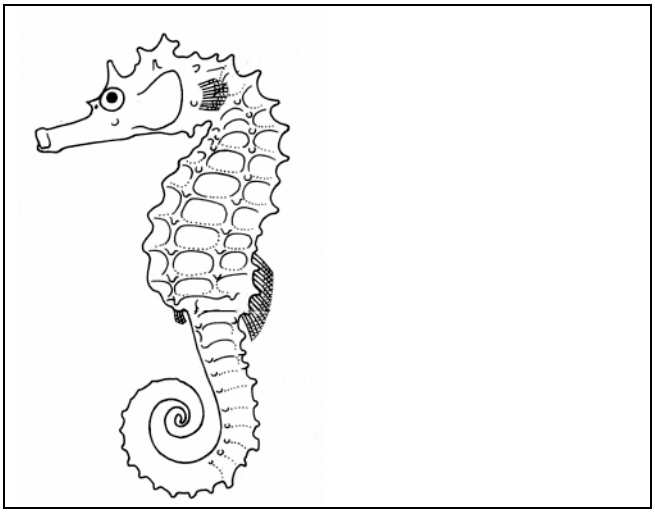
Nomination

Hippocampus hippocampus, Short-snouted Seahorse



Geographical extent

OSPAR Regions; II, III, IV, V
Biogeographic zones: 5,6,7,9,
Region & Biogeographic zones specified for decline and/or threat: as above

This species of seahorse has a distribution that includes the Eastern Atlantic, the Bay of Biscay, the Wadden Sea, the southern North Sea, English Channel, and south western coasts of the British Isles, through the Mediterranean to North Africa. It is not known to occur in Swedish waters. *H.hippocampus* occurs mostly in shallow inshore waters among seagrass and algae but may overwinter in deeper waters (Fishbase, 2002; Lourie *et al*.1999).

Application of the Texel-Faial criteria

Nominations of this species of *Hippocampus* to be placed on the OSPAR list cited regional importance, decline, and sensitivity. Information was also provided on threat.

Regional/Local importance

This species of seahorse has been reported from four of the five OSPAR Maritime Areas where it is found close inshore. It also occurs elsewhere and is threatened by similar activities outside the OSPAR Maritime Area.

Decline

There are reports and strong circumstantial evidence of declining numbers and diminishing size in catches among a number of the commonly traded species of *Hippocampus* (TRAFFIC, 2002). There are no specific figures for this species in the OSPAR Maritime Area although important habitat for seahorses (seagrass) is known to have become less extensive.

Sensitivity

The life history characteristics of *Hippocampus* spp. make populations particularly sensitive to activities which deplete the number of individuals in a particular area. The fragility of the juveniles also makes the seahorse very sensitive to perturbations of its natural environment (Beaufort, 1987). Seahorse biology is such that populations will be particularly susceptible to overfishing (Vincent 1996, Schmid & Senn 2002):

(a) pregnant seahorses must survive if the young are to survive;
(b) lengthy parental care combined with small brood size limit reproductive rates;
(c) low mobility and small home ranges restrict recolonisation of depleted areas;
(d) sparse distribution means that lost partners are not quickly replaced;
(e) strict monogamy means that social structure is easily disrupted; and
(f) typically low rates of adult mortality mean that fishing exerts a relatively substantial selective pressure.

Threat

Directed fisheries are known to occur in Portugal and in the British Isles, Jersey and Guernsey, and are usually the source of live specimens for the aquarium trade, as well as a portion of the dried specimen trade (TRAFFIC, 2002). A significant number are collected in southern England and the Channel Isles to contribute to an aquarium trade estimated to take over one million seahorses per year.

Seahorses are taken as by-catch in a variety of fishing gear (trawls, beach seines, push nets, gill and trammel nets, and pots). By-catch currently accounts for the majority of specimens in international trade, destined for the traditional medicine and curio markets. In excess of 30 million seahorses per year are taken world-wide for the traditional medicine trade (Vincent 1995). The scale of this trade in more than 65 countries provides

increasing pressure for new populations to be found.

The destruction of sea grass beds, which are an important habitat for the seahorse is another threat.

Relevant additional considerations

Sufficiency of data

There are limited data on seahorses in the OSPAR Maritime Area. There is also little information on population dynamics, reproductive rate and ecology of this species in the NE Atlantic.

Changes in relation to natural variability

Little is known about the natural variability of the population of *H.hippocampus* in the NE Atlantic. However, in other parts of the world where it is collected for the medicine, curio and aquarium trade, the dramatic decline in numbers due to human activity totally overshadows any changes that are likely to be due to natural variability.

Expert judgement

The absence of precise information on the population size of this species in the OSPAR Maritime Area means that expert judgement has played a significant part in this nomination. It rests on a recognition that the threats to the short-snouted seahorse are known, that such threats occur in the OSPAR Maritime Area and that they have led to significant declines in the number of other seahorse species elsewhere.

ICES Evaluation

The Advisory Committee of Ecosystems of ICES reviewed information on this species (ICES 2003), and concluded that there was no evidence for decline although the extent of the seagrass habitat used by this species has decreased. There was considered to be sound evidence of threat to seagrass habitats but no evidence of threats to this species of seahorse. The sensitivity of the genus has been well-documented.

Threat and link to human activities

Cross-reference to checklist of human activities in OSPAR MPA Guidelines

Relevant human activity: Fishing, hunting, harvesting; *Category of effect of human activity:* Biological – removal as target and non-target species by fisheries.

There is a clear link between the decline of seahorses and human activities in parts of the world where it is collected for the curio, medicine and aquarium trade. Although collection is not as intensive in the North East Atlantic it still takes place and is a significant long-term threat to the species along with degradation and loss of important seagrass habitat.

Management considerations

Management actions that are essential for the conservation of this species are control and monitoring of collection and trade in seahorses. It is important that collection and trade is not allowed to increase in the OSPAR Maritime Area as numbers become depleted due to trade in other parts of the world.

Ongoing management action for seagrass bed habitat in the North East Atlantic should consider the protection of seahorses, as well as for the seagrass habitat. Protection of seahorses should also be considered in other habitats in which they occur (kelp and seaweed habitats).

This species is classified as Vulnerable in the IUCN Red List (2002) and has recently been added to Appendix II of CITES. The UK is considering listing this species on Schedule V of the UK Wildlife and Countryside Act 1981.

Further information

Nominated by:

Portugal

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Useful References:

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