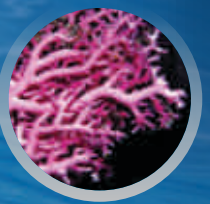
जहां है हरियाली।
वहां है रवुशहाली।।

FISHES AND CORALS OF THE WORLD LISTED IN *CITES* APPENDICES

N. Krishnakumar, Satish Sahayak
K.K. Joshi, Maheshwar Hegde and T.P. Raghunath



INSTITUTE OF FOREST GENETICS AND TREE BREEDING
Indian Council of Forestry Research and Education
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PREFACE

Dr. N. Krishnakumar, IFS
Director

वन आनुवंशिकी एवं वृक्ष प्रजनन संस्थान
भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद पि.बी.नं. 1061 कोयम्बत्तूर 641 002

Ministry of Environment and Forests, Government of India
Institute of Forest Genetics and Tree Breeding
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CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) ensures that international trade in specimens of wild animals and plants does not threaten their survival in the wild. At present, 175 countries are party to this international convention and India is also a party since 1976. Roughly 5,000 species of animals and 28,000 species of plants are protected by CITES against over-exploitation through international trade. All these species are included in various CITES appendices, according to degree of protection required to regulate the trade.

The Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore has been designated as one of the Scientific Authorities for CITES in India by the Ministry of Environment and Forests (MoEF), Govt. of India - the CITES Management Authority, in 2011. Since then, IFGTB is actively involved in various CITES related activities. It is being felt that, there is a need to create increased awareness about CITES and species included in CITES appendices among various enforcement agencies in India, like Directorate of Revenue Intelligence (DRI), Customs, the Central Bureau of Investigation (CBI), the State Police, Forest Department, Coast Guards and other Paramilitary forces posted in borders. Therefore, the MoEF has entrusted IFGTB to conduct awareness training programmes for various CITES implementation agencies in India and also to make available enough reference materials like booklets and brochures on CITES related species and issues.

Several Indian animal and plant species have been included in CITES appendices. IFGTB has prepared booklets on various animal species and plants included in CITES for benefit of the participants of the training programme. This booklet on 'Fishes and Corals of the World Listed in CITES Appendices' is one such ready reference document. The information provided in this brochure is compiled from various published sources. The photographs included have also been taken for education purpose from various sources published on internet. These photographs are just indicative of the species listed. For further detailed identification of species and their parts, other published authentic works on respective species need to be referred or consulted.

The need for such handy publications emerged during trainings conducted for officials of various State Forest Departments, Directorate of Revenue Intelligence, Customs and other CITES enforcement agencies in India. It is hoped that this booklet on fishes and corals listed under CITES will go long way to improve the understanding on the subject among personnel involved in CITES implementation in the country.

Your sincere comments and feedbacks are solicited.

Dr. N. Krishnakumar
Director
IFGTB, Coimbatore

Fishes and Corals of the World Listed in *CITES* Appendices

N. Krishnakumar, Satish Sahayak[1], K.K. Joshi[2], Maheshwar Hegde and T.P. Raghunath

Institute of Forest Genetics and Tree Breeding, Coimbatore - 2
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The first global 'Census of Marine Life (2010)' estimated that there are over 2, 30,000 species of organisms living in our Oceans. This census has analyzed the diversity, distribution and abundance of life in the world's oceans. It has been revealed that, the marine life is highly biologically diverse and it has been explored only partially so far. It is estimated that there are almost 22,000 fish species in the world, which is more than the total number of mammals, reptiles, amphibians, and birds combined and every year 100 new species are added to this list. Fish are divided into two major types. The first type is cartilaginous fish, which includes Sharks, Skate and Rays. The second type is the bony fish, which have a complete bony skeleton and are covered with bony scales. Bony fishes are the most common and account for over 90% of all fish.With all this diversity within; the ocean is a major contributor for the world food production. According to FAO (2010), the total world fish production has touched 88 million tons, out of which, inland capture fisheries contributed 11 million tons and the oceans contributed the rest of 77million tons.

India is one of the 12 mega biodiversity countries in the world and has a long coastline of 8129 km, with an '*exclusive economic zone'* (EEZ) of 2.02 million sq.km including the continental shelf of 0.5 million sq.km which is home to about 1800-2400 fish species. These fishes occupy diverse habitats like estuaries, lagoons, mangroves, backwaters, rocky areas, coral islands and sea grass beds. Topographically, our peninsular area has coastal ecosystem with the shallow and deep continental shelf areas with sandy and rocky substratum. Lakshadweep and Andaman and Nicobar islands are the island ecosystem with lagoons. Gulf of Mannar and Gulf of Kutch are shallow continental shelf areas with coral island and sea grass beds. Sunderbans have one of the world's largest estuarine areas with mangroves and back waters. About 3638 marine fishing villages and 2251 traditional landing centers are spread along the coastline of India. Marine fishery has been a source of food for masses, employment for coastal population and earns foreign exchange by export of fish and fish products.

The Government of India has brought into force a number of laws for conservation of marine organisms and their habitats. There are several species of Elasmobranchs, Sponges and Corals occurring along the Indian coast which are put under the Schedules of Wildlife (Protection) Act, 1972. According to this ten species of Elasmobranchs, all species of Sea Horses, Gorgonids and Corals are under protected species. As India is a signatory of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1976, we need to regulate the trade of the species listed in the appendices of CITES. A total of 96 species of fishes and around 2500 species invertebrates are listed in the appendices of CITES. In India, international trade in all wild fauna and flora in general, and the species covered under CITES in particular are controlled jointly through the Wildlife (Protection) Act 1972 and its amendments, the Foreign Trade Act 1992, the Foreign Trade Policy of Government of India and Customs Act, 1962.

The main threat for the world oceans is overfishing, especially intensified exploitation of the vulnerable and threatened species. Overfishing is causing drastic population reduction in some of the species which ultimately may lead to species extinction. Other forms of threats, especially to inland fishes are loss of habitats, pollution and the arrival of invasive species. Problems like rising water temperatures, acidification and global warming are some of the other issues making incisions into the now almost fragile ocean ecosystems and also contributing to expansion of areas unable to support life in the oceans. According to recent estimates about 90% losses of some of the rare species of organisms from the seas are due to human activities and some species may be heading for extinction, as it has happened to many terrestrial species. The occurrence of many marine species is not restricted to the waters of any particular country. Therefore, all the Fish and Coral species of the world listed in various CITES appendices are included in this booklet, which may be useful as a handy reference document for the CITES enforcement agencies in India.

PHYLUM PISCES (ELASMOBRANCHS AND TELEOSTS)

APPENDIX - I

	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	1	PRISTIDAE	Knife tooth sawfish	***Anoxypristis cuspidata*** (Latham, 1794) (Freshwater-Marine)	Indian Ocean, Pacific Ocean	Bycatches during commercial fishing	Critically Endangered
	2	PRISTIDAE	Dwarf Sawfish	***Pristis clavata*** Garman, 1906	Northern Australia, Eastern Indian Ocean, Western central Pacific	Bycatch in commercial gillnet and trawl fisheries; long tooth-studded saw, makes them extraordinarily vulnerable to entanglement in any sort of net gear	Critically Endangered
	3	PRISTIDAE	Smalltooth Sawfish	***Pristis pectinata*** Latham, 1794 (Freshwater-Marine)	Atlantic Ocean Indian Ocean Mediterranean and Black Sea	Fishing and habitat modification	Critically Endangered
	4	PRISTIDAE	Southern sawfish	***Pristis perotteti*** Müller & Henle, 1841 (Freshwater-Marine)	Atlantic – eastern central; southeast, southwest & western central	Bycatch in virtually all fisheries throughout its tropical Atlantic range	Critically Endangered
	5	PRISTIDAE	Common Sawfish	***Pristis pristis*** (Linnaeus, 1758) (Freshwater-Marine)	Atlantic – eastern central, northeast; Mediterranean and Black Sea; Pacific – southeast	Bycatch in virtually all fisheries	Critically Endangered
	6	PRISTIDAE	Narrow snout Sawfish	***Pristis zijsron*** Bleeker, 1851 (Freshwater-Marine)	Indian Ocean – eastern, western; Pacific – northwest & western central	Extremely vulnerable to capture by target and bycatch fishing throughout its range	Critically Endangered

APPENDIX - I

	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	7	CYPRINIDAE	Jullien's Golden Carp	***Probarbus jullieni*** Sauvage, 1880 (Fresh water)	Cambodia, Lao, Malaysia Thailand & Vietnam	Overfishing, habitat destruction, and large dams	Endangered
	8	OSTEOGLOSSIDAE	Asian Arowana	***Scleropages formosus*** (Müller & Schlegel, 1844) (Fresh water)	Cambodia, Myanmar, Thailand & Vietnam	Targeted for the aquarium trade since the 1970s; caught incidentally in local fisheries; Habitat degradation	Endangered
	9	SCIAENIDAE	MacDonald's Weakfish	***Totoaba macdonaldi*** (Gilbert, 1890) (Freshwater-Marine)	Mexico	Overfishing and habitat alteration	Critically Endangered
	10	PANGASIIDAE	Mekong Giant Catfish	***Pangasianodon gigas*** Chevey, 1930 (Fresh water)	Cambodia, Lao, Thailand & Vietnam	Overfishing; damming of the main stream Mekong River.	Critically Endangered
	11	ACIPENSERIDAE	Shortnose Sturgeon	***Acipenser brevirostrum*** LeSueur, 1818 (Freshwater-Marine)	Canada &, USA	Harvested incidental to Atlantic sturgeon in Canada; blockage of up- and downstream migrations at dams	Vulnerable
	12	ACIPENSERIDAE	Atlantic Sturgeon	***Acipenser sturio*** Linnaeus, 1758 (Freshwater-Marine)	France	Bycatch is the major threat and the extraction of gravel in the Garonne is a potential threat to the species. Dam construction, degradation of spawning sites.	Critically Endangered

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S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
13	CATOSTOMIDAE	Cui-ui	***Chasmistes cujus*** Cope, 1883 (Fresh water)	Nevada, USA	Intensive fishing in the 19th and early 20th century; habitats have been greatly altered by water development projects.	Critically Endangered
14	LATIMERIIDAE	Coelacanths	***Latimeria chalumnae*** Smith, 1939	Comoros; Indonesia	Known as the "living fossil", Rare in occurrence	Critically Endangered

APPENDIX - II

	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	15	LAMNIDAE	Great White Shark	***Carcharodon carcharias*** (Linnaeus, 1758)	Atlantic Ocean, Indian Ocean; & Pacific Ocean	Targeted commercial and sports fisheries for jaws, fins, game records and for aquarium display; protective beach meshing	Vulnerable
	16	CETORHINIDAE	Basking Sharks	***Cetorhinus maximus*** (Gunnerus, 1765)	North and South Atlantic, Mediterranean, North and South Pacific,	Supply liver oil for lighting and industrial use, skin for leather and flesh for food or fishmeal	Vulnerable
	17	ANGUILLIDAE	European Eel	***Anguilla anguilla*** (Linnaeus, 1758) (Freshwater-Marine)	Atlantic – eastern central. Northeast, northwest, western central, Mediterranean and Black Sea	Overfishing for glass eels; Dams blocking migration routes	Critically Endangered
	18	PRISTIDAE	Freshwater Sawfish	***Pristis microdon*** Latham, 1794 (Freshwater-Marine)	Indian Ocean – eastern & western; Pacific – southwest & western central	Long tooth-studded saw, makes them extraordinarily vulnerable to entanglement in any sort of net gear, compounded by habitat loss	Critically Endangered
	19	RHINCODONTIDAE	Whale Shark	***Rhincodon typus*** Smith, 1828	Cosmopolitan in tropical and warm temperate seas	Depleted by harpoon fisheries in Southeast Asia and perhaps incidental capture in other fisheries. High value in international trade,	Vulnerable
	20	SYNGNATHIDAE	Big-belly Seahorse	***Hippocampus abdominalis*** Lesson, 1827	Indian Ocean – eastern; Pacific – southwest	Bycatch in commercial fisheries, unregulated take, risk through intrinsic life history traits Demand in Chinese traditional medicine markets and increase in aquarium trade.	Data Deficient

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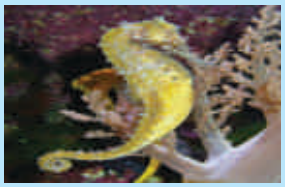
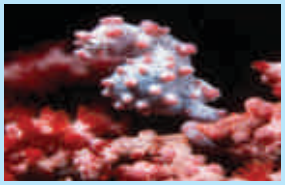
	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	21	SYNGNATHIDAE	Winged Seahorse	***Hippocampus alatus*** Kuiter, 2001	Indian Ocean – eastern; Pacific – western central	Discarded as bycatch in the shrimp trawl fishery, no trade of the species is recorded	Data Deficient
	22	SYNGNATHIDAE	West African Seahorse	***Hippocampus algiricus*** Kaup, 1856	Atlantic – eastern central; Atlantic – southeast	Habitat degradation; Shrimp trawling, with high levels of bycatch; The international trade of dried, wild seahorses	Vulnerable
	23	SYNGNATHIDAE	Narrow-bellied Seahorse	***Hippocampus angustus*** Günther, 1870	Indian Ocean – eastern; Pacific – western central	Relatively sparse distributions; bycatch in trawls in northern Australia	Data Deficient
	24	SYNGNATHIDAE	Barbour's Seahorse	***Hippocampus barbouri*** Jordan & Richardson, 1908	Indonesia , Malaysia , Philippines	Exploitation for trade for traditional medicine and aquaria display; bycatch in multiple fisheries	Vulnerable
	25	SYNGNATHIDAE	Bargibant's Seahorse	***Hippocampus bargibanti*** Whitley, 1970	Australia (Queensland); Indonesia; New Caledonia; Papua New Guinea; Philippines	Collected for the aquaria trade. It has a specific habitat, being found only on gorgonian corals Muricella plectana	Data Deficient
	26	SYNGNATHIDAE	False-eyed Seahorse	***Hippocampus biocellatus*** Kuiter, 2001	Shark Bay region of Western Australia.	Relatively sparse distributions; rare; habitat damage	Not yet been assessed for the IUCN Red List

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	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	27	SYNGNATHIDAE	Réunion Seahorse	***Hippocampus borboniensis*** Duméril, 1870	Madagascar, Mauritius, Mozambique, Réunion, South Africa, United Republic of Tanzania	Traditional medicine and curios trades; habitat may also be threatened by degradation	Data Deficient
	28	SYNGNATHIDAE	Knobby Seahorse	***Hippocampus breviceps*** Peters, 1869	Australia (South Australia, Tasmania, Victoria, Western Australia)	Increasing development and population pressure in coastal waters leading to the degradation of shallow inshore habitat; Prawn trawling	Data Deficient
	29	SYNGNATHIDAE	Cape Seahorse	***Hippocampus capensis*** Boulenger, 1900	South Africa	Habitat damage	Endangered
	30	SYNGNATHIDAE	Coleman's Pygmy Seahorse	***Hippocampus colemani*** Kuiter, 2003	Lord Howe Island, Australia	Incidentally caught (bycatch) in other fisheries and affected by habitat degradation	Not yet been assessed for the IUCN Red List
	31	SYNGNATHIDAE	Tiger Tail Seahorse	***Hippocampus comes*** Cantor, 1849	India (Andaman Is.), Indonesia, Malaysia, Philippines, Singapore & Vietnam	Trade in seahorses for medicinal and aquarium uses; incidentally caught (bycatch) in other fisheries and affected by habitat degradation	Vulnerable
	32	SYNGNATHIDAE	Crowned Seahorse	***Hippocampus coronatus*** Temminck & Schlegel, 1850	Japan	Caught incidentally in other fisheries	Data Deficient

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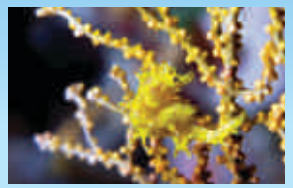
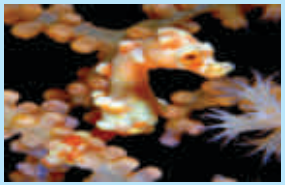
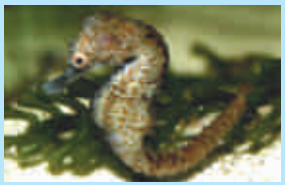
	33	SYNGNATHIDAE	Soft coral Seahorse	***Hippocampus debelius*** Gomon & Kuiter, 2009	Egypt	Relatively sparse distributions; habitat damage	not yet been assessed for the IUCN Red List
	34	SYNGNATHIDAE	Denise's pygmy seahorse	***Hippocampus denise*** Lourie & Randall, 2003	Indonesia, Malaysia, Micronesia, Palau, Philippines , Solomon Islands, & Vanuatu	Major threats to the species are currently unknown ; collected for the aquaria trade	Data Deficient
	35	SYNGNATHIDAE	Lined Seahorse	***Hippocampus erectus*** Perry, 1810	Atlantic – northwest, southwest & western central	Traded dried as traditional medicine; popular aquarium fish in North America; bycatch by shrimp trawling	Vulnerable
	36	SYNGNATHIDAE	Fisher's Seahorse	***Hippocampus fisheri*** Jordan & Evermann, 1903	Hawaiian Island	Relatively sparse distributions	Data Deficient
	37	SYNGNATHIDAE	Sea Pony	***Hippocampus fuscus*** Rüppell, 1838	Djibouti, India, Saudi Arabia & Sri Lanka	Traded for traditional medicines, curiosities, and aquaria; vulnerability of its shallow eelgrass habitats to human influence	Data Deficient
	38	SYNGNATHIDAE	Big-head Seahorse	***Hippocampus grandiceps*** Kuiter, 2001	Gulf of Carpentaria, Australia.	Curiosities, and aquaria; habitat damage	Not yet been assessed for the IUCN Red List

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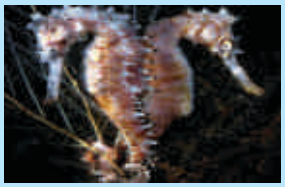
	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	39	SYNGNATHIDAE	Long-snouted Seahorse	***Hippocampus guttulatus*** Cuvier, 1829	Atlantic – eastern central & northeast; Mediterranean and Black Sea	Habitat degradation; degradation through climate change; curiosities, and aquaria	Data Deficient
	40	SYNGNATHIDAE	Eastern Spiny Seahorse	***Hippocampus hendriki*** Kuiter, 2001	Restricted to the inner Great Barrier Reef area, Australia.	Bycatch by shrimp fisheries.	Data Deficient
	41	SYNGNATHIDAE	Short-snouted Seahorse	***Hippocampus hippocampus*** (Linnaeus, 1758)	Atlantic – eastern central & northeast; Mediterranean and Black Sea	Habitat degradation; Climate Change; accidental bycatch from fisheries are sold as curiosities or into the live aquarium fish trade	Data Deficient
	42	SYNGNATHIDAE	Spiny Seahorse	***Hippocampus histrix*** Kaup, 1856	Indian Ocean – eastern & western; Pacific – eastern central, northwest & western central	International trade for the aquarium and traditional medicine trades; bycatch in the tropical shrimp trawl fishery	Vulnerable
	43	SYNGNATHIDAE	Giant Seahorse	***Hippocampus ingens*** Girard, 1858	Pacific – eastern central & southeast	International trade for the aquarium and traditional medicine trades; degradation of habitat from coastal development	Vulnerable
	44	SYNGNATHIDAE	Jayakar's Seahorse	***Hippocampus jayakari*** Boulenger, 1900	Israel, Oman & Pakistan	Local collection for aquarium use; threatened due to the vulnerability of its shallow habitats to human influence.	Data Deficient

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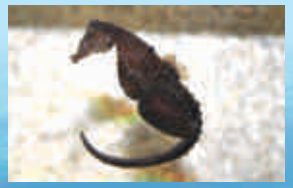
	45	SYNGNATHIDAE	Collared Seahorse	***Hippocampus jugumus*** Kuiter, 2001	Lord Howe Island, Australia.	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List
	46	SYNGNATHIDAE	Great Seahorse	***Hippocampus kelloggi*** Jordan & Snyder, 1901	China, India, Indonesia, Japan, Malaysia, Pakistan, Philippines, Tanzania, Thailand & Viet Nam	Threatened from bycatch in multiple artisanal as well as commercial fisheries throughout its range; heavily traded for traditional medicines throughout its range	Vulnerable
	47	SYNGNATHIDAE	Spotted Seahorse	***Hippocampus kuda*** Bleeker, 1852	Indian Ocean – eastern & western; Pacific – eastern central, northwest & western central	Traded for traditional medicines, aquaria and curios throughout its range; incidental catch in the shrimp trawl fishery; habitat destruction	Vulnerable
	48	SYNGNATHIDAE	Lichtenstein's Seahorse	***Hippocampus lichtensteinii*** Kaup, 1856	Indian Ocean – western	Major threats to the species are currently unknown.	Data Deficient
	49	SYNGNATHIDAE	Bullneck Seahorse	***Hippocampus minotaur*** Gomon, 1997	New South Wales, Victoria, Australia.	Trawling presents an unknown threat.	Data Deficient
	50	SYNGNATHIDAE	Lemur-tail Seahorse	***Hippocampus mohnikei*** Bleeker, 1854	Japan	Major threats to the species are currently unknown.	Data Deficient

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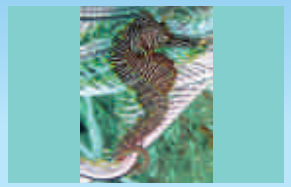
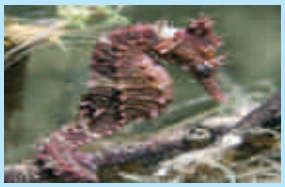
	51	SYNGNATHIDAE	Monte Bello Seahorse	***Hippocampus montebelloensis*** Kuiter, 2001	Monte Bello Islands and Exmouth Gulf, Australia.	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List
	52	SYNGNATHIDAE	Northern Spiny Seahorse	***Hippocampus multispinus*** Kuiter, 2001	Western Australia to Northern Australia, and southern Papua New Guinea	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List
	53	SYNGNATHIDAE	Patagonian Seahorse	***Hippocampus patagonicus*** Piacentino & Luzzatto, 2004	Argentina	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List
	54	SYNGNATHIDAE	High-crown Seahorse	***Hippocampus procerus*** Kuiter, 2001	Queensland, Australia.	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List
	55	SYNGNATHIDAE	Queensland Seahorse	***Hippocampus queenslandicus*** Horne, 2001	Queensland, Australia	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List
	56	SYNGNATHIDAE	Slender Seahorse	***Hippocampus reidi*** Ginsburg, 1933	Bahamas, Barbados, Belize, Bermuda, Brazil, Colombia, Cuba, Grenada, Haiti, Jamaica, Panama, United States & Venezuela	Traded in the Americas as aquarium fishes; bycatch in shrimp trawl fisheries	Data Deficient

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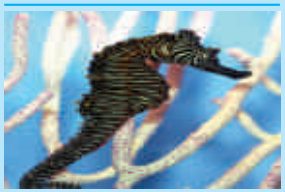
	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	57	SYNGNATHIDAE	Half-spined Seahorse	***Hippocampus semispinosus*** Kuiter, 2001	Indonesia	Traded for aquaria and curios; bycatch in trawl fisheries	Not yet been assessed for the IUCN Red List
	58	SYNGNATHIDAE	Dhiho's Seahorse	***Hippocampus sindonis*** Jordan & Snyder, 1901	Japan	Taken as bycatch, susceptible to coastal habitat degradation, or exploited for the Chinese medicine trade or ornamental trade	Least Concern
	59	SYNGNATHIDAE	Hedgehog Seahorse	***Hippocampus spinosissimus*** Weber, 1913	Australia, Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Sri Lanka, Taiwan, Thailand & Vietnam	Threatened from bycatch in multiple artisanal and commercial fisheries throughout its range	Vulnerable
	60	SYNGNATHIDAE	Tiger Snout Seahorse	***Hippocampus subelongatus*** Castelnau, 1873	Western Australia	Collected for the aquarium trade; habitat degeneration is a potential threat to the species.	Data Deficient
	61	SYNGNATHIDAE	Three-spotted Seahorse	***Hippocampus trimaculatus*** Leach, 1814	Australia, Cocos Islands, French Polynesia, Hong Kong, India, Indonesia, Japan, Philippines, Tailand Singapore, Taiwan & Vietnam	Caught and traded for traditional medicines, and curios throughout its range; Japan's traditional medicine; incidental catch in the shrimp trawl fishery.	Vulnerable
	62	SYNGNATHIDAE	Walea Pygmy Seahorse	***Hippocampus waleananus*** Gomon & Kuiter, 2009	Togean Islands in Tomini Bay, central Sulawesi, Indonesia.	Major threats to the species are currently unknown.	Not yet been assessed for the IUCN Red List

APPENDIX - II

	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	63	SYNGNATHIDAE	New Holland Seahorse	***Hippocampus whitei*** Bleeker, 1855	Australia (New South Wales, Queensland); Solomon Islands	Caught for the aquarium trade; bycatch in the southeast trawl fishery	Data Deficient
	64	SYNGNATHIDAE	Zebra Seahorse	***Hippocampus zebra*** Whitley, 1964	Australia (Queensland), Papua New Guinea	Major threats to the species are currently unknown.	Data Deficient
	65	SYNGNATHIDAE	Dwarf Seahorse	***Hippocampus zosterae*** Jordan & Gilbert, 1882	Bahamas; United States (Florida, Texas)	Aquarium trade; trawl fishery in shallow grass beds off the west coast	Data Deficient
	66	ACIPENSERIDAE	Great Siberian Sturgeon	***Huso dauricus*** (Georgi, 1775) (Freshwater)	China & Russian Federation	Overfishing; environmental pollution in the Amur River basin threatens the habitat and reproduction of this species	Critically Endangered
	67	ACIPENSERIDAE	Russian Sturgeon	***Acipenser gueldenstaedtii*** Brandt, 1833 (Freshwater-Marine)	Azerbaijan, Bulgaria, Georgia, Iran, Islamic Republic of Kazakhstan, Moldova, Romania, Russian Federation, Serbia, Turkey, Turkmenistan & Ukraine	Most spawning sites have been lost due to dam construction; Poaching and illegal fishing, is also a threat to the species; High levels of pollution altered hormonal balance, and increased the number of hermaphroditic fish.	Critically Endangered
	68	ACIPENSERIDAE	Amur Sturgeon	***Acipenser schrenckii*** Brandt, 1869 (Freshwater)	China & Russian Federation	Overfishing, both legal and poaching; environmental pollution in the Amur River basin threatens the habitat and reproduction of this species	Critically Endangered

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	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	69	ACIPENSERIDAE	European Sturgeon	***Huso huso*** (Linnaeus, 1758) (Freshwater-Marine)	Azerbaijan, Bulgaria, Georgia, Iran, Kazakhstan, Moldova, Romania, Russian Federation; Serbia & Turkey	Overfishing at sea and poaching in estuaries and rivers for meat and caviar is a major threat to the species; Bycatch is also a threat to the species; The species caviar is very high value (8,000 USD per kilo in 2009).	Critically Endangered
	70	ACIPENSERIDAE	Siberian Sturgeon	***Acipenser baerii*** Brandt, 1869 (Freshwater-Marine)	China, Kazakhstan, Mongolia & Russian Federation	Overfishing, damming and poaching; declined due to a high level of abnormalities in development and functioning of reproductive system caused by water pollution	Endangered
	71	ACIPENSERIDAE	Adriatic Sturgeon	***Acipenser naccarii*** (Bonaparte, 1836) (Freshwater-Marine)	Northern part of Italy and the eastern coasts of the Adriatic Sea.	Overfishing, particular of pre-reproductive sized fish; barriers to its migratory routes, which reduce its reproductive success	Critically Endangered
	72	ACIPENSERIDAE	Syr-darya Shovelnose Sturgeon	***Pseudoscaphirhynchus fedtschenkoi*** (Kessler, 1872) (Freshwater)	Kazakhstan, Tajikistan & Uzbekistan	Large levels of water extraction and damming on the Syr Darya River	Critically Endangered
	73	ACIPENSERIDAE	Dwarf Sturgeon	***Pseudoscaphirhynchus hermanni*** (Kessler, 1877) (Freshwater)	Turkmenistan , Uzbekistan	High levels of water pollution, dams and water extraction in the Amu Darya River	Critically Endangered
	74	ACIPENSERIDAE	Amu Darya Shovelnose Sturgeon	***Pseudoscaphirhynchus kaufmanni*** (Kessler, 1874) (Freshwater)	Afghanistan , Tajikistan, Turkmenistan & Uzbekistan	High levels of water pollution, dams and water extraction in the Amu Darya River	Critically Endangered

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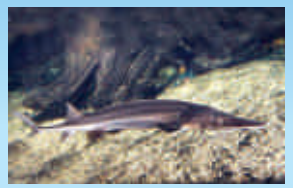
	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	75	ACIPENSERIDAE	Pallid Sturgeon	***Scaphirhynchus albus*** (Forbes & Richardson, 1905) (Freshwater)	United States of America	Construction of six main stem dams on the Missouri River and extensive channelisation in the lower Missouri and Mississippi Rivers	Endangered
	76	ACIPENSERIDAE	Sand Sturgeon	***Scaphirhynchus platorynchus*** (Rafinesque, 1820) (Freshwater)	United States of America	Construction of locks and dams for navigation purposes has contributed significantly to the decline of shovelnose sturgeon by blocking access to ancestral spawning grounds	Vulnerable
	77	ACIPENSERIDAE	Alabama Sturgeon	***Scaphirhynchus suttkusi*** Williams & Clemmer, 1991 (Freshwater)	United States of America (Alabama & Mississippi)	Over-fishing, the loss and fragmentation of habitat as a result of navigation-related development, and degradation of water quality.	Critically Endangered
	78	APLOCHEILIDAE	Ginger Pearlfish	***Leptolebias marmoratus*** (Ladiges, 1934) (Freshwater)	Brazil	Aquarium trade	Vulnerable
	79	APLOCHEILIDAE	Barredtail Pearlfish	***Leptolebias minimus*** (Myers, 1942) (Freshwater)	Brazil	Aquarium trade	Vulnerable
	80	APLOCHEILIDAE	Opalescent Pearlfish	***Leptolebias opalescens*** (Myers, 1942) (Freshwater)	Brazil	Aquarium trade	Vulnerable

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	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	81	APLOCHEILIDAE	Splendid Pearlfish	***Leptolebias splendens*** (Myers, 1942) (Freshwater)	Brazil	Aquarium trade	Vulnerable
	82	CYPRINIDAE	Woundfin	***Plagopterus argentissimus*** Cope, 1874 (Freshwater)	United States of America	Dams and water diversions have destroyed most of the habitat	Vulnerable
	83	POLYODONTIDAE	Duckbill Cat	***Polyodon spathula*** (Walbaum in Artedi, 1792) (Freshwater)	United States of America	Dams, habitat, and water quality are major factors	Vulnerable
	84	POLYODONTIDAE	Chinese Paddlefish	***Psephurus gladius*** (Martens, 1862) (Freshwater-Marine)	China	Overfished; blocking the migration route of this species and preventing adult fish moving to the upper reaches of the river to spawn	Critically Endangered

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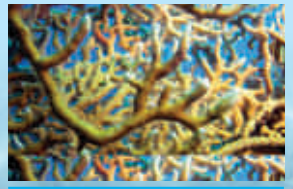
	S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
	85	LAMNIDAE	Beaumaris shark	***Lamna nasus*** (Bonnaterre, 1788)	Indian Ocean, Atlantic Ocean, South Pacific Ocean, Mediterranean and Black Sea.	Unsustainable fisheries utilizing its very high value meat. It is also target game fish species in Ireland and UK.	Threatened Species
	86	SPHYRNIDAE	Scalloped Hammerhead	***Sphyrna lewini*** Griffith & Smith, 1834	Common in warm temperate and tropical seas	Targeted fishing and bycatch by trawls, purse-seines, gillnets, fixed bottom longlines, pelagic longlines and inshore artisanal fisheries; fins are highly valued	Endangered
	87	CYPRINIDAE	Colorado pikeminnow	***Ptychocheilus lucius*** Girard, 1856 (Freshwater)	United States of America	Construction of large dams on the Colorado and Gila Rivers Deleted items from CITES list	Vulnerable
	88	SALMONIDAE	Mexican Golden Trout	***Salmo chrysogaster*** Needham & Gard, 1964 (Freshwater)	Mexico	Game fishing Deleted items from CITES list	Vulnerable
	89	PERCIDAE	Blue Pike	***Sander vitreus*** (Mitchill, 1818) (Freshwater, Brackish)	Arctic, Canada, United States of America	Game fishing Deleted items from CITES list	Not Evaluated
	90	APLOCHEILIDAE	Annual Tropical Killifish	***Simpsonichthys constanciae*** (Myers, 1942) (Freshwater)	Brazil	aquarium trade Deleted items from CITES list	Vulnerable

APPENDIX - III

S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
91	SALMONIDAE	Beloribitsa	***Stenodus leucichthys*** (Güldenstädt, 1772) (Freshwater)	Azerbaijan, Iran, Kazakhstan, Russian Federation & Turkmenistan	Construction of dams led to the loss of all spawning grounds for the species; Increasing illegal fishing in the Volga and in the Caspian Sea Deleted items from CITES list	Extinct in the Wild
92	POECILIIDAE	Monterrey platyfish	***Xiphophorus couchianus*** (Girard, 1859) (Freshwater)	Mexico	aquarium trade Deleted items from CITES list	Critically Endangered

APPENDIX - II

CORALS



S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
1	ANTIPATHIDAE	Black corals	***Antipatharia* spp. Antipathidae** have 8 genera and 182 known species	These species are found in near shore zones of Islands and continents; cosmopolitan in distribution in temperate and tropical areas	Aquarium trade; bycatch by trawls; global climate change	Not Evaluated
2	HELIOPORIDAE	Blue corals	***Heliopora coerulea*** (Pallas, 1766)	Shallow reef, exposed reef locations, reef flats and intertidal zones; Indian Ocean – eastern & western; Pacific – eastern central, northwest, southwest & western central	Collected for the curio and jewellery trade and the aquarium trade; global climate change	Vulnerable
3	SCLERACTINIA	Stony corals	***Scleractinia* spp. Scleractinia** have 13 genera and 42 species	Primary reef-builders; shallow tropical waters; These corals are restricted to shallow, well-lit, warm water with moderate to brisk turbulence and abundant oxygen; Indo-West Pacific	Collected for the curio and jewellery trade and the aquarium trade; global climate change	Not Evaluated
4	TUBIPORIDAE	Organ-pipe corals	***Tubiporidae* spp. Tubiporidae** have 1 genera and 10 species	Indo-West Pacific; west Pacific, to the south of Japan, west to Africa's east coast, and throughout the Red Sea	Attractive material for ornaments and jewellery; popular species in aquariums as it is easy to maintain and fairly tolerant of aquarium conditions; fishing using destructive methods physically devastates the reef	Not Evaluated
5	MILLEPORIDAE	Fire corals	***Milleporidae* spp. Milleporidae** have 1 genera and 29 species	Distributed in tropical and subtropical waters; Indian, Pacific and Atlantic Oceans and the Caribbean Sea	Collected for the curio and jewellery trade and the aquarium trade; global climate change	Not Evaluated

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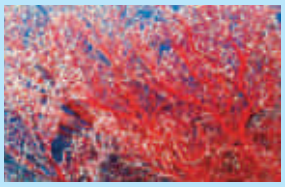
S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
6	STYLASTERIDAE	Lace corals	***Stylasteridae* spp. Stylasteridae** have 46 genera, 3 subgenera and 422 species	Pacific -Temperate southwest, tropical southwest & northwest Atlantic; Arctic; Antarctic sector of the Indian Ocean & Mediterranean	Collected for the curio and jewellery trade and the aquarium trade; global climate change	Not Evaluated

APPENDIX - III



S. No.	Family	English Name	Scientific Name	Distribution	Trade Purpose / Remarks	IUCN Threat Status (2012)
7	CORALLIIDAE	Red Corals	***Corallium elatius*** Ridley, 1882	West Coast of Japan; Western Pacific	Collected for the curio and jewellery Trade; Used in preparation of traditional medicine in Asian countries; impacted by dredges and trawls.	Not Evaluated
8	CORALLIIDAE	Red Corals	***Paracorallium japonicum*** (Kishinouyi, 1903)	West Coast of Japan; Western Pacific	Collected for the curio and jewellery Trade; Used in preparation of traditional medicine in Asian countries; impacted by dredges and trawls.	Not Evaluated
9	CORALLIIDAE	Red Corals	***Corallium konojoi*** Kishinouye, 1903	West Coast of Japan; Western Pacific	Collected for the curio and jewellery Trade; Used in preparation of traditional medicine in Asian countries; impacted by dredges and trawls.	Not Evaluated
10	CORALLIIDAE	Red Corals	***Corallium secundum*** Dana, 1846	West Coast of Japan; Western Pacific	Collected for the curio and jewellery Trade; Used in preparation of traditional medicine in Asian countries; impacted by dredges and trawls.	Not Evaluated

Fishes and Corals of the World Listed in *CITES* Appendices

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