachievable. HMG cannot honestly support the 2010 target if it neglects the global biodiversity treasure house of the overseas territories.

2. My evidence to the committee—and I would welcome the opportunity to support it with oral evidence—suggests why this regrettable situation has arisen. Since I am not a trained field biologist, this submission draws on experience when working in the Foreign and Commonwealth Office of the difficulty of achieving joined-up government. At its simplest level “joined-up government” is often taken to mean co-ordination between different government departments, usually with the implication that, as well as sharing information, policy objectives of one ministry should reinforce—or at least not undermine—those of another. That is not easy: climate change and transport policies are a topical example.

3. However, Whitehall departmental policies are only part of the picture. Biodiversity is affected by the activities of many parts of society: commercial companies, academics, NGOs. For the UK overseas territories the problems of achieving joined up government are even harder because they are far from the metropolitan UK, with each territory having mostly small areas of land and limited financial and human resources. Moreover, loss of biodiversity is often a result of history (the introduction, both deliberate and accidental, of invasive alien species such as rats, cats, goats and many plants), changes in land use and the lack of public access to information that would make for better-informed debate about good governance of the environment, from planning laws to pollution.

4. Lack of joined-up government is seen in the following:

- When the 1999 White Paper Partnership for Progress and Prosperity—Britain and the Overseas Territories was being drafted the elected governments of the territories were not consulted. HMG's view of “Partnership” is rather paternalistic. Processes of “consultation” tend to be after departments have made up their minds. When helping to negotiate the 2001 series of Environment Charters between HMG and the territories, I often found that officials both in the FCO and in other Whitehall departments wanted there to be “an agreed HMG line” before any consultation with overseas territories governments or with environmental NGOs in the UK and in the territories.
- Despite the 1999 White Paper promising funding from FCO and the Department for International Development, it was several years before DfID was able to produce its contribution.
- Despite the Department for Environment, Food and Rural Affairs (Defra) being the lead department on most international environmental agreements, its ministers and senior officials show little interest in or knowledge of the biodiversity of the territories. How many of them have visited key biodiversity sites in the territories or invited ministers, officials and NGOs in the territories to the UK to discuss how best to work together to support the 2010 target?

5. However, the select committee system seems unable to hold HMG properly to account. On global biodiversity, evidence is not taken from the full range of government departments who are involved with the overseas territories where the most threatened biodiversity is found. Perhaps the committee could consider asking other select committees to work with it to devise a more effective system of getting a shared response from all the relevant ministries. Defra, DfID, FCO, DCMS, MOD and MOJ ministers and officials need to have a shared understanding of what role each of them has in supporting the 2010 target.

EXAMPLES OF THREATENED BIODIVERSITY IN THE TERRITORIES

6. By its nature biodiversity is diverse. These three examples are therefore only illustrative of some of the fundamental issues.

SOUTH GEORGIA AND INTRODUCED REINDEER

7. One of the most dramatic changes to the ecology of South Georgia was the introduction—early in the 20th century—of reindeer. This is a bit like introducing penguins to Greenland. Despite the acceptance that South Georgia merits consideration as a World Heritage Site, nothing has been done to implement the removal of the reindeer, which would be a key component of any management plan to protect the island's biodiversity. Lesson: South Georgia has no permanent resident population. HMG should make the island a showcase of responsible environmental management.

ASCENSION—SEABIRD RESTORATION PROJECT

8. This project to restore the seabird colonies of Ascension by removing feral cats from the island has already had considerable success. It was a major project involving close co-operation between RSPB, the FCO (which provided funding of £500,000) and the government and residents of Ascension. What is striking about this project is that it arose by accident because the FCO did not want to be embarrassed by returning money to the Treasury that had already earmarked for an unrelated project which, for reasons beyond its control, had fallen through for that financial year. Lesson: The only way that the loss of UK biodiversity will be halted will be by large habitat restoration projects being a key component in a HMG's commitment to the 2010 target (and beyond) not a happenstance exception.

ANGUILLA—AN INVASIVE PLANT ON A REMOTE ISLAND

9. A highly invasive vine is seriously threatening the biodiversity of the uninhabited island of Sombrero in Anguilla. A good illustrated account of the problem is at <http://tinyurl.com/4uwctt>. It would be revealing to discover whether the name of the species, either in English—Beach Morning Glory or Goat's Foot—or in Latin—Ipomoea pes-caprae features in any document originating in Defra, FCO or DfID.

Lesson: How can HMG promote the 2010 target if it is not aware of such a clear threat to biodiversity in an area so small that quick control of the threat should be the immediate response?

QUESTIONS TO ASK

10. Questions that the committee might ask those who give it evidence:

- *How important is biodiversity in the UK's overseas territories to the 2010 objective?*
- *What is your department/ organization doing to halt the loss of biodiversity in the territories? What more could you do?*
- *Is the biodiversity of the territories reflected in the UK's contribution to the work of key international institutions such as the multilateral environmental agreements, especially the Convention on Biological Diversity?*
- *Which of the UK commitments under the Environment Charters are applicable (to any extent) to your organization? Have you plans to make greater efforts to support biodiversity in the territories? If so, how? If not, why not?*

11. Three outcomes from this inquiry could dramatically improve the UK's contribution towards halting the loss of biodiversity in the UK and its overseas territories.

A—Tasking the key departments to devise a joint strategy to halt the loss of biodiversity in the overseas territories.

B—Persuading other select committees of the need jointly to monitor each government department that has any responsibility for achieving the 2010 target (and later targets which need to follow).

C—Making sure that the UK meets its commitments under the Environment Charters.

June 2008

Memorandum submitted by the Scottish Government

BIODIVERSITY DELIVERY IN SCOTLAND

1. The Scottish Government is working to create a more successful country where all of Scotland can flourish through increasing sustainable economic growth. It has made a firm commitment to build a Greener Scotland and one of the outcomes of the National Performance Framework calls for us to value and enjoy our built and natural environment and protect it and enhance it for future generations. The achievement of this objective will be measured by three national indicators which relate to biodiversity: the abundance of terrestrial breeding birds, the proportion of protected nature sites in favourable condition and the proportion of adults visiting the outdoors weekly.

2. The Scottish Government provides strategic policy direction on biodiversity, working closely with key statutory agencies include Scottish Natural Heritage (SNH), the Scottish Environment Protection Agency (SEPA) and the Forestry Commission Scotland (FCS). Non-government organisations including Scottish Wildlife Trust, RSPB and Scottish Environment Link are represented in the partnership arrangements as are other stakeholder interests including business, land managers and local government.

3. The Scottish Biodiversity Strategy “Scotland’s Biodiversity: It’s In Your Hands”, published in 2004, set out a 25 year framework for action to conserve and enhance biodiversity for the health, enjoyment and well-being of all the people of Scotland. *A Progress Report 2005–07*, published in December 2007, highlights examples of progress with implementation of the Scottish Biodiversity Strategy in its first three years (<http://sh45inta/Publications/2007/12/11141751/0>).

4. The Progress Report included the first suite of biodiversity indicators for Scotland. In summary for species and habitats these showed:

- Of the 153 UK priority species in Scotland, nearly 40% are increasing or stable, while 18% are declining. The status of around 30% of these species is not currently known.
- Of the 41 UK priority habitats in Scotland, 35% are increasing or stable, while nearly 30% are declining. For 34% of habitats however the status is unknown.
- Four indicators show biodiversity responses to climate change across terrestrial, coastal and marine environments. Major declines in some nesting seabirds are of particular concern, and may be related to climate change.

5. The delivery of biodiversity in Scotland has recently been reviewed and we are implementing a revised delivery structure. This new delivery structure is aimed at achieving an increased focus on the planning and delivery of effective actions, and is designed to embed the ecosystem approach. The new structure will also include a Ministerial chaired group to provide oversight over the success of the strategy, and reach out across sectors to achieve progress.

PARTNERSHIP WORKING THROUGH THE UK BIODIVERSITY PARTNERSHIP

6. The Scottish Government and Scottish Natural Heritage participate in the work of the UK Biodiversity Partnership. The Scottish Government is committed to the principles set out in *Conserving Biodiversity—the UK Approach*. It provides a useful framework for future action, including the desirability of adopting an ecosystems approach in delivery strategies. Work is underway in Scotland to explore how the ecosystems approach could best be given practical effect in Scotland, including the development of a model ecosystem plan for a pilot area. The ecosystem approach takes us away from regarding biodiversity merely as something to protect, often in isolated sites, to an understanding of how a rich, diverse ecosystem supports and interacts with a successful society and economy. The projected impacts of climate change give further impetus to looking at a wider, landscape scale in planning actions, as well as protecting individual sites which remain a key element of sustaining biodiversity.

7. The recent publication and launch of the *Invasive Non-Native Species Framework Strategy for Great Britain*, ably illustrates the benefits of joint working where appropriate. This Framework has been jointly developed by Defra, the Scottish Government and the Welsh Assembly Government working as equal partners. It is clear that there is value in working together to tackle the problems of non-native invasive species across the landmass of Britain. We look forward to playing our part in moving forward to implement this framework.

8. As we head to 2010, when European and international targets halted the loss of biodiversity fall due, the Scottish Government encourages continuing dialogue, and a co-operative effort to ensure that all administrations can make a useful input to the development of reporting on the targets. It is important that we achieve a balanced and informative reporting against the targets, that gives due emphasis both to successes and to remaining challenges. Looking forward, we need to ensure that the expertise available across the UK is used effectively to allow actions to be planned in the four nations. We need to ensure that our planning structures at every level allow a focus on the ecosystem scale.

9. Mr Russell, Minister for Environment, has invited his counterparts from the other three administrations to Scotland to discuss a number of issues which lie ahead, notably the handling of reporting progress on 2010 and future arrangements for nature conservation more generally. It is expected that this dialogue will assist in the sharing of views and the development of agreed understanding on these issues and it is hoped this meeting will take place in early autumn.

June 2008

Memorandum submitted by Eco-Logically

SUMMAR

- Whilst a clear process exists between UKBAP targets and action through local delivery there is a significant gap in achieving implementation.
- A political commitment to progress biodiversity targets is required.
- Clear monitoring of progress towards BAP objectives is required.

- Brighton & Hove City Council (BHCC) are the local authority best placed to deliver biodiversity development, initially by producing a Local Biodiversity Action Plan (LBAP) covering the whole jurisdiction.
- Over seven years after the recommendation a LBAP has not even been initiated by BHCC, despite the mechanisms that exist to assist with the technical details.
- There has been a loss of local biodiversity through habitat degradation, and a lack of potential enhancement through identifying opportunities for biodiversity gain.
- With the lack of strategic direction from a LBAP it is inevitable that future development planning (such as the LDF and associated SPDs) will result in nett biodiversity loss.
- There is a local enthusiasm for biodiversity amongst many residents. This is not reflected through the priorities and actions of the elected unitary authority.

Since 1987 I have worked with County Wildlife Trusts, the Nature Conservancy Council, Woodland Trust and English Nature (now Natural England). A close interest in the emergence of the UK Biodiversity Action Plan (UKBAP) and its implementation has continued since 1994.

1.3 From 2001 I have worked as Director of Eco-Logically.com which provides advice to a range of public bodies, local authorities and private land managers.

1.4 Also since 2001 advice has been provided to Brighton & Hove City Council (BHCC) on environmental issues, particularly regarding biodiversity and delivery of local biodiversity action plan targets (LBAP).

2. POLICY AND PROGRESS

History

2.1 A clear process was laid out through the UKBAP to provide national targets which are addressed through local delivery. The UKBAP Strategy (DEFRA, 2002) provided further clarification on key action areas.

2.2 Local delivery in southern England can most effectively be progressed with local authorities providing the lead co-ordinating role, this has also been explicitly stated (ALGE, 2001).

2.3 1997: Brighton Borough Council was merged with Hove to form the new Unitary Authority Brighton & Hove City Council.

2.4 2001: The Wildlife Advisory Group (WAG) recommended to the council that a LBAP should be produced.

2.5 2002: BHCC formally launched its “Sustainability Strategy” in March. This included the commitment to meet its biodiversity objectives. Shortly after a ‘Sustainability Commission’ was formed comprising elected members, senior officers and specialist co-opted advisors which met bi-monthly to discuss sustainability issues. It aimed to mainstream sustainability within the authority and develop best-practice.

2.6 2003: The WAG recommended a timetable to the Sustainability Commission for progressing a LBAP.

2.7 Technical expertise exists with many local naturalists. The council has the dedicated “Booth Museum of Natural History” staff and an ecologist upon which to receive a detailed input.

Outputs

2.8 None—a LBAP has not been progressed despite the mechanisms that exist!

2.9 Significant Gaps exist in knowledge even within the council’s environment section. For example a planning SPD covering trees (BHCC, 2005) failed to mention the existence of the Sussex Woodland HAP (published in 2001) which clearly identified the key objectives and targets for trees. Brighton is nationally important for its trees, holding the national elm collection.

2.10 Lost Opportunities for BAP delivery and enhancement through the absence of a LBAP. For example the Secretary of State agreed to construction of a new Stadium to be used by the Albion Football Club. This will be adjacent to an AONB and proposed National Park. There was no assessment against local BAP objectives during this lengthy public inquiry. Consequently there is likely to be local biodiversity loss during the construction phase without appropriate mitigation or biodiversity benefits.

3. KEY THREATS

3.1 With the absence of a LBAP to steer the strategic direction there are a series of bizarre decisions (ecologically speaking) being made. Guidance is being developed on a “Nature Conservation and Development SPD” where recent drafts included species planting recommendations more associated with the garden centre!

It was suggested that appropriate species with biodiversity benefit could include Californian lilac, Himalayan honeysuckle, Japanese quince and Portuguese laurel; along with the inevitable buddleja.

None of these plants are native to England, let alone the local region. Some are potentially invasive and indicate a lack of awareness of the local biodiversity.

3.2 Unfortunately this is symptomatic of a lack of real environmental interest within BHCC. There are likely to be more examples of inappropriate proposals, guidance and development in the future. This will result in both the obvious reduction in local biodiversity and also in the inability to identify appropriate biodiversity gains.

4. RESOURCES

4.1 Letters have been exchanged between Eco-Logically.com and the council Leader in 2005 and 2006 seeking a commitment to progressing a LBAP. Despite a generic agreement that this was an important issue, resources have not been allocated to LBAP delivery.

4.2 There has also been repeated communication with David Lepper MP about the lack of meaningful progress and ways this could be addressed. The issue of progressing LBAP objectives and targets was not addressed. The only progress identified was a “school grounds LBAP”. Whilst this has an important educational role it is a very easy area to address; children are interested in the environment and resources exist in the educational budget. However there is no habitat of “school grounds” and it fails to address any of the UKBAP objectives.

4.3 Resources for producing a LBAP are insignificant within the local authority budget. It appears a political decision has been made to ignore this work area, describing it simply as “non-statutory”.

4.4 There is quite obviously a large gap between the published national objectives and achieving targeted progress through local implementation.

4.5 The lack of meaningful progress in developing relevant LBAP objectives and targets are partly related to the lack of national “drivers” being applied to BHCC. Housing targets are eagerly progressed and funding for social projects in deprivation areas eagerly sought by BHCC.

These two areas of sustainable development (economic and social) are being actively addressed. However, the third key area (environmental) is being significantly overlooked. Such an imbalance will have significant future consequences for a city which is geographically embraced by natural habitat.

4.6 Whilst the future of a city pursuing only economic growth without environmental growth is clearly threatened there is also the more immediate inability to meet its biodiversity targets by 2010.

4.7 It is imperative that a political commitment to delivering a LBAP and identifying targets is given the highest priority by local authorities, particularly where they are the unitary authority. How this commitment is achieved will depend upon potential mechanisms, but at the very least there should be a process for monitoring progress towards identifying targets that contribute to the UKBAP. Councils report on their economic and social progress already. It is time to include a report on biodiversity progress in contributing to the UKBAP.

Until genuine responsibility for local delivery is ensured, it seems unlikely that any biodiversity targets will ever be met in Brighton & Hove, let those for the 2010 “milestone”.

4.8 As a related issue it should be emphasized there is no shortage of local enthusiasm for biodiversity, even if termed “nature”, “flowers”, “birds” or “wildlife” by most people. The inability of BHCC’s strategy managers to respond to this passionate local interest in nature is at least recognized by their “Countryside Service” that promotes the “Brighton & Hove Goes Wild” events for thirteen days during spring.

Biodiversity provides genuine value to local people. It seems that council priorities do not yet recognize their residents values.

5. PROTECTED AREAS

5.1 The key semi-natural habitats locally are the South Downs and the Coast. Remaining fragments of agriculturally-unimproved chalk grassland are internationally important. Coastal habitats include vegetated shingle (a globally rare habitat) and the chalk cliffs.

5.2 There is a lack of active management on much of the Downland. Areas within the council’s control are becoming significantly degraded.

5.3 Lack of commitment to conserving the coastal habitats is resulting in a declining vegetated shingle area and increased development pressure on the chalk cliffs. Plans are currently being progressed for a large residential development in the Brighton Marina. This is totally out of character with the flat eroded wave-cut platform where the chalk is covered by the tides. Six massive concrete tower-blocks are proposed which will inevitably require protection from natural processes, such as chalk cliffs eroding.

REFERENCES

BHCC, 2005. Trees and Development Sites: Supplementary Planning Document, SPD 06-Brighton & Hove City Council. October Draft.

Defra, 2002. Working with the grain of nature: a biodiversity strategy for England. Department for Environment, Food and Rural Affairs, London.

ALGE, 2001. Position statement on biodiversity. Association of Local Government Ecologists.

30 May 2008

Memorandum submitted by Matthew Thomas, Ecologist, Brighton & Hove City Council

SUMMARY

1. This short report is submitted in response to a request for evidence on progress with the Local Biodiversity Action Plan (LBAP) for Brighton and Hove. The report highlights the contribution that Brighton & Hove City Council has made to the LBAP for Sussex and describes the progress that has been made with Action Plans specifically for Brighton and Hove. The main obstacle to further progress is identified as the comparative neglect nationally of the importance of increasing public awareness and involvement in biodiversity. It is also contended that a preoccupation with addressing targets for priority species and habitats has missed opportunities to promote urban biodiversity conservation more generally.

INTRODUCTION

2. Thank you for your invitation today to submit evidence to the Environmental Audit Committee Inquiry “halting biodiversity loss”. My name is Matthew Thomas and I have been Ecologist for Brighton & Hove City Council since 1997. The views expressed below are my own and not necessarily those of Brighton & Hove City Council.

LBAPs IN SUSSEX

3. You asked for information on progress with the City’s Local Biodiversity Action Plan (LBAP). Brighton & Hove has been a partner with the Sussex Biodiversity Partnership since 1997 and has contributed to the development of several pan-Sussex Action Plans for habitats and species (for further information see www.biodiversitiesussex.org). These Local Action Plans address Government expectations that LBAPs should be a part of preparing Sustainable Community Strategies. The Sustainable Community Strategy for Brighton and Hove also includes a number of separate biodiversity commitments (for more information see <http://www.2020community.org/index.cfm?request=c1165429>).

LBAPS IN BRIGHTON AND HOVE

4. Despite the Council’s membership of the pan –Sussex BAP, Brighton & Hove also recognises the need to produce separate Biodiversity Action Plans specifically for the city. Advice on the development of these has been gleaned from the council’s Wildlife Advisory Group (WAG), comprising a wide range of statutory and non-statutory nature conservation organisations and local groups. There has been broad agreement that the themes for these LBAPs should reflect the particular needs of the urban environment and help raise public awareness and involvement in biodiversity.

5. The School Grounds Biodiversity Action Plan, published in 2005 was the first such plan to be produced for Brighton and Hove. Written by a sub-group of the WAG including school teachers, educationalists and grounds maintenance staff, the LBAP was deliberately produced at the “grass roots” level, by school teachers, for school teachers. Funding was subsequently won from the then English Nature under the Countdown 2010 programme, for a full time post to implement the LBAP, in partnership with the Sussex Wildlife Trust. The WAG sub-group then continued their role by overseeing the implementation of their LBAP. More information on the School Grounds BAP can be read at: http://www.citywildlife.org.uk/fbx_index.cfm?fuseaction=bio.schools and <http://www.brighton-hove.gov.uk/index.cfm?request=b1153124>.

6. The School Grounds BAP was widely recognised as successful and, just before the funding ended in summer 2008, was beginning to lead on to broader community-based biodiversity work. Visiting the city during the “Big Biodiversity Butterfly Count” (a local schools-led initiative) this summer, Professor David Bellamy said, “A big wow! for Brighton, who are really leading the way for the rest of country on biodiversity.” (see <http://www.treeappeal.com/brighton08/planting.html>).

7. Despite the success of the School Grounds BAP, the original Countdown 2010 funding scheme has been replaced by a scheme with much tighter funding criteria, focused entirely on “the recovery of priority species and habitats in England”. The broader, community-based biodiversity aims of Brighton & Hove’s School Grounds BAP no longer qualify for funding under this programme and the project has been discontinued.

WIDER ISSUES

8. The original aspirations of the UK Biodiversity Action Plan process were captured in “Biodiversity: The UK Steering Group Report Volume 1: Meeting the Rio Challenge” (published in 1995). Section 4 of this report prescribes a way forward for biodiversity conservation in the UK. Four areas are addressed:

- Targets for key species and habitats.
- Improved access to biodiversity information.
- Increasing public awareness and involvement.
- Monitoring.

9. In England, these areas were further developed through the admirable biodiversity strategy for England (2002). However looking over the biodiversity process nationally, a disproportionate amount of attention and resources have since been focused on addressing targets for key species and habitats and this trend appears to be gaining momentum. Biodiversity monitoring and information have also improved significantly, although most of this information is difficult for the general public to access. Conversely public awareness and involvement have remained comparatively poorly developed and tend to rely on isolated initiatives such as the BBC’s excellent Breathing Places campaign. Compare this (for example) with the overwhelming and on going attention given to Climate Change and Carbon management.

10. Opportunities to integrate public awareness and involvement throughout the whole BAP process, nationally, regionally and locally have been under resourced. This is obvious in the urban environment, where there are so many opportunities to promote public involvement in biodiversity, but where funding for biodiversity initiatives is severely limited because most BAP funding streams are preoccupied with addressing targets for priority species and habitats. Granted, it might be possible to use Access to Nature to fund community orientated LBAP initiatives, but this funding stream is unusual and (as I have found from working on a bid) hugely over subscribed. Conversely, opportunities to integrate LBAPs into wider local government programmes through schemes such as the Local Area Agreement have not been fully realised (NI97, although better than nothing, is a wasted opportunity to promote the much broader aspirations of the original BAP process).

RECOMMENDATION

11. To promote further progress with urban LBAPs, such as the LBAP for Brighton and Hove, more attention should be given to increasing public awareness and involvement in biodiversity nationally and regionally. Indeed, this objective should be embedded in the whole BAP process to ensure the importance of biodiversity conservation is more widely understood as being on an equal footing with the other environmental concerns of today.

I hope these comments have been helpful.

13 October 2008