

## FACTSHEET

# SEAHORSE



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Seahorses are charismatic fish with a snout like a horse. They are widespread in marine ecosystems across the world. Most seahorses are marine except a few estuarine species. Their distinct shape also makes them an attractive species of interest for the aquaria trade worldwide. Seahorses, seadragons and pipefish collectively comprise the family *Syngnathidae*.

- 46 recognised species of seahorses are found in the world's oceans.
- 7 of these are found in India: Spotted Seahorse *Hippocampus kuda*, Longnose Seahorse *H. trimaculatus*, Hedgehog Seahorse *H. spinosissimus*, Great Seahorse *H. kelloggi*, Thorny Seahorse *H. histrix*, Japanese Seahorse *H. mohnikei*, and Giraffe Seahorse *H. camelopardalis*.

“ Seahorses swim upright and escape predators by camouflaging with their surroundings. ”

“ Male and female seahorses form monogamous pair bonds. ”

“ Couples 'greet' each other every day and hold tails. A peculiar greeting ritual is performed every morning reinforcing the pair's bond, wherein the individuals change colours and dance in synchrony lasting about ten minutes, followed by separation throughout the day. ”

# #DYK

“ All seahorses give birth to young ones by the unique breeding behaviour of male pregnancy. ”

“ They have no stomach and teeth and feed by swallowing mobile prey such as small crustaceans, fish fry and invertebrates. ”

## ECOLOGICAL ROLE:

Seahorses are flagship species for their habitats, including seagrass beds, mangroves, coral reefs, estuaries, and seaweeds. In the marine food chain, they have an indispensable ecological role. They predate bottom-dwelling organisms and small shrimp, and are preyed upon by invertebrates, fish, sea turtles, seabirds and marine mammals. Due to their strong and long-term relationship with their habitats, their removal may jeopardise the balance of coastal ecosystems.

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## SIZE, DISTRIBUTION AND POPULATION STATUS:

Species	Average size	Distribution	Population trend
<i>H. kuda</i> Spotted Seahorse	Adult up to 30 cm	Palk Bay (Tamil Nadu), Coromandel coast (Tamil Nadu), Karaikal (Puducherry), Malabar coast (Kerala), Karwar & Kumta (Karnataka), Panjim estuary & Marmagao (Goa), Mirya creek Ratnagiri (Maharashtra), Kavaratti & Minicoy (Lakshadweep), Chilka lake (Odisha), Andaman and Nicobar Islands, West Bengal coast	
<i>H. trimaculatus</i> Longnose Seahorse	Adult up to 22 cm	Palk Bay (Tamil Nadu), Gulf of Mannar (Tamil Nadu), Coromandel coast (Tamil Nadu) Kerala coast	
<i>H. spinosissimus</i> Hedgehog Seahorse	Adult up to 17.2 cm	Palk Bay, Gulf of Mannar, Coromandel coast (Tamil Nadu)	
<i>H. kelloggi</i> Great Seahorse	Adult up to 28 cm	Gulf of Mannar (Tamil Nadu), Coromandel coast (Tamil Nadu), Kanyakumari waters (Tamil Nadu), Malabar coast (Kerala) and Andhra Pradesh coast	
<i>H. histrix</i> Thorny Seahorse	Adult up to 17 cm	Gulf of Mannar (Tamil Nadu), Andaman Islands, Kadamat & Kavaratti (Lakshadweep)	
<i>H. mohnikei</i> Japanese Seahorse	Adult up to 8 cm	Palk Bay (Tamil Nadu)	
<i>H. camelopardalis</i> Giraffe Seahorse	Adult up to 10 cm	Mithapur reef, Gulf of Kachchh (Gujarat)	Not assessed



## CONSERVATION STATUS:

Species	Wildlife (Protection) Act, 1972	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	International Union for Conservation of Nature (IUCN) Red List
Spotted Seahorse	Schedule I	Appendix II	Vulnerable
Longnose Seahorse	Schedule I	Appendix II	Vulnerable
Hedgehog Seahorse	Schedule I	Appendix II	Vulnerable
Great Seahorse	Schedule I	Appendix II	Vulnerable
Thorny Seahorse	Schedule I	Appendix II	Vulnerable
Japanese Seahorse	Schedule I	Appendix II	Vulnerable
Giraffe Seahorse	Schedule I	Appendix II	Data Deficient

## SEAHORSES IN PERIL:

**INCIDENTAL BYCATCH** of non-targeted fishery gear gravely threatens seahorses all over the world. A study conducted in 2015, under the BOBLME-CMFRI project estimated fisheries bycatch numbers as high as 14,088 in the Gulf of Mannar and 139,791 in Palk Bay, over a five month period. Due to the relatively unregulated nature of the seahorse fishery, this incidental bycatch often enters the clandestine markets where it is sold internationally.

### ILLEGAL WILDLIFE TRADE

In the 1990s, before the blanket ban on trade of species by The Ministry of Environment, Forests and Climate Change (MoEF & CC), Government of India, India and Philippines were the top collectors and exporters of seahorses. Harvested from the Gulf of Mannar and Palk Bay, the dried and processed seahorses were exported to Singapore, Hong Kong, Malaysia and United Arab Emirates. Vincent (1996) estimated large numbers exported, approximately 1.5 million individuals traded annually from the southern coast of India.



Despite the ban today, seahorses have consistently been poached through the years. A large seizure of 2.24 t of seahorses destined for Singapore was seized by the Directorate of Revenue Intelligence in July 2004 in Tamil Nadu waters. More recently, in March 2019 the Forest Department intercepted 3,000 seahorse individuals in a consignment at Mumbai airport. Another seizure in Nathu-la revealed an international trafficking route, wherein enforcement officials intercepted 56 kg of seahorse bound for China.

According to Project Seahorse estimates, >70 million seahorses are extracted in unregulated fisheries around the world every year, and >95% of the dried seahorse trade is illegal, unregulated and unreported circumventing international regulations in many countries. Dried seahorses are an easy cargo to move across borders due to their small size and property of retaining their shape over long time periods. They are often smuggled in personal luggage through airports and among other shipments mislabelled as dried seafood.

- **Traditional medicine:** Seahorse serves as a key ingredient in traditional Asian medicine in several countries including India where communities believe in its anti-inflammatory properties as a cure for diseases like asthma and arthritis. Seahorse derivatives used in folk medicinal form in Japan is called '*kanpo*', '*hanyak*' in Korea and '*Jamu*' in Indonesia. Additionally, there are superstitious beliefs in India including their use as a good luck charm to prevent disorders such as epilepsy, that are adding to the pressure on the species.



- **Curios & Aquaria trade:** Live wild-caught seahorses are traded to aquariums from all over the world. Whereas dead seahorses are used in jewellery, key chains, souvenirs etc. Owing to their plated body structure, they maintain their appealing shape even after death, making them a popular article for sale as curios.

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## RECENT CONSERVATION EFFORTS:

- The declaration of *Dr. KK Mohammed Koya Sea Cucumber Conservation Reserve* at Cheriyanani reef in Lakshadweep Islands in 2020, is a win for conservation of marine species such as seahorses, which were previously caught in non-target fishing practices in the area.
- Globally co-ordinated seizure operations are an extraordinary effort to curb illicit trade of protected species. One such operation was Operation Thunderbird, jointly conducted for 26-days in June 2019 by Interpol and the World Customs Organization, successfully co-ordinated by the Wildlife Crime Control Bureau (WCCB). The operation collectively seized over 10,000 animals and plants, among which was a 1,280 kg consignment of dried seahorses intercepted in China.
- Special efforts by enforcement agencies such as state forest departments, marine police and customs departments resulted in interception of several seahorse consignments in multi-species seizures and as personal luggage. In November 2019, 79 kg of seahorses were seized by the Forest Department while patrolling on the Passipattinam shore in Tamil Nadu. Another major multi-species haul was conducted in December 2018, wherein 180 dried seahorses were also recovered by the Marine Police in Pudukkottai, Tamil Nadu.
- In 2002 all *Hippocampus* spp. were listed in CITES Appendix II, a measure to regulate their international trade.
- Project Seahorse works on seahorse conservation, devising bycatch mitigation strategies in Tamil Nadu.
- In India, TRAFFIC within its marine conservation work aims to understand the seahorse trade chain and set a quantitative baseline of seahorses landed and entering the illicit market.

## SECURING THE FUTURE OF SEAHORSES IN INDIA:

- Increased collaboration between import and export country enforcement officials to curb transnational smuggling.
- Capacity building and increasing awareness for enforcement agencies such as Customs Department, Directorate of Revenue Intelligence, State Forest departments, Marine police and Wildlife Crime Control Bureau, to provide knowledge on the scale of clandestine trade and measures they could incorporate to tackle ground level issues.
- Gear limitation to reduce destructive practices by trawlers is a key measure for habitat protection and bycatch reduction of seahorses.
- Participatory co-management of seahorse rich areas through community monitoring is a potential future management approach.
- Research to fill in knowledge gaps on the distribution of *Hippocampus* spp. throughout Indian waters, especially Palk Bay, will provide the required scientific backstopping to facilitate effective conservation approaches such as declaration of marine protected zones.



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 the wildlife trade monitoring network