



Championing UK's most special species: the wildlife of UK's Overseas Territories (UKOTs) and Crown Dependencies (CDs)

FACT-SHEET ON:

Giant Kelp *Macrocystis pyrifera* (and other species of giant kelp) UK Overseas Territory: Falkland Islands

Kelps are large brown algae seaweeds. They grow in what are described as 'underwater forests' in shallow, nutrient-rich waters. Falklands Giant Kelp, made up mostly of *Macrocystis pyrifera*, grows in huge forests, with an understory or 'kelp park' supporting an abundance of marine biodiversity. As in most other kelp species, the body consists of flat or leaf-like structures known as blades. They originate from elongated stem-like structures, the stipes. The holdfast, a root-like structure attaches the kelp to the substrate of the ocean.

Importance: Kelp forests are an important ecosystem, providing food and shelter for a variety of marine life. Throughout the world, kelp is also used commercially in many ways, e.g. toothpaste, and ingredients used in food. It has been suggested as a source of renewable energy, but is also a possible way to store carbon and contribute towards the 'blue carbon' economy.

Ecosystem: The Giant Kelp forests support an abundance of both small sessile invertebrates (sponges, bryozoans and ascidians) as well as mobile invertebrate fauna, such as fish, urchins and crustaceans, both for food and shelter. Their importance for birds (including penguins), predatory fish and cetaceans is also recognised.

Threats: Kelp is particularly sensitive to environmental changes, which may limit its productivity (its growth). Marine pollution and poor water quality, climate-change, and invasive species threaten a fully functioning kelp forest ecosystem. In the Falkland Islands, *Macrocystis* productivity appears to be stable throughout the year and it has not been commercially exploited. However, there may be human activities which may become significant.

Needs: Studies have found that the value of the Falkland Islands Giant Kelp forests in the amount of carbon sequestration is significant. Despite the fact that they are healthy and stable, there remains some uncertainty into the future. Monitoring any changes associated with climate-change and limiting/reducing/



Above: Giant Kelp, Below: Kelp forest, © Shallow Marine Survey Group.



removing other human activities, which are key stressors, such as coastal development, over-exploitation, potential pollution events, unregulated fishing activity and run-off from farming, are needed.