



THE MANAGEMENT OF MARINE LIVING RESOURCES IN THE WATERS AROUND GIBRALTAR



REPORT TO H.M. GOVERNMENT OF GIBRALTAR



REPORT TO H.M. GOVERNMENT OF GIBRALTAR ON “THE MANAGEMENT OF MARINE LIVING RESOURCES IN THE WATERS AROUND GIBRALTAR”

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Foreword

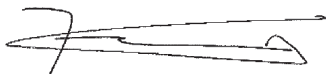
The exploitation of natural resources in areas with international borders has throughout history provided both a source of conflict and an opportunity for co-operation. This is even more so today, when these natural resources continue to decline steeply. Such situations can cause tension between states, but have also resulted in some of the most far reaching international co-operation agreements ever seen.

The situation in Gibraltar provides both possibilities, and it is up to administrations with vision to arrive at solutions with substance but without conflict. But solutions must be informed ones.

It is for this reason that H.M. Government of Gibraltar, with the agreement of authorities and interested parties both in Gibraltar and in neighbouring communities in Spain, commissioned a panel of persons with experience in fisheries and marine protection, to look at available data, set the Gibraltar situation in an international context, and make recommendations for the Government to consider.

This is the work that is presented in this document.

H.M. Government of Gibraltar will be taking its analyses and recommendations into account as it develops a strategy for the protection of the marine environment and the sustainable use of marine resources in British Gibraltar Territorial Waters forward into the 21st Century.



The Hon Fabian Picardo
Chief Minister



The Hon Dr John Cortes
Minister for Health and the Environment



Her Majesty's Government of Gibraltar

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Finally, the authors would like to thank the Government of Gibraltar.

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Summary

1. Ongoing disputes between the Government of Gibraltar and the fishing communities of Algeciras and La Linea came to a head once more in May 2012 following an incursion by Spanish commercial fishing boats into British Gibraltar Territorial Waters (BGTW). This followed a decision by the incoming Government in Gibraltar deciding to enforce the provisions of the 1991 Nature Protection Act which prohibits certain types of fishing gear including nets. The previous Government had allowed illegal fishing under the terms of a so-called “Joint Understanding” dating from 1999.
2. To seek resolution the Chief Minister of Gibraltar agreed a Memorandum of Understanding with Spanish fishing interests following which a Joint Commission was established between Gibraltar and the Spanish fishermen with an independent Chairman. A Working Group was established in Gibraltar to feed into that process.
3. Two formal meetings of that Commission were held during which the Spanish members withdrew from the Memorandum of Understanding. Also the scope of the work and both timetable and terms of reference could not be agreed. Technical expertise was available through an independent fisheries expert on the Working Group but was missing on the Spanish side. However requests for inclusion of such an expert were eventually met. Informal meetings were held with the fishermen in both La Linea and Algeciras where some landing data were made available for consideration. However, the independent fisheries expert then met with a representative of the Instituto Español de Oceanografía (IEO) in Cadiz and a longer time series of statistical information was provided and subsequently added to the previous data. These data were analysed by the independent fisheries expert, and the analysis of the Spanish data has been reviewed and finalized taking into account the amendments from the Spanish expert, Dr. Ignacio Sobrino.
4. Despite the desires of the Spanish fishermen to discuss only fisheries issues the extent of the review was taken to be the “Sustainable Management of Marine Living Resources in the Waters around Gibraltar.”
5. Gibraltar is an Overseas Territory of the United Kingdom and as such the UK claims a 3nm limit around the Territory under international law – British Gibraltar Territorial Waters. Gibraltar also forms part of the European Union but is



excluded *inter alia* from the Common Fisheries Policy. However, Gibraltar is subject to EU legislation pertaining to the environment.

6. The Government of Gibraltar has in place the Nature Protection Act 1991, which was passed with no votes against, and the explanatory memorandum of which states that it is *“An Act to provide for the protection of wild birds, animals and plants and for the designation and preservation of protected areas for the purpose of nature conservation and matters incidental thereto.”* It is not fisheries legislation but put in place for environmental purposes although it includes restrictions of specific fishing practices and other marine activities. This was because the Government of Gibraltar believed that the fishing grounds around Gibraltar had been overexploited and believed that the fishermen themselves accept that catches had declined seriously.
7. The Government of Gibraltar has a good record in respect of environmental protection, with its own Environmental Charter and being a contracting party to all of the major multilateral environmental agreements, and implements their requirements as it does for EU environmental legislation.
8. One of these provisions is the Habitats Directive under which Gibraltar declared the Southern Waters Special Area of Conservation (SAC) in 2006. The Spanish Government claimed the same waters for a Spanish SAC in 2008 which strangely was also accepted by the European Commission. This has been the subject of a case before the European Court of Justice.
9. While the Government of Gibraltar has every right to legislate for and regulate activities in BGTW, something apparently accepted in the 1999 “Joint Understanding”, nonetheless incursions of Spanish boats continue to infringe the 1991 Act. Without prejudice to the Nature Protection Act 1991 and its requirements, and in order to be very precise about the circumstances relating to fish and fisheries, an analysis has been undertaken of fishing activities in the waters around Gibraltar to consider their sustainability in management terms as a fishery and as part of the management regime. The fisheries analysis forms a complete and separate section to this report.
10. This issue of fisheries impacts is not new. There is early evidence of human interaction with marine fauna in the Mediterranean Sea from the Paleolithic period and this continued through the Mesolithic and Neolithic periods (approximately 20,000–4000 B.C.). Zooarchaeological remains in Spain include 20 taxa and show changes in mean fish size and range over time that have been considered as an indication of overfishing.

11. Seagrass beds have declined considerably including *Posidonia oceanica* (an important indicator of human impacts and a host of crucial ecosystem services) which if not now extinct in BGTW is very close to it, along with other species of seagrass (*Zostera* spp).
12. The background to the need for protection and sustainable management of the environment is that the Mediterranean is a biodiversity hotspot. There are believed to be about 17,000 species occurring in the Mediterranean Sea which is about 7% of the world's known marine species in an area that represents less than 1% of the world's ocean surface. Many of the ecological characteristics in the Mediterranean Sea are problematic with over 20% of the known species under threat and this is likely to increase given that currently undescribed species will be added in the future and a large proportion of species are either not assessed or assessed as Data Deficient (an issue in itself). This includes emblematic species of conservation concern, such as the world's most endangered pinniped, the critically endangered Mediterranean monk seal (no longer regular in BGTW), sea turtles, several whales, dolphins, sharks, skates and rays at risk of extinction or threatened, and the overexploited bluefin tuna (*Thunnus thynnus*). There are several unique habitats at various levels of risk, including the seagrass meadows almost lost from BGTW and in need of a recovery plan, vermetid reefs, coralligenic concretions, maerl beds, seamounts and deep sea coral reefs most of which occur in BGTW.
13. The highest levels of biodiversity are to be found largely in the north west Mediterranean following a gradient of production, and biodiversity is also found to be generally higher in coastal areas and continental shelves, and decreases with depth. Temporal trends indicated that overexploitation and habitat loss have been the main human drivers of historical changes in biodiversity. Habitat loss and degradation, followed by fishing impacts, pollution, climate change, eutrophication, and the establishment of alien species are the most important threats and affect the greatest number of taxonomic groups. The spatial identification of hot spots highlighted the ecological importance of most of the western Mediterranean shelves and in particular, *inter alia* the Strait of Gibraltar and the Alboran Sea.
14. There is an indication that the Mediterranean Sea is losing a wide range of its predator species with some shark species rates of decline being from > 96 to > 99.99%. In addition to large predatory sharks, cetaceans, pinnipeds, turtles, and large bony fishes have been recorded as declining similarly. The wider ecosystem consequences remain to be investigated but losing top predators can induce strong increases in midlevel consumers, shifts in species interactions, and trophic cascades. The decline of large sharks and other marine predators in the Mediterranean may have brought about such significant changes in the ecology of

the region. It has been suggested that apparent increases in squid around Gibraltar are as a result of loss of top predators.

15. Nine species of marine mammals are encountered regularly in the Mediterranean. Another 14 species are sporadically sighted throughout the basin and are considered “visitors” or “non-residents.” Marine mammals are concentrated in the Western Mediterranean and Aegean Seas. As for Gibraltar specifically cetaceans are prominent in both the Bay and in the Strait and both common dolphin (*Delphinus delphis*) and striped dolphin (*Stenella coeruleoalba*) have nurseries in these areas. For common dolphin in particular the importance of the Strait of Gibraltar, especially the more coastal areas including the Bay of Gibraltar, has been noted.
16. Seabirds in the Mediterranean have a low diversity (15 species) and their population densities are small, consistent with a relatively low-productivity ecosystem compared with open oceans, and particularly with upwelling regions. Seven of these species of birds are susceptible to bycatch in longlines. The most commonly caught seabirds in longlines are Cory’s shearwater (*Calonectris diomedea*), Audouin’s gull (*Larus audouinii*), yellow-legged gull (*Larus michahellis*), Northern gannet (*Morus bassanus*), Mediterranean shearwater (*Puffinus yelkouan*), and Balearic shearwater (*Puffinus mauretanicus*). The north-west Mediterranean longline fishery was estimated to affect 4-6% of the local breeding seabird population with Balearic shearwaters being of particular concern because of their susceptibility to longline bycatch and their declining population size. BGTW are important waters for Balearic shearwaters.
17. The European Commission has produced a Communication for an “*Action Plan for reducing incidental catches of seabirds in fishing gears*”. This notes that at least 20 species of seabirds interact with longline fisheries in EU waters, of which three Mediterranean species are notable for their high conservation status with moderate to high frequency of capture in longline gear relative to their populations. The Balearic shearwater is classified by the IUCN⁵ as Critically Endangered, meaning it has been evaluated to have a very high risk of extinction in the wild. The others, the Yelkouan shearwater and Audouin’s gull, are classified as Near Threatened meaning the population is in moderately rapid decline globally. In addition to these species a further five are listed in the Birds Directive as having unfavourable conservation status requiring “special conservation measures” due to declines in localised populations. These include

⁵ International Union for Conservation of Nature

Cory's shearwater and Mediterranean gull (*Larus melanocephalus*) in the Mediterranean. For all of these species, significant levels of bycatch are reported.

18. The information available on incidental catches of seabirds in static nets is incomplete; however there are several static net fisheries where seabird mortality has been reported as being problematic. In the Mediterranean available information suggests that static nets pose a threat to a subspecies of the European shag (*Phalacrocorax aristotelis desmarestii*) – the subspecies that breeds in Gibraltar - and several species of shearwater. Furthermore, evidence is emerging that purse seines can take significant bycatch of species such as shearwaters.
19. The Communication contains an Action Plan the objective of which is to minimise and, where possible, eliminate the incidental catches of seabirds, with priority action focussing on individuals belonging to at least 49 threatened seabird populations by EU vessels operating in EU and non-EU waters, as well as by non-EU vessels operating in EU waters. For other seabirds where the populations are stable but bycatch are at levels that are cause for concern, bycatch should be reduced as a first step towards bycatch elimination. It has been aligned with the Common Fisheries Policy (CFP). The Action Plan depends on parts of the EU environmental *acquis*, in particular the Birds and Habitats Directives and the Marine Strategy Framework Directive (MSFD). The full implementation of these Directives is part of the EU's response to its commitments under the UN Convention on Biological Diversity, and is reinforced by the commitment made by EU Heads of State "to halt the loss of biodiversity [in the EU] by 2010"; it is further reiterated in the EU Biodiversity Strategy to 2020.
20. Gibraltar has a Biodiversity Action Plan dating from 2006 prepared by the Gibraltar Ornithological and Natural History Society. It has not yet been codified in Gibraltar law and, although a valuable resource, is in need of updating and amending.
21. In that document are action plans for western Mediterranean shag (*Phalacrocorax aristotelis desmarestii*), the Mediterranean ribbed limpet (*Patella ferruginea*), the date mussel (*Lithophaga lithophaga*) and all cetaceans. The limpet and the date mussel are on Annex IV of the Habitats Directive meaning that they require strict protection as are the fan mussel *Pinna nobilis* and the sea urchin *Centrostephanus longispinus* for which no action plans have been prepared although their populations have been monitored as required under the Habitats Directive.
22. The Bay of Gibraltar houses the largest known population of *Patella ferruginea* in the entire Iberian Peninsula, and very probably in the entirety of



continental Europe, with the highest densities in the Rock of Gibraltar. Other species of importance include the black limpet (*Patella nigra*) and Mediterranean seaweed (*Cystoseria mediterranea*) which are on Annex II of the SPAM Protocol under the Barcelona Convention to which Gibraltar is not yet a party.

23. Artificial reefs have had strong beneficial impact on the biodiversity in BGTW.

24. The Biodiversity Action Plan lists a range of activities which are known to adversely impact on habitats in BGTW. These include:

- illegal net fishing;
- excessive long lining;
- uncontrolled scuba diving;
- uncontrolled spear fishing;
- illegal dumping;
- illegal fishing by scuba divers and specifically for sandy bottoms;
- uncontrolled rake fishing by Spanish boats;
- illegal rake sizes; and
- illegal clam raking.

25. Other human induced threats listed in the Biodiversity Action Plan are:

- The risk of oil spillage from bunkering operations throughout the Bay, fuel storage and the Spanish oil refinery and associated industries;
- The risk of pollution from shipping;
- Excessive use of anchorage areas in the east and west of Gibraltar affecting benthic habitats;
- The risk of invasive species being released from ballast water carried from other locations;
- The release of effluents, e.g. sewage, industrial waste, and desalinisation plant water;
- The release of untreated effluents at Europa Point sewage outfall;
- The reclamation of low-lying inshore waters;
- Illegal seine net, gill net and rake fishing by Spanish commercial fishing boats;
- Illegal spear fishing with breathing apparatus;
- Uncontrolled scuba diving;
- Excessive disturbance of cetaceans by tour operators (“dolphin watching”) in the absence of guidelines and regulations;
- Water flows and oxygen levels; and
- Toxic sediments especially TBT.

26. There is little information on some habitat types – in particular maerl and coralligenous habitats in BGTW and surrounding waters.
27. In biodiversity terms Gibraltar is a small but vital link in a biodiversity hotspot given its strategic importance adjacent to the Strait and in the Alboran Sea.
28. The fisheries analysis is based on such statistical data on fish landings of target species, and fishing effort⁶ for both Spanish commercial fishermen and Gibraltar recreational fishermen as were available. However, no information was available on catches from longlines, bycatch by commercial boats or from recreational fishing away from competitions.
29. The data were useful for understanding trends in landings of the target species, trends in fishing pressure and trends in landing per unit effort (LPUE)⁷, used as an index of stock abundance.
30. While the data have been useful in providing part of the overall picture of fisheries operations in and around BGTW, they do not allow discrimination between catches in BGTW and elsewhere. The species mostly targeted by the Algeciras vessels in the Bay of Gibraltar have changed over time including species such as mackerel (*Trachurus spp*), mullets (*Mullus spp*), frigate mackerel or melva (*Auxis rocheii*) and several species of sea breams – some of which are highly migratory and are likely to be spending part of their lifecycle in the Bay of Gibraltar and which and elsewhere in the Mediterranean. However, as there is no current monitoring of the stocks in the Bay of Gibraltar, neither is there is published data specifying the role of the Bay in the population dynamics of these species, there is uncertainty over the state of these specific stocks and the impacts of these fisheries on the stocks.
31. In the case of La Linea, the fisheries statistics have also been useful in understanding the fishing operations and the evolution of the fishing fleet over the last two decades. Specifically, the information available provided a picture of the species targeted, fishing effort and the number of vessels. The La Linea fisheries are artisanal and coastal and the fleet is engaged in fishing close to shore from Gibraltar to Malaga. The main fisheries are for corruco (*Acanthocardia tuberculata*) and smooth clam (*Callista chione*) using the conch rakers, although La Linea also benefits from migratory species such as horse mackerel, which is seasonal in the Mediterranean, and some species of bream.

⁶ Fishing effort is the effort applied to catch fish. In the case of the commercial fisheries, fishing effort is the number of vessels and the number of fishing days. In the case of the recreational fisheries is the number of fishermen, the number of competitions and the number of hours fished.

⁷ LPUE is calculated by dividing landings by fishing effort (the number of specific fishing days) applied to the specific fisheries.

32. In the case of Gibraltar, there is no information on commercial fishing operations. However, data from the recreational fishing clubs from their competitions were made available for analysis. Although the data on the recreational fishing are not as extensive as for the Spanish fisheries, they have been informative in relation to the target species, levels of catches and fishing effort. The data show that whilst the number of anglers and competitions has remained largely constant over the years, the quantities of some major species show declines.
33. In terms of resource management, it is important to understand and quantify the level of overlap between the Gibraltarian recreational fisheries and the Spanish commercial fisheries. The data show that there are some overlaps between the areas fished and species targeted by both the recreational fishermen from Gibraltar and the commercial fishermen from La Linea and Algeciras. For the species where there are overlaps, there has been a decline in landings, but without additional information, it is difficult to infer with any certainty the relative level of impact by the commercial Spanish fisheries and the recreational fisheries in Gibraltar. However, it can be concluded that increased fishing pressure from either is likely to have an impact and potentially a negative impact on the status of these species.
34. Currently the recreational fisheries in Gibraltar are unregulated by the Government of Gibraltar and there is no official monitoring programme for the collection of data to inform the management of fish populations targeted.
35. Spanish vessels fish illegally in BGTW: whilst these vessels are legally registered and licensed in Spain and operate under the conditions established by the Spanish Government, using methods which have been authorised including gear types and legal sizes of fish caught, there is anecdotal information that they fish in BGTW using illegal methods including driftnets.
36. Spanish fisheries are governed by Spanish regulations established annually. These national regulations are based on the European Common Fisheries Policy (CFP)⁸ and the Council Regulation for the Mediterranean⁹. However, Spanish implementation of both regulations has found to be lacking over the years.

⁸ Council Regulation (EC) 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the CFP.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:358:0059:0080:EN:PDF>

⁹ Council Regulation (EC) 1967/2006 of 12 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 1626/94.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:409:0011:0085:EN:PDF>

Specifically in relation to the latter, the Spanish management plan under the 2006 Regulation, establishes a 10% reduction in fishing effort plus additional technical measures. A recent evaluation by the European Commission Scientific and Technical Committee on Fisheries (STECF) has found that the measures implemented by Spain (2006-2010) were insufficient to achieve recovery of overexploited stocks. The proposed plan by Spain for 2011-2015 (under the 2006 Regulation), while setting correct biological goals, is also unlikely to achieve the target for any stocks by 2016 or even halt their decline by then.

37. Based on the analyses, some important conclusions have been drawn. It is critical that management decisions should be based on robust information on the state of the stocks in and around Gibraltar and to what extent current fishing practices are impacting their sustainability, throughout their range.
38. A concerted effort was made to collect such information to evaluate the fisheries and understand their impact. However, the data (which consisted of mainly landings, number of fishing vessels and trips) available have been insufficient in providing clear indications on the state of the stocks and the impacts of the current fishing operations in the waters in and around Gibraltar.
39. Serious gaps in the data include the total catches by species, the location of commercial fishing operations, the biology and population dynamics of these species in and around Gibraltar and these gaps prevented any quantification of the impact of either commercial or recreational fisheries on the species fished; and broader environmental impacts of these fishing activities.
40. The fisheries analysis therefore remains inconclusive about the state of fish species targeted by either the Spanish fishermen fishing in BGTW or the adjacent waters or the fish resources within BGTW (within the 3 nautical miles) targeted by recreational fishermen. In addition, the role of these activities on regional fish resources and their sustainability, is largely unknown.
41. At the same time, a recent presentation¹⁰ on the state of Mediterranean fisheries indicated that whilst the overall situation in the Mediterranean is improving, there is still concern over the sustainability of fisheries in the Mediterranean, despite regional efforts to reduce fishing effort.
42. On this basis, a precautionary approach to the management of fisheries in BGTW is recommended at this time. The level of uncertainty relating to status

¹⁰ Cardinale, M. and Chato Osion, G. 2012. State of the stocks in the Mediterranean and Black Sea. A presentation at the ‘State of Fish Stocks in European Waters’ seminar in Brussels, September 2012. http://ec.europa.eu/fisheries/news_and_events/events/20120926/max_cardinale_en.pdf



and impact of these fisheries on the marine environment within BGTW, provides sufficient evidence to support a ban on commercial fishing within BGTW.

43. The precautionary approach should also be applied to fishing activities on shared or highly migratory stocks (for example bluefin tuna, (*Thunnus thynnus*) for example, is currently under a recovery plan established by the International Commission for the management of Atlantic Tuna (ICCAT)) and especially as Gibraltar is not currently participating in these regional management arrangements.
44. Before any commercial fishing is even considered in BGTW, robust monitoring and assessment programmes need to be established and implemented to collect and evaluate the marine environment around Gibraltar and provide a basis for robust management actions.
45. However, the costs and benefits, and to whom, of considering any commercial fishing in BGTW should be taken carefully into account especially given the overarching desire of the Government of Gibraltar for environmental sustainability, the legislation already in place and that most fishing practices are already regulated if not fully enforced.
46. The situation of Gibraltar is a complicated one in terms of the ability to manage the fisheries resources in and around BGTW. Gibraltar is an overseas territory of the United Kingdom and part of the European Union. However, it does not form part of the CFP and is therefore not subject to the Regulations governing those fisheries. In addition, Gibraltar is not obligated under the Mediterranean fisheries policy, as it is not considered a Mediterranean Member State through the UK. Therefore, any negotiations at international level, including within the EU, cannot be conducted by the Government of Gibraltar directly but must be undertaken by the Government of the United Kingdom.
47. There are a number of regional arrangements, strategies and agreements for the Mediterranean which connect the EU Member States, neighbourhood states and others which provide opportunities for coherence and collaboration in the Mediterranean region and in many cases sub-regions, but Gibraltar is rarely included which is to its disadvantage.
48. These include the Euro-Mediterranean Partnership/Union for the Mediterranean; MEDPAN - A Transnational Cooperation Project to Enhance Management Effectiveness of Marine Protected Areas in the Northern Mediterranean; the Barcelona Convention and its Protocols; the General Fisheries Council for the Mediterranean; and the Alboran Sea Initiative. The UK is currently

not a party to the ACCOBAMS¹¹ agreement under the Bonn Convention (by contrast to EUROBATS¹²) but has acted as an observer and has been considering whether to become a party since 2002. Gibraltar was excluded from the nearby UNESCO Biosphere Reserve.

49. At the EU level, apart from the implementation of the Habitats and Birds Directives (which has been complicated by the European Commission’s agreement that two member states are responsible for the same area as an SAC), there are new commitments under the Integrated Maritime Policy (IMP) and in particular the Marine Framework Strategy Directive (MSFD) which will have implications for Gibraltar. There are both threats and opportunities in these new initiatives.

50. Conclusions and a series of recommendations are presented in this report.

¹¹ Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic ar

¹² Conservation of Populations of European Bats

INTRODUCTION

In May 2012 there were a series of clashes between the Royal Gibraltar Police and Spanish fishing boats fishing illegally in British Gibraltar Territorial Waters (BGTW). This followed the newly elected Gibraltar Government deciding to rescind the so-called “Joint Understanding” (Annex 1) agreed between the previous administration and the Spanish fishermen and to fully implement the Nature Protection Act 1991. This Act was put in place to protect the environment of Gibraltar, including its territorial waters and as such *inter alia* controls and regulates fishing methods in BGTW. Under this “Joint Understanding” fishermen from Spain were allowed access to BGTW in breach of the Gibraltar legislation. The clashes in May 2012 were a reaction to that change as Spanish fishermen believe that they have a right to fish in BGTW. This belief is backed (in their eyes) by statements from Spanish Government representatives to the effect that BGTW are Spanish.

In order to seek to resolve this situation the Chief Minister of Gibraltar met with representatives of Spanish fishermen and a Memorandum of Understanding (MoU) (Annex 2) was agreed which provided for the establishment of an independent technical Commission with representatives from both sides to assess the situation and provide recommendations. Dr Chris Tydeman was appointed as Chair and a fisheries expert, Indrani Lutchman, was also appointed alongside three members from Gibraltar (Stephen Warr as Secretary, Alfred Vasquez and Eric Shaw) all of them acting in an independent capacity. There were also five representatives from Spain, (Pedro Maza, José Gabriel Frías, Juan Morente Montes, Jorge L. Campos Ucles, Leoncio Fernandez) three of them fishermen, one a lawyer and one a trade union official and boat owner. An additional fisherman Manuel Peinado attended the first meeting. Two full formal meetings of the Working Group took place where it was clear that the agendas of each side were at odds and there was a significant lack of technical expertise on the Spanish side to match that on the Gibraltar side. This made discussions beyond rhetoric and those of a meaningful technical nature somewhat problematic. At the first meeting the Spanish fishing representatives also rejected the MoU which had previously been agreed and signed. The Chairman suggested that these would lay on the table pending further discussions. Also at the first meeting it was agreed that the fisheries expert Indrani Lutchman would visit the fishing ports in La Linea and Algeciras (accompanied by Stephen Warr and Eric Shaw) at the invitation of the fishermen to look at fishing practices and catches. During that additional meeting she was provided with some limited catch statistics from those ports.

At the second Working Group meeting there was some further discussion around the draft Terms of Reference (ToR) (Annex 3) provided by the Chairman, with little apparent dissent at the meeting. Subsequently, problems were raised by the Spanish members, especially in terms of the extent of the work and in timing. At the Working Group meeting the Spanish side wished to delete the time frame but subsequently insisted on a much shorter one but this was never agreed. Indeed since the ToR remained outstanding there has been no agreed time frame and any suggestions for deadlines have been those imposed unilaterally by the Spanish side or imposed without the knowledge or agreement of the Chairman and the rest of the Working Group. A decision was taken to proceed without agreement on the ToR for practical reasons. At the second meeting the Chairman asked if there could be access to technical experts from the Spanish side as direct requests had thus far been rejected. This was agreed. However, a proposed meeting date offered by the Spanish side was impossible to make at the very short notice offered. Subsequently suggestions were made by the Spanish representatives, that a technical meeting had been rejected, which was most certainly not the case. One element of the ToR that had not been questioned was that meetings should be by mutual agreement as to time and place. A meeting was arranged on 7th August at the Instituto Español de Oceanografía in Cadiz between the Spanish fisheries expert (Dr. Ignacio Sobrino) and Indrani Lutchman. This was a positive meeting with further data on fisheries being made available. Further information was forthcoming on request and has been analysed together with information collated from the fishing clubs in Gibraltar. A preliminary rapid analysis was undertaken of the first tranche of data and was presented to the Chief Minister on 17th August 2012, at his specific request. The full analysis of the available fisheries data can be found in the section specific to fisheries below.

However this Report does not only deal with fisheries issues although this was the only interest expressed by the Spanish fishermen in the Working Group meetings, although wider concerns had been expressed outside those meetings. Also it should be noted that this exercise was related specifically to technical and practical matters. However, there are very clear political overtones that have been very difficult to ignore not the least of which is the position of the Spanish Government on BGTW continuing to advise the Spanish fishermen that the waters are Spanish and to ignore the Gibraltar legislation and more particularly the Royal Gibraltar Police. This has been further exacerbated by the ongoing presence of boats from the Guardia Civil accompanying Spanish fishing boats on their incursions into BGTW. Thus the political and practical cross making it impossible for the report to remain entirely technical in nature. However, the authors have endeavoured to avoid political issues wherever possible and tried to produce a purely factual and technical report.



The Report considers the background to the issues and then considers the marine environment around Gibraltar and its biodiversity, including in a regional context. It then goes on to look at human interactions with the environment in general and then specifically at fisheries and related matters including an analysis of available data from both commercial and recreational sectors. Consideration is given to relationship (and potential relationship) of Gibraltar in the international and European arenas followed by some conclusions and recommendations.

BACKGROUND

UK Overseas Territory and relationship to the EU

Gibraltar is an Overseas Territory of the United Kingdom having been ceded to the “Crown of Great Britain” by the Treaty of Utrecht in 1713. Various terms have been used to describe the status of Gibraltar and its relationship with the United Kingdom but under the provisions of the British Overseas Territories Act 2002 Gibraltar is termed a British Overseas Territory – sometimes called a UK Overseas Territory (UKOT). As such the UK claims a 3nm limit around the Territory under international law – British Gibraltar Territorial Waters – and the report is predicated on that point of law, which although challenged informally by the Spanish Government has not, as far as we are aware, been tested in the international courts.

Uniquely, as a UKOT, Gibraltar is also part of the European Union. Article 299(4)3 of the EEC Treaty provides that “the provisions of the EEC Treaty shall apply to the European territories for whose external relations a Member State is responsible”. As Gibraltar was and is a territory for which the United Kingdom is responsible it formed part of the European Economic Community subsequently renamed the European Community and this also means that Gibraltar forms part of the European Union.

Notwithstanding that Gibraltar is part of the EU, some provisions *inter alia* relating to the Common Agricultural and Fisheries Policies do not apply to Gibraltar. The Government of Gibraltar is responsible for legislating for and implementing EU legislation in those areas for which it has competence, which includes environment protection and sustainable development but it is the UK Government which is responsible for acting for Gibraltar in relations with the EU institutions save that Gibraltar is represented in the European Parliament as part of the SW England constituency.

Nature Protection and Sustainability

In 1991 the Government of Gibraltar passed the 1991 Nature Protection Ordinance, which later became the Nature Protection Act 1991. The explanatory memorandum states that it is “AN ACT TO PROVIDE FOR THE PROTECTION OF WILD BIRDS, ANIMALS AND PLANTS AND FOR THE DESIGNATION AND PRESERVATION OF PROTECTED AREAS FOR THE PURPOSE OF NATURE CONSERVATION AND MATTERS



INCIDENTAL THERETO.” This is a far reaching Act and in many respects ahead of its time in thinking about environmental protection pre-dating for example the UNCED Conference in Rio in 1992 and the Convention on Biological Diversity (CBD) adopted at that meeting. The CBD was then ratified by the UK on behalf of the Government of Gibraltar. Thus the Government of Gibraltar has strong credentials for a desire to conserve biodiversity and to protect the environment in a sustainable development context.

This was further exemplified by the introduction of the Environment Charter in 2006 which provides a series of broad guiding principles to form the core basis on which Gibraltar aims to achieve sustainable development. It provides the footprint by which environmental policies and management are administered and developed.

The guiding principles are:

- *To recognise that all people need a healthy living environment for their well-being and livelihood and that all can help to conserve and sustain it;*
- *To use our natural resources sensibly, with regard to the needs of present and future generations;*
- *To identify environmental opportunities, costs and risks in all policies and Strategies;*
- *To seek expert advice and consult with relevant parties on decisions affecting the environment;*
- *To aim for solutions which benefit both the environment and development;*
- *To contribute towards the protection and improvement of the global environment;*
- *To safeguard and restore native species, habitats and landscape features, and control or eradicate invasive species;*
- *To encourage activities and technologies that benefit the living environment;*
- *To control pollution, with the polluter paying for prevention and remedies; and*
- *To study and celebrate our environmental heritage as a treasure to share with our children.*

It clearly illustrates the Gibraltar Government’s commitment to the environment and the importance of environmental protection whilst taking into account the objectives of sustainable development, from ecological, economic and social perspectives.

Biodiversity Action Plan and global commitments

Also in 2006 the Gibraltar Ornithological and Natural History Society (GONHS) Issued the “Biodiversity Action Plan, Gibraltar: Planning for Nature” (Perez, 2006) which sets out the overall goal for Gibraltar’s biodiversity requirements “*To conserve and enhance biological diversity within Gibraltar and to contribute to the conservation of global biodiversity through all appropriate mechanisms*”. The objectives of the Plan, within both terrestrial and marine ecosystems are therefore:

- *To sustain the existing biodiversity of natural and semi-natural habitats where this has been declining;*
- *To conserve internationally important, threatened and vulnerable species and Habitats;*
- *To sustain the populations and distribution of native species;*
- *To conserve and improve the quality of natural habitats;*
- *To increase total biodiversity, by reintroducing locally extinct species; and*
- *To restore natural habitats by controlling and eradicating alien species.*

It also provides detailed information on species and habitats of special concern.

The Government of Gibraltar is party to the main multilateral environment agreements:

- The Convention on Biological Diversity;
- The Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats);
- The Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals) and two agreements under it EUROBATS and ACCOBAMS);
- The Ramsar Convention on Wetlands of International Importance;
- CITES – the Convention on Trade in Endangered Species of Wild Flora and Fauna; and
- The World Heritage Convention.

The EU collectively is a signatory to all of these agreements (except the Ramsar Convention from which the EU is legally prevented from becoming a contracting party but in which it acts collectively) but with the latter two being of less consequence to this study; and in terms of the EU, Gibraltar is subject to implementing the following legislation most relevant to the review:

- The Birds Directive and Habitats Directive including the Natura 2000 network;
- The Water Framework Directive; and
- The Marine Strategy Framework Directive.

As previously noted British Gibraltar territorial waters do not form part of the Common Fisheries Policy (CFP) and Gibraltar has no registered commercial fleet - indeed it is impossible to register a commercial fishing boat in Gibraltar – and therefore there are no regulations specific to those under the CFP.

Nature Protection Act 1991 and Fisheries

However on environmental grounds the Nature Protection Act 1991 specifically prohibits the use of certain fishing methods in BGTW, namely seine and gill nets, and seabed raking, and the use of artificial lights for attracting fish are also illegal. These measures were enacted in 1991 in order to safeguard marine habitats and species within BGTW that were being negatively impacted by commercial fishing activities. Between 1991 and 1997 the Act was enforced by the Royal Gibraltar Police. While some fishing occurred, this was without sanction and the Police effected arrests and prosecutions on a number of occasions.

Following such an arrest, Spanish fishermen campaigned strongly to press the Gibraltar Government to allow them to fish, leading to the fishermen blockading the frontier. Under this pressure, in 1999, the then Chief Minister agreed to a 'Joint Understanding' (Annex 1) with the fishing federations of La Linea and Algeciras that allowed Spanish fishing vessels to fish in BGTW using methods illegal under the Nature Protection Act 1991. Fishing was allowed subject to certain requirements being met (e.g. number of fishing boats, distance from shore, etc). This was based on the requirements of the fishermen and was not assessed in any way. The term “Understanding” was used in order to avoid any legal implications of a formal agreement, which would have been impossible for Spain as they do not recognise the Government of Gibraltar. However, it should be noted that the general principles of international law provide that bilateral agreements between governments are binding if they are signed in writing with specific commitments; are entered into without coercion or duress; and there is no express written provision that the signatories do not intend to be bound. Thus this “Understanding” would have failed as a binding agreement on several grounds including that regarding duress. Furthermore, the “Joint Understanding” states *“The fishing sector of the Campo de Gibraltar respects as fact that the Gibraltarian authorities have the right to legislate in relation to fishing as they see fit and therefore, as such respect the validity of the Nature Protection Ordinance (Gibraltar*

law). Equally, the fishing sector undertakes to respect the instructions of the police authorities of Gibraltar, in their enforcement of that law”.

This is seemingly at odds with the view that the Spanish Government does not recognise the Government of Gibraltar and its right to legislate.

The Government of Gibraltar believed that the fishing grounds around Gibraltar had been overexploited and required measures to redress this. The presence of rocky reefs in BGTW is attractive both to fish and to fishermen. This is one of the reasons why Gibraltar created the protected area, under the 1991 NPA, one of the considerations being to provide refuge, feeding and breeding opportunities for fish, something which will be of benefit to fishermen in adjacent areas, as well as to marine life in general. It was on this basis that the Government of Gibraltar reinstated the enforcement of the 1991 Act. Subsequently the fishermen themselves appear to have accepted that catches have declined seriously and as a result, Spanish authorities in the region have also now implemented a series of protected areas including no- fishing zones and time restrictions.

Previous Analysis of the Fisheries Issues

It became clear when researching the background to this issue that much of the ground had been covered before and that both analysis (aside from detailed work on fish catches and landings) and consideration of much the same issues had been covered before. This is not unsurprising given that little has changed since 1991 when the Government of Gibraltar deemed it necessary to take action to regulate activities in BGTW. In February 1999 the Gibraltar Ornithological and Natural History Society (GONHS) produced a report *“Commercial fishing and the conservation of marine life in the waters around Gibraltar: An Informed Analysis”* which described the outcome of a similar working group (but with no independent members) detailing discussions around the dispute situation pertaining at the time.

G.O.N.H.S. summarised the then main points, as they saw them, as follows:

- Fishing with nets and rakes, and use of artificial light to attract fish is illegal in the waters of Gibraltar. Long line fishing is permitted but should be licensed under the 1995 Regulations.
- The waters of Gibraltar are defined by the Geneva Convention to which Spain is a party.
- The methods are prohibited under nature conservation laws and the issue is therefore not political.



- Gibraltar has a legitimate and constitutional right to legislate in matters of nature conservation. The laws are legitimate and well justified.
- Gibraltar's waters are a small area and cannot sustain commercial fishing.
- Fishing stocks in the area are in decline.
- Gibraltar has an international obligation to conserve its marine species.
- The measures have been seen to be effective in Gibraltar as well as in Spain.
- Vessels fishing in these waters are breaking the law and committing a criminal offence.
- Gibraltar's law enforcement agencies have to take action when criminal offences are committed, by person or persons of whatever nationality.
- Spanish fishermen, on their own admission, do not NEED to fish in Gibraltar waters for survival: they like to have it as an option.
- They are not allowed to fish near the port of Algeciras nor in the approaches to the petrochemical works on the north and north-west of the Bay.
- They move into Gibraltar waters because they are quick to exhaust stocks in their own.
- Fish living in and/or reproducing in Gibraltar waters will swim into Spanish waters.
- Spanish biologists close to the fishermen have stated that marine protected areas of the type found in Gibraltar's waters are essential.
- The Spanish fishing fleets of Algeciras and La Linea are in decline as fish stocks in general fall; there is a need for the Spanish authorities to diversify the occupation of present fishermen.
- The Junta de Andalusia itself recognises the need to stabilise the fishing fleet.
- Spain has itself designated many areas where fishing is prohibited for reasons of nature conservation.
- There seems a failure on the part of Spanish fishing interests to understand the true issues, despite these having been explained to them at length. There may be an unwillingness to understand the issues. Issues such as the right to declare nature protection areas are repeatedly ignored.
- The long term solution must include recognition of the value of protection of marine life and extensive measures to protect this in waters adjacent to Gibraltar.
- A respect for nature protection laws and a regional approach to improve fish stocks must be achieved.
- Any move to licence Spanish fishermen will be followed by Gibraltarians wishing to be given priority for such licences.
- Concessions which appear to accept Spanish claims on the sovereignty of Gibraltar waters could be followed by Spanish claims for bunkering fees to be payable in the Bay, with negative consequences for both Gibraltar and Spain.

The conclusions reached by the authors of the GOHNS report will be compared to those reached as result of the work of the authors of this report.

Marine Special Area of Conservation

To further protect the marine biodiversity of BGTW, and to comply with European Union legislation, the Southern Waters of Gibraltar were designated as a Site of Community Importance (SCI) under the Habitats Directive. This designation was approved by the Commission in July 2006. The Southern Waters have since been designated as an SAC and an SPA (March 2011) and a management plan elaborated (Government of Gibraltar, 2011) namely the Southern Waters of Gibraltar Management Scheme. The Government of Spain questions this designation on the grounds that these waters are Spanish and so they designated an area in 2008 which overlaps all of BGTW. The European Commission also approved this proposed area as a Special Area of Conservation thus making an immediate further conflict between the Governments concerned. This has been subject to challenge in court in Europe by both Gibraltar and the United Kingdom. It is difficult to see how this was able to happen given a guidance note issued by the European Commission which states “On the basis of the proposed national lists, ***the Commission, in agreement with the Member States***, must adopt the lists of SCIs”.

Rescinding the “Joint Understanding”

With the change in administration in December 2011, a decision was made to rescind this (illegal) 1999 “Joint Understanding” on fishing. There was a very clear mandate for this, based on a manifesto commitment made by the incoming Government. It therefore followed that the Royal Gibraltar Police would now need to enforce applicable laws that prevented the use of illegal fishing methods under the Nature Protection Act 1991.

In the early months of 2012 discussions took place between the Government of Gibraltar and the fishing cofradías of La Linea and Algeciras (Spain) regarding commercial fishing within BGTW, regarding the rescinding of the 1999 “Joint Understanding” and the potential impact that this would have on the ability of the Spanish fishing cofradías to continue fishing. However the Spanish Government intervened and informed the Spanish fishing cofradías in La Linea and Algeciras that the waters in question are Spanish and that therefore they should not abide by any applicable laws in BGTW i.e. the Nature Protection Act 1991; the same stance that was adopted by the Spanish Government in 1997 when the previous fishing dispute erupted. Despite the willingness of Gibraltar Government to engage in



dialogue the situation escalated when 12 fishing boats from Algeciras (Spain) entered BGTW in the late hours of Thursday 17th May 2012 and used fishing methods that are illegal under the Nature Protection Act 1991, deploying seine nets and using artificial light lures. The fishing vessels were later joined by several Guardia Civil launches that spent over half an hour watching over the Spanish fishing vessels. After approximately 3 hours the Royal Navy intervened and ordered the Guardia Civil launch to leave BGTW. At that point all Spanish vessels departed, although it is suggested that they had managed a catch before leaving.

At this point in order to seek to resolve this ongoing dispute the Chief Minister of Gibraltar met with representatives of Spanish fishermen and a Memorandum of Understanding (Annex 2) was agreed which provided for the establishment of an independent technical working group with independent representation and representatives from both sides to assess the situation and provide recommendations.

BIODIVERSITY IN THE MEDITERRANEAN

Biodiversity hotspot

The Mediterranean is a biodiversity hotspot. Coll *et al* (2010) following a thorough literature analysis, and seeking expert opinions, assessed that there were about 17,000 species occurring in the Mediterranean Sea. The Mediterranean Sea includes 7% of the world’s marine species for an area that represents less than 1% of the world’s ocean surface. Many of the ecological characteristics in the Mediterranean Sea are under threat with over 20% of the known species under threat, which will likely increase given that currently undescribed species will be added in the future and a large proportion of species are either not assessed or assessed as Data Deficient (an issue in itself). This includes emblematic species of conservation concern, such as the world’s most endangered pinniped, the critically endangered Mediterranean monk seal (*Monachus monachus*), sea turtles, several whales, dolphins, sharks, skates and rays at risk of extinction or threatened, and the overexploited bluefin tuna (*Thunnus thynnus*). There are several unique habitats at various levels of risk, such as seagrass meadows¹³ including the endemic *Posidonia oceanica* (an important indicator of human impacts and a host of crucial ecosystem services), vermetid reefs, coralligenous concretions, maerl beds, seamounts and deep sea coral reefs. Coll *et al* found that spatial patterns showed a general decrease in biodiversity from northwestern to southeastern regions following a gradient of production and that biodiversity was also generally higher in coastal areas and continental shelves, and decreases with depth. Temporal trends indicated that overexploitation and habitat loss have been the main human drivers of historical changes in biodiversity. Habitat loss and degradation, followed by fishing impacts, pollution, climate change, eutrophication, and the establishment of alien species are the most important threats and affect the greatest number of taxonomic groups. The spatial identification of hot spots highlighted the ecological importance of most of the western Mediterranean shelves and in particular, *inter alia* the Strait of Gibraltar and the adjacent Alboran Sea.

¹³ There has been some dispute as to the extent, or even presence, of *Posidonia* in BGTW – however there are recorded incidences in the literature and personal communications that confirm the presence of seagrass beds within BGTW.

Fish

There is still some discussion about diversity estimates for some taxonomic groups. For fish species, for example, several estimates of Mediterranean diversity exist (references are within Coll *et al* 2012): Whitehead *et al.* (1986) mention 589; Fredj and Maurin (1987) listed a total of 612 species (and identified 30 species as uncertain); and Quignard and Tomasini (2000) registered 664 species. Hofrichter (2002) summarised 648 species, and Golani *et al.* (2002) report a total of 650 fish species. Fish diversity estimates also change as new species are described or reclassified. The list of exotic fish species as of 2010 revealed that the Mediterranean contains 116 exotic species, although more species are likely to be found. There is also a long-standing controversy regarding genetic differentiation among a few fish populations and sub-basins, especially of commercial species due to management implications (for example for the European anchovy (*Engraulis crasicholus*)), although results are still under debate.

Approximately 80 fish species are elasmobranchs (sharks and rays), although the status of some is uncertain because of infrequency or uncertain reporting. According to Cavanagh and Gibson (2007) nine of these elasmobranch species may not breed in the Mediterranean, while some are rare because the Mediterranean represents the edge of their distribution ranges. The distribution of elasmobranch species was not homogenous showing a higher concentration of species in the west. The endemic richness gradient of fish species was more pronounced with latitude, the north side exhibiting a greater richness. A paper by Ferretti *et al* (2008) states that in the Mediterranean Sea large predatory sharks have declined dramatically in abundance over the last 2 centuries. Only 5 of the 20 large predatory sharks were detected at levels of abundance sufficient for analysis and these 5 species showed rates of decline from > 96 to > 99.99%, which may classify them as critically endangered according to IUCN criteria. At these low levels large sharks may be considered functionally extinct in coastal and pelagic waters of the north western Mediterranean. Historical records show the Mediterranean Sea as once having an abundance of large sharks, sharks which were once considered a pest by fishermen. In the early 20th century many coastal fisheries regularly targeted or landed sharks and indeed until relatively recently, about a decade ago, sharks were subject to an angling competition in Gibraltar waters, which ceased for insufficient target species.

There is an indication that the Mediterranean Sea is losing a wide range of its predator species. In addition to large predatory sharks, cetaceans, pinnipeds, turtles, and large bony fishes have been recorded as declining similarly. The wider ecosystem consequences remain to be investigated but elsewhere it has been demonstrated that predators can play an important role in structuring communities

by controlling prey populations and preventing ecological dominance. Losing top predators can induce strong increases in midlevel consumers, shifts in species interactions, and trophic cascades. The decline of large sharks and other marine predators in the Mediterranean may have brought about such significant changes in the ecology of the region. It has been suggested that apparent increases in squid around Gibraltar are as a result of loss of top predators.

Mouillot *et al* (2011) undertook an investigation into *Protected and Threatened Components of Fish Biodiversity in the Mediterranean*. They found that the spatial congruence of fish biodiversity hot spots with the existing Marine Protected Area (MPA) system and the areas of high fishing pressure have not been assessed. Moreover, evolutionary and functional breadth of species assemblages has been largely overlooked in marine systems. They adopted a multifaceted approach to biodiversity by considering the species richness of total, endemic, and threatened coastal fish assemblages as well as their functional and phylogenetic diversity. They showed that these fish biodiversity components are spatially mismatched. The MPA system covers a small surface of the Mediterranean (0.4%) and is spatially congruent with the hot spots of all taxonomic components of fish diversity. However, it misses hot spots of functional and phylogenetic diversity. In addition, hot spots of endemic species richness and phylogenetic diversity are spatially congruent with hot spots of fishery impact. The results highlight that future conservation strategies and assessment efficiency of current reserve systems will need to be revisited.

Marine Mammals

Nine species of marine mammals are encountered regularly in the Mediterranean. Of these species, five belong to the Delphinidae, and one each to the Ziphiidae, Physteridae, Balaenopteridae, and Phocidae. Another 14 species are sporadically sighted throughout the basin and are considered “visitors” or “non-residents.”

Marine mammals are concentrated in the Western Mediterranean and Aegean seas. Of the nine resident marine mammals, eight were found in the western part of the basin. This distribution pattern was also observed for the visiting marine mammals. As for Gibraltar specifically, cetaceans are prominent in both the Bay and in the Strait, and both common dolphin (*Delphinus delphis*) and striped dolphin (*Stenella coeruleoalba*) have nurseries in these areas. A Spanish study (Canadas *et al* 2005) attempted to use habitat preference modelling as a tool for identifying suitable protected areas for cetaceans using 11 years of survey data. The results identified areas that are important for a number of cetacean species most particularly in the Strait and in the Alboran Sea, areas of some significance for

Gibraltar. By contrast there are very low numbers of sightings in the Gulf of Cadiz. The importance of the Strait of Gibraltar, especially the more coastal areas, was noted for common dolphin, including the Bay of Gibraltar.

Seabirds and Fisheries

Seabirds from the Mediterranean have a low diversity (15 species) and their population densities are small, consistent with a relatively low-productivity ecosystem compared to open oceans, and particularly with upwelling regions. Ten of the Mediterranean species are gulls and terns, four are shearwaters and storm petrels, and one is a shag (Pelecaniformes). Three of the ten species are endemics. Belda and Sanchez (2001) found that seven species of birds are susceptible to bycatch in longlines. The most commonly caught seabirds in longlines are the Cory's shearwater (*Calonectris diomedea*), Audouin's gull (*Larus audouinii*), yellow-legged gull (*Larus michahellis*), Northern gannet (*Morus bassanus*), Mediterranean shearwater (*Puffinus yelkouan*), and Balearic shearwater (*Puffinus mauretanicus*).

The north-west Mediterranean longline fishery was estimated to affect 4-6% of the local breeding seabird population (Cooper 2003, Belda and Sanchez 2001). Balearic shearwaters are of particular concern because of their susceptibility to longline bycatch and their declining population size. It is noteworthy that the European Commission (2012) released on 16th November 2012 a Communication from the Commission to the European Parliament and the Council, for an “*Action Plan for reducing incidental catches of seabirds in fishing gears*”. This notes that at least 20 species of seabirds interact with longline fisheries in EU waters, of which four species are notable for their high conservation status with moderate to high frequency of capture in longline gear relative to their populations. Three of these are Mediterranean. The Balearic shearwater is classified by the IUCN as Critically Endangered, meaning it has been evaluated to have a very high risk of extinction in the wild. The others, the Yelkouan shearwater and Audouin's gull, are classified as Near Threatened, meaning the population is in moderately rapid decline globally. In addition to these species a further five are listed in the EU Birds Directive as having unfavourable conservation status requiring "special conservation measures" due to declines in localised populations. These include Cory's shearwater (*Calonectris diomedea*) and Mediterranean gull (*Larus melanocephalus*) in the Mediterranean.

For all of these species significant levels of bycatch are reported. Several other species including the yellow-legged gull (*Larus michahellis*) in the Mediterranean have high incidental catches and ICES reports that the sheer scale of the

numbers caught in longline fisheries is cause for concern even though the populations of these species are believed to be relatively stable. The information available on incidental catches of seabirds in static nets is not complete enough for a comprehensive understanding of the magnitude of the impacts on seabird populations at an EU-wide level. However there are several static net fisheries where seabird mortality has been reported as being problematic. In the Mediterranean available information suggests that static nets pose a threat to a subspecies of the European shag (*Phalacrocorax aristotelis desmarestii*) – the subspecies that breeds in Gibraltar - and several species of shearwater. Furthermore, evidence is emerging that purse seines can take significant bycatch of species such as shearwaters. A survey carried out in 2008/2009 in Portuguese ports showed purse seines to have taken the highest proportion (45%) of Balearic shearwaters compared to any other fishing gears, including longlines and static nets in that region.

The objective of the Action Plan is to minimise and, where possible, eliminate the incidental catches of seabirds, with priority action focusing on individuals belonging to at least 49 threatened seabird populations by EU vessels operating in EU and non-EU waters, as well as by non-EU vessels operating in EU waters. For other seabirds where the populations are stable but bycatch are at levels that are cause for concern, bycatch should be reduced as a first step towards bycatch elimination. Additional specific objectives are to:

- *Identify and rectify weaknesses and incoherencies in current management measures both in EU and non-EU waters;*
- *Consolidate and collect data critical to establish the extent and threat posed by seabird bycatch particularly to the populations of species identified as being of conservation concern;*
- *Minimise bycatch of seabird species of conservation concern to levels that eliminate the threat to the populations of these species through the implementation of appropriate mitigation measures;*
- *Address the lack of acceptance by fishermen that seabird bycatch is a problem as well as the lack of incentive for fishermen to adopt mitigation measures; and*
- *Resolve outstanding difficulties with existing mitigation used in longline fisheries and address the absence of effective mitigation measures for other fishing gears, particularly static net fisheries.*

The Action Plan has been aligned with the overarching objective of the CFP which points to the need to minimise the impacts of fishing activities on marine ecosystems (including seabirds) and progressively implement an ecosystem based approach to fisheries management. The Action Plan depends on parts of the EU environmental *acquis*, in particular the Birds and Habitats Directives and the Marine Strategy

Framework Directive (MSFD). The full implementation of these Directives is part of the EU's response to its commitments under the UN Convention on Biological Diversity, and is reinforced by the commitment made by EU Heads of State "to halt the loss of biodiversity [in the EU] by 2010"; it is further reiterated in the EU Biodiversity Strategy to 2020.

The key measure established by the Birds Directive is a general scheme of protection for all wild birds prohibiting various acts including, most relevant to fisheries, deliberate killing or capture by any method. The problem word here is “deliberate” and proving intent. The Birds and Habitats Directives also establish the Natura 2000 network of protected areas, which embraces sites designated under any of the Directives concerned – Special Protection Areas (SPAs) established under the Birds Directive and Special Areas of Conservation (SACs) established under the Habitats Directive. The MSFD aims to bring coherence between different policies and foster the integration of environmental concerns into other policies, such as the CFP. Under the MSFD protection of seabirds is recognised as a requirement that will contribute towards the achievement of Good Environmental Status (GES). Its implementation is a legal requirement and dedicated measures to protect seabirds are implicitly required in compliance with the Directive. In the context of the MSFD and also the Action Plan, the issue of seabird bycatch is also covered within the framework of Regional Sea Conventions on marine environment, in this case the Barcelona Convention. However, once again Gibraltar finds itself in a policy vacuum not being part of the CFP; in conflict (courtesy of the European Commission) over its marine SAC and not being a party to the Barcelona Convention which it indeed cannot be as this would have to be done through the UK Government's signature and ratification.

Species and Habitats - The Biodiversity Action Plan

In terms of biodiversity in and around Gibraltar knowledge of wildlife in historic times is limited although there have been bones of the now very rare and endangered Mediterranean monk seal (*Monachus monachus*) found dating back 20,000 years. The Biodiversity Action Plan gives information on the situation as of 2006 and provides action plans for both species and habitats. Each species is classified under one of four categories: global, European, regional and local. Species for which action plans have been prepared include western Mediterranean shag (*Phalacrocorax arisotelis desmaresti*), the Mediterranean ribbed limpet (*Patella ferruginea*) and all cetaceans.

cold surface Atlantic waters that enter eastwards. It is these pelagic waters that are home to the larger predatory species such as Atlantic bonito (*Sarda sarda*), albacore (*Thunnus alalunga*), swordfish (*Xiphias gladius*), and Northern bluefin Tuna (*Thunnus thynnus*). Cetaceans are also prominent in the Bay and in the Strait and both common dolphin (*Delphinus delphis*) and striped dolphin (*Stenella coeruleoalba*) have nurseries in these areas.

The Strait is also an important site for seabirds, both for passage and wintering species especially for Balearic and Cory's shearwaters, and is recognised as an Important Bird Area (IBA) by Birdlife International. Although IBA is a non-statutory designation it is highly thought of and has been used by several European Union countries as the basis for the designation of Special Protection Areas under the Birds Directive.

Intertidal Habitats and Species

Although the intertidal habitats around Gibraltar are relatively narrow they are nonetheless an important component in its biodiversity. This habitat is home to two species of molluscs the Mediterranean ribbed limpet (*Patella ferruginea*) and the date mussel (*Lithophaga lithophaga*) both of which are on Annex IV of the Habitats Directive meaning that they require strict protection. The ribbed limpet, *Patella ferruginea* is endemic to the Mediterranean and is the most endangered marine invertebrate along the Western Mediterranean rocky shoreline. Although its relative abundance in Palaeolithic and Neolithic deposits indicates an extensive former distribution in the Western Mediterranean Basin (East coast of Italy, Mediterranean France, Iberian Peninsula, Morocco, Tunisia and the Western Mediterranean islands), today its Mediterranean range has progressively contracted to restricted areas probably due to anthropogenic pressure and, presently, the species is threatened with extinction. The Bay of Gibraltar houses the largest known population of this species in the entire Iberian Peninsula, and very probably in the entirety of continental Europe, with the highest densities in the Rock of Gibraltar, possibly due to the limestone substrate and the reduced collecting. The intertidal also includes the rocky vertical walls of the harbour and marinas that form an algal mat on the surface which is full of invertebrates and attractive to juvenile fish. There is some evidence to suggest that these areas may be important nursery areas for young fish which then migrate out into the Bay but clearly further study is required. There are two further species of interest in the intertidal which are listed on Annex II of the SPAM Protocol under the Barcelona Convention. These are the black limpet (*Patella nigra*) and Mediterranean seaweed (*Cystoseria mediterranea*).

Sub-littoral Habitats

These above species are also found in sub-littoral habitats with date mussel (*Lithophaga lithophaga*) recorded down to 20 m. Offshore rocks also form an important habitat, especially in deeper waters beyond the sandy benthic areas. The benthic rocky bottoms on the east side are fairly degraded due to excessive commercial fishing and damage by ships anchors. Rock habitat within the Bay also appears to be degraded. The rock habitat off Europa Point is well fished by both commercial and recreational fishers especially by longliners.

There are several species of conservation concern that do not seem to be habitat specific. One of these is the fan mussel (*Pinna nobilis*) which is endemic to the Mediterranean and its numbers have shown a serious decline in recent years, which many authorities believe to be linked to increasing damage to the coastline and reduction of one of its prime habitats of seagrass meadows. The knowledge of the density of individuals and their distribution is extremely scarce. It is a filter feeder and these mussels anchor their anterior apex in the substrate using their byssus threads. These mussels then stand proud of the sea-bed where their vertical position allows them to tap into currents away from the seabed. Water is siphoned through their mantle cavity where it is used for respiration and also filtered for nutrients. This feeding habit unfortunately makes them particularly susceptible to pollutants not only directly but also via longer-term bioaccumulation, and their vertical position off the seabed means that they are easily dragged up by rakes or bottom nets. It can grow to 65cm in 15 years and individuals over 80cm in length are almost certainly over 20 years old. There are reports of this species in the Bay of Gibraltar based on personal recollection and reports produced for the Department of the Environment as part of its surveillance monitoring programme geared for protected species. There are records of this species in the seagrass meadows that used to run between the old Montagu Sea-Bathing Pavilion and H.M.S. *Rooke*. Unfortunately reclamations in the area have wiped out the seagrasses and, probably associated species such as *P. nobilis* within the harbour and the Bay in general. The species can also be found, albeit more rarely, on sand, maërl, biodetritic and muddy substrates which predominate in the shallow seas around the Rock. There exists a similar species in Gibraltar waters *Pinna rudis* which is also in serious decline and although not listed in Annex IV of the EU Directive 92/43/EEC, as is *Pinna nobilis*, it is included in the Barcelona Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean 1999 – Annexe II and Bern Convention (on the Conservation of European Wildlife and Natural Habitats 1998 – Annexe II). Although relatively easy to separate from *P. nobilis* when adult, particularly due to size differences (the maximum size for *P. rudis* is around 50cm compared to over 1m for *P. nobilis*), juvenile *P. nobilis* individuals are very similar to *P. rudis* specimens, especially as they both sport thick, convex

scales on the outside of the shell and are also invariably covered with encrusting sponges, bryozoans and other similar epibionts, making identification based on external features very difficult. Thus, unless the specimen in question is large and/or relatively devoid of encrustations, it becomes difficult in the field to establish whether it belongs to *P. nobilis* or *P. rudis* without handling or even removal both of which are invariably detrimental to the organism. It would thus seem sensible to provide the same degree of protection to both species. The fourth species in Annex IV of the Habitats Directive is the long-spined sea urchin *Centrostephanus longispinus* which is also endemic to the Mediterranean. It has a relatively wide distribution in the Western Mediterranean and in the proximal Atlantic but is rarely reported hence its inclusion in Annexe IV of the Habitats Directive. It is usually associated with rocky or detritic/maërl substrates, usually in the depth range 5-200m, although most commonly at depths greater than 25m. The habitats usually occupied by this species mean that it is infrequently brought up by fisherman using traditional methods. This, added to the fact that it is not an animal that is sought after by humans for either food or collection value, suggests that its scarcity may not be due to anthropogenic factors, and it may instead be a relict species undergoing a natural decline.

Artificial Reef

Work on the construction of the first artificial reef began in 1975 and since then a number of others have been created. Shaw (1996) noticed a dramatic increase in biodiversity of mid-water and bottom-dwelling species associated with these artificial reefs. Marine life had increased from 12 vertebrate and 22 invertebrates previously recorded in the area to 54 vertebrates and 55 invertebrates (including *Pinna spp*) once the reef was in place. The area has been affected by the incursions of Spanish fishing boats. Remains of nets have had to be removed by hand from around the site to prevent ghost fishing, and uncontrolled diving has also proved a problem.

Sandy Substrates

Gibraltar is mostly surrounded by sandy substrate but there are many inshore rocks and some shallow reefs among which are Europa Reef, Seven Sisters. Governor's Beach Reef, Sandy Bay Reef and Eastern Beach Reef. The most significant of these is Europa Reef with its position at the entrance to the Bay and the Strait making it particularly attractive to marine life making it also a popular area for fishing and diving. Factors noted as affecting this habitat type are:

- illegal net fishing;
- excessive long lining;

- uncontrolled scuba diving;
- uncontrolled spear fishing;
- illegal dumping; and
- illegal fishing by scuba divers.

The majority of benthic areas are composed of sand covering most of the western and eastern sides of the Rock. It is not particularly high in numbers of species but was once a rich habitat for a range of molluscs on the east side but this habitat has deteriorated markedly mainly due to excessive rake fishing by Spanish boats. *Tapes (Ruditapes) decussatus* has practically disappeared having once been a common feature in the fish market in La Linea; *Acanthocardia tuberculata* once commonly taken for bait was depleted in the 1980's. In 1985 the price for live *Ruditapes decussatus* was about € 0.60/kg. In 2005, the price was about € 15/kg. Mollusc fishermen have since concentrated on the smooth clam (*Callista chione*) a highly regarded edible species but immature numbers make up most of the catches now. It should be noted that clam raking is indiscriminate in the species taken and is highly destructive to benthic habitats. The loss of the rich mollusc breeding grounds to the east of the Rock has had a serious impact on the quantity and species of fish that frequented the area. Rake fishing in the area of Western Beach and the airport during the late 1990's destroyed an area of seagrass which after a survey in 2004 found was gone completely and lead to agreement to the area being dredged for a reclamation project. The physical loss of characteristic habitats of the Mediterranean is one of the most visible consequences of human pressure. The abundance and distribution of seagrass meadows, critical habitat for the refuge, reproduction and feeding of 25% of Mediterranean flora and fauna species, has drastically declined due to bottom trawling, coastal physical modifications, and pollution. Densities of the most common species, *Posidonia oceanica*, have decreased by up to 50% compared to original distributions in the Mediterranean. Areas of seagrass, such as *Posidonia*, are a priority habitat under the Habitats Directive and are subject to recovery plans. Factors noted as affecting this habitat type are:

- uncontrolled rake fishing by Spanish boats;
- illegal rake sizes;
- ignoring Spanish close season for mollusc fisheries; and
- illegal net fishing.

Maerl

Another habitat type found in these waters is maerl which is a crumbly composite of clays, calcium and magnesium carbonates and remnants of shells. It is found inshore off the North Mole in an area used as anchorage by shipping; and below the 100m

mark in the middle of the Bay of Gibraltar and just beyond the 3 nm limit on the east side, again below the 100 m mark where it is too deep to be an anchorage. The status of maerl beds and coralligenous habitats is unknown and little is known of their biodiversity in these waters.

Summary

In summary Gibraltar’s waters are in an important sea in global biodiversity terms - a “hotspot” and Gibraltar most particularly is an important part of it. On the Strait it is on the crossroads between the Atlantic and Mediterranean and between Africa and Europe. It is the Mediterranean stronghold for at least one marine invertebrate; a nursery ground for dolphins; a critical part of the flyway for endangered shearwaters; has artificial reefs that function as nursery grounds for fish and the habitat for numerous marine invertebrates. It is nominally largely a marine protected area with legislation from 1991 that was ahead of its time in many respects but has not received the enforcement required under that legislation. Given the paucity of marine protected areas in the region it should receive priority attention to ensure its conservation and sustainable management. The subject of fisheries receives special attention.

HUMAN INTERACTIONS IN THE MEDITERRANEAN

Historical Perspective

There is early evidence of human interaction with marine fauna in the Mediterranean Sea from the Paleolithic period and this continued through the Mesolithic and Neolithic periods (approximately 20,000–4000 B.C.). Zooarchaeological remains have been found in Greece, in southern Spain, in Israel, in Cyprus, and the Strait of Gibraltar. In Greece, fish bones of large tuna, Sparidae and Mugillidae, were found. Zooarchaeological remains in Spain include 20 taxa and show changes in mean fish size and range over time that have been considered as an indication of overfishing. Thus the issue is hardly a new one – but it still remains a problem.

Since the fifth century B.C., humans have exploited marine resources. Aristotle, in his zoological works dating to the fourth century B.C., focused his scientific interest on fish and invertebrates exploited by humans in various ways. Commercial fishing and fish processing activities played an important role in the Pontic economy. The export of fish and fish products, including salt-fish (tarichos) and fish sauce (garum) mainly from European anchovy to the Aegean Sea, continued into the Roman period. These products were exported from the western Mediterranean. Seafood became increasingly popular toward the end of Roman domination, probably because of the proximity of, and access to, marine resources. There is historical evidence of overfishing in some parts of the Western Mediterranean in the early Imperial period. Even then, certain fishing techniques were prohibited to manage or counteract the decline in fish stocks (such as fishing by torch lights at night), and efforts were made to boost natural availability with introduced fish and shellfish stocks. Fishing, fish processing, industrial exploitation of several marine species, and development of improved fishing gear continued during the Byzantine period. Various literary sources point out that targeted species, among them the currently overfished Tuna, are conspicuous. In Northern Africa, the first written evidence dates from the tenth century and refers to fishing gear used to catch mullets, Atlantic bluefin tuna (*Thunnus thynnus*) (with large spears), and fish in shallow waters. There is noticeable fishing activity dating from the Byzantine, Moslem (tenth century), and later Norman periods (eleventh to thirteenth centuries) in southern Italy and in Sicily, where Atlantic bluefin tuna (*Thunnus thynnus*) was the main target species exploited by traps (tonnara). Human impacts on marine biodiversity grew increasingly stronger

as the Mediterranean cities and ports continued to grow and more recent centuries witnessed substantial advances in technology. It is assumed that since the fourteenth century, the adoption of new fishing methods in the Western Mediterranean, their spread to southern Italy, and their introduction to the Adriatic in the seventeenth century increased fishing catches. They increased to such an extent that even the early fishermen's organisations (sixteenth century), such as *cofradias* in Catalonia and the *Prud'homies* in Provence, were concerned about possible negative effects on exploited stocks. Such effects are further intensified by the increasing industrialisation in the nineteenth century, with an increase in the efficiency of existing fishing gear (e.g. otter trawl) and the introduction of new ones (such as mid-water pelagic trawls, hydraulic dredges, and iron-toothed dredges). Industrialised fishing had severe impacts on species, habitats, and ecosystems. Several studies also show historical changes in fish communities of different regions of the basin. These findings point to a general severe depletion of top predators in the basin, including Atlantic bluefin tuna (*Thunnus thynnus*), which is considered critically endangered according to the declining trend observed in the Atlantic and the Mediterranean in the last 50 years. Historical fluctuations in the abundance of this species have been described on the basis of a centuries-long time-series of tuna trap catches, starting in the seventeenth century, and suggested to be linked to climate fluctuations. Despite this comparative wealth of historical information about temporal trends mainly linked to the history of human exploitation of Mediterranean marine biodiversity, many unknowns remain in spatial and chronological gaps from prehistoric periods to the present. Ancient, medieval, and early modern records contain qualitative rather than quantitative data, and it is difficult to depict general diversity trends at either a species or ecosystem level at the scale of the whole Mediterranean. With the onset of the industrialization in Europe in the nineteenth century, signs of species depletions and rareness increased and accelerated throughout the twentieth century, when the first extirpations of species were also recorded.

Changes in Species Composition

Fundamental changes in species composition had effects on the structure and functioning of food webs and ecosystems. Population declines have also been noted among marine mammals throughout the Mediterranean. These species include sperm whales (*Physeter macrocephalus*) which have been declining since the end of the 1980s, short-beaked common dolphins (*Delphinus delphis*) which began to decline around the 1970s, common bottlenose dolphins (*Tursiops truncatus*) which have decreased by at least 30% over the past 60 years, and striped dolphins (*Stenella coeruleoalba*), which have been in decline since the early 1990s. Although the population trends for most seabird species are not well known, all reliable long-term

information suggests that most seabird species have recovered on the European coasts during the last three decades. This recovery is due to more restrictive conservation policies at national and international levels. With the exception of shearwaters, seabird species show relatively stable population trends. Gulls and terns, after two decades (1980s and 1990s) of sharp increase in their densities (up to an average 13% annual growth rate in Audouin's gull (*Larus audouinii*), now seem to be in dynamic equilibrium. Sparse data on shags (*Phalacrocorax arisotelis desmaresti*) suggest a slow recovery in the last two decades but this is not mirrored in Gibraltar. Storm petrel populations are stable at the few long-term monitored sites, but many suitable breeding sites have been destroyed since historical times along coastlines. Paleontological records confirm that the distribution of many species was much larger, even occupying habitats in the interior of large islands relatively far from the sea, where recolonisation is now impossible. Population recoveries of Mediterranean seabirds must be considered only partial, and only occurring where protection is effective.

Exploitation of Marine Resources

The oldest and one of the most important maritime activities that has become a threat to diversity is human exploitation of marine resources as noted above. People around the Mediterranean have exploited marine resources since earliest times. Maybe not surprisingly, negative effects of the exploitation of the Mediterranean marine biodiversity were first reported in the fourth century B.C. by Aristotle. He mentioned that scallops had vanished from their main fishing ground (Gulf of Kalloni, in Lesbos Island) since fishermen began using an instrument that “scratched the bottom of the sea”. Early records of overfishing and depletion of coastal resources become evident during Roman and medieval times and were driven by human population growth and increasing demand and increasing commercialisation and trade in food and products. The current high demand for marine resources continues and has resulted in high levels of fishing or harvesting intensity. Several fish resources are highly exploited or overexploited. Other organisms that are exploited or affected by exploitation in the Mediterranean include macrophytes, sponges, cnidarians, echinoderms, molluscs, arthropods, polychaetes, ascidians, and other invertebrates. The threats to currently endangered marine mammals and sea turtles include unwanted by-catch as well as historical exploitation. For sea turtles, the overall mortality rate caused especially by entanglement in fishing gear and by habitat degradation is poorly known, but for marine mammals the major threats clearly derive from human activities: direct or indirect effects of exploitation, such as prey depletion, direct killing, disturbance by boats and fishery by-catch. At sea, threats to seabirds mainly come from fisheries, particularly by-catch in longlining. Fishing is being expanded toward deeper areas and is threatening several ecosystems,

while management effectiveness in the Mediterranean is low. Fishing activity may also be the cause of ecosystem structural and functional changes and ecosystem degradation. The Mediterranean is a complex region where ecological and human influences meet and strongly interact, posing a large and growing potential impact to marine biodiversity. Although much is known about individual threats, knowledge is very limited about how multiple impacts will interact. Therefore, there is the need to develop comprehensive analysis of conservation and management initiatives to preserve Mediterranean biodiversity.

Fishing and Marine Protected Areas

According to UNEP, in its report *“Global Synthesis - A report from the Regional Seas Conventions and Action Plans for the Marine Biodiversity Assessment and Outlook Series”* for the 10th Conference of the Parties to the CBD, fishing is the oldest and most widespread use of marine resources and services. The general situation is that fishery yields peaked at some point between the mid-1980s and mid-2000s, and have declined since that time. This decline has led to increasing concern about the impacts of destructive fishing practices, unsustainable fishing and illegal, unreported and unregulated (IUU) fishing on marine biodiversity and habitats. The report uses the marine trophic index (MTI) based on the average predator status of landed fish in the food chain. A detritus feeder has a low score and a top predator has a high score. The precise value of the MTI is not an issue but declining trends in MTI in most regions suggest that the phenomenon of “fishing down the food chain” is typical of all regions. As fisheries remove large species they turn to smaller species lower in the food chain. UNEP and FAO are developing approaches for the integration of management objectives to achieve verifiably sustainable levels of fisheries and the maintenance of marine biodiversity and ecosystem services. Fisheries statistics are extensive and diverse but tend to have little or limited coverage of subsistence or recreational catch, effort or impact as is the case here. This creates particular problems for management of coastal stocks that are targeted by subsistence, recreational and commercial fishermen.

All regions reported progress on the establishment of Marine Protected Areas but reported levels of 1.17% of global ocean surface or 4.32% of continental shelf areas fall far short of the 10% target set by CBD COP7 in 2004. The figures do not include some managed fishery areas that have objectives consistent with multiple sustainable use and overall objectives for conservation but even if these are taken into account the proportion managed with objectives explicitly addressing sustainability of biodiversity or ecosystem processes is inadequate. The need to plan and implement ecosystem scale and ecosystem-based management of the seas was stated to be urgent. The report provided a reasonable understanding of the nature and extent of the problems

facing marine biodiversity and marine resources. There are examples of effective actions to address those problems but management performance is generally insufficient and inadequately coordinated to address the growing problems of marine biodiversity decline and ecosystem change.

The report showed that even if fishing effort could be curtailed by 3% each year, the MTI indicates that marine biodiversity could still decline in 11 of the 15 FAO areas modelled. The continuing decline in marine biodiversity will compromise the resilience of marine and coastal ecosystems to the impacts of climate change, as well as their ability to mitigate the effects of climate change. Analyses of the performance and impacts of fisheries are complicated by inconsistencies in data collection methods, limited effort data and the difficulty of comparing levels of effort over time because of technological creep whereby units of effort become more efficient through better targeting and better gear design. The technologies exist to achieve much clearer information on the nature, extent and location of fishing activities. Their application could provide much clearer information on sustainability and biodiversity implications of commercial fisheries. In coastal areas the management and analytical pictures are further obscured because of lack of information on levels of subsistence and recreational fisheries, particularly where they target stocks that are also commercially targeted. It is clear that the proportion of the marine environment managed with objectives that explicitly address sustainability in the sense of maintenance of biodiversity or ecosystem processes is inadequate to meet obligations of coastal states under Articles 61, 62, 118, 119 and 237 of the United Nations Convention on Law of the Sea. Informed management of marine biodiversity requires more comprehensive global and regional data on the extent, objectives and performance of marine management regimes.

The report deals specifically with overfishing in the Mediterranean Sea area where total fish catch increased quickly to the mid-80s reaching around 1 million tons, and continued to fluctuate at this level. Since 2000 there has been a decline in catches. This may be a result of weak fisheries management. The number of fisheries that are rebuilding are increasing, but many stocks are fully exploited and a few stocks have collapsed.

Perceived Threats

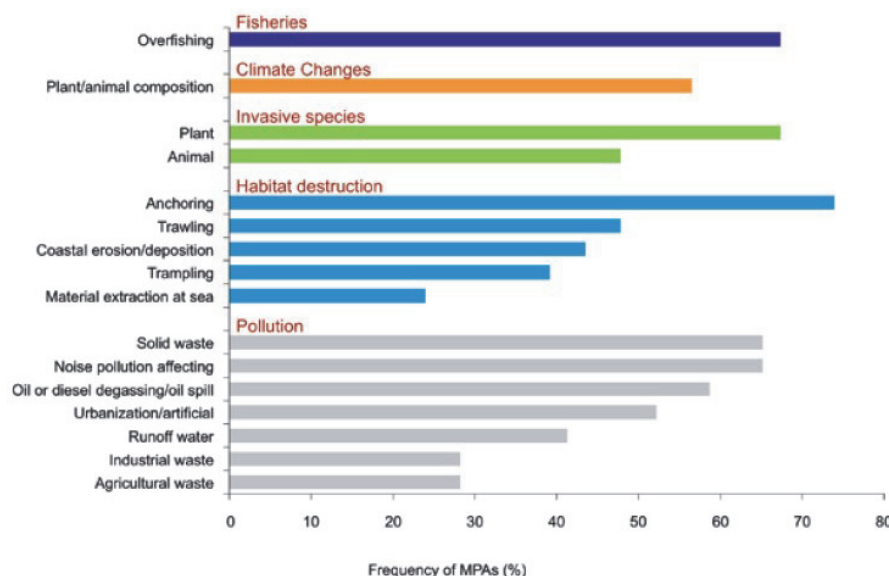


Figure 1:
Reported
Frequency of
occurrence of
threats (% of
MPAs, n=62)

In a survey conducted by IUCN (Abdulla *et al.*, 2008) there was general agreement between responses that the current level of overfishing was currently low or moderate within the MPAs. However, the risk of "overfishing" in terms of probability and consequences was perceived to be significant or intolerable in many of them (43%).

Threats in Gibraltar

However, as noted in the diagram above there are numerous other human induced threats to biodiversity in the marine environment. The main threats perceived in the Gibraltar Biodiversity Action Plan were:

- The risk of oil spillage from bunkering operations throughout the Bay, fuel storage and the Spanish oil refinery and associated industries;
- The risk of pollution from shipping;
- Excessive use of anchorage areas in the east and west of Gibraltar affecting benthic habitats;
- The risk of invasive species being released from ballast water carried from other locations;
- The release of effluents e.g. sewage, industrial waste, and desalinisation plant water;
- The release of untreated effluents at Europa Point sewage outfall;
- The reclamation of low-lying inshore waters;
- Illegal seine net, gill net and rake fishing by Spanish commercial fishing boats;
- Illegal spear fishing with breathing apparatus;



- Uncontrolled scuba diving; and
- Excessive disturbance of cetaceans by tour operators (“dolphin watching”) in the absence of guidelines and regulations.

In addition there are:

- Impacts of sewage from outfall at La Linea outwith Gibraltar’s control;
- Potential impact from energy generation and related activities of exploration and exploitation (e.g. fracking);
- Reduced water flows around the harbour;
- Toxic contaminants in sediments;
- Direct effects of shipping on cetaceans;
- Disturbance from jetskis and powerboats; and
- Acoustic pollution.

While there are clearly many perceived and/or real threats to the marine environment of Gibraltar with which the Gibraltar Government has to deal - and many of them are already being addressed – the one that has been the cause of most concern has been that of illegal fishing within BGTW by Spanish commercial fishermen. In an attempt to work on evidence rather than conjecture an analysis has been conducted of such information as exists and that follows in the next section.

FISHERIES EXPLOITATION AND MANAGEMENT IN AND AROUND BGTW

Prepared by Indrani Lutchman

Introduction

Gibraltar’s marine resources are complex in terms of the nature of the species present, especially those targeted by fishermen, their population dynamics and their management. Fish species targeted both within BGTW and in adjacent waters are a mixture of local stocks and regional and shared stocks. In some cases, highly migratory stocks also pass through Gibraltar’s waters from the Atlantic through the Straits of Gibraltar and from the Mediterranean. The management of fishing activities within the current BGTW is critically dependent on accurate information about the state of the stocks, the fishing pressures on these stocks and other maritime activities or environmental pressures. In the case of the majority of the stocks, there is limited basic information needed in order to assess the state of the different fish stocks and the impact of the different activities on the fish stocks in and around BGTW.

Best efforts were made to obtain as much information as possible from internal sources in Gibraltar, from the Spanish authorities and regional management organisations to assess the state of target fisheries and the level of fishing impact on the fisheries in and around BGTW. A review of the relevant management regimes was also undertaken and recommendations for future actions by the Government of Gibraltar towards ensuring sustainable management within BGTW in the short, medium and long term are proposed. These also include proposals for management of fisheries in BGTW, research and monitoring and the institutional arrangements as part of a comprehensive management regime for BGTW.

Methodology

Statistical data including landings, fishing effort (that is, the number of fishing vessels and fishing days for the commercial fisheries conducted by Spain and the number of fishermen and competitions for the recreational fisheries targeted by Gibraltar) were obtained from a number of sources (see below).

The statistical information analysed in this report were collected from a number of sources including:

- Interviews with all stakeholders¹⁴ in Gibraltar who provided both anecdotal and quantitative information.
- Fishing cooperatives in Algeciras and La Linea during site visits in July 2012.
- Instituto Español de Oceanografía (IEO) in Cadiz.

Desk-based research including a comprehensive review of published information relevant to fisheries in and around BGTW was also undertaken. Key data on landings and fishing effort for the Spanish fleet were sourced from various publications including:

- The annual fisheries statistics on landings and value (fisheries production) from the Andalusian government websites, specifically for data for the years 1985-1999;
- Junta de Andalusia reports (1999-2011) for supplementary information on fisheries production and value for Algeciras and La Linea;
- The Spanish Ministry of Agriculture and Fisheries website for information on the laws and regulations as applicable to the fisheries in Andalusia;
- The General Fisheries Council for the Mediterranean (GFCM) and International Council for the Exploration of the Sea (ICES) websites for information on status of stocks and management regimes as applicable to the Mediterranean and the Straits of Gibraltar; and
- The annual fisheries statistics published by the Food and Agriculture Organisation (FAO).

The fisheries data were collated and analysed, as far as possible and used to highlight:

1. The species targeted by fishermen in Gibraltar.
2. The species targeted by fishermen from La Linea and Algeciras.
3. Trends in landings by the different groups of fishermen.
4. Trends in fishing pressure (effort) deployed by the three groups of fishermen (from Algeciras, La Linea and Gibraltar).
5. Trends in landing per unit effort (LPUE) (used as an index of abundance of the various fish species).

The results of these analyses and the limitations of the available data are presented and discussed in the following sections.

¹⁴ Including recreational fishermen, cottage industry, spear fishermen, commercial fishermen, etc.

Review of Current Fisheries in the Waters around Gibraltar

Current fishing operations in and around Gibraltar include commercial fishing by the fishing fleets of Algeciras and La Linea and recreational fishing by the fishing clubs of Gibraltar. These fisheries operate in the three distinct areas:

- The Bay of Gibraltar
- Europa point
- Eastern side of the Rock of Gibraltar.

Fishing areas in and around BGTW

The Bay of Gibraltar is found at the extreme south of the Iberian Peninsula between $36^{\circ} 6'$ and $36^{\circ} 11'$ North and $5^{\circ} 27'$ and $5^{\circ} 21'$ West. The Bay is semi-circular in shape and the coastline is around 30km long starting at Punta del Carnero and ending at Europa Point.



Source: NASA (2006). Available from <http://earthobservatory.nasa.gov/>

Figure 2: Aerial Photograph of Gibraltar

The Bay of Gibraltar benefits from general tidal circulation of Atlantic and Mediterranean waters across the Strait of Gibraltar, particularly superficial currents, which together with the tidal streams, winds and prevailing atmospheric pressure create a unique pattern of water movement. The main currents and tidal flux is well described in Smith *et al*, 2004.

Atlantic surface waters entering the Mediterranean Sea bring continuously oxygen-rich and nutrient poor water into the area. The Bay also receives freshwater with nutrient rich runoff from two separate rivers, resulting locally in high phytoplankton concentrations. These brackish, estuarine-like conditions are crucial for numerous marine fishes at early stages in their life cycle including various mullet species (*Mullus spp*), red seabream (*Pagellus bogaraveo*), and axillary bream (*Pagellus acarne*) (*pers comm*. Bernard Wright). Main ocean commercial fish species, like swordfish (*Xiphias gladius*), bluefin tuna (*Thunnus thynnus*) and horse mackerel (*Trachurus spp*) also migrate into the Mediterranean Sea through the Strait of Gibraltar (but not in the Bay of Gibraltar), and large numbers of other marine species including cetaceans and sea turtles can be observed all year round (Kloff *et al*, 2002).

A range of commercially important fish species are also known to be resident in and around Gibraltar. The habitat types include sandy substrate and support a number of key species including European anchovy, (*Engraulis encrasicolus*), axillary bream, (*Pagellus acarne*), and black bream (*Spondyllosoma cantharus*). The east side of Gibraltar was once a very rich habitat in biodiversity terms and supports a wide variety of molluscs including smooth clam, (*Callista chione*) and corruco (*Acanthocardia tuberculata*), (Perez, 2006). A full list of the species caught in and around Gibraltar can be found in Annex 4.

Commercial Fisheries in and around BGTW

The main commercial fisheries in and around Gibraltar are conducted by the Spanish fleet from Algeciras in the Bay of Gibraltar and La Linea on the east side of the Rock and off Europa point. The main fishing methods reportedly used by the Spanish fishermen from Algeciras and La Linea are purse seines and longlines (see Figure 3). Whilst there is no official commercial fishery in Gibraltar, there is anecdotal information that there is a modest Gibraltarian commercial fishery using longlines off Europa Point (*pers. comm.*, GONHS).

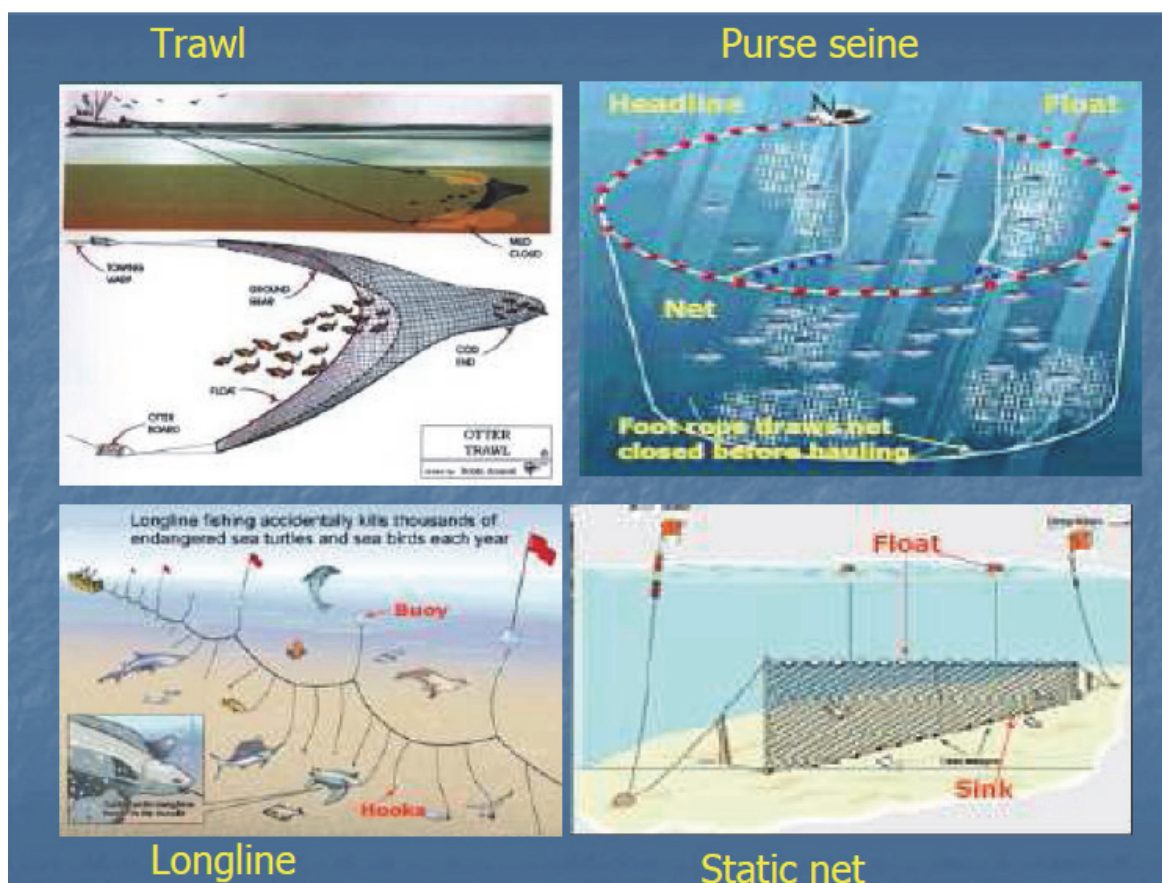


Figure 3: Fishing methods reportedly used by Spanish fleets in BGTW.

Algeciras

Algeciras is situated in the Campo de Gibraltar and is one of the key fishing ports in Andalusia. However, its fishing port has lost importance over the last decade, following mainly from the cessation of the EU agreement with Morocco. Thus, fishing has gone from being one of the most important socio-economic drivers of the economy to a cause of concern, as the fleet has had to adapt to available resources. There has been a consequential decline in employment in the fisheries sector. In 2011, there were 491 people employed in fishing. Of these 491 workers, 222 members are working in direct activities and 269 in the related activities.

Statistical data from the Junta de Andalusia and the Instituto Español de Oceanografía (IEO) in Cadiz are collated and presented in Figures 4-11. These data show the trends in fish landings, fishing effort and value of target species over the last two decades and also provide graphic evidence of the evolution of the fleet of Algeciras during this time.

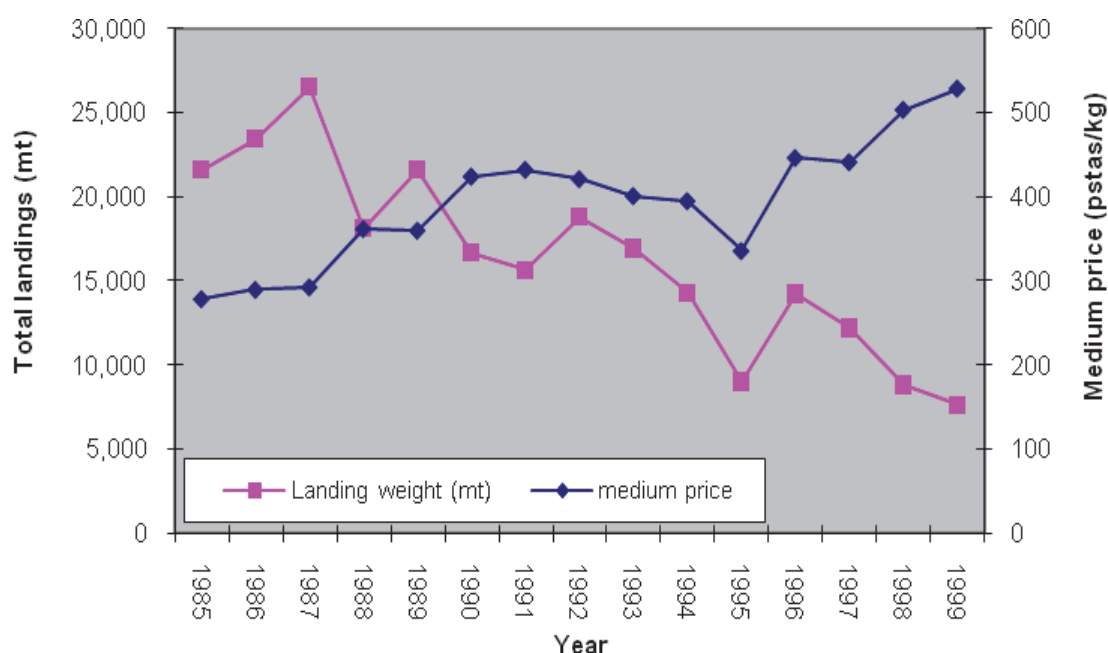


Figure 4: Total landings and value for the top ten species - Algeciras (1985-1999)

During the period 1985 to 1999, overall landings by the Algeciras fleet declined from 21,588kg to 7,678.27 kg with a corresponding increase in value from 278 million pesetas to 528 million pesetas over the same period (Figure 4). Total landings for Algeciras were dominated by various marine fish species including bluefin tuna (*Thunnus thynnus*), hake (*Merluccius merluccius*), and swordfish (*Xiphias gladius*) (Figure 5), with most species showing a decline from 1985-1999.

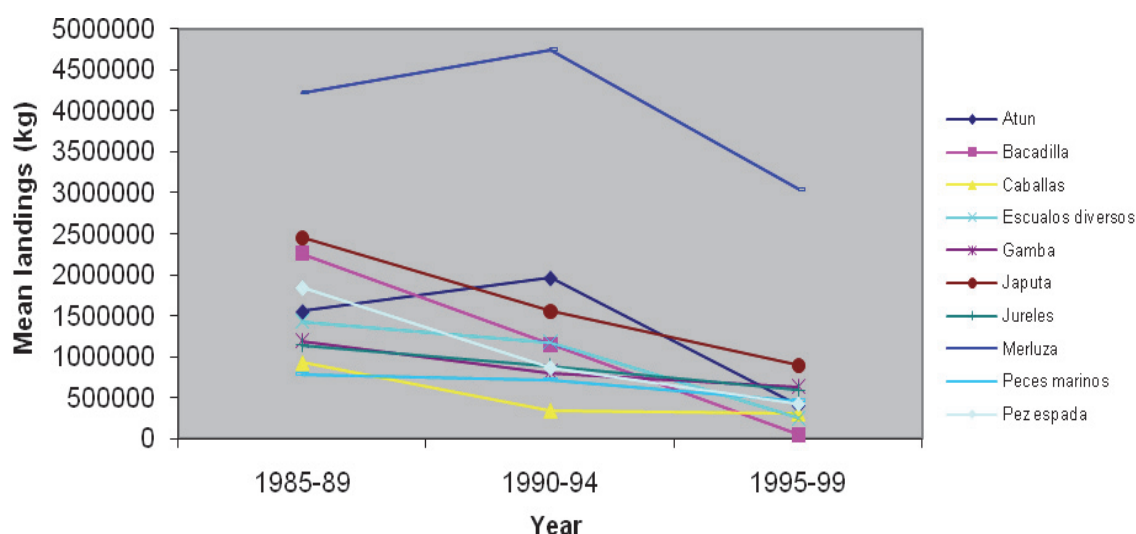


Figure 5: Total landings for the top ten species -Algeciras (1985-1999)

Fisheries statistics for Algeciras for the period (2002-2011) were made available by the Instituto Español de Oceanografía (IEO). Figure 6 shows the trend in landings for the key commercial species targeted by the fleet from Algeciras with the four main species being m e l v a (*Auxis rocheii*) and mullets (*Mullus spp*) and two species of bream, *Pagallus acarne* and *Pagellus bogaraveo*. The highest proportion of landings in the period 2002-2011 have been for frigate mackerel and mullet species, with the former representing 38 per cent of the landings and the latter representing 21 percent of the total landings for the period.

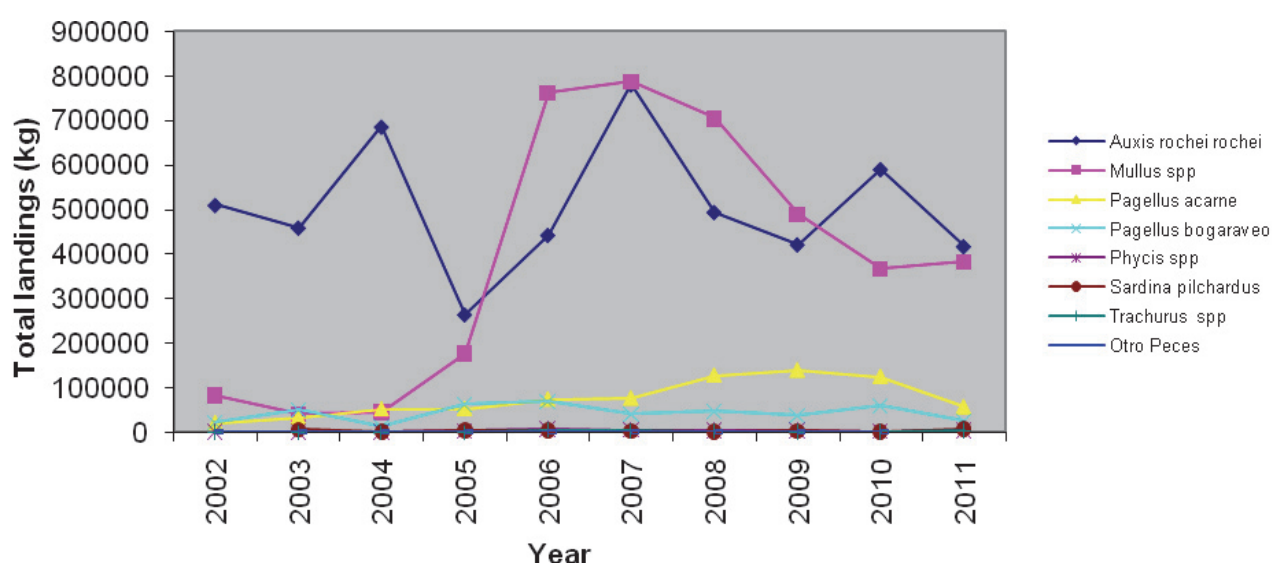


Figure 6: Total landings for key target species - Algeciras (2002-2011).

In terms of fishing effort, the total number of fishing boats varied between from 85 boats in 2002 to 72¹⁵ vessels in 2011, however, the number of specific fishing days targeting the top seven species varied from year to year (see Figure 7), most notably increase in fishing days for *Pagellus bogaraveo* from 429 days in 2002 to 2029 in 2009 and then a decrease in the number of specific fishing days since then to 1223 days in 2011.

¹⁵ This number includes 48 vessels registered in Algeciras and vessels registered in other ports, e.g. Tarifa which land fish in Algeciras.

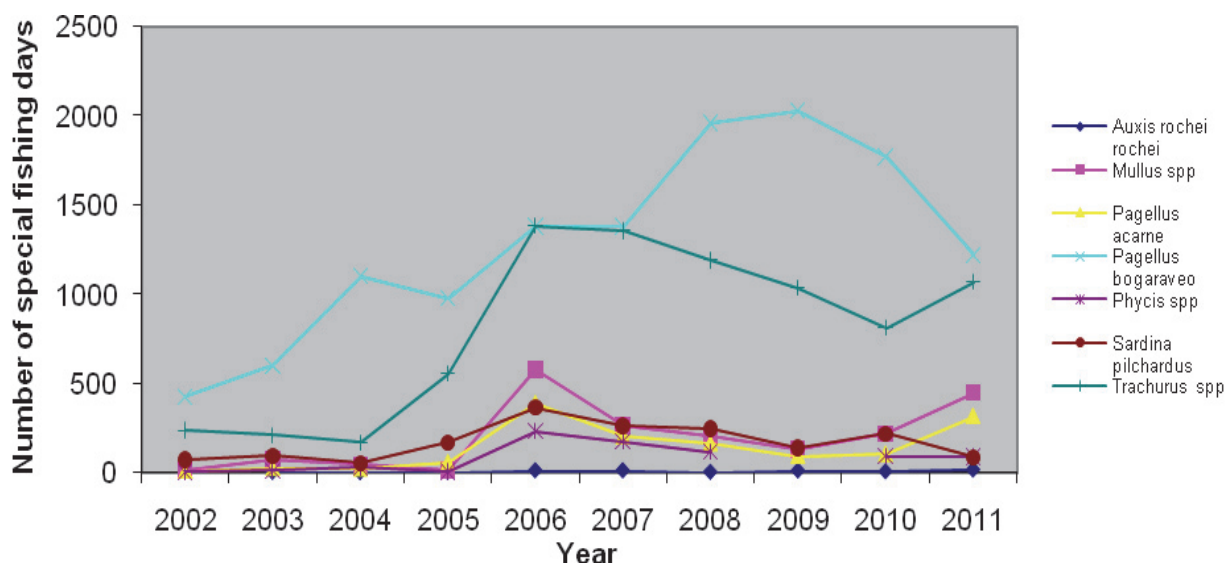


Figure 7: Number of special fishing days (fishing effort) - Algeciras (2002-2011).

Landing per unit effort (LPUE) for the key commercial species was calculated and highlights that stock abundance for the four key species during the period 2002-2011.

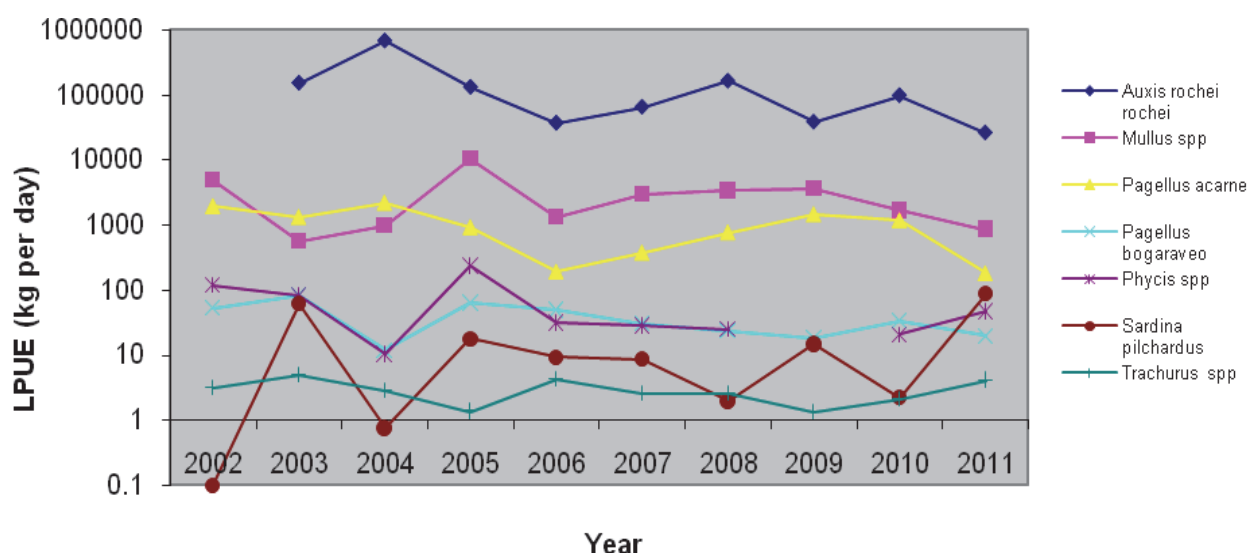


Figure 8: LPUE for top four species fished by the fishing fleet from Algeciras.

Since 2002, only five fishing vessels from the port of Algeciras are known to be fishing in the Bay of Gibraltar (*pers.comm*, IEO, 2012). The vessels use purse seines with longlines or palangres superficie which are accompanied by boats with lamps (see Figure 9).



Photo by Eric Shaw

Figure 9: Fishing vessels (with longlines or 'palangres') from Algeciras.

The five vessels fishing in the Bay of Gibraltar are the *Chanito Segundo*, *Joaquina*, *Nuevo Real Madrid*, *Saladillo*, *Salvador y Maria*. Landings for these vessels were extracted from the full data series for the entire fleet from Algeciras and the trends in their landings for key species are presented in Figure 10. For most species, there have been modest variations in landings over time with the highest variation in landings of mackerel species (*Trachurus spp*) over the period.

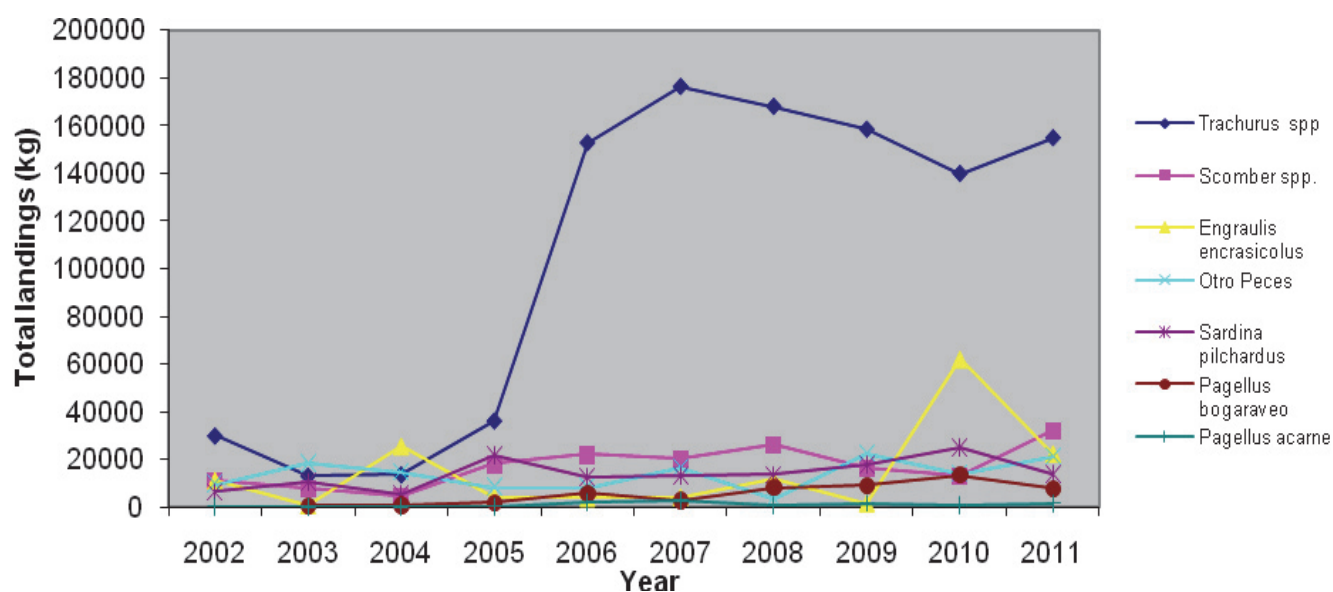


Figure 10: Total landings by Algeciras boats fishing in the Bay of Gibraltar.

LPUE for the key species is presented in Figure 11 and indicate that stock abundance for key species such as anchovy (*Engraulis spp*) and Atlantic mackerel (*Scomber spp*)

show major declines since 2003 and 2004 respectively and remain low. Species such as axillary seabream (*Pagellus acarne*) and red seabream (*Pagellus bogaraveo*) have lower stock abundance and remain at low levels between 2002-2011, despite the establishment of a recovery plan for the latter species by the Spanish government in 2002 (Deepfishman, 2010).

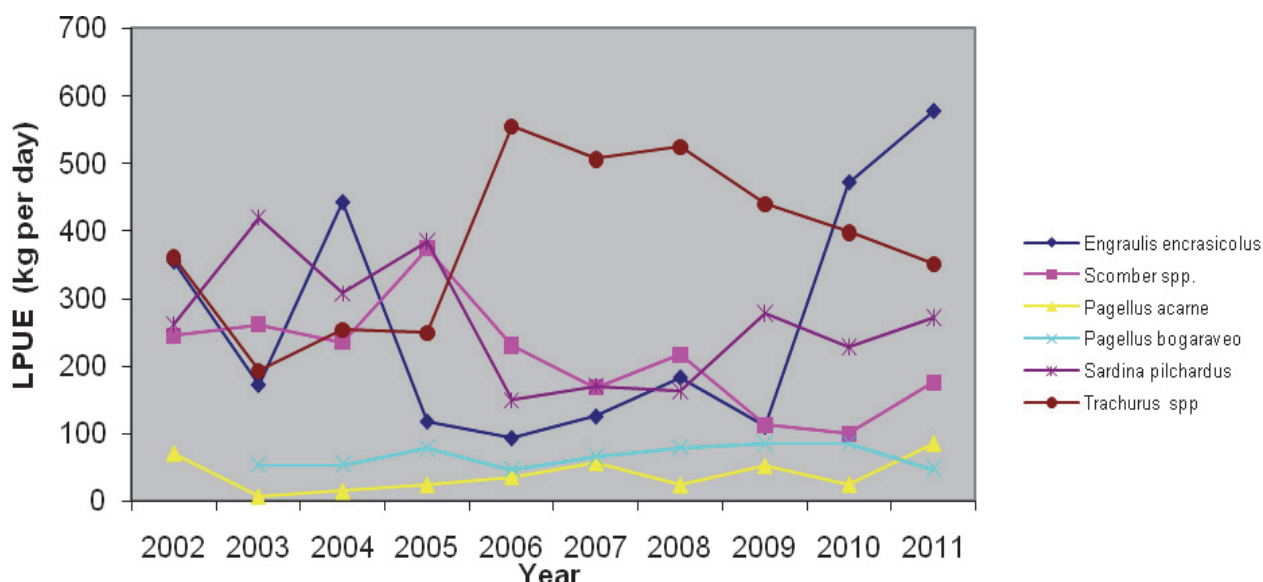


Figure 11: LPUE for the key species fished by Algeciras boats fishing in Bay of Gibraltar (2002-2011)

La Linea

La Linea de la Concepcion is one of the more recently established towns of Andalusia. In 2011, La Linea had 64,645 inhabitants, and the population density is very high (2476.82 inhabitants / Km²). La Linea has always been closely linked to Gibraltar with a large proportion of the local population who come daily to work at "The Rock". There are around 526 people employed in fishing. Of the 526 jobs, 153 are engaged directly in fishing operations and around 373 are involved in processing and marketing (Junta de Andalusia, 2011).

The economy of La Linea depends heavily on the fishing season, and specifically on the fishery for corruco (*Acanthocardia tuberculata*). The La Linea fleet in 2011 had 80 vessels registered - 11 vessels using 'artes menores' (which includes trammel nets¹⁶, 67 conch rakers (rastros mecanicos), 1 long line vessel and 1 purse seiner (see

¹⁶ There is anecdotal information that this group of methods includes trammel nets and until recently on the eastside of Gibraltar, driftnets

from La Linea have decreased from 2005 by 20.8% and between 23.1% and 13.1% respectively.



Photo by Eric Shaw

Figure 12: Conch raker from La Linea.



Photo by Eric Shaw

Figure 13: Preparation of longline hooks in La Linea.

Fisheries data from La Linea, for two time periods, 1985-1999 and 2002-2011 were available for analysis. Figure 14 presents total landings and value from La Linea for the period 1985-1999, showing that there was an initial increase in landings between



1985 and 1986 and then a dramatic decline in overall landings from 1986-1989 when landings remained at constant levels until 1994 when landings steadily increased until 1999. Figure 15 highlights that in this period, 1985-1999, catches were largely made up of fish and mollusc species, with both groups of species showing increases towards 1999.

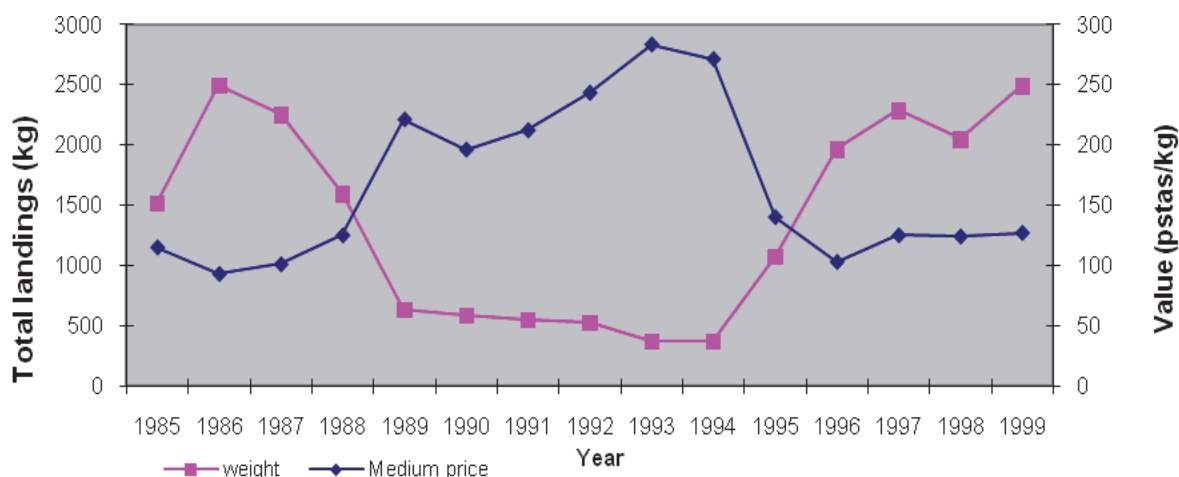


Figure 14: Total landings and value - La Linea (1985-1999)

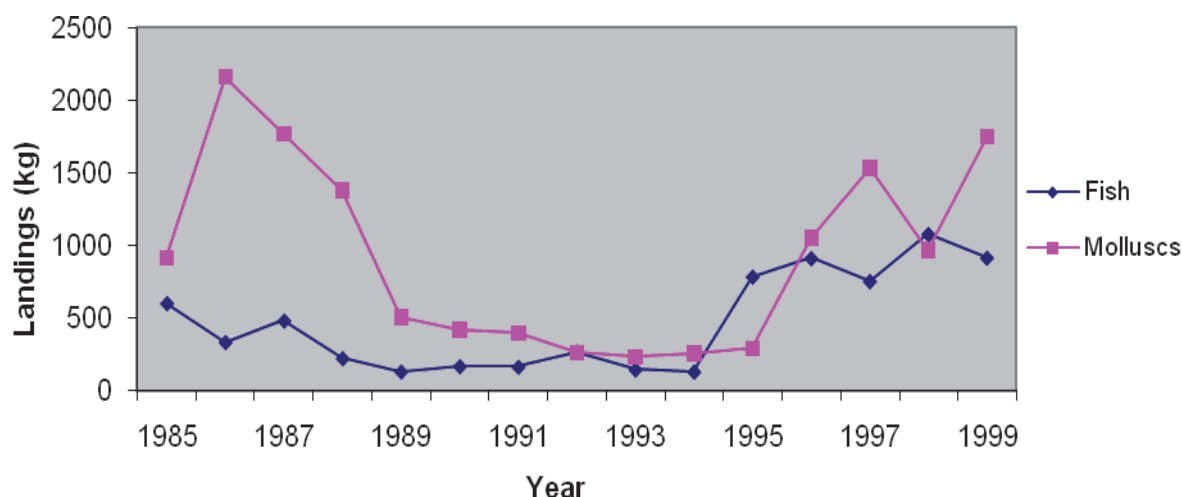


Figure 15: Total landings for key species groups - La Linea (1985-1999)

Fisheries statistics of the fleet from La Linea were also made available for the period 2002-2011. Figure 16 shows the landings of the key species by the La Linea fleet for the period 2002-2011, showing that landings for the two key species corruco (*Acanthocardia tuberculata*) and smooth clams (*Callista chione*) have declined since 2002. The most significant decline was in the landings of corruco between 2007 and 2009 and although landings increased again in 2010, they declined again in 2011. During the same time

period, the number of fishing days has decreased from 6010 days in 2002 and 3934 days in 2011. The number of fishing boats fishing from La Linea also decreased between 2006 and 2011 from 93 boats to 67 boats (Junta de Andalusia, 2011). In addition, the number of fishing days for some of the key commercial species such as *Acanthocardia tuberculata* and *Callista chione* showed marked declines since 2002 (see Figure 17).

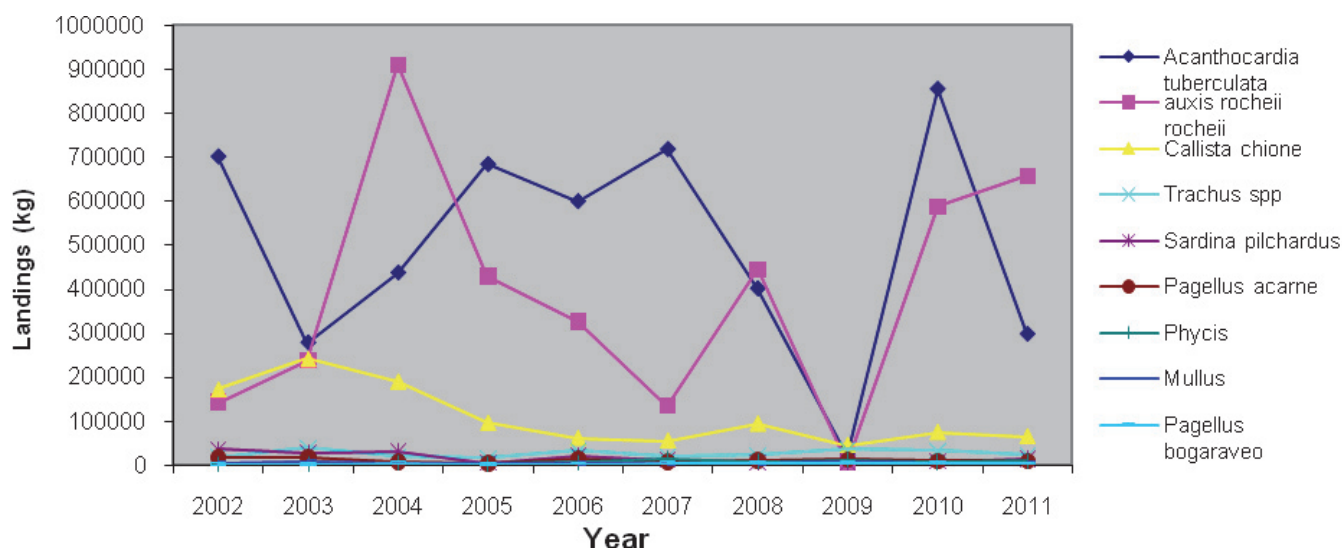


Figure 16: Total landings by species - La Linea (2002-2011)

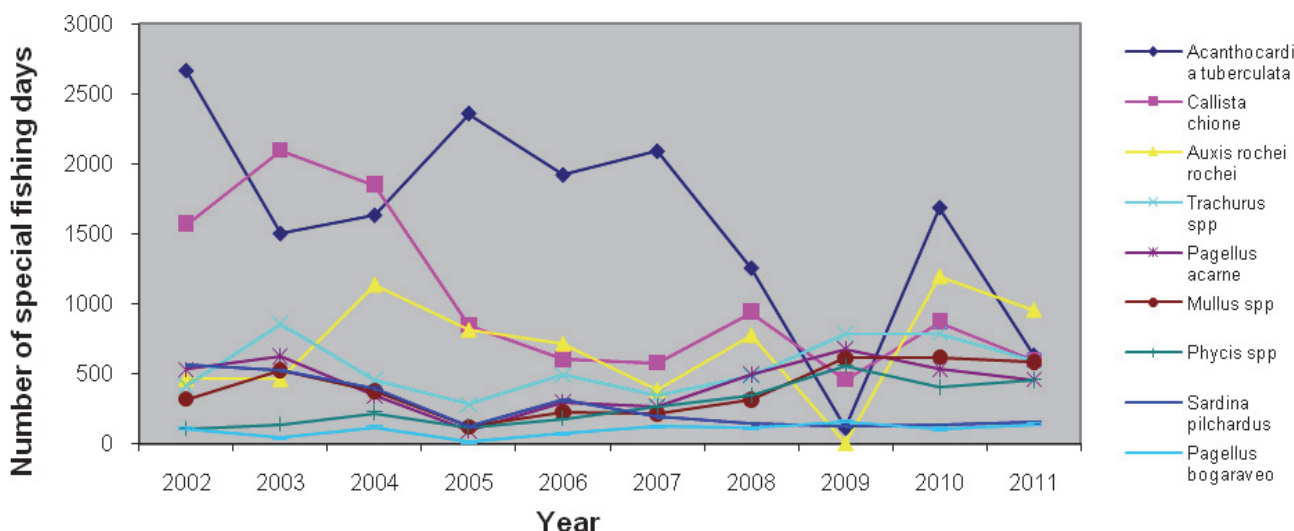


Figure 17: Number of special fishing days (fishing effort) by species - La Linea (2002-2011)

The data presented in Figure 18 shows that the LPUes (stock abundance) for two species, melva (*Auxis rocheii*) and corruco (*Acanthocardia tuberculata*) have increased in 2010 and 2011 respectively, while the LPUes for the other target species including the smooth clam (*Callista chione*) remain relatively low.

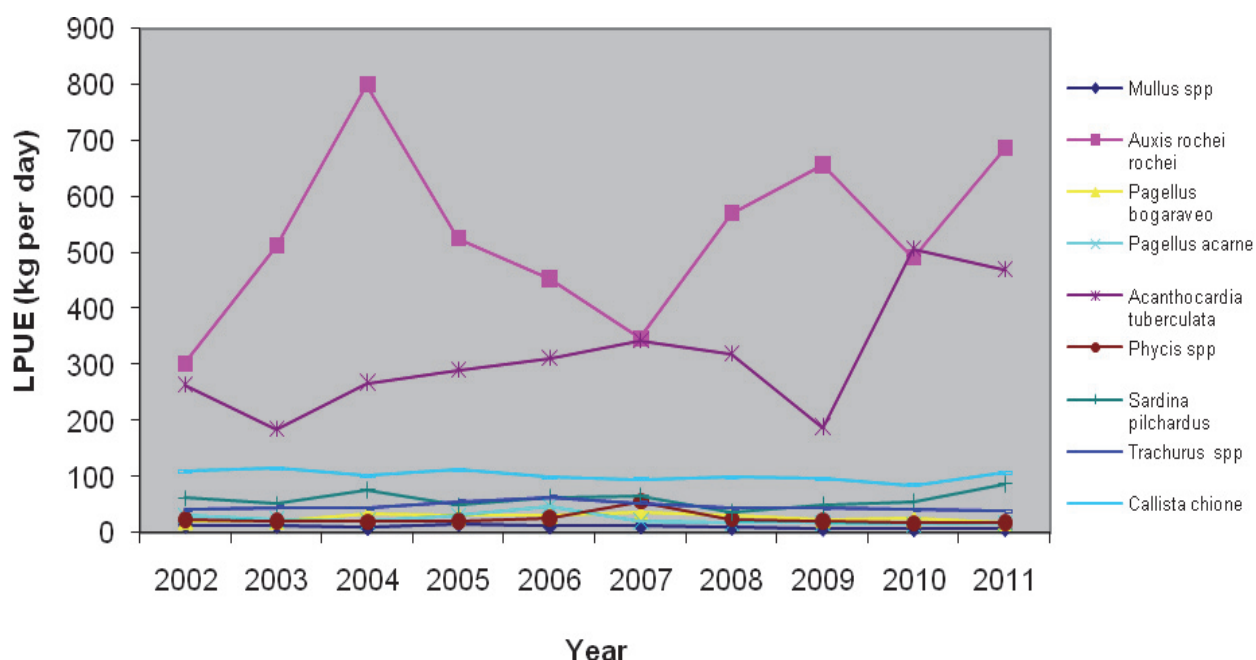


Figure 18: LPUE for key target species - La Linea (2002-2011)

Recreational fisheries - Gibraltar

The main type of fishing undertaken by Gibraltarians is recreational fishing, although there is anecdotal information that there is commercial fishing, including for tuna within BGTW using longlines which is currently unregulated or licensed (*pers. comm.* Alfred Vasquez). Most forms of angling are practiced in Gibraltar from deep sea angling carried out in the deeper waters in BGTW, specifically on the reefs as well as inshore and shore angling using rod and lines. According to Caetano (2004), bottom fishing is no longer productive within the harbour but shore angling from the moles is very popular, in particular, the Detached Mole. Other sites which are equally popular are Rosia Bay and the Lighthouse area. Breams make up the bulk of the catches although there are a range of species (see Annex 3) which are also caught by recreational fishermen in the yearly competitions which are organised by the fishing clubs (see below). Shore angling is seasonal depending on the species of fish. In addition to shore angling, with lines off boats (trolling) is also popular with boat anglers all year targeting seabass (*Dicentrarchus labrax*) and bonito (*Sarda sarda*), amongst other species. The status of these species is largely unknown. A further and more detailed list of fish species which are native to Gibraltar can be found on <http://www.fishbase.org/Country/CountryChecklist.php>

There are three main fishing clubs in Gibraltar with fishermen fishing from boats and from the shore. The main fishing clubs are:

- Gibraltar Fishing Club and Mediterranean Sea Anglers Club (Medsac) fish in the west of Gibraltar, off the South Mole and the Detached Mole, and anglers fishing from the shore.
- Tarik Deep Sea Anglers Association (Tarik) is the other major fishing club with anglers fishing from the East side and off Europa Point.

A summary of the species caught (catches) and the number of anglers and fishing competitions (fishing effort) fishing between 1998 and 2012 can be found in Figures 19 to 20. Catch data for two years, 2011-2012 are presented for GFC in Figure 19. Catch and effort data for Tarik fishing club are also presented for 2009-2012 in Figure 20. A longer time series of data from Medsac, for the period 1998 to 2012 are presented in Figure 21.

Gibraltar Fishing Club catch data shows that white bream (*Diplodus sargus*) and two-banded bream (*Diplodus vulgaris*) are the highest proportion of the catch compared to other species in two years, 2009 and 2011. Tarik catches are for a relatively longer time period. Two species, black bream (*Spondylus cantharus*) and two banded bream (*Diplodus vulgaris*) dominate the catches during this period. Medsac catches are for the longest time period 1998-2012. White bream (*Diplodus sargus*) catches are significantly greater than the catches of all other species. Whilst there has been an increase in catches in some years, the general trend in catches is similar to Tarik and GFC.

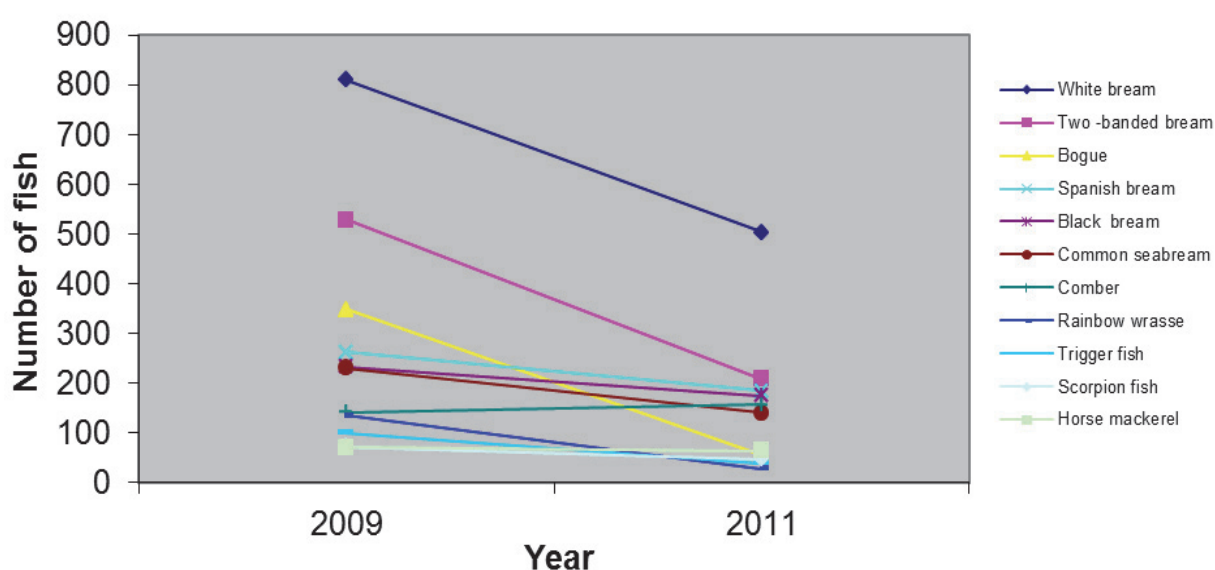


Figure 19: Total number of fish caught by Gibraltar fishing club in 2009 and 2011

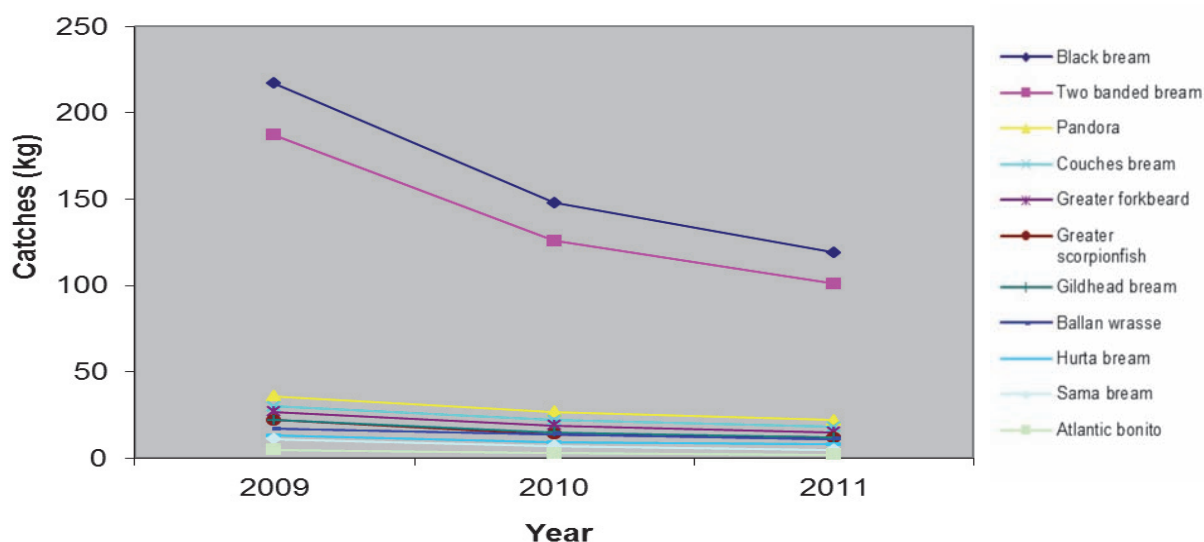


Figure 20: Total number of fish caught by Tarik fishing club 2009-2011.

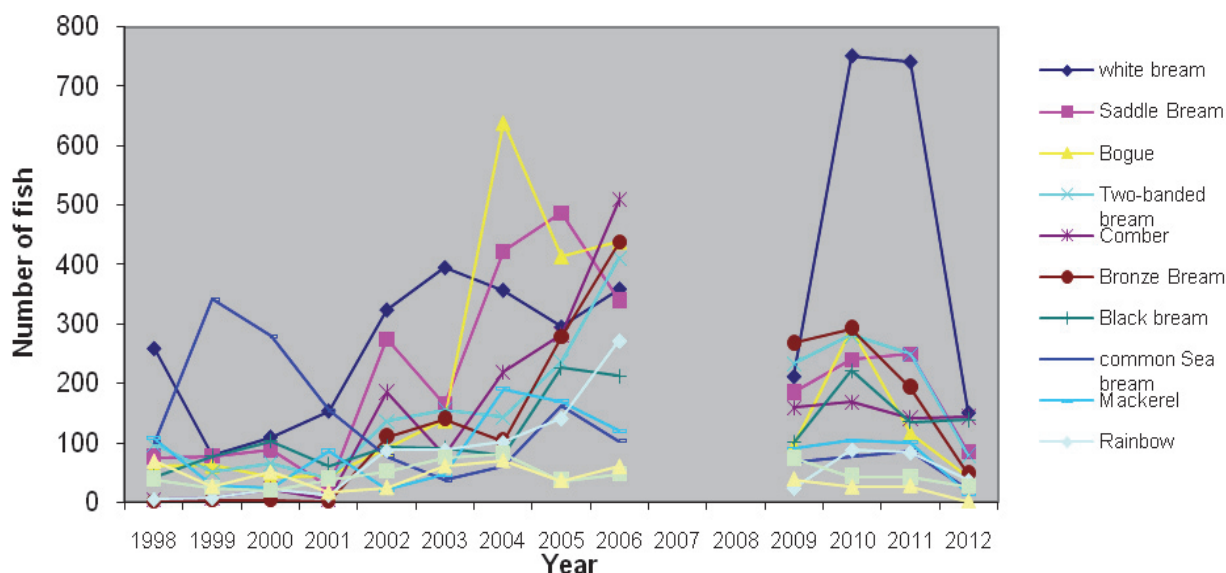
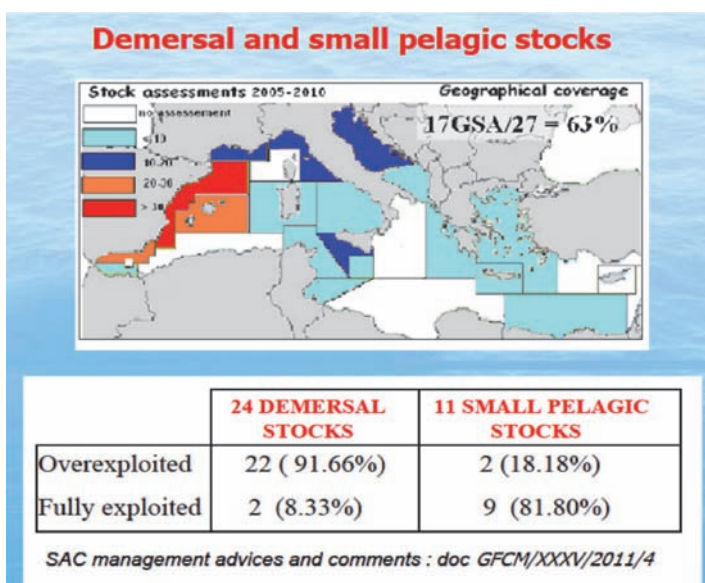


Figure 21: Catches by species - Medsac fishing club (1998-2012).

Regional fisheries

The marine species in and around Gibraltar are a mixture of resident/local stocks and migratory species which are found throughout the Mediterranean and more specifically in the Southern Alboran Sea.

This includes species which occur in the middle or the water column (pelagic species) and in deeper water (demersal species). Demersal species account for 30 percent of total reported catches in the Mediterranean and some are of high commercial value.



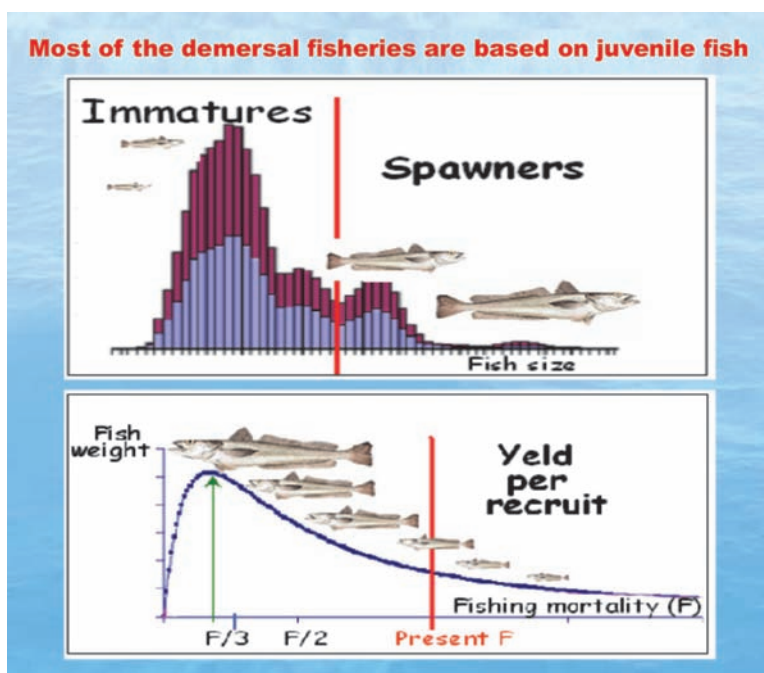
Source: GFCM, 2012

Aristaeomorpha foliacea), Norway lobster (*Nephrops norvegicus*) and deep-water rose shrimp (*Parapenaeus longirostris*) (FAO, 2011). Many different gear types are used including trawls (main gear), trammel nets, gillnets, bottom longlines, deep water traps and lines. In almost all cases, the catch of demersal fish is multi-species.

In the most recent two sessions of the GFCM Sub-committee on Stock Assessment (GFCM, 2010, 2011) and of the Mediterranean Subgroup of the EU's Scientific and Technical Committee for Fisheries-SGMED (Cardinale *et al.*, 2009; Cardinale *et al.*, 2010 in FAO, 2011), a total of 59 stocks from 13 of the most exploited species were formally assessed mostly with analytical models. The quality of these assessments was reviewed through the formal process of the GFCM's Scientific Advisory Committee (SAC) or the EU's Scientific, Technical and Economic Committee for Fisheries (STECF). The majority (78 percent) of the stocks assessed in the region in 2009 and 2010 were considered to be overexploited, with 22 percent fully exploited or non-fully exploited.

Figure 22: State of fish stocks in the Mediterranean.

The most important of these are hake (*Merluccius merluccius*), red mullets (*Mullus spp*), blue whiting (*Micromesistius poutassou*), whiting (*Merlangius merlangus*), anglerfishes (*Lophius spp.*), pandoras (*Pagellus spp.*), bogue (*Boops boops*), picarels (*Spicara spp.*) striped venus (*Chamelea gallina*), octopus (*Octopus spp.*), cuttlefish (*Sepia officinalis*), red shrimps (*Aristeus antennatus* and



Source: GFCM, 2012

Figure 23: State of fish stocks in the Mediterranean.

The situation differed between demersal and small pelagic fish. Practically all demersal fish and crustaceans stocks assessed were classified as overexploited. In contrast, almost 70 percent of the small pelagic fish stocks were classified as fully exploited or non-fully exploited. Given the high intensity of fishing

practised across the whole region, it is reasonable to assume that this is also the general situation for most of the non-assessed.

FISHERIES POLICIES AND LAWS RELEVANT TO MANAGEMENT OF FISHERIES IN AND AROUND GIBRALTAR

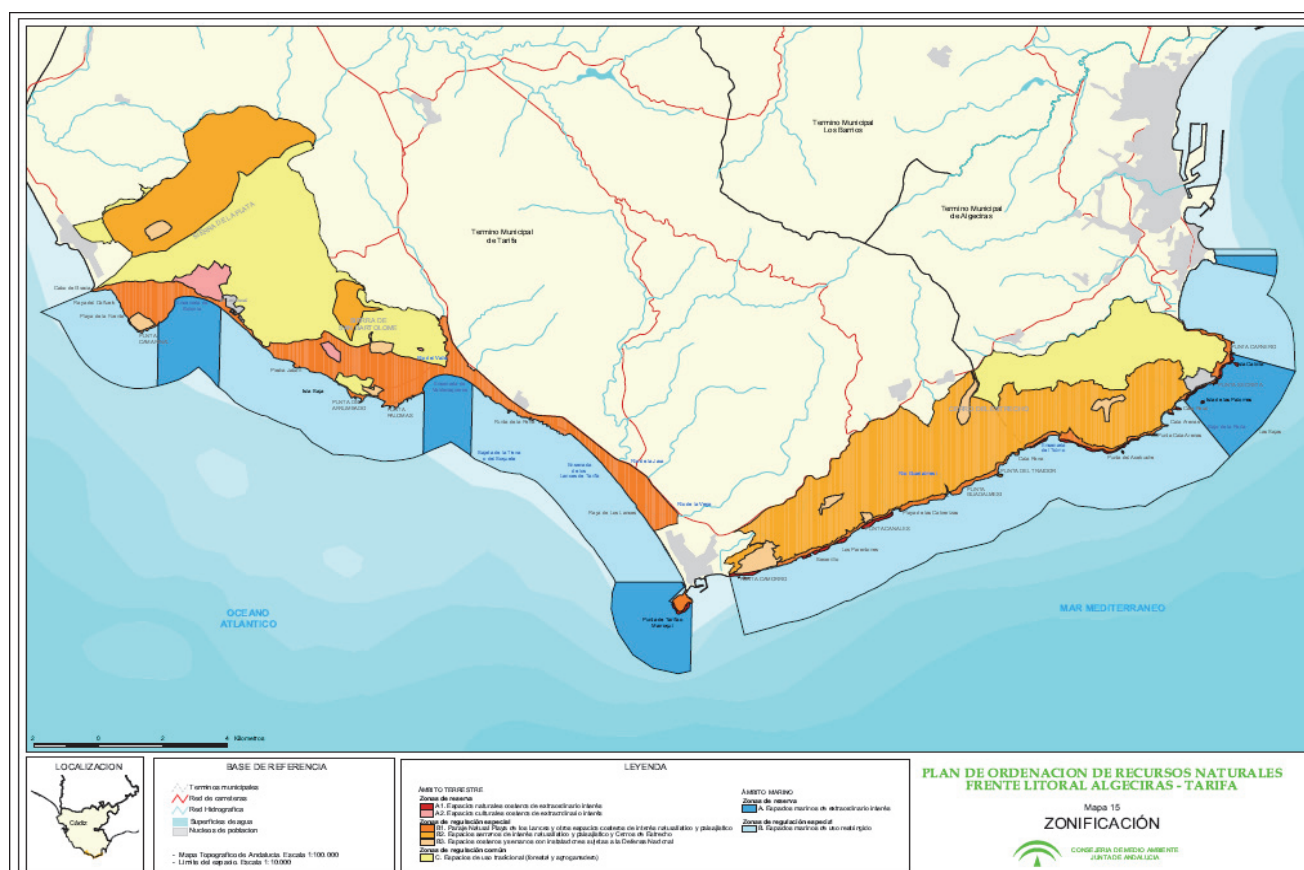
Spanish Fisheries Regulations

Spain implements the Common Fisheries Policy (CFP), Regulation 2371/2002 and as such all the technical rules under the CFP including gear restrictions, monitoring control and enforcement. Specifically in relation to the Mediterranean, Spain is obligated under Council Regulation No 1967/2006 to take specific measures in relation to sustainable exploitation, management and conservation. Spain is currently implementing its marine plan under this regulation and specific elements also include the national fishing laws applicable to the fisheries in Andalusia which cover the fisheries of Algeciras and La Linea.

A list of Spanish fishing laws and restrictions includes:

- Order APA/37/2007 in BoE no.18 dated 20/01/2007 which describes, in detail, the minimum mesh size and dimensions of fixed gears and minor gears/arts in the Mediterranean;
- Order dated 5 June 2006, BOJA no.116 dated 19/06/2006, establishing the minimum depths for seine nets and trawling in interior waters of the Mediterranean (in summary: 50m for trawling and 35 for seine nets);
- Order dated 7 April 2004, BOJA no.76 dated 20/04/2004, establishing the regulatory standards for the capture of octopus in the interior waters of the Mediterranean (Andalucia);
- **Real Decreto 632/1993** prohibits "arrastre de fondo", (one of the methods of "raking the seabed" covered in the Nature Protection Act) in waters less than 50 m deep in the Bay of Cadiz;
- The use of "artes de Cerco" (seine nets) is regulated under the **Real Decreto 2349/1984** modified by **Real Decreto 2751/1986** (BOE No 306, 23/12/1986) and **Real Decreto 139/1993** (BOE No 49 26/2/1993); and
- Trammels are subject to mesh and size restrictions. These nets can be used within designated areas in Spanish Waters outside the special areas. Real Decreto 1428/1997 and Annex VI from EC Regulation 894/97 include specifications for the use of those nets.

Spain has also established a system of protected areas. With specific relevance to Andalusia, the Parque Natural del Estrecho (PNE) has different zones corresponding to varying levels of protection. **Class A** zones (those in dark blue) are known as Zonas de Reserva. Fishing within these areas has been banned completely. The area of Punta Carnero is one of them amongst others (see Figure 25 which shows the exact location of these areas). In addition, the restricted zones within the Bay include the area in front of the Refinery (for security purposes). Within these areas there are restricted zones as shown in Figure 24.



Source: Junta de Andalucía, 2004

Figure 24: Parque Natural Del Estrecho – Spanish network of Protected Areas



Source: Junta de Andalucía, 2004

Figure 25: Fisheries exclusion zone in Punta Carnero.

Some fishing methods which are banned in Gibraltar are allowed within certain Spanish marine protected (outside of the aforementioned Zonas de Reserva). Gibraltar's legislation is similar to those that apply to a Zona de Reserva and other protected zones throughout Europe.

Gibraltar Law on marine Fisheries and Enviroment

Currently Gibraltar has no authorised commercial fisheries and therefore has no comparable fisheries legislation to Spain. In addition, whilst the marine resources in

and around Gibraltar are regional in nature, neither the Common Fisheries Policy (CFP) (Regulation 2371/2002) or the Mediterranean Policy (Regulation 1967/2006) are applicable to Gibraltar. In the case of the latter Regulation, this is particularly disadvantageous, as the marine resources are categorised as Mediterranean but the provisions of the Regulations cannot be implemented to manage and conserve these resources.

Despite this fact, Gibraltar has the Nature Protection Act 1991 which contains specific elements on fisheries. It prohibits, under Section 10, certain methods of catching wild animals, which biologically clearly and undisputedly includes fish, molluscs, crustaceans and other marine creatures. These methods include:

- Seine nets;
- Gill nets;
- Drift nets;
- Any pot or device for raking the sea-bed; and
- Any form of artificial light.

In addition, Schedule 1 to the Act lists species which are protected. These do not include commercially important fish, but do include a variety of creatures of the sea bed which are destroyed or removed during dragging of the seabed and are protected under the EU Habitats Directive.

The Marine Nature Reserve Regulations 1995 allow for further restrictions on activities within the reserve. These Regulations include provision for the issuing of licences for fishing, angling, and other activities in the reserve, although Gibraltar is yet to implement these provisions. However, The Marine Nature Reserve Regulations 1995 (MNR) are now being revised and a new set of regulations are being drafted namely the Marine Protection Regulations (MPR) which bolster the legislative provisions of the MNR.

Regional Fisheries Management by the GFCM

Marine resources in the Mediterranean are currently managed by the General Fisheries Council for Mediterranean (GFCM). Their remit includes coordinating the scientific assessment of regional fish resources including species which occur around Gibraltar, as part of the Southern Alboran Sea. The GFCM was created under the auspices of the FAO in 1949. All Mediterranean countries and the European Commission are Members of its functioning Committees. Membership of GFCM is open to both Mediterranean coastal states and regional economic organisations as

well as to United Nations member states whose vessels engage in fishing in Mediterranean waters.

The GFCM has a scientific fisheries committee to support the work of the GFCM. GFCM's work to date has focused on shared or straddling stocks, particularly those involving demersal, small and large pelagic species. A key focus has been on international collaboration on research, improving information exchange and determining the state of resources. Most fisheries management measures adopted since 1997 relate to tuna, in coordination with recommendations of ICCAT. In turn, these measures have been transposed into EU law, obligating all EU Member States including Spain. A key issue is the level of implementation of the rules adopted by GFCM by EU Member States.

Gibraltar is not a party to the GFCM and can only be so through the UK. However, the UK is not a party to the GFCM either and this restricts Gibraltar's future participation in GFCM. This non-participation is critical to the management of resources within BGTW, as some of these fish species are currently included in the management plans for GFCM Geographical Statistical Area (GSA) 03 which is the Southern Alboran Sea (see Figure 26) and Gibraltar is not included in these decisions.

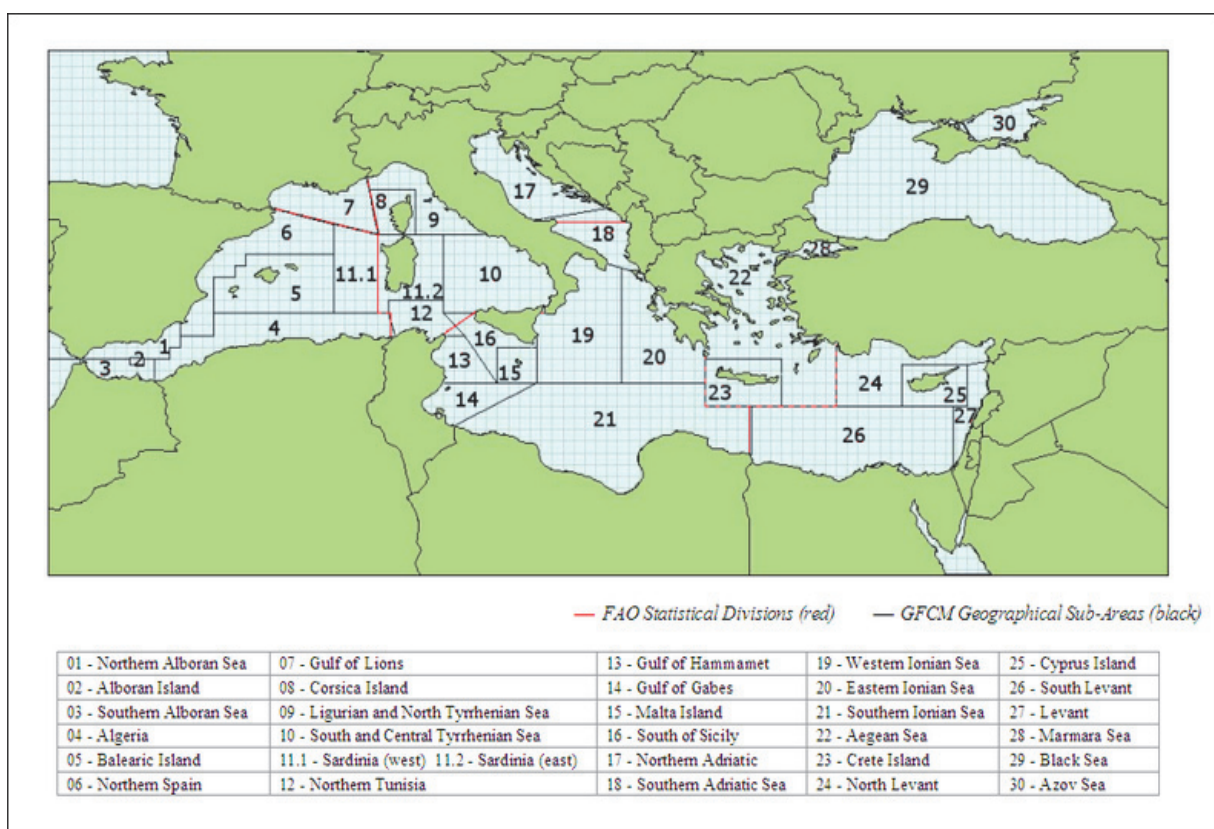


Figure 26: Map of the area of competence of the GFCM.

Similar to other regional management bodies, GFCM has an annual meeting to implement its policy and activities.

GFCM has four committees which meet intersessionally:

- the Scientific Advisory Committee (SAC),
- the Committee on Aquaculture (CAQ),
- the Compliance Committee (CoC),
- the Committee of Administration and Finance (CAF) and their respective subsidiaries.

The GFCM also works on cooperative projects at sub-regional and regional level which enhance, in particular, scientific cooperation and capacity building in participating countries in line with GFCM priorities and strategies. In addition, the Commission cooperates closely with other international organisations in matters of mutual interest.

The core functions of GFCM are:

- to keep under review the state of the Mediterranean living resources, including their abundance and the level of their exploitation, as well as the state of the fisheries based thereon;
- to formulate and recommend, appropriate measures: (i) for the conservation and rational management of living marine resources; and (ii) for the implementation of these recommendations;
- to keep under review the economic and social aspects of the fishing industry and recommend any measures aimed at its development;
- to encourage, recommend, coordinate and, as appropriate, undertake training and extension activities in all aspects of fisheries;
- to encourage, recommend, coordinate and, as appropriate, undertake research and development activities, including cooperative projects in the areas of fisheries and the protection of living marine resources;
- to assemble, publish or disseminate information regarding exploitable living marine resources and fisheries based on these resources;
- to promote programmes for marine and brackish water aquaculture and coastal fisheries enhancement; and
- to carry out such other activities as may be necessary for the Commission to achieve its purpose as defined above.

Analysis

Fisheries statistics from Algeciras and La Linea are available for two key time periods: 1985-1999 and 2002-2011. The data included total landings by year, landings by species and fishing effort data (number of fishing vessels and days), with a specific focus, on fishing activities within BGTW. A preliminary analysis was presented in the interim report and has since been expanded to include additional data both from Spain and Gibraltar.

In summary, the data have been useful in providing a better understanding of the trends in landings, shifts in target species and fishing effort. In the case of Algeciras, there is a much larger fleet fishing in areas outside the Bay of Gibraltar in the two time periods researched. These data were presented to highlight the importance of Algeciras and La Linea in the Spanish regional context, that is, Andalusia. In the case of the Spanish fleets, the trends in landings and species compositions over the two distinct time periods studied years are evident. Based on the available information, it is difficult to pinpoint the reasons for the change in fishing over the two time periods without additional information. In the case of other species such as the bluefin tuna (*Thynnus thunnus*) and red seabream (*Pagellus bogaraveo*) the serious decline of these species over the time periods led to regional management decisions by ICCAT and GFCM which have resulted in changes the fishing fleet and the activities of fleet of Algeciras, specifically.

In addition, to the cessation of the EU-Morocco agreement may have also led to shifts in species focus to other species targeted by the fleet of Algeciras in order to meet national production targets. In addition fluctuations in landings (e.g. declines and increases) may also have been due to the migratory and seasonal variations of some species, for example, melva (*Auxis rocheii*) and horse mackerel (*Trachurus spp*). As previously highlighted, whilst these data provided some useful information on trends, they do not provide an indication on the impact of the fleet from Algeciras on the fish in the Bay of Gibraltar, specifically. In order to do so, more detailed information linking landings to the location of fishing operations is required and this information was not available.

Specific data on the five vessels from Algeciras fishing in the Bay of Gibraltar provided by the IEO were also analysed and provide useful information on their fishing activities of this part of the Algeciras fleet, however, again it was only useful in drawing some general conclusions. The data highlighted that the species targeted by the Algeciras vessels in the Bay of Gibraltar are largely migratory species such as the mackerels (*Trachurus spp*), frigate mackerel or melva (*Auxis rocheii*), mullets (*Mullus spp*) and various species of sea breams – some of these are likely to be spending part of their lifecycle in the Bay but these are also migratory species. As there is no current monitoring on the stocks in the Bay of Gibraltar and therefore no scientific data to define unit stocks and status or changes in population size, composition etc, there

remains great uncertainty about the state of these specific stocks, past or current. However, using the available data on landings and effort (number of boats, trips and target days), calculations of LPUEs were made to provide a preliminary indication of the state of the species - that is stock abundance. However, as there is a lack of information on the specific locations of the fishing operations and specific data on the biology of these stocks in the Bay of Gibraltar, it was not possible to use this information to make any robust conclusions about the impact of the fleet on species or stocks.

The fisheries statistics and data on La Linea have also been useful in understanding their fishing operations. Similar to Algeciras, their data highlights the evolution of the fleet over the last two decades in terms of the species targeted, fishing effort and the number of vessels. Published and anecdotal information on the La Linea fisheries indicate that the fisheries are artisanal and coastal in comparison to the Algeciras fleet but the fleet is engaged in fishing closer to shore from Gibraltar to Malaga.

The main fisheries are for corruco (*Acanthocardia tuberculata*) and smooth clam (*Callista chione*) using the conch rakers, although La Linea also benefits from the migratory species such as horse mackerel (*Trachurus trachurus*) which is seasonal in the Mediterranean, and other species of bream. LPUEs for the key species show little variations over the last nine years, but landings for the main species remain at lower levels than some other species. No conclusions can be drawn about the state of these stocks as there are no assessments and monitoring of catches for scientific purposes.

Although the data on the recreational fishing are not as extensive as the commercial data for the Spanish fisheries, they have been informative in terms of target species, levels of catches and fishing effort applied to the recreational fisheries. The number of anglers and competitions has remained largely constant over the years, but the quantity of some major species have shown decline (see results in previous section).

There are overlaps between the areas fished and species targeted by both the recreational fishermen from Gibraltar and the commercial fishermen from La Linea and Algeciras; however the data indicate that the greatest overlap is in relation to the former rather than the latter. For the species where there is overlap and decline in catches, it is difficult to infer with any certainty the relative level of impact by the commercial Spanish fisheries and the recreational fisheries in Gibraltar. However, it can be concluded that increased fishing pressure from either is likely to have an impact and potentially a negative impact on the status of these species.

Explanatory note: EU fisheries policy for the Mediterranean – Council regulation 1005/2006

The Mediterranean Regulation was adopted in January 2007 and replaced the previous “Regulation on technical Measures in the Mediterranean” dating from 1994. It applies to the 7 EU member states bordering the Mediterranean: Spain, France, Italy, Slovenia, Greece, Cyprus and Malta. The aim of the Regulation is to ensure the sustainable exploitation of resources through an ecosystem approach to fisheries management by implementing certain technical measures (i.e. minimum distances from the coast, minimum mesh sizes, maximum overall dimensions of fishing gears, minimum size of organisms, etc), and to promote a different approach to fisheries management based on a decentralized decision-making process and on setting up multi-annual management plans both at national and community level.

It is not a mere technical measures Regulation. It tackles the current fisheries problems in the much wider context of an ecosystem approach to fisheries management, it integrates the environmental dimension, and it spells out the specific role of each actor, in line with good governance principles.

The necessary flexibility to adapt the basic principles to the various local fisheries and situations is ensured by a 'bottom-up' integrated approach: unlike the top-down rules applied in other sea basins, Member States are requested to draw up National Management Plans for the fisheries in their territorial waters.

Technical measures foreseen in the Mediterranean Regulation touch different issues, including: protection of sensitive habitats, prohibition to use dangerous fishing practices, improvement of the selectivity of trawlers, minimum hook size, limitation of the maximum dimensions of passive fishing gears, limitation of the active fishing gears operations (e.g. trawlers, purse seines, dredges etc.) in coastal areas (distance to coast, depths etc), limitations on the minimum size of fish and other marine organisms which can be caught and prohibition to use professional fishing nets for recreational fishing.

Currently the recreational fisheries in Gibraltar are unregulated by the Government of Gibraltar and there is no official monitoring programme for the collection of data to inform the management of fish populations targeted. Whilst the Spanish vessels have been fishing illegally in BGTW, these vessels are legally registered and licensed in Spain and operate under the conditions established by the Spanish government, using

methods which have been authorised including gear types and legal sizes fish caught (BOE¹⁷, 2012).

The La Linea fleet is also more important to the local economy in terms of the socio-economic benefits from the fishery as compared to other local towns in Andalusia. This fleet is categorised as an artisanal fleet compared to Algeciras fishing operating with vessels less than 25 m and using a range of fishing methods including ‘artes menores’ and the rastros (rakers) – all of which are likely to have ecosystem impacts and impacts on the marine environment.

The Spanish fisheries are governed by Spanish regulations established annually. These national regulations are based on the European Common Fisheries Policy (CFP) and the Council Regulation for the Mediterranean. However, Spanish implementation of both regulations has found to be lacking over the years. In particular, the Spanish management plan to implement the 2006 Regulation which was reviewed by the Scientific and Technical Committee for Fisheries (STECF) in 2012, highlighted that the Spanish management plan under the 2006 Regulation, established a 10% reduction in fishing effort plus additional technical measures. However these measures were not sufficient to achieve recovery of overexploited stocks. The plan was reviewed by STECF and, they concluded that the proposed Spanish management plan for 2011-2015, while being an appropriate scientific background and setting correct biological goals, for example, maximum sustainable yield (MSY), it is unlikely to achieve this target for any stocks by 2016 or even halt their decline by then (STECF, 2012).

Fisheries Analysis Conclusions

The Government of Gibraltar is committed to a high standard of environmental protection hence the passing of the 1991 Nature Protection Act. They are also committed to responsible fisheries management in a regional context. With this in mind, it is critical that management decisions should be based on robust information on the state of the stocks in and around Gibraltar and to what extent current fishing practices are impacting their sustainability, throughout their range.

In this review of the fisheries in and around Gibraltar, a concerted effort was made to collect information from a range of sources in Spain and Gibraltar to evaluate the fisheries and understand their impact of current fishing activities on the marine resources. Whilst these data were useful for some analyses, they have been insufficient in providing clear indicators on the state of the fish stocks and the impacts

¹⁷ Boletín Oficial del Estado

of the current fishing operations in the waters in and around Gibraltar. In addition, there is no reliable or quantitative and validated data on the level of illegal fishing in and around BGTW. Furthermore, most of the data, specifically the Spanish data, relates to landings and does not include estimates of fish discarded as bycatch during fishing operations.

Serious gaps in the data which hamper further analysis at this stage include:

- The location of the fishing operations of Spanish fleets to evaluate local impacts on the fish resources;
- The status of these stocks currently being exploited and the relationship between this and regional sustainability;
- The biology and population dynamics of these species in and around Gibraltar;
- Quantification of the impact of either commercial or recreational fisheries on the species fished; and
- Broader environmental impacts of these fishing activities.

Gibraltar has no formal commercial fisheries but has a vibrant recreational fraternity. This analysis remains inconclusive about the state of the fish species targeted by either the Spanish fishermen fishing in BGTW or the adjacent waters or the fish resources within BGTW (within the 3 nautical miles) targeted by recreational fishermen. In addition, the role of these activities on regional fish resources is unknown. The recent report on the state of Mediterranean fisheries indicates that whilst the overall situation in the Mediterranean is improving, there is still concern over the sustainability of fisheries in the Mediterranean. This is despite regional efforts to reduce fishing efforts in the Mediterranean.

Based on the lack of complete and critical information on which sound fisheries management measures and actions can be based, a precautionary approach is recommended at this time. The level of uncertainty associated with most of the species including whether some species spend part of their life cycle in BGTW (for example, during their juvenile or breeding stage) and the impacts of fishing methods on the marine environment within BGTW, does not provide sufficient evidence to support commercial fishing within BGTW. This includes fishing of shared or highly migratory stocks, for example bluefin tuna which is currently under a recovery plan established by the International Commission for the management of Atlantic Tuna (ICCAT) and especially as Gibraltar is not currently participating in these regional management arrangements.

Before any commercial fishing is allowed in BGTW robust monitoring and assessment programmes would need to be established and implemented to collect and evaluate the marine environment around Gibraltar and provide a basis for robust management actions. A series of recommendations are proposed as part of a



comprehensive framework for the sustainable management of resources in and around Gibraltar.

THE EUROPEAN AND INTERNATIONAL SITUATION

Politico-legal Situation

As has already been demonstrated the politico-legal situation of Gibraltar is a complicated one. It is an Overseas Territory of the United Kingdom and also part of the European Union. However, it does not form part of the Common Fisheries Policy and is not subject to the Regulations governing fisheries under that process and others such as within the remit of the General Fisheries Council for the Mediterranean. Any negotiations at international level, including within the EU, cannot be conducted by the Government of Gibraltar directly but must be undertaken by the Government of the United Kingdom. Since the Government of Spain does not recognise the sovereignty of Gibraltar, direct discussions or negotiations do not take place between them and indeed bilateral discussions between Spain and H.M.G. have in the past taken place and still take place without the presence of Government of Gibraltar representation. Hence the “Joint Understanding” which was not a legal document given this situation. Nonetheless it is interesting to note that it contains language that tacitly recognises the right of the Government of Gibraltar to manage BGTW. Thus a considerable degree of the problems facing Gibraltar are not of their solution but rely heavily on the UK Government.

Mediterranean Structures

It should also be recognised that the Mediterranean region has in place a whole series of strategies, agreements, and arrangements which connect the EU Member States, neighbourhood states, and others which attempt to provide coherence in the region and in many cases sub-regions. Given that the Government of Gibraltar is unable to be represented directly on these various bodies and which must be undertaken by the UK Government and that thus far they have proved largely unwilling to become parties to these processes as the UK is not seen to be a Mediterranean country, it is unsurprising that Gibraltar is missed out in any discussions or negotiations which could, and sometimes do, fundamentally affect them. The situation becomes even more complex when the EU decides to operate Mediterranean processes either with or through these third parties. Below are some examples of these processes and the difficulties that face Gibraltar in being

seen to be part of the bigger picture in Mediterranean environmental management. Currently in most cases they are largely ignored whether by design or by oversight. Gibraltar can gain from being part of these processes and the rest of the Mediterranean can gain from Gibraltar's experience.

Among these is the Euro-Mediterranean Partnership. The Union for the Mediterranean promotes economic integration and democratic reform across 16 neighbours to the EU's south in North Africa and the Middle East. Formerly known as the Barcelona Process, cooperation agreements were re-launched in 2008 as the Union for the Mediterranean (UfM). Along with the 27 EU member states, 16 Southern Mediterranean, African and Middle Eastern countries are members of the UfM: Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Israel, Jordan, Lebanon, Mauritania, Monaco, Montenegro, Morocco, the Palestinian Authority, Syria, Tunisia and Turkey.

The UfM has a number of key initiatives on its agenda including *inter alia*:

- the de-pollution of the Mediterranean Sea, including coastal and protected marine areas;
- the establishment of maritime and land highways that connect ports and improve rail connections so as to facilitate movement of people and goods;
- a joint civil protection programme on prevention, preparation and response to natural and man-made disasters;
- a Mediterranean solar energy plan that explores opportunities for developing alternative energy sources in the region,

all of which have some relevance to Gibraltar but in particular the first of these.

Environmental cooperation with the countries of the Mediterranean lies in the framework of EU external policy, the European Neighbourhood Policy (ENP), whose aim is to strengthen relations between the EU and its neighbours. Of most interest to Gibraltar the policy covers Algeria, and Morocco, as riparian states in the Alboran Sea, among others. This policy reinforces the Euro-Mediterranean Partnership, while using all of its institutions and mechanisms. EU third countries relations are governed by a series of bilateral Association Agreements between the EU and each country concerned. The environmental chapter of the National Action Plans agreed with partner countries under the ENP will be implemented primarily through discussions that will take place in bilateral Environment Sub-committees under each ratified Association Agreement. These relations are bilateral whilst regional cooperation in the Mediterranean takes place under the Union for the Mediterranean. It should be noted that although the EU is a member (and therefore includes the UK) the UK is not apparently involved directly and therefore, neither is Gibraltar.

Regional Cooperation

In terms of regional cooperation there are a number of initiatives relevant to this report. One such is MEDPAN - A Transnational Cooperation Project to Enhance Management Effectiveness of Marine Protected Areas in the Northern Mediterranean. The MedPAN North project is an independent project operating within the MedPAN network framework under the leadership of WWF-France. It brings together 12 key actors from 6 European countries bordering the Mediterranean: Spain, France, Greece, Italy, Malta and Slovenia; with a budget of €2.38M co-funded by the European Regional Development Fund through the Meda Programme. The project started in July 2010 and runs until June 2013. The aim of the project is to improve MPA management effectiveness, including in the marine Natura 2000 sites and to contribute to the establishment of a network of MPAs, as part of the international commitments, and particularly the European commitments in this area.

There are 5 different components:

- Innovative aspects of MPA management;
- Sustainable management of fisheries in MPAs;
- Sustainable management of tourism in MPAs;
- Communication; and
- Project management.

The project is intended to contribute to related European policies:

- Habitats and Birds Directives;
- EU Action Plan for Biodiversity;
- Marine Strategy Framework Directive;
- Common Fisheries Policy;
- Integrated Maritime Policy;
- Tourism; and
- Their implementation in the territorial policies in each country concerned, as well as to national policies.

The aim of the activities for the sustainable protection of the marine environment, especially in terms of sustainable tourism and fisheries, is to maintain long-term employment and even to create new jobs in these two areas.

This project is officially supported by the Barcelona Convention, through the Regional Activity Centre for Specially Protected Areas, which is partner to the project.

Gibraltar is not part of this process although it appears from the map provided in the Brochure (below) for the project that if its waters are not part of the project they are extremely close – fisheries management is a significant component.



Source MedPAN Organization

Alboran Sea

A further ongoing initiative is that relating to the Alboran Sea of which Gibraltar's waters form a part. MedRas is the result of a joint initiative of IUCN, together with other Mediterranean partners, to foster a network of the most representative and critical habitats through the Mediterranean. This involves the setting up of a network of experts and practitioners in different countries; integrating information on biodiversity, habitats and human users and impacts; and developing a methodology that includes scientific and socio-economic values to establish a sustainable and representative Network of Managed Areas with the objective of biodiversity conservation. One of the areas they have chosen to use is the Alboran Sea as a pilot site to initiate the process to identify a Network of Conservation Areas in this region, identify its features and more significant elements as well as to illustrate the development and applicability of criteria to define those important representative features and areas to conserve. The main objectives are:

- Identification of priority sites for conservation and marine management areas for a protection network in the Alboran Sea;
- Evaluation of the scientific information available for the design of a network of marine management areas for protection and its use to identify important areas and species; and
- Integration of the biological information and the interaction with productive activities and impacts for the selection of sites.

The Alboran Initiative has, as its stated primary goal, to facilitate a future joint management of the Alboran Sea ***between the three countries, Morocco, Spain and Algeria*** (added emphasis) to ensure its Sustainable Development. The IUCN Mediterranean Cooperation Centre initiated a process focusing on this goal and has realised several international encounters and consultations with a wide range of stakeholders (local authorities, civil society, sectoral stakeholders, support organisations) of the region. Note once more the lack of involvement of Gibraltar. Also of note here is the role of IUCN which here operates through a regional office in Malaga and persistently and consistently ignores the existence of Gibraltar. Another example of this is a study that IUCN undertook, at European level, on implementation of the CBD in European Overseas Countries and Territories and once again left out Gibraltar.

Barcelona Convention

Probably the most critical of international environmental processes in the Mediterranean is the Barcelona Convention through which much of the environmental management arrangements in the Mediterranean are organised, even by the EU. The European Community and all the EU Mediterranean Member States are contracting parties to the Convention. The UK, however, is not despite having responsibility for Gibraltar within the EU.

The Barcelona Convention obliges the Contracting Parties generally to take all appropriate measures to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area caused by dumping from ships and aircraft or incineration at sea, discharges from ships, exploration and exploitation of the continental shelf and the sea bed and its subsoil, land-based sources and transboundary movements and disposal of hazardous wastes. The Contracting Parties shall also protect and enhance the marine environment in that Area including conservation of biological diversity so as to contribute towards its sustainable development. International co-operation is to be undertaken in dealing with

pollution emergencies, in the monitoring of pollution, and in scientific and technical matters.

In 2008, the Barcelona Convention agreed the Mediterranean Ecological Vision, “a healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations” is the first step towards the development and application of the, often quoted but barely understood, Ecosystem Approach in the region. Twenty-one states have a coastline on the Mediterranean Sea, but only seven are Member States of the EU (Spain, France, Italy, Greece, Cyprus, Slovenia and Malta). Note here once again that the UK is not considered to be in this group despite the existence of Gibraltar within the EU. Non-member states have no obligation to maintain the environment in a manner described in several EU directives (e.g. Habitats Directive, WFD or MSFD) although the European Neighbourhood Policy does provide some opportunities in this direction but the absence of a fully coordinated effort towards the objectives of those directives may lead to difficulties in the achievement of those goals.

UNEP Regional Sea

Since 1975, The United Nations Environment Programme (UNEP) has played a key role in coordinating a Mediterranean-wide regional sea programme. The Mediterranean Action Plan (MAP) was the first ever plan adopted as a Regional Seas Programme under UNEP’s umbrella and was initially adopted by 16 Mediterranean countries and the European Community. Today, this has been extended to involve all 21 countries that border the Mediterranean Sea but once again not involving UK/Gibraltar.

There are five objectives of the MAP:

- to assess and control marine pollution;
- to assist in the formulation of national environmental policies;
- to improve the ability of governments to identify better options for alternative patterns of development;
- to optimise the choices for allocation of resources; and
- to incorporate integrated coastal zone planning and management as a tool to support the environmental, social and economic objectives of the programme.

Specially Protected Areas Protocol

Leaving aside these overarching policy goals, probably the most important part of the Barcelona Convention for Gibraltar in the context of this report is the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) which establishes the framework for the protection and conservation of biodiversity of valuable areas in the Mediterranean Sea. The SPA/BD Protocol is the Mediterranean’s main tool for implementing the Convention on Biological Diversity (CBD), as regards the *in situ* sustainable management of coastal and marine biodiversity. The Protocol has three main elements:

- The creation, protection and management of Specially Protected Areas (SPAs);
- The establishment of a list of Specially Protected Areas of Mediterranean Importance (SPAMIs); and
- The protection and conservation of species.

The lists of species for which some form of regulation is required may be found at Annex 5. Some of these species, in Annex 2 of the Protocol, require strict protection while those in Annex 3 of the Protocol require management objectives.

ICZM Protocol

A relatively recent (2008) Protocol dealing with Integrated Coastal Zone Management (ICZM) in the Mediterranean has been adopted by the Convention. Both near neighbours Morocco and Spain have ratified it. On 13 September 2010, the European Council adopted the decision to ratify the ICZM Protocol to the Barcelona Convention. The Commissioner stressed that the EU ratification decision “*sends a strong signal of commitment from the EU to the protection and sustainable management of the Mediterranean coast*” and this includes coastal waters. The Protocol entered into force on the 24th of March 2011. The ratification of the Protocol means that the Protocol now becomes part of EU law and has binding effect.

MPAs in the Mediterranean

Designation and management of MPAs and MPA networks in the Mediterranean is driven by a range of international, regional, and national obligations and initiatives. The overarching legislation for multilateral cooperation is the Convention on Biological Diversity (CBD). All Mediterranean countries ratified the CBD. The CBD Programme of Work on Protected Areas indicated the actions needed to achieve the obligations under the Convention, governments committed to reach a target of

protecting at least 10% of each eco-region by 2010, and establishing ecologically representative networks of MPAs by 2012. Based on the best available scientific knowledge, these targets have been recognised worldwide as instruments to promote the health of the sea. This commitment has been reaffirmed in numerous international fora. Within the EU the Habitats and Birds Directives are the legal framework of references for European countries to establish an ecological network of protected areas, Natura 2000.

Although the effectiveness of MPAs is the subject of much debate, they are currently considered as an important tool for the conservation of biodiversity by many international frameworks including those above. There are three main potential types of MPA in the Mediterranean – Special Area of Conservation (SAC) under the Habitats Directive; Special Protected Area (SPA) under the Birds Directive and thirdly Specially Protected Areas of Mediterranean Importance (SPAMI) under the Barcelona Convention. With respect to cetaceans, designation as an SAC is of relevance only to common bottlenose dolphins (*Tursiops truncatus*), and harbour porpoises (*Phocoena phocoena*), listed in Annex II whereas SPAMI can be applicable for many species and characteristics, and an area can be declared as a SPAMI if it is an important and representative area for the whole Mediterranean Sea (SPA Protocol, 1995). However, it should be noted that the species protection provisions of the Habitats Directive apply to all species of cetaceans which are protected under Annex IV.

Special Areas of Conservation are required for species listed under Annex II of the EU Habitats Directive. Under Article 1(k) of the EU Habitats Directive, a Site of Community Importance is defined as a site that contributes significantly to the maintenance or restoration at a favourable conservation status of a natural habitat type in Annex I or of a species in Annex II. The two cetacean species above are listed under this Annex: the bottlenose dolphin and the harbour porpoise. In Article 1(l) a special area of conservation (SAC) is defined as a site of Community importance where necessary measures are applied to maintain, or restore, to favourable conservation status, the habitats or populations of the species for which the site is designated. To become accepted as part of the European NATURA 2000 Network of protected areas, proposed SACs must be shown to be of particular importance for the conservation of the species.

The general criteria considered for a region to be designated as a SPAMI are described in the technical documents of the Barcelona Convention (SPA Protocol, 1995). They include:

- exceptional character (hydrology, oceanography, geology, species richness, and presence of endangered habitats);

- representativeness (regarding ecological processes and habitat types);
- high diversity of flora and fauna;
- naturalness;
- presence of habitats of endangered species;
- scientific, educational and aesthetics interest; and
- presence of endangered, catalogued or protected species.

SPAMI are applicable to a wide range of species and oceanographic characteristics. In relation to the specific criteria for cetaceans, the most important points to be considered are:

- the importance of the area for the feeding and reproduction of several species;
- its role as a migration path;
- the inclusion of a high percentage of species' populations at the national or European level;
- a high density and large diversity of cetaceans;
- a large proportion of the population(s) is resident;
- that some human activities are having or may have a negative impact on the cetacean populations inhabiting it; and
- presence of populations of fragmented species and some degree of genetic isolation.

Although SACs are only directly relevant to the common bottlenose dolphin and harbour porpoise, many of the actual and potential threats to them are also shared by other cetacean species. Indirectly, therefore, conservation plans developed for an SAC may, but not necessarily, benefit other cetaceans occupying the same areas. However, the SPAMI allows for greater flexibility and although it is technically “soft law” the EU is a party.

There is discussion in literature of a proposed SAC in the Strait of Gibraltar as representing preferred habitat for several other species, especially common dolphin (*Delphinus delphis*), striped dolphin (*Stenella coeruleoalba*), long-finned pilot whales (*Globicephala melas*), and sperm whales (*Physeter macrocephalus*). Fin whales (*Balaenoptera physalus*) and killer whales (*Orcinus orca*) are also found there regularly. It is assumed that this refers to the Spanish version of the SAC. It was noted that the Strait also represents the primary route of movement (and gene flow) between the Alboran Sea and North-Eastern Atlantic populations of some species such as the short-beaked common dolphin.

It was further noted that a conservation plan to address the main anthropogenic threats to common bottlenose dolphins in the area must address:

- chemical and other physical pollution in the form of contaminants;
- plastic debris and sewage from Gibraltar and Algeciras;
- oil from ships crossing the Strait and the shipyards and harbours of the area;
- bilge-cleaning, particularly from the large number of tankers around the port of Algeciras and the oil refinery;
- acoustic pollution;
- ship strikes due to intense maritime traffic; and
- whale-watching operations, which are growing rapidly in the area.

This seems to accord reasonably well with the list provided in the Gibraltar Biodiversity Action Plan but it is noteworthy that a particular exception is fisheries, which is missing from this list.

Bonn Convention - ACCOBAMS

Also with respect to cetaceans there is a further piece of international regulation that is relevant and that is the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) under the Bonn Convention on the Conservation of Migratory Species of Wild Animals. Its purpose is to reduce threats to cetaceans in Mediterranean and Black Sea waters and improve our knowledge of these animals. The UK is still listed as a non-Party observer because of Gibraltar although apparently it has considered becoming a Party after attending meetings as an observer in 2002 and 2004. This was still under consideration in 2010 but there appears to be no impediment to the UK becoming an (active) party. At a recent meeting of the Parties a Resolution was passed on interactions between cetaceans and fisheries the text of which can be found at Annex 6. In this may be found the following: “effectively enforcing existing bans on relevant fishing gear in the ACCOBAMS area and report measures to the Secretariat through the appropriate online system”.

At an ACCOBAMS workshop in 2009 it was noted that the short-beaked common dolphin (*Delphinus delphis*), once one of the most common cetacean species in the Mediterranean, is now well known to have declined throughout the region during the last 30-40 years. The causes remain poorly understood but are thought to include prey depletion caused by overfishing, bycatch in fishing gear and habitat degradation. The Secretariat of ACCOBAMS was requested to convey the international concern for common dolphins to the environment and fisheries directorates of the European Commission, in particular for the inclusion of the common dolphin in Annex 2 to the Habitat Directive. Competition between dolphins and fisheries in coastal areas was

shown to have minor effects on fisheries. Conversely, prey depletion resulting from fishing can negatively affect cetaceans, common dolphins in particular.

Given the key role of fisheries in the survival of the common dolphin in the Mediterranean, the ACCOBAMS Scientific Committee recommended that the Secretariat, the Parties and the Scientific Committee, as appropriate, cooperate to ensure that:

- the international concern for common dolphins be conveyed to the relevant EU authorities, and appropriate strategies and funding opportunities be identified;
- continue in the participation of appropriate members of the ACCOBAMS (its Scientific Committee or Secretariat) at fisheries meetings such as those organized by FAO (GFCM, ICATT), such that information on the impact of fishing activities on Mediterranean common dolphins is provided and collaborative efforts encouraged;
- the situation of common dolphins in the Mediterranean Sea will be a matter of particular attention (including with the organisation of a workshop) for the collaboration between ACCOBAMS and GFCM as far as both ecological and operational interactions are concerned; and
- that work with the Bonn Convention Secretariat will start on a joint approach to encourage the Parties to implement conservation action, consistent with the decisions taken so far and the listing of Mediterranean common dolphins in Appendix I of CMS.

The Scientific Committee also wished to highlight for the Parties the issue of prey depletion as a factor in common dolphin decline, as witnessed by in the waters of Kalamos, Western Greece, and suspected through work in the Gulf of Vera, Spain. For the former area, which is located in the Natura 2000 area GR2220003 also known as ‘Inner Ionian Sea Archipelago’, research indicates a high risk of local disappearance of common dolphins in the very near future unless fishery management measures are implemented immediately to reduce overfishing. It was noted by the Scientific Committee that allowing the recovery of a coastal ecosystem that has been considerably damaged by overfishing, also created the conditions for common dolphin recovery, including *inter alia*:

- the strict enforcement of national legislation and of Council Regulation 1967/2006, and appropriate penalties for illegal fishing; and
- the immediate moratorium on purse seining and trawling.

In addition, measures should be taken to ensure that the present fishing capacity does not increase.

The importance of the Alboran Sea has already been noted and the ACCOBAMS Conservation Plan for the Mediterranean short-beaked common dolphin includes the Alboran Sea as one of the key areas for conservation of this species and management actions are being designed for this purpose. It was noted that an important consideration for cetacean conservation in the Alboran Sea is that some management actions could and should be implemented whether or not specific MPAs are designated. As a minimum this should include the enforcement of regulations that are already in place but still need the political will and, in many cases, the necessary financial support, to be implemented adequately. These include *inter alia* the limitations on fisheries catches (Spanish and European regulations on fishing quotas) and the MARPOL agreement on pollution (International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78)). In addition, additional steps should be taken to ensure the regulation of active acoustic activities (military sonar, seismic explorations, etc), reduction of fishing effort, and thus overfishing, and the control of incidental capture of cetaceans in fishing gear.

In respect of fisheries, as already noted, there is the GFCM for which it would be useful for Gibraltar to become a member (through the UK Government) as it deals not just with commercial fisheries, but recreational fisheries too, (it has a code of guidance for recreational fisheries) and interests for example in artificial reefs.

Biosphere Reserve

Returning to a more general process and an issue that was well known in Gibraltar but is covered here again as a typical problem that Gibraltar suffers from is the incident of the Biosphere Reserve. Biosphere Reserves are places recognised under UNESCO's Man and Biosphere (MAB) Programme where local communities are actively involved in governance and management, research, education, training and monitoring, promoting both socio-economic development and biodiversity conservation. Among these sites is the Intercontinental Biosphere Reserve of the Mediterranean, Morocco/Spain. This was a pioneering initiative, establishing an intercontinental transboundary biosphere reserve. Connected by a marine transition area, the sites in both countries have strong similarities in terms of geology, ecology and cultural heritage. Both countries will thus be able to benefit from each other's experience and cooperate in managing both marine and terrestrial areas of shared characteristics. The creation of the biosphere reserve aims at boosting development in the region through the promotion of rural tourism and biological culture.

However Gibraltar was not included despite the fact that it gives the region its name and its waters make up a notable part of the region. It has similarities to much of the

surrounding areas, particularly Morocco, but is different and contributes both habitats and species unique to its territory and waters. It already has a high measure of protection. The setting up of an intercontinental biosphere reserve arose at the conclusions of a conference on the ecology of Gibraltar and the surrounding Campo de Gibraltar, held in 1993 in Gibraltar. In April 2000, when word first came of the Spanish and Moroccan Government’s initial plans, GONHS suggested that intervention was needed from both the Gibraltar Government and HMG, possibly via the Governor, that Gibraltar should support such an international Biosphere Reserve, but insist on the Rock’s inclusion. GONHS also wrote to the Spanish authorities but never received any response. It is noteworthy that throughout all this time, support from Spanish bodies was strong. The only response from official Spanish circles came in 2005, with an indication that while in principle there were no problems, inclusion was not practically possible at such a late stage. The exclusion of Gibraltar’s protected areas from the Biosphere Reserve was deemed to be unacceptable and almost certainly politically motivated. Inclusion would have confirmed a sense of direction in favour of good environmental management and in Gibraltar’s future which is totally consistent with its Environmental Charter, and with obligations already accepted by virtue of the European protected status of much of its territory and waters. Questions have to be asked about the role of UNESCO in this process.

European Union processes - Biodiversity Strategy

EU 2050 vision

By 2050, European Union biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity’s intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.

EU 2020 headline target

Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.

With respect to the EU, there are a number of processes some of which have already been covered such as Habitats Directive and Common Fisheries Policy. There is also an agreed Biodiversity Strategy, adopted in May 2011, that lays down the framework for EU action over the next ten years in order to meet the 2020 biodiversity headline target set by EU leaders in March 2010. The strategy is built around six mutually supportive targets which address the main drivers of biodiversity loss and aim to reduce the key pressures on nature and ecosystem services in the EU. Each target is

further translated into a set of time-bound actions and other accompanying measures. The strategy will be implemented through a Common Implementation Framework involving the European Commission and Member States in partnership with key stakeholders and civil society. It is underpinned by a solid EU baseline on the state of biodiversity and ecosystems in Europe which will be used as a basis for monitoring progress. The EU will also continue to play an active role at the international level, helping to ensure the global biodiversity commitments adopted at the 2010 Conference of Parties to the Convention on Biological Diversity in Nagoya, Japan, are met.

TARGET 1: Fully implement the Birds and Habitats Directives

To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, compared to current assessments: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.

TARGET 2: Maintain and restore ecosystems and their services

By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems

TARGET 4: Ensure the sustainable use of fisheries resources

Achieve Maximum Sustainable Yield (MSY) by 2015. Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the Marine Strategy Framework Directive.

Action 13: Improve the management of fished stocks

13a) The Commission and Member States will maintain and restore fish stocks to levels that can produce MSY in all areas in which EU fish fleets operate, including areas regulated by Regional Fisheries Management Organisations, and the waters of third countries with which the EU has concluded Fisheries Partnership Agreements.

13b) The Commission and Member States will develop and implement under the CFP long-term management plans with harvest control rules based on the MSY approach. These plans should be designed to respond to specific time-related targets and be based on scientific advice and sustainability principles.

13c) The Commission and Member States will significantly step up their work to collect data to support implementation of MSY. Once this objective is attained, scientific advice will be sought to incorporate ecological considerations in the definition of MSY by 2020.

Action 14: Eliminate adverse impacts on fish stocks species, habitats and ecosystems

14a) The EU will design measures to gradually eliminate discards, to avoid the by-catch of unwanted species and to preserve vulnerable marine ecosystems in accordance with EU legislation and international obligations.

14b) The Commission and Member States will support the implementation of the Marine Strategy Framework Directive, including through providing financial incentives through the future financial instruments for fisheries and maritime policy for marine protected areas (including Natura 2000 areas and those established by international or regional agreements). This could include restoring marine ecosystems, adapting fishing activities and promoting the involvement of the sector in alternative activities, such as eco-tourism, monitoring and managing marine biodiversity, and combating marine litter.

TARGET 5: Combat Invasive Alien Species

By 2020, Invasive Alien Species (IAS) and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS.

N.B. Target 3 relates to agriculture and forestry and so not applicable here.

There are 5 applicable targets in the Strategy directly applicable to this review.

It will be noted that as usual the fisheries elements are predicated on membership of the CFP which does not apply in Gibraltar's case. As such it requires knowledge of fish stocks which also does not apply to Gibraltar. There is however an element concerned with preserving vulnerable marine ecosystems. The Commission notes in its promotional materials:

“The fourth target aims to combat overfishing and ensure a more sustainable ecosystem-based management of fisheries resources. Despite important reforms to the EU’s Common Fisheries Policy in 2002, most of Europe’s commercial fish stocks remain over-exploited. Vessels are catching more fish than can be safely reproduced, thus exhausting individual fish stocks and threatening the marine ecosystem. Today on average three out of four stocks are overfished, varying from as much as 82% in the Mediterranean to 63% in the Atlantic. Yet, despite these warning signs, decisions on catch levels remain dominated by short-term thinking, and the catching capacity of the European fleet remains more than twice what is needed to harvest our own fish stocks sustainably. Action is also foreseen to eliminate adverse impacts of commercial fishing on other marine species and habitats, and entire ecosystems, for instance by phasing out of discards and by providing financial incentives for fishermen to adapt their fishing activities. The latter will be designed to encourage fishermen to use more selective fishing gear, diversify their activities and play a more active role in helping to manage and conserve Europe’s marine biodiversity.”

Marine Strategy Framework Directive

But there are also new initiatives that are not only critical to the management of marine living resources around Gibraltar, but also to relationships with neighbouring countries especially Spain and the European Institutions, particularly the Commission. The most critical of these is the Marine Strategy Framework Directive (MSFD). The aim of the MSFD is to protect more effectively the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. The EU says that the MSFD constitutes the vital environmental component of the Union's future maritime policy, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment. The marine strategies to be developed by each Member State must contain a detailed assessment of the state of the environment, a definition of "good environmental status" at regional level and the establishment of clear environmental targets and monitoring programmes. Each Member State must draw up a programme of cost-effective

measures. Prior to any new measure, an impact assessment which contains a detailed cost-benefit analysis of the proposed measures is required.

The criteria for Good Environmental Status of marine waters focus on different aspects of marine ecosystems including biological diversity, fish populations, eutrophication, contaminants, litter and noise. The criteria and associated indicators defined have been based on scientific and technical advice provided by independent experts and have to be used by Member States to determine the environmental status of the marine ecosystem. They build on existing obligations and developments in EU legislation, covering elements of the marine environment not yet addressed in existing policies. A series of guidance documents has been produced for all of the qualitative descriptors. The most relevant for Gibraltar in this context are biological diversity, non-indigenous species, commercially exploited fish and shellfish, food webs, seafloor integrity, contaminants and pollution effects, and contaminants in fish and other seafood. Good Environmental Status (GES) means that the overall state of the environment in marine waters provides ecologically diverse and dynamic oceans and seas which are healthy and productive. Use of the marine environment must be kept at a sustainable level that safeguards potential uses and activities by current and future generations. This means the structure, functions and processes of marine ecosystems have to be fully considered, marine species and habitats must be protected and human-induced decline of biodiversity prevented. To achieve the EU's objective of good environmental status for all marine waters by 2020, Member States have to develop marine strategies which serve as action plans for applying an ecosystem-based approach to the management of human activities. Good Environmental Status must be determined at the level of marine regions or sub regions, on the basis of 11 qualitative descriptors of the marine environment specified in the Marine Strategy Framework Directive. Of particular importance here is that regional cooperation is required at each stage of the implementation of the Directive.

Technically Gibraltar has no commercial fishery and so it is possible that it will not have to report on commercially exploited fish and shellfish – but an informal Gibraltarian commercial fishery of unknown status is operating as well as an illegal commercial fishery by Spanish boats. Member states that are part of the CFP will be utilising data collected for that purpose in order to fulfil this task but as Gibraltar is not part of the CFP it would have to establish a monitoring programme for this specific purpose. Monitoring programmes in place for compliance with the Habitats Directive may be sufficient for biological diversity and non-indigenous species but not necessarily for food webs and the latter could be very important for the cetacean populations adjacent to Gibraltar and for the western Mediterranean shag. This information could also provide information on fish species present and their numbers.

However, there will undoubtedly be an issue with the Government of Spain as it has already produced a draft management plan incorporating BGTW (as they did for the SAC) and submitted it to the European Commission. Much now depends on how the European Commission will deal with this situation. Until now they have shown little willingness to try to resolve the difficulties between the UK and Spain over Gibraltar and in some ways added to it by granting power to both parties over the same territory under the Habitats Directive. Even more intriguing is the requirement under the MSFD that regional cooperation is required at each stage of the implementation of the Directive. It is clear that Gibraltar is willing to cooperate but the question is will Spain reciprocate and if they do not how will that be dealt with in terms of breaching the Directive?

More recently the EU has started other maritime and marine initiatives – the Integrated Marine Policy and the Blue Growth Agenda among them. The latter is concerned more or less solely with economic growth and utilising marine resources to that end. It is thus even more important that Gibraltar maintains a strong stance on its environmental protection agenda and its sustainability agenda.

CONCLUSIONS

The dispute over fisheries between the Government of Gibraltar and local Spanish fishermen has been around for several decades sometimes very active and sometimes smouldering waiting to flare up again. It acts as a niggling sore to both sides; it is untenable in the long term and a considerable diplomatic problem for both the governments of UK and Spain. It is for the EU too but those in authority appear not to wish to consider having to deal with a problem that is partly of their making and they have exacerbated.

Although this is intended to be a technical report and we have tried to keep it in that form, there are inevitable crossovers between the technical and political. Unfortunately a technical report can only provide so much in terms of the potential management solutions and it will not resolve the problems which seem largely intractable given the relevant positions of the governments of Spain and of the UK. The matter of sovereignty and territoriality, which is at the heart of this issue, is beyond the scope of this report but we are bound to say that we believe that some parties to this dispute – whether at local, regional or national levels - are using the fisheries issue as a proxy for the sovereignty dispute. That leaves both the Gibraltar Government trying to achieve its best for the environment and the fishermen, especially the artisanal fishers of La Linea, in a difficult position. There are clearly problems for the Spanish Government of a socio-economic nature and for the fishermen but they are not of Gibraltar's making, nor should they be seen as something for Gibraltar to resolve. There are numerous closed areas to fishermen in Spanish coastal waters for a mixture of environmental protection and fisheries management and that has restricted the options for Spanish fishermen. Also the arrangements with Morocco have broken down and caused access to be restricted for Spanish fishermen. Again this is nothing of Gibraltar's doing but it is expected to provide a ready solution by opening up its waters to Spanish boats when in all likelihood, were the waters Spanish they would also be closed off to access for fishermen.

It is clear that the Government of Gibraltar has been, and continues to be, committed to environmental protection in the context of sustainable management at a high level in a part of the world area where pressure on the environment is immense. There is considerable evidence to suggest that fish stocks continue to decline and biodiversity is under more stress than in 1991 when the Government of Gibraltar passed the Nature Protection Act. Spain is committed to a reduction of 10% under its latest fisheries management plan under the 2006 EU Regulation and is failing to

meet this target. Overfishing on already stressed stocks continues and biodiversity continues to decline, also against agreed targets internationally and within the EU. This is highlighted particularly in the EU Biodiversity Strategy from 2011, which has a target dealing specifically with fisheries. However this once again flags up the relationship with the CFP, so Gibraltar is in something of a hybrid situation being within the EU and subject to its environmental requirements but, where these are linked to CFP requirements as for member states, unable to relate to them directly. However, it should be noted that the CFP specifically allows for its use for ecosystem management and in its reform is working towards ecosystem-based management.

Given these circumstances, coupled with the considerable uncertainties around fish stocks and the lack of potential for any sort of sustainable management of a fishery in BGTW, it is entirely appropriate for the Government of Gibraltar to maintain its waters effectively as a Marine Protected Area.

It is possible that there may have been an issue of confusion over terminology, as according to an unnamed management plan *‘An atlas of maritime spatial planning (La política marítima europea y la planificación espacial. Aplicación al arco Atlántico-Mediterráneo)’* by Concepción Jiménez Sánchez (discovered on an internet search) “Spain did not recognise MPAs as a protection tool of its own until Law 42/2007 on the Natural Heritage and Biodiversity came into effect. Said Law defines these areas as “Designated natural spaces for the protection of ecosystems, communities and biological or geological marine environment elements including intertidal and sub-tidal areas which, due to their rareness, fragility, importance or uniqueness warrant special protection”. All marine areas responding to the generic meaning of the word come under national protection legislation, including: The Natural Protected Spaces Network (*RENPA*), the Marine and Fisheries Reserves and other legal concepts agreed in international treaties: the Natura 2000 network, Biosphere Reserves, RAMSAR wetlands and other forms, such as the Specially Protected Areas of Mediterranean Importance (SPAMIs).

In the same document, in a section marked “Uses and Activities”, is the following wording “The biological characteristics of its ecosystems produce fishing grounds and a large fishing fleet in decline due to overfishing. Uses and activities in the Straits Subdivision are identified to assess the existing level of compatibility between uses, ecosystems and marine protected areas taking maritime jurisdictions into account, with the aim of detecting the presence of possible conflicts/opportunities between the uses themselves and all other elements sharing the same maritime space that produce certain effects and impact favourably or unfavourably on the resources available”.

In a section purely on fishing and fisheries may be found the following: “The importance of the fishing sector in Spain is only in part due to the size of the maritime area over which the country exercises the right of sovereignty. Whilst the morphology of the land – long seabords giving onto the Atlantic and Mediterranean - favours access to the sea and the existence of numerous fishing ports, its waters are not very productive and productivity is unevenly distributed.”

In Andalusia, coastal fishing **has greater social than economic importance**. The fleet approaches some 2,000 vessels, a large number of which are artisanal. Fishing takes place along the coast, and in Moroccan (this pre-dates the closing of Moroccan waters to Spain) and Portuguese waters, as well as in the fishing grounds of the south east Atlantic. **In broad terms, the trend has been for the fleet to shrink due to the falls in catches in an over-exploited sea** and the difficulties that gaining access to foreign waters presents. The most important province as far as fishing is concerned is Huelva, followed by Cadiz due to the port of Algeciras. In general terms, **the Mediterranean fleet is geared for traditional fishing and the fishing sector is highly restricted by progressively declining resources that are being subjected to an excess of effort due to growing demand** driven, to a certain degree, by the development of tourism.

As to the GONHS proposals (given in the Background section) the only wording with which we have an issue is the suggestion that longlining should be licensed. We understand that longlining was to have been one of the proscribed activities under the NPA 1991 but was omitted in error. We have no information on the species taken by longlines, nor of catch sizes. As such we have even less information than we do for the Spanish commercial boats. It is clearly not a recreational activity but an unregulated commercial activity. This also has implications for tax and also possibly for environmental health. We are aware of only one individual who holds a hawkers licence. It is also potentially damaging to other species to the extent that the European Commission has implemented a plan to stop bycatch of threatened species, much of which is due to longlining.

With the controversy in 1999 leading to the “Joint Understanding”, the Foreign Affairs Select Committee decided to undertake an enquiry (House of Commons Session 1998-99) into the problems in Gibraltar including those surrounding the ongoing fishing dispute. Once again there are many common features and recommendations that still apply and bear scrutiny once more but they will not be dealt with here.

The Government of Gibraltar was perfectly entitled to declare a Marine Protected Area and to enforce the relevant legislation. Given that the situation for both fisheries and biodiversity is worse now than in 1991 and continue to decline there is every reason not only to maintain the MPA but also to extend it and reinforce its management. There have been numerous initiatives in the area from which Gibraltar

has been excluded partly because Gibraltar was not part of the governing process (as this has to be handled through the UK Government), partly because of deliberate exclusion and possibly in part because of the small area (although nonetheless important) involved only having a limit of 3 nm. There are good grounds for extending the limit to the full 12 nm in terms of the critically important area in the Strait for both seabirds and cetaceans and the maerl beds which lie outside the 3nm limit on the east side.

In terms of the initiatives from which Gibraltar is excluded, such as the Barcelona Convention, they also deal with much of the day to day EU and Mediterranean regional work undertaken. Part of this is due to the governance gap caused by Gibraltar being an Overseas Territory of the UK. While Gibraltar has considerable power to generate its own laws and manage the environment effectively, it has to rely on the UK Government in matters of foreign policy and defence, and this includes through multilateral environment agreements and in the EU. It is rare to see Gibraltar listed as a Mediterranean entity – which it clearly is – and when it is, either the UK or Gibraltar is often placed in brackets. The UK does not see itself as a Mediterranean country for fairly obvious geographical reasons, but it is in regard to Gibraltar's interests. The European Commission regard Gibraltar's waters as British and expect to see input on marine matters as part of UK submissions but this does not seem to be fully recognised by officials.

The Government of Gibraltar has a clear mandate from its election manifesto to try to resolve the ongoing dispute with Spanish fishermen. Were it possible to derive the solutions entirely locally one may have been found some time ago. Where Gibraltarians and people from Algeciras, for example, get together it does seem possible to reach sensible working conclusions but then national politics become involved and the local common sense working relationships are overridden. The “Joint Understanding” arose not from that but under the duress of border sanctions and was shamefully backed by the then UK Government (see evidence in 1999 Foreign Affairs Select Committee Report). While it may have provided a temporary solution it only delayed the time when decisions had to be taken without breaking the law – and in many ways it might have made matters worse. It is our view that the law must be implemented and, where it is being broken, action must follow.

In 1991 the Government of Gibraltar passed the Nature Protection Act on grounds of environmental protection and decided to control most fishing activities. It would appear from an analysis of the current situation that such protection is needed even more so now than in 1991. The marine area for which Gibraltar has responsibility is very small by Mediterranean standards let alone on a European or global scale but it is something of a “jewel in the crown”.

Given that Gibraltar was excluded by design from the CFP there can have been no expectation of fishery within BGTW unless the European Union, in particular the Commission, believed the waters to be Spanish, but that is an area into which they refuse to go as does the ECJ. Any management option for a commercial fishery must consider a series of issues. Firstly we believe that the size of BGTW is too small to manage as a standalone fishery resource. Secondly, were it to be attempted to be managed as such it would require a new infrastructure to manage, inspect and enforce that fishery. Thirdly, aside from its impracticability, we suspect on looking at costs and benefits that it would prove to be a very expensive option accruing little revenue and be expensive to maintain. The costs, which could be substantial, would fall on the Gibraltar Government with the benefits accruing elsewhere if citizens from outside Gibraltar were allowed the catches. The costs to a fragile environment could also be considerable. Even if that were not the case the analysis of such fisheries data as is available, suggests that at least a moratorium is needed. It should be noted that there are no data available for catches from long lining activities which is currently allowed under the NPA nor is there information on catches of tuna regulated by ICCAT. It is understood that some Gibraltar registered boats have a licence issued in Spain but fail to complete the required returns.

Given that we believe that a 3 nm extent is insufficient to manage a commercial fishery the options appear to be:

- that BGTW are treated (as we believe was intended) as a MPA with at least the existing constraints properly enforced but preferably with a stronger regime involving users/existing exploiters of the area for example scuba diving; the latter should also include longlining being proscribed as there is currently no information on catches and it is potentially harmful to biodiversity;
- that Gibraltar extends its territorial waters so that it has greater control, potentially over a larger area but that is also problematic given that it would be politically extremely difficult; have additional high cost implications; and probably still be of insufficient size to maintain a standalone fishery. There may however be good grounds on biodiversity conservation for extending the territorial limit for habitat protection (e.g. maerl) and species protection (e.g. cetaceans and seabirds); and
- that BGTW become part of a regional management area, possibly tripartite involving Morocco as well as Spain but this would still require proper stock assessments and a clear management plan and with still no guarantee that BGTW would be an acceptable part of a fishery. It would however fulfill one obligation under the MSFD of cooperation with neighbouring countries which we understand that Gibraltar is committed to but not reciprocated by the Government of Spain.

It should also be noted that there is a monitoring requirement built into the MFSD which will have to be undertaken and an inspection regime could be aligned with that into one unit. However, any fisheries inspection, or other infraction system, would be separate from the enforcement regime as currently established. Certainly it would not be appropriate for inspectors to be expected to deal with armed opposition in the form of the Guardia Civil.

A prerequisite for effective legislation is providing an adequate enforcement system. The issue of enforcement may have several layers, however. There is an institutional aspect – that is, setting up institutional enforcement structures and authorities, and providing those involved in the enforcement process with an appropriate range of powers to carry out control procedures, detect infringements and secure evidence. There is an operational aspect – for example, if some enforcement will be based on satellite monitoring of vessels then the legislation must specify the reporting and other requirements imposed on those vessels. There is a practical aspect – i.e. considering what may or may not easily be proven. For example, a prohibition on capturing marine mammals may be more difficult to enforce than one that prohibits possession, sale or use of marine mammals or derivative products, as the former might require the authorities actually to have witnessed the capture. Also restricting, for example, some boats or some types of fishing gear requires discriminatory powers which is much more difficult to enforce than a clear prohibition across the board. There is a procedural aspect, which in turn has two sides: providing appropriate procedures for the authorities, so that the scope and application of their powers are clearly defined; and providing adequate safeguards for individuals who may be subject to enforcement procedures, to ensure that their civil and other rights are protected. Finally, there is a sanctions aspect – enforcement provisions should be supported by graduated sanctions (whether criminal, administrative or both), depending on the seriousness of an offence, but which in all cases are sufficient to deter offenders and remove from them any benefit they may have gained from their illegal activity.

These factors must be taken into account when deciding how to make modifications (if any – although this does seem likely) to the NPA 1991. Under the “Joint Understanding” a blind eye was largely turned when incursions occurred. There have been some recent arrests but, by and large, Spanish boats are still illegally fishing in BGTW waters accompanied by Guardia Civil vessels – in breach of both the NPA and also of territorial integrity. These vessels are clearly not using the waters for navigation purposes. It is the Royal Gibraltar Police that have responsibility for policing entirely at the decision of the Commissioner but the Royal Navy is responsible for territorial infringements.

RECOMMENDATIONS

1. That given the remaining uncertainties on fish stocks and catches, and the purpose of legislating under the Nature Protection Act 1991, there should be no commercial fishing within BGTW until such uncertainties have been resolved and a suitable management plan is in place if clarification provides sufficient evidence that a fishery is sustainable as part of a wider regional process.
2. This would require amending the NPA 1991 to proscribe longlines in BGTW.
3. Given our belief that BGTW are too small to maintain and manage a fishery sustainably, and given lack of knowledge of stocks and the often rapid changes in species composition with pelagic species, a precautionary approach should be adopted, not just in terms of the fish as a fishery but also for its impact on other species e.g. common dolphin and Western Mediterranean shag.
4. That Gibraltar should incorporate the 2006 EU Regulation on Mediterranean Fisheries into its own legislation to cover elements not already dealt with by the NPA 1991 but clearly noting that some elements are already incorporated into Gibraltar legislation and that Gibraltar law goes further than the Regulation as is allowed within the EU.
5. It is recommended that there is no revision of existing provisions to the NPA in relation to fisheries but additions should be made as outlined in the recommendations. However, whilst recognising that the exact mechanisms for change are the prerogative of the Government of Gibraltar but noting that there is a need to manage the recreational fisheries in line with both regional and international standards established by the FAO and its regional management body, the GFCM, the following are proposed:
 - Licenses or permits are issued to recreational fishermen. It would be an offence to fish without a permit.
 - In the short term, number of licences can be based on the current number of registered anglers in fishing clubs.
 - In the medium to long term, a specific number of licenses will be issued based on the state of the fisheries as part of an adaptive management system.
 - Specific number of licenses/permits would be issued by the marine fisheries agency.
 - Licenses and conditions of the licences as part of adaptive management.
 - Recreational fishermen will have specific responsibilities as part of the conditions of the permits, e.g. operational and administrative:
 - Operational (code of conduct already exists with the clubs so would refer to these).

- Administrative – requirement to record all catches (not landings), fishing hours/competitions for all species and submit data in a timely manner to ‘Agency’; area fished (e.g. from the Moles for the shore-based anglers and location for the boat anglers.
6. In order to implement and manage recreational fisheries in BGTW, it is recommended that a marine/fisheries team or an agency be established with specific responsibilities for fisheries management.
7. These responsibilities may include:
- Issuance of permits to recreational fishermen;
 - Establishment of criteria and conditions for licences/permits;
 - Establishment and management of a database of information submitted by anglers on catches and competitions, etc;
 - Establishment of research and monitoring programmes for fisheries as part of an assessment of status of stocks within and around BGTW;
 - Collaboration with the GFCM and other regional arrangements on the assessments of recreational fisheries of particular importance to Gibraltar;
 - Monitoring of fishing activities: inspections and control to ensure compliance with the conditions of the permit; and
 - Establishment and application of fines and sanctions for non- compliance with the permit conditions.
8. In respect of research and monitoring, the analysis herein concurs with other reports on Mediterranean fisheries which point to the need for better information and data on populations, assessment of different techniques (e.g. longlines vs seines), landings and discards, mortality rates, impacts on non-target species and habitats, etc. Data needs apply not only to the natural resource itself but to the fishing pressure applied by all fishers fishing in the waters around Gibraltar, including the Bay of Gibraltar.
9. Given that a large proportion of the fisheries data analysed in this report (for example, landings and effort statistics including from Spain and the recreational fishers in Gibraltar) were not specific enough to draw conclusions on the level of fishing pressure on the species and stocks in BGTW and/or surrounding waters, it is recommended that a data collection programme (protocol) in support of management needs to be established, methods and reporting systems for data collection, and the scope of data and the approach to data analysis specified. In turn, this should support information sharing for both Spain and Gibraltar and the Mediterranean region and within the EU.



10. That given the lack of knowledge and experience in fisheries matters within the Government of Gibraltar, that an advisory committee akin to the NCC be established.
11. All of BGTW should be included within the SAC as some areas important for listed species are currently excluded.
12. Serious consideration should be given to extending the limit of territorial waters to 12nm especially on biodiversity conservation grounds but also in respect of any potential fisheries management plan for the region.
13. We suggest undertaking a review of the role of artificial reefs with recommendations on possible expansion.
14. Undertake a research programme on the nursery functions of BGTW for fish species.
15. We recommend improved regulation of scuba diving and spear fishing but understand that matters are already in hand in this respect.
16. The relevant authorities in Gibraltar should continue with their best endeavours to reach agreement at a local level on matters of common interest such as oil spill contingency.
17. We cannot recommend managing a commercial fishery in Gibraltar with consequent expenditure and manning requirements under present circumstances.
18. There is need for some form of regulation for recreational fisheries with a permitting system. If the recommendation to adopt the 2006 Regulation is accepted then this will mean that fish caught recreationally may not be sold. If that recommendation is not accepted we would recommend the no sale provision is included in legislation.
19. Any sales of fish should only be with a relevant hawkers licence.
20. We would recommend careful consideration of the consequences, or the need for, before adopting a quota for tuna in ICCAT. We understand that Gibraltar registered boats already have permits/licences from Spain and would therefore question the need. Also there appears to be a failure to fulfil the requirements of same which would be a cause for concern if that happened under a Gibraltar



quota. We also have very good anecdotal evidence of tuna caught recreationally in BGTW being sold in Gibraltar (see above on sale issue).

21. The existing, very useful, Biodiversity Action Plan should be revised and updated and the action plans codified in some form either attached to legislation, or as some form of statutory guidance. They should be appended to the SAC management plan.
22. Alongside this, the list of protected species under NPA should be reviewed and suitably amended
23. Further research is needed on maerl and coralligenous habitats, their extent and importance. This may be coupled with an analysis of sensitive areas within which anchoring should be managed/prohibited.
24. A recovery plan for seagrass habitat should be devised and implemented. Also for *Pinna* spp for which there is probably a significant connection.
25. Further attempts should be made to agree a code of conduct for dolphin watching in collaboration with the local Spanish authorities, possibly using ACCOBAMS to which the UK should become a Party.
26. Monitoring will be required for a range of obligations under the MSFD as well as those already undertaken for the Habitats and Birds Directive so these will need to be coordinated. This does already appear to be covered to some extent in the SAC management plan but the boundaries for the MSFD are wider than the SAC boundaries.
27. The issues raised in the Biodiversity Action Plan impacting the environment adversely (aside from commercial fishing) appear to be covered by the SAC Management Plan but again this does not formally cover all of BGTW and should be reviewed and any gaps dealt with.
28. We are uncertain as to the practicability of restoring water flows in the harbour but we are aware of adverse effects especially on levels of oxygen in the water column following the closing up of the viaduct between Waterport and the North Mole and would wish to see this option investigated.
29. We are also aware of significant toxic deposits in the harbour including high levels of TBT in the sediment. It appears to be biologically inactive now but would recommend its removal if practicable.



30. We recommend that the Government of Gibraltar uses its best endeavours to persuade the UK government to engage with international processes that may have a positive impact on Gibraltar such as the Barcelona Convention and General Fisheries Council for the Mediterranean and more importantly to engage better with the European Commission in particular DGs ENV and MARE to ensure greater consideration of Gibraltar and relevant input into legal processes. The UK Government could also work better with IUCN to insist on and ensure proper consideration of Gibraltar.
31. Perhaps the issue of greatest concern remains that of enforcement of the NPA 1991 and any subsequent changes made by the Government of Gibraltar. Under existing legislation it is the Royal Gibraltar Police who have responsibility for enforcement of the NPA and therefore of arresting, where appropriate, people fishing illegally. On the face of it that would be acceptable, however as with fisheries inspectors, they should not be put into a position where they (unarmed) are having to deal with armed Guardia Civil boats.
32. We had contemplated suggesting a new arrangement akin to the US Coastguard but that would also incur unreasonable costs and duplication of existing resources and merely cover for those that should be responsible. The role of the Gibraltar Defence Police who work in concert with the Royal Gibraltar Police could be looked at in this respect.

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ANNEX I. THE "JOINT UNDERSTANDING"

JOINT UNDERSTANDING ISSUED BY THE FISHERMEN AND GIBRALTAR GOVT

The fishing sector of the Campo de Gibraltar respects as fact that the Gibraltarian authorities have the right to legislate in relation to fishing as they see fit and therefore, as such, respect the validity of the Nature Protection Ordinance (Gibraltar law).

Equally the fishing sector undertakes to respect the instructions of the police authorities of Gibraltar in their enforcement of that law.

As a consequence both sides understand that there should be a return to the status quo which existed in the period 1991 to the start of 1997 and that thus the law will be applied with the same level of tolerance as during that same period.

The Government of Gibraltar states further that it is not its objective to apply the law with greater rigour than before and therefore as in the period 1991-1997 there will be fishing through tolerance in the application of that law, and not as of right and not due to the invalidity of that law.

This will be demonstrated through the respect that all vessels will have towards instructions from the Gibraltar police.

Both sides have discussed in depth what a return to the status quo means, in practical terms, in terms of the nature and level of firmness of the enforcement of that particular Gibraltar law. The Gibraltar Government will ask His Excellency the Governor to ask the Royal Gibraltar Police to enforce the law on the basis of this understanding.

ANNEX

After having discussed in detail what a return to the status quo and therefore to the 1991-1997 situation is, both sides understand that the law will be applied strictly in the following circumstances:

AREA - West side (Bay)

Distance from the coast 225 metres

Number of fishing boats: no more than four

(In this respect the luceros are not considered boats actually fishing)

At no time can any entrance or exit of the two openings of the ports be obstructed nor will the passage of ships be hindered.

EAST SIDE

In areas less than 225 metres from the beach or coast. The circumstances here described do not mean that any transgression of the Nature Protection Ordinance (law of Gibraltar) is permitted, and the fishermen undertake to respect the instructions of the police authorities in every case.

Contact will be maintained so as to provide such clarification as may be necessary of this understanding.



EN GIBRALTAR – 3 de Febrero, 1999.

El sector pesquero del Campo de Gibraltar respeta de hecho el derecho a las autoridades Gibraltarenas a legislar las leyes que con referencia al tema pesquero estimen conveniente y por lo tanto respeta la validez de la Nature Protection Ordinance (ley de Gibraltar).

Igualmente el sector pesquero se compromete a respetar las instrucciones de las autoridades policiales de Gibraltar en la aplicacion de dicha ley.

Por consiguiente ambas partes entienden que se debe de volver al estatus quo existente en el periodo 1991 y comienzos de 1997 y que por lo tanto la ley se aplique con el mismo grado de tolerancia que durante ese periodo.

El gobierno de Gibraltar manifiesta que su objetivo no es que se aplique la ley con mas rigor que antes y por lo tanto, al igual que durante 1991 a 1997 habra pesca por tolerancia en la aplicacion de la ley y no por derecho o invalidez de la misma.

Esto se demostrara por el respeto que todas las embarcaciones del sector pesquero tendran hacia las instrucciones de la policia Gibraltarena.

Ambas partes han discutido a fondo lo que significa un retorno a la situacion de status quo, de hecho y en practica, en terminos de la naturaleza y el grado de firmeza de la aplicacion de esa particular ley de Gibraltar. El gobierno de Gibraltar le pedira a su excelencia el Gobernador que le pida a la Royal Gibraltar Police que aplique la ley en esta base de entendimiento.



ANEXO

Despues de haber discutido a fondo lo que significa un retorno a la situacion de status quo, es decir, volver a la situacion en el periodo 1991 a 1997 ambas partes entienden que la ley se aplicara estrictamente en las siguientes circunstancias:

ZONAS

1 - Zona occidental

- Distancia a la costa : menos de 225 metros
- Numeros de buques calados: no exeden 4
- A estos efectos los botes luceros no seran considerados como buques faenando.

Nunca se podra obstaculizar la entrada y salida de las dos bocanas del puerto de Gibraltar ni entorpeser el movimiento de buques.

2. - Zona de levante

Menos de 225 metros de la playa o costa

Las circunstancias aqui resenadas no significan que se permita la vulneracion de la Nature Protection Ordinance (ley de Gibraltar), comprometiendose el sector pesquero a respetar las instrucciones de las autoridades policiales en cualquier caso.

Se mantendra el contacto para cualquier aclaracion que fuera necesaria de este entendimiento.

ANNEX II. JOINT COMMUNIQUÉ AND MEMORANDUM OF UNDERSTANDING TO ESTABLISH A JOINT WORKING GROUP

This memorandum of understanding has been arrived at between the following parties:

1. Her Majesty's Government of Gibraltar; and
2. The President of the La Linea Union of Fishermen, Leoncio Fernandez Ramos.
3. The President of the Association of Fishing Boat Owners of La Linea de La Concepcion, Juan Morente Morales.

Background

This Memorandum of Understanding follows various meetings held between representatives of the above parties and others.

The position of Her Majesty's Government of Gibraltar is that the law of Gibraltar must be upheld and that breaches of the law cannot be condoned or tolerated at any distance from the shore.

The enforcement of the law of Gibraltar is exclusively a matter for the Royal Gibraltar Police, which is independent of the Government.

The representatives of the Spanish fishermen claim that the fishing methods and the nets that they use are legal in Spain and in the European Union and maintain that these do not harm the marine environment.

All sides agree without prejudice to the respective positions:

- That the principal objective and purpose is to ensure that the marine environment is protected and preserved in the most sustainable manner possible;
- That a technical Joint Working Group between the parties will be established to report to Her Majesty's Government of Gibraltar;
- That the working group should set up a Commission of Independent experts to examine all issues surrounding this question;
- That the current incompatibility between the objectives of the fishermen and the objectives of the law of Gibraltar will therefore be examined in depth in order to achieve a greater understanding of the respective positions and to seek to identify situations that might enable all parties' objectives to be met; and
- That the discussions will continue to reflect the spirit of friendly co-operation and common sense that all the parties have shown in relation to this issue to date and without seeking to defy and without breaching the laws of Gibraltar currently in force.



Her Majesty's Government of Gibraltar remains ready to accept the inclusion of the Algeciras Union of Fishermen and Fishing Boat Owners in this Working Group.

The parties will remain in constant contact in order to avoid misunderstandings of the respective positions that may be misrepresented.

Gibraltar, 22nd May 2012.

ANNEX III. DRAFT TERMS OF REFERENCE FOR THE JOINT GIBRALTARIAN-SPANISH WORKING GROUP CONSIDERING THE SUSTAINABLE MANAGEMENT OF MARINE LIVING RESOURCES

- 1) The Working Group shall consist of equal numbers of representatives (including the Chair) appointed by Her Majesty's Government of Gibraltar (5) and 5 (in total) representatives of the Spanish fishermen from the Andalusian Federation of Fishing Guilds and the Andalusian Federation of Fishing Associations which include the Fishing Guilds and Associations of Algeciras and La Linea de la Concepcion. The Committee, may invite the involvement of additional experts *ad hoc* with requisite expertise, where necessary to provide information relevant to the work of the Committee.
- 2) The Working Group is not a negotiating mechanism but will provide advice and recommendations to Her Majesty's Government of Gibraltar and to the relevant institutions within Spain and will use its best endeavours to agree recommendations that ensure that the marine environment is managed in the most sustainable manner possible.
- 3) The Working Group will examine issues relevant to the sustainable management of living marine resources, including fisheries, in the waters surrounding Gibraltar and shall address specifically the apparent incompatibility between the objectives of Spanish fishermen and the requirements of the law of Gibraltar, the law of the European Union, and international law, in order to achieve a greater understanding of the respective positions and to seek to identify solutions that might enable all parties' objectives to be met.
- 4) Working Group discussions will be undertaken in such a way as to reflect the spirit of friendly co-operation and common sense that all the parties have shown in relation to this issue in recent times and without providing recommendations seeking to defy and leading to breaching the laws of Gibraltar.
- 5) Working Group and associated meetings will take place on mutually agreed dates and at mutually agreed places.
- 6) The Working Group will use its best endeavours to produce an interim report by the 7th of August for discussion in the Working Group at a date to be arranged as soon as possible thereafter. The report will be open for comment and possible amendment for 3 weeks from the date of delivery.



Members of the Joint Gibraltar-Spanish Working Group

Dr. Chris Tydeman
Indrani Lutchman
Dr Eric Shaw
Alfred Vasquez
Stephen Warr

Pedro Maza
Leoncio Fernandez
José Gabriel Frías
Juan Morente Montes
Jorge L. Campos Ucles

ANNEX IV. LIST OF COMMERCIAL FISH SPECIES IN GIBRALTAR TARGETED BY SPANISH FISHERMEN

NAMES			PRESENCE		
Spanish Common	English Common	Latin	Gibraltar Fishing Clubs	Algeciras	La Linea
Acedia/Lenguado	Wedge Sole	<i>Dicologlossa cuneata</i>			Y
Anchova/Boqueron	Anchovy	<i>Engraulis encrasicolus</i>		Y	
	Axillary Seabream or				
Aligote/Besugo	Bronze Bream or Spanish Bream	<i>Pagellus acarne</i>	Y	Y	
Almeja Tonta/Choca	Carpet shell	<i>Tapes decussatus</i>			Y
Atun Rojo	Bluefin Tuna	<i>Thunnidae</i>		Y	
Bacoreta	Little Tuna	<i>Euthynnus alleteratus</i>		Y	
Baila	Spotted Bass	<i>Dicentrarchus punctatus</i>		Y	
Besugo/ Voraz	Red seabream / blackspot bream	<i>Pagellus bogaraveo</i>	Y	Y	Y
Bodiones	Wrasse	<i>Labridae (family)</i>	Y	Y	
Boga	Bogue	<i>Boops boops</i>	Y	Y	
Bogavante	Lobster	<i>Homarus gammarus</i>		Y	Y
Bonito del Norte	Albacore	<i>Sarda sarda</i>	Y	Y	Y
Breca	Pandora	<i>Pagellus erythrinus</i>	Y	Y	Y
Brotola de roca/Molla	Forkbeard	<i>Phycis blennoides</i>		Y	Y
Borriquette	Rubberlip grunt	<i>Plectorhinchus mediterraneus</i>		Y	Y
Burro listado	Skipjack tuna	<i>Katsuwonus pelamis</i>			Y
Cavalla	Atlantic mackerel	<i>Scomber scombrus</i>	Y	Y	Y
Capon	Large-scaled scorpionfish	<i>Scorpaena scrofa</i>			Y
Calamari	Squid	<i>Loligo vulgaris</i>		Y	
Cazon	Tope	<i>Galeorhinus galeus</i>		Y	Y
Centolla	Spidercrab	<i>Maja squinado</i>		Y	Y
Cherna	Stonebass	<i>Polyprion americanum</i>		Y	
Chiral	Striped venus	<i>Chamelea gallina</i>			Y
Choco	Cuttlefish	<i>Sepia officinalis</i>		Y	Y
Chopa	Black seabream	<i>Spondyliosoma cantharus</i>	Y	Y	
Concha fina	Smooth clam	<i>Callista chione</i>			Y
Congrio	Congereel	<i>Congerconger</i>		Y	Y
Corruco	Rough cockle	<i>Acanthocardia tuberculata</i>			Y
Corvina	Meagre	<i>Argyrosamus regius</i>	Y	Y	
Dorada	Gilt-headbream	<i>Sparus auratus</i>	Y	Y	Y
Escolar negro/Gabot	Rockfish	<i>Gobidae spp</i>		Y	
Espeton	Barracuda	<i>Sphyraena sphyraena</i>		Y	
Gallineta	Blue-mouth	<i>Helicolenus dactylopterus</i>		Y	Y
Herrera	Stripedbream	<i>Lithognathus mormyrus</i>	Y	Y	Y
Jurel	Scad/Horsemackerel	<i>Trachurus trachurus</i>		Y	Y
Langosta	Spinylobster	<i>Palinurus elephas</i>			Y
Lenguados	Sole	<i>Soleasolea</i>		Y	Y
Lubina	Seabass	<i>Dicentrarchus labrax</i>	Y	Y	Y
Marrajo	Shortfinmako	<i>Isurus paucus</i>		Y	
Merluza	Hake	<i>Merluccius merluccius</i>		Y	Y
Melva	Melva/frigate mackerel	<i>Auxis rocheii</i>	Y	Y	Y
Mero	Grouper	<i>Epinephelus squaza</i>	Y	Y	Y
Morena	Morayeel	<i>Muraena helena</i>		Y	
Pargo	Commonseabream,	<i>Pagrus pagrus</i>	Y	Y	Y
Patudo	Bigeye Tuna	<i>Thunnus obesus</i>	Y		
Pez escopeta	Triggerfish	<i>Balistes capricus</i>			Y

Pezcinto/sable	Scabbardfish	<i>Lepidopus caudatus</i>		Y	
PezdeStPedro/gallo	JohnDory	<i>Zeusfaber</i>		Y	Y
Pezespada	Swordfish	<i>Xiphiasgladius</i>		Y	
Pulpo	CommonOctopus	<i>Octopus vulgaris</i>		Y	Y
Quelvacho	Gulper shark	<i>Centrophorus granulosus</i>			Y
Rapes	Angler-fish	<i>Lophius piccatorius</i>		Y	Y
Rascacio	BrownScorpionfish	<i>Scorpaena porcus</i>		Y	
Rayas	Ray	<i>Rajasp.</i>		Y	Y
Rodaballo	Turbot	<i>Scophthalmus maximus</i>		Y	Y
Rubios	Gurnard	<i>Triglalyra</i>		Y	Y
Salmonete de fango	RedMullet	<i>Mullus barbatus</i>	Y	Y	
Salmonetes	Redmullet	<i>Mullusbarbatus</i>	Y		Y
Samadepluma	Pink dentex	<i>Dentex dentex</i>	Y		Y
Sapos	Toadfish	<i>Halobatrachus didactylus</i>			Y
Sardina	SardineorPilchard	<i>Sardinapilchardus</i>		Y	Y
Sargo	Whiteseabream	<i>Diplodus sargus</i>	Y	Y	Y
Sargobreda/testa negra	Twobandedbream	<i>Diplodus vulgaris</i>	Y	Y	
Serranos	Comber	<i>Serranus cabrilla</i>		Y	
Solleta	Sole	<i>Citharus linguatula</i>		Y	
Urta(Hurta)	Red banded bream	<i>Pagrus auriga</i>		Y	

ANNEX V. THE BARCELONA CONVENTION LIST OF PROTECTED SPECIES (SPA/BD PROTOCOL)

The Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) was established in order to safeguard the areas and species that best represent the conservation value of Mediterranean ecosystems. Its Annex II lists the following seabird species of highest conservation concern:

- * *Calonectris diomedea diomedea* – Cory’s shearwater (Mediterranean subspecies)
- * *Puffinus yelkouan* – Yelkouan shearwater (endemic)
- * *Puffinus mauretanicus* – Balearic shearwater (endemic)
- * *Hydrobates pelagicus melitensis* – European storm-petrel (Mediterranean subspecies)
- * *Phalacrocorax aristotelis desmarestii* – Mediterranean shag (Mediterranean subspecies)
- * *Larus audouinii* – Audouin’s gull (endemic)
- * *Larus melanocephalus* – Mediterranean gull (near-endemic)
- Larus genei* – Slender-billed Gull
- Sterna albifrons* – Little tern
- Sterna bengalensis* – Lesser crested tern
- Sterna caspia* – Caspian tern
- Sterna nilotica* – Gull-billed tern
- Sterna sandvicensis* – Sandwich tern

Those species marked with an asterisk * have been highlighted because they:

- occur further offshore and therefore are more representative of pelagic habitats;
- have higher levels of endemism, at species or subspecies level, and in most cases represent taxa that evolved in isolation in the Mediterranean and do not occur anywhere else in the world; and
- have higher levels of threat, according to international standards (IUCN, BirdLife International).

The full lists of species receiving protection under the SPA Protocol to the Barcelona Convention.

Annex II

List of Endangered or Threatened Species

Magnoliophyta

Cymodocea nodosa (Ucria) Ascherson

Posidonia oceanica (Linnaeus) Delile



Zostera marina Linnaeus

Zostera noltii Hornemann

Chlorophyta

Caulerpa ollivieri Dostál

Heterokontophyta

Cystoseira genus (except *Cystoseira compressa*) *Fucus virsoides* J. Agardh

Gymnogongrus crenulatus (Turner) J. Agardh

Kallymenia spathulata (J. Agardh) P.G. Parkinson

Laminaria rodriguezii Bornet

Sargassum acinarium (Linnaeus) Setchell

Sargassum flavifolium Kützing

Sargassum hornschurchii C. Agardh

Sargassum trichocarpum J. Agardh

Sphaerococcus rhizophylloides J.J. Rodríguez

Rhodophyta

Lithophyllum byssoides (Lamarck) Foslie (Synon. *Lithophyllum lichenoides*)

Ptilophora mediterranea (H. Huvé) R.E. Norris

Schimmelmannia schousboei (J. Agardh) J. Agardh

Tenarea tortuosa (Esper) Lemoine *itanoderma ramosissimum* (Heydrich) Bressan & Cabioch
(Synon. *Goniolithon byssoides*)

Titanoderma trochanter (Bory) Benhissoune et al.

Porifera

Aplysina sp. plur.

Asbestopluma hypogea Vacelet & Boury-Esnault, 1995

Axinella cannabina (Esper, 1794)

Axinella polypoides Schmidt, 1862

Geodia cydonium (Jameson, 1811)

Petrobiona massiliana (Vacelet & Lévi, 1958)

Sarcotragus foetidus Schmidt, 1862* (synon. *Ircina foetida*)

Sarcotragus pipetta (Schmidt, 1868)* (synon. *Ircinia pipetta*)

Tethya sp. plur.

Cnidaria

Astroides calycularis (Pallas, 1766)

Errina aspera (Linnaeus, 1767)

Savalia savaglia Nardo, 1844 (synon. *Gerardia savaglia*)

Bryozoa

Hornera lichenoides (Linnaeus, 1758)

Mollusca

Charonia lampas (Linnaeus, 1758) (= *Ch. Rubicunda* = *Ch. Nodifera*)

Charonia tritonis variegata Lamarck, 1816 (= *Ch. Seguenzia*)

Dendropoma petraeum (Monterosato, 1884)



Erosaria spurca (Linnaeus, 1758)
Gibbula nivosa A. Adams, 1851
Lithophaga lithophaga (Linnaeus, 1758)
Luria lurida (Linnaeus, 1758) (= *Cypraea lurida*)
Mitra zonata Marryat, 1818
Patella ferruginea (Gmelin, 1791)
Patella nigra (Da Costa, 1771)
Pholas dactylus (Linnaeus, 1758)
Pinna nobilis (Linnaeus, 1758)
Pinna rudis (= *P. pernula*) (Linnaeus, 1758)
Ranella olearia (Linnaeus, 1758)
Schilderia achatidea (Gray in G.B. Sowerby II, 1837)
Tonna galea (Linnaeus, 1758)
Zonaria pyrum (Gmelin, 1791)

Crustacea

Ocypode cursor (Linnaeus, 1758)
Pachylasma giganteum (Philippi, 1836)

Echinodermata

Asterina pancerii (Gasco, 1870)
Centrostephanus longispinus (Philippi, 1845)
Ophidiaster ophidianus (Lamarck, 1816)

Pisces

Acipenser naccarii (Bonaparte, 1836)
Acipenser sturio (Linnaeus, 1758)
Aphanius fasciatus (Valenciennes, 1821)
Aphanius iberus (Valenciennes, 1846)
Carcharias taurus (Rafinesque, 1810)
Carcharodon carcharias (Linnaeus, 1758)
Cetorhinus maximus (Gunnerus, 1765)
Dipturus batis (Linnaeus, 1758)
Gymnura altavela (Linnaeus, 1758)
Hippocampus guttulatus (Cuvier, 1829) (synon. *Hippocampus ramulosus*)
Hippocampus hippocampus (Linnaeus, 1758)
Huso huso (Linnaeus, 1758)
Lethenteron zanandreae (Vladykov, 1955)
Mobula mobular (Bonnaterre, 1788)
Odontaspis ferox (Risso, 1810)
Oxynotus centrina (Linnaeus, 1758)
Pomatoschistus canestrini (Ninni, 1883)
Pomatoschistus tortonesei (Miller, 1969)



Pristis pectinata (Latham, 1794)
Pristis pristis (Linnaeus, 1758)
Rostroraja alba (Lacépède, 1803)
Squatina aculeata (Dumeril, in Cuvier, 1817)
Squatina oculata (Bonaparte, 1840)
Squatina squatina (Linnaeus, 1758)
Valencia hispanica (Valenciennes, 1846)
Valencia letourneuxi (Sauvage, 1880)

Reptiles

Caretta caretta (Linnaeus, 1758)
Chelonia mydas (Linnaeus, 1758)
Dermochelys coriacea (Vandelli, 1761)
Eretmochelys imbricata (Linnaeus, 1766)
Lepidochelys kempii (Garman, 1880)
Trionyx triunguis (Forskål, 1775)

Aves

Calonectris diomedea (Scopoli, 1769)
Ceryle rudis (Linnaeus, 1758)
Charadrius alexandrinus (Linnaeus, 1758)
Charadrius leschenaultii columbinus (Lesson, 1826)
Falco eleonora (Géné, 1834)
Halcyon smyrnensis (Linnaeus, 1758)
Hydrobates pelagicus (Linnaeus, 1758)
Larus armenicus (Buturlin, 1934)
Larus audouinii (Payraudeau, 1826)
Larus genei (Breme, 1839)
Larus melanocephalus (Temminck, 1820)
Numenius tenuirostris (Viellot, 1817)
Pandion haliaetus (Linnaeus, 1758)
Pelecanus crispus (Bruch, 1832)
Pelecanus onocrotalus (Linnaeus, 1758)
Phalacrocorax aristotelis (Linnaeus, 1761)
Phalacrocorax pygmeus (Pallas, 1773)
Phoenicopiterus ruber (Linnaeus, 1758)²¹*Puffinus mauretanicus* (Lowe, PR, 1921)

Puffinus yelkouan (Brünnich, 1764)
Sterna albifrons (Pallas, 1764)
Sterna bengalensis (Lesson, 1831)
Sterna caspia (Pallas, 1770)
Sterna nilotica (Gmelin, JF, 1789)



Sterna sandvicensis (Latham, 1878)

Mammalia

Balaenoptera acutorostrata (Lacépède, 1804)

Balaenoptera borealis (Lesson, 1828)

Balaenoptera physalus (Linnaeus, 1758)

Delphinus delphis (Linnaeus, 1758)

Eubalaena glacialis (Müller, 1776)

Globicephala melas (Trail, 1809)

Grampus griseus (Cuvier G., 1812)

Kogia simus (Owen, 1866)

Megaptera novaeangliae (Borowski, 1781)

Mesoplodon densirostris (de Blainville, 1817)

Monachus monachus (Hermann, 1779)

Orcinus orca (Linnaeus, 1758)

Phocoena phocoena (Linnaeus, 1758)

Physeter macrocephalus (Linnaeus, 1758)

Pseudorca crassidens (Owen, 1846)

Stenella coeruleoalba (Meyen, 1833)

Steno bredanensis (Cuvier in Lesson, 1828)

Tursiops truncatus (Montagu, 1821)

Ziphius cavirostris (Cuvier G., 1832)



Ten species of sharks and rays were added to Annex II of the Barcelona Convention (July 2012)

<i>Galeorhinus galeus</i>	Tope	Vulnerable	Once common in coastal waters, now a rare by-catch. Severe population decline: >99.97% over 25 years	Overfishing (bycatch) Habitat degradation
<i>Isurus oxyrinchus</i>	Shortfin mako	Critically Endangered	Once common, now virtually disappeared from some areas. Severe population decline: >99.99% over 106-135 yrs	Overfishing (any catches are likely unsustainable)
<i>Lamna nasus</i>	Porbeagle	Critically Endangered	Now scarce where once common, and virtually disappeared from Mediterranean records. Severe population decline: >99.99% over 106-135 years	Overfishing (any catches are likely unsustainable)
<i>Leucoraja circularis</i>	Sandy skate	Critically Endangered	Substantial reduction in area of occurrence, with local extinctions. Significant population decline over 50 years. Rare in many parts of its range	Overfishing (bycatch)
<i>Leucoraja melitensis</i>	Maltese skate	Critically Endangered	Absent or rare from areas where once common. Considered under imminent extinction threat	Overfishing (bycatch, especially in trawls)
<i>Rhinobatos cemiculus</i>	Blackchin guitarfish	Endangered	Severe declines in abundance and area of occupancy. Once common, now virtually extirpated from northern Mediterranean	Overfishing. Degradation of shallow inshore habitats
<i>R. rhinobatos</i>	Common guitarfish	Endangered	Severe declines in abundance and	Overfishing. Degradation of



			area of occupancy Once common, now virtually extirpated from northern Mediterranean	shallow inshore habitats
<i>Sphyrna lewini</i>	Scalloped hammerhead	Endangered	Rapid declines in catches Severe population decline: > 99.99% over 107- 178 yrs	Overfishing (with high post-capture mortality) and high commercial value of fins
<i>S. mokarran</i>	Great hammerhead	Endangered	Rapid declines in catches Severe population decline: > 99.99% over 107- 178 yrs	Overfishing (with high post-capture mortality) and high commercial value of fins
<i>S. zygaena</i>	Smooth hammerhead	Vulnerable	Rapid declines in catches Severe population decline: > 99.99% over 107- 178 yrs	Overfishing (with high post-capture mortality) and high commercial value of fins



Annex III

List of Species whose Exploitation is Regulated

Porifera

Hippospongia communis

Spongia agaricina

Spongia officinalis

Spongia zimocca

Cnidaria

Antipathes sp. plur.

Corallium rubrum

Echinodermata

Paracentrotus lividus

Crustacea

Homarus gammarus

Maja squinado

Palinurus elephas

Scyllarides latus

Scyllarus pigmaeus

Scyllarus arctus

Pisces

Alosa alosa

Alosa fallax

Anguilla anguilla

Epinephelus marginatus

Isurus oxyrinchus

Lamna nasus

Lampanyctus fluviatilis

Petromyzon marinus

Prionace glauca

Raja alba

Sciaenops ocellatus

Squatina squatina

Thunnus thynnus

Urophycis cirrosa

Xiphias gladius

ANNEX VI. RESOLUTION 4.9 FISHERIES INTERACTIONS WITH CETACEANS

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS):

Taking into consideration the recommendations from the Scientific Committee;

Renewing its concern about the negative impacts on cetacean populations of fishing activities in the Agreement area;

Noting that the problem of cetacean bycatch affects the entire area where ACCOBAMS applies and involves a variety of types of fishing gear;

Greatly concerned that fishing nets with mesh size equal to or exceeding 100 mm are still widely used, either legally or illegally, for Turbot, Spiny Dogfish and Sturgeon fisheries in the Black Sea sub-region;

Seriously concerned that other types of fishing gear commonly deployed even in accordance with the EU Regulations, in the Agreement area are known to cause significant mortality and can seriously affect cetacean populations;

Greatly appreciating the collaboration established between ACCOBAMS and the General Fisheries Commission for the Mediterranean (GFCM) to address the issue of by-catch of cetaceans and other endangered marine species;

Taking note of the work on bycatch done by the Scientific Council of the CMS lead by the Conference appointed councillor for bycatch, as well as of the activities undertaken in the framework of ASCOBANS towards mitigating bycatch and improving collaboration with fishing communities;

Recalling Resolution 8.22 on adverse human induced impacts on cetaceans and Resolution

9.18 on bycatch, adopted within the framework of the Convention on the Conservation of Migratory Species of Wild Animals;

Recalling also that the Agreement requires that Parties collect and analyze data on direct and indirect interactions between humans and cetaceans in relation to fishing and take appropriate remedial measures, applying, when necessary, the precautionary principle;

Taking into consideration the Guidelines for technical measures to minimize cetacean- fishery conflicts in the Mediterranean and Black Seas adopted in the Resolution 2.12,1.;

1. Encourages Parties with respect to bycatches and depredation:
 - (a) To improve reporting by:
 - establishing regular, representative onboard monitoring programmes related to the ByCBAMS project (Project for assessing and mitigating the adverse impacts of interactions between cetaceans and fishing activities in the ACCOBAMS area to quantify cetacean bycatch and reporting on the methods used to the ACCOBAMS Scientific Committee);
 - reporting cetacean bycatch for different types of fisheries and ghost nets in order to provide the GFCM Task 1 with the required information concerning cetacean bycatch; and
 - obtaining and reporting on local information on the nature of the depredation and its effects on fisheries.
 - 197(b) To make every effort to reduce cetacean bycatch levels and/or incidences of depredation, in co-operation with affected fishing communities by:
 - raising the awareness of fishermen about the need to mitigate the impact of fishing on cetacean populations;
 - effectively enforcing existing bans on relevant fishing gear in the ACCOBAMS area and report measures to the Secretariat through the appropriate online system;
 - developing and implementing specific national programmes, taking into consideration advice from the ACCOBAMS Scientific Committee, with (1) defined management objectives for reducing cetacean bycatches and/or alleviating conflicts between cetaceans and fisheries or mariculture operations, (2) methods for monitoring and evaluating the success of the measures implemented in national programmes, and (3)



- mechanisms for modifying national programmes if necessary after evaluation;
 - recognising that if use of acoustic mitigation devices for bycatch reduction (AMDb) or for depredation reduction (AMDd) are to form part of a national programme, great care must be given to undertaking and evaluating them using limited controlled in situ tests of effectiveness, in conjunction with the ACCOBAMS Scientific Committee, before widespread implementation is approved; and
 - enhancing the capacity of fishermen to properly handle and release live cetaceans caught incidentally in their fishing gear.
2. Invites the Parties to take into consideration with respect to the testing and use of acoustic mitigation measures the study on - Testing and use of AMD for depredation mitigation, presented in document ACCOBAMS-MOP4/2010/Doc21 as well as the study on - Guidelines for technical measures to minimise cetacean-fishery conflicts in the Mediterranean and Black Sea presented in Document ACCOBAMS-MOP4/2010/Inf39 and the - Protocol for data collection on bycatch and depredation in the ACCOBAMS Region, as presented in document ACCOBAMS- MOP4/2010/Doc22;
 3. Also invites Non-Party States to join the effort of the ACCOBAMS Parties in reducing cetacean mortality induced by fisheries activities in the Agreement area;
 4. Takes note of the Review on the effectiveness of acoustic devices and depredation mitigation measures presented in document ACCOBAMS-MOP4/2010/Doc23;
 5. Invites the Agreement Secretariat and the Scientific Committee to pursue the collaboration with relevant Organizations and Bodies to consider further the relations between prey depletion and increasing interactions between cetaceans and fishing activities, proposing remedial solutions where possible;
 6. Takes note of the Technical specifications and conditions of use of acoustic deterrent devices appearing in Annex to this Resolution; and
 7. Decides that the present Resolution replaces resolution 3.12.

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