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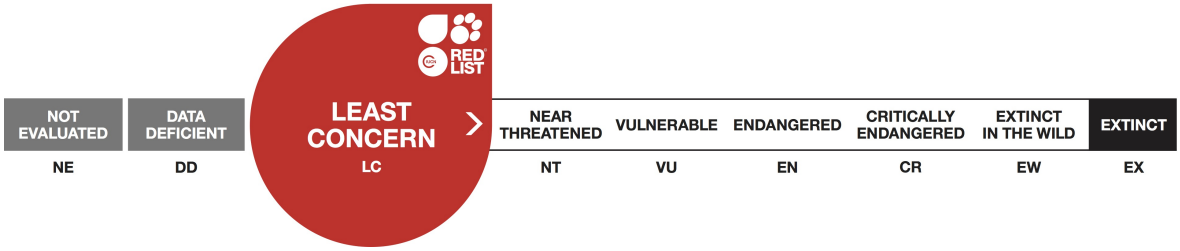
Tursiops truncatus, Common Bottlenose Dolphin

Assessment by: Hammond, P.S., Bearzi, G., Bjørge, A., Forney, K.A., Karkzmarski, L., Kasuya, T., Perrin, W.F., Scott, M.D., Wang, J.Y. , Wells, R.S. & Wilson, B.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Cetartiodactyla	Delphinidae

Taxon Name: *Tursiops truncatus* (Montagu, 1821)

Synonym(s):

- *Tursiops gephyreus*
- *Tursiops gilli*
- *Tursiops nuuanu*

Regional Assessments:

- Mediterranean
- Europe

Infra-specific Taxa Assessed:

- Tursiops truncatus (Fiordland subpopulation)
- Tursiops truncatus (Mediterranean subpopulation)
- Tursiops truncatus ssp. ponticus

Common Name(s):

- English: Common Bottlenose Dolphin, Bottle-nosed Dolphin, Bottlenosed Dolphin, Bottlenose Dolphin
- French: Dauphin souffleur, Grand dauphin, Souffleur, Tursiops
- Spanish: Delfín Mular, Pez Mular, Tursión

Taxonomic Notes:

All bottlenose dolphins around the world were previously recognized as *T. truncatus*, but recently the genus has been split into two species: *T. truncatus* and *T. aduncus* (the smaller Indo-Pacific Bottlenose Dolphin – Wang *et al*. 1999, 2000a,b). However, the taxonomy of bottlenose dolphins is confused, due to geographical variation, and it is very possible that additional species will be recognized in the future. For example, two forms in the North Atlantic, an offshore and a coastal form, are distinguishable on the basis of morphology and ecological markers (e.g., Mead and Potter 1995), have fixed genetic differences and, therefore, eventually may be assigned to different species (Leduc and Curry 1997, Hoelzel *et al*. 1998, Reeves *et al*. 2003).

Bottlenose dolphins in the Black Sea are recognized as a subspecies possessing morphological differences from Atlantic and Pacific dolphins (Barabasch-Nikiforov 1960, Geptner *et al*. 1976). The Black Sea subpopulation is also differentiated genetically from other bottlenose dolphins in the eastern and western Mediterranean and the northeastern Atlantic (Natoli *et al*. 2005), and the available evidence (Birkun 2006) supports recognition of the subspecies *T. t. ponticus*.

Assessment Information

Red List Category & Criteria: Least Concern ver 3.1

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Year Published: 2012

Date Assessed: July 1, 2008

Justification:

Although there are many threats operating on local populations, the species is widespread and abundant, and none of these threats is believed to be resulting in a major global population decline.

Previously Published Red List Assessments

2008 – Least Concern (LC)

1996 – Data Deficient (DD)

1994 – Insufficiently Known (K)

Geographic Range

Range Description:

Common Bottlenose Dolphins are distributed worldwide through tropical and temperate inshore, coastal, shelf, and oceanic waters (Leatherwood and Reeves 1990, Wells and Scott 1999, Reynolds *et al*. 2000). Bottlenose Dolphins generally do not range pole-ward of 45°except in northern Europe (as far as the Faroe Islands 62°N 7°W - Bloch and Mikkelsen 2000) and to southern New Zealand. The species is rare in the Baltic Sea (it may best be considered extralimital there) and is vagrant to Newfoundland and Norway (Wells and Scott 1999).

The map shows where the species may occur based on oceanography. The species has not been recorded for all the states within the hypothetical range as shown on the map. States for which confirmed records of the species exist are included in the list of native range states. States within the hypothetical range but for which no confirmed records exist are included in the Presence Uncertain list.

Country Occurrence:

Native: Albania; Algeria; American Samoa (American Samoa); Angola (Angola); Anguilla; Antigua and Barbuda; Argentina; Aruba; Australia; Bahamas; Bahrain; Bangladesh; Barbados; Belgium; Belize; Benin; Bermuda; Bonaire, Sint Eustatius and Saba (Saba, Sint Eustatius); Bosnia and Herzegovina; Brazil; British Indian Ocean Territory; Brunei Darussalam; Bulgaria; Cambodia; Cameroon; Canada (Newfoundland I - Vagrant); Cape Verde; Cayman Islands; Chile; China; Cocos (Keeling) Islands; Colombia; Comoros; Cook Islands; Costa Rica; Côte d'Ivoire; Croatia; Cuba; Curaçao; Cyprus; Denmark; Djibouti; Dominica; Dominican Republic; Ecuador; Egypt; El Salvador; Falkland Islands (Malvinas); Faroe Islands; Fiji; France; French Guiana; French Polynesia; Gabon; Gambia; Georgia; Germany; Ghana; Gibraltar; Greece; Grenada; Guadeloupe; Guam; Guatemala; Guernsey; Guinea; Guinea-Bissau; Guyana; Haiti; Honduras; Hong Kong; India; Indonesia; Iran, Islamic Republic of; Ireland; Isle of Man; Israel; Italy; Jamaica; Japan; Jersey; Kenya; Kiribati; Korea, Republic of; Kuwait; Lebanon; Liberia; Libya; Madagascar; Malaysia; Maldives; Malta; Marshall Islands; Martinique; Mauritania; Mayotte; Mexico; Micronesia, Federated States of ; Monaco; Montenegro; Morocco; Mozambique; Myanmar; Namibia; Nauru; Netherlands; New Caledonia; New Zealand; Nicaragua; Nigeria; Niue; Northern Mariana Islands; Oman; Pakistan; Palau; Panama; Papua New Guinea; Peru; Philippines; Pitcairn; Portugal; Puerto Rico; Qatar; Réunion; Romania; Russian Federation; Saint Helena, Ascension and Tristan da Cunha; Saint Kitts and Nevis; Saint Lucia; Saint Martin (French part); Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Samoa; Sao Tomé and Principe; Saudi Arabia; Senegal; Seychelles; Singapore; Sint Maarten (Dutch part); Slovenia;

Solomon Islands; Somalia; South Africa; Spain; Sri Lanka; Suriname; Syrian Arab Republic; Taiwan, Province of China; Tanzania, United Republic of; Thailand; Togo; Tonga; Trinidad and Tobago; Tunisia; Turkey; Turks and Caicos Islands; Ukraine; United Arab Emirates; United Kingdom; United States (Georgia); Uruguay; Vanuatu; Venezuela, Bolivarian Republic of; Viet Nam; Virgin Islands, British; Virgin Islands, U.S.; Wallis and Futuna; Western Sahara; Yemen

Vagrant: Norway

FAO Marine Fishing Areas:

Native: Atlantic - eastern central, Atlantic - northeast, Atlantic - northwest, Atlantic - southeast, Atlantic - southwest, Atlantic - western central, Indian Ocean - eastern, Indian Ocean - western, Mediterranean and Black Sea - , Pacific - eastern central, Pacific - northeast, Pacific - northwest, Pacific - southeast, Pacific - southwest, Pacific - western central

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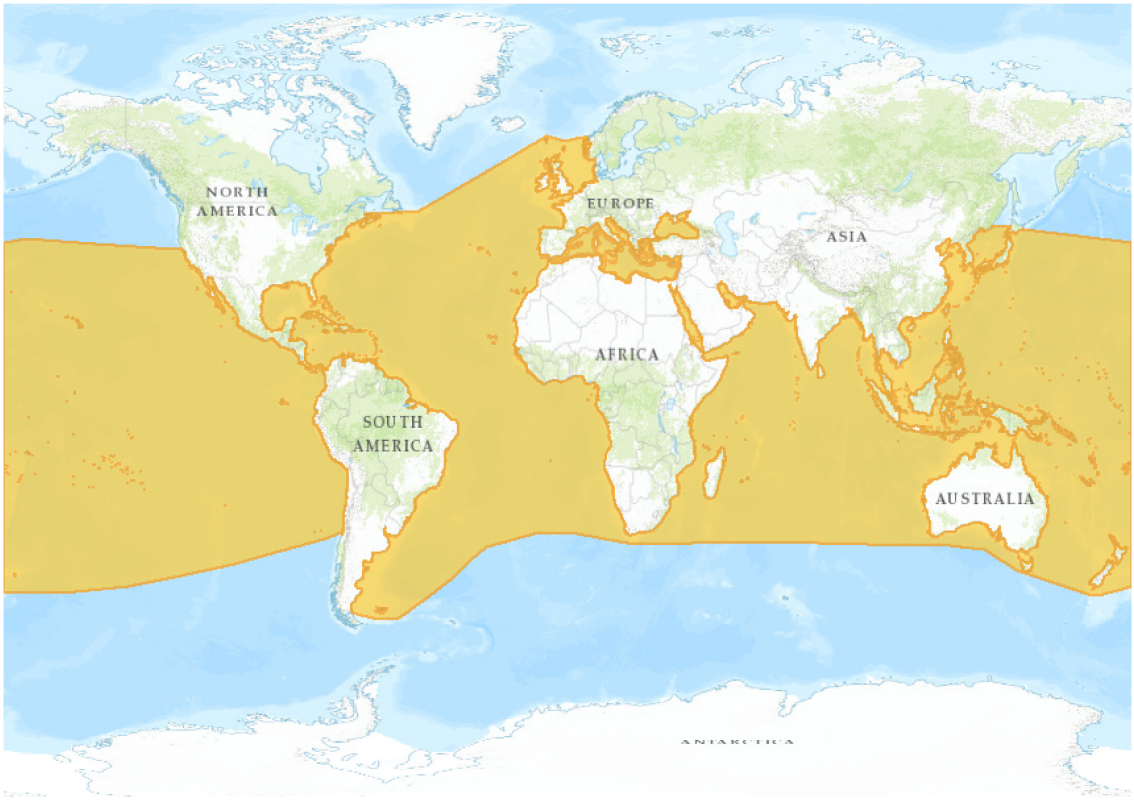
Distribution Map



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kilometer

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

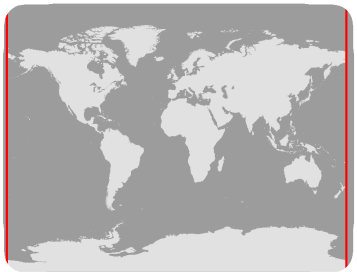
Tursiops truncatus

Range

Extant (resident)

Compiled by:
International Union for Conservation of Nature (IUCN)

NE DD LC LEAST CONCERN NT VU EN CR EW EX



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

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Population

Abundance has been estimated for several parts of the species' range. Summing available estimates, a minimum world-wide estimate is 600,000.

U.S. National Marine Fisheries Service surveys have estimated 52,000 Bottlenose Dolphins in the northern Gulf of Mexico (3,708 [CV=42%] in oceanic waters beyond the shelf edge (Mullin 2006), 25,320 [CV=26%] on the outer continental shelf, 17,602 in coastal waters, and 5,063 in estuaries, bays, and channels – Waring *et al*. 2008). There are approximately 126,000 off the eastern coast of North America (including 81,588 [CV=17%] in offshore waters and 32,533 (winter) to 43,951 (summer) in coastal waters – Waring *et al*. 2008). Pacific surveys found 243,500 (CV=29%) in the eastern tropical Pacific (Wade and Gerrodette 1993), 3,215 (CV= 59%) off Hawaii (Barlow 2006), 323 (CV=13%) in coastal California waters (Dudzik *et al*. 2006), and an average of about 2,000 (CV = 44%) in the offshore waters of California/Oregon/Washington (Barlow and Forney in press). Japanese surveys found 168,000 (CV=26%) in the Northwestern Pacific west of 180ºE, including 36,791 (CV=25%) in Japanese coastal waters (Miyashita 1993). In the eastern Sulu Sea, Dolar *et al* (2006) estimated 2,628. Approximately 900 Bottlenose Dolphins were found along 400 km of coastal waters off KwaZulu-Natal (however, many of these may have been *T. aduncus* - Reyes 1991; Wells and Scott 1999).

Total abundance in the Mediterranean is unknown but thought to be in the low 10,000s based on observed densities in areas that have been surveyed (Bearzi and Fortuna 2006). Surveys in the northwestern Mediterranean estimated 7,654 (CV=45%) present (Forcada *et al*. 2004). An estimated 584 (CV=28%) occur in the Alboran Sea (Cañadas and Hammond 2006). Mediterranean Bottlenose Dolphins exhibit population structure, based on toxicology and diet (Borrell *et al*. 2005) and genetics (Natoli *et al*. 2005).

The total population size in the Black Sea is unknown. However, there are recent abundance estimates for parts of the range suggesting that population size is at least several thousands (Birkun 2006).

Preliminary estimates from the late 1980s indicate about 1,000 dolphins occur around the Faroe Islands (Sigurjónsson *et al*. 1989, Sigurjónsson and Gunnlaugsson 1990, Bloch and Mikkelsen 2000). Estimates of inshore bottlenose dolphins along the European Atlantic coasts total at least 610 individuals (Liret *et al*. 1998, Wilson *et al*. 1999, Grellier and Wilson 2003, Evans *et al*. 2002, Ingram 2000, White and Webb 1995, Baines *et al*. 2002, Gaspar 2003). A wide-scale survey in 2005 of western European continental shelf waters including the western Baltic, North Sea and Atlantic margin as far as southern Spain estimated that there were 12,600 Bottlenose Dolphins in this area (CV=27%, P. Hammond pers. comm..). Minimum estimates exist for other small areas around the world: for example, 122 (95% CI = 114-140) off Belize (Kerr *et al*. 2005) and 66 in Doubtful Sound, New Zealand (Hase and Schneider 2001).

Current Population Trend: Unknown

Habitat and Ecology **(see Appendix for additional information)**

Common Bottlenose Dolphins tend to be primarily coastal, but they can also be found in pelagic waters (Wells and Scott 1999). Where distinct ecotypes are known, the inshore form frequents estuaries, bays, lagoons and other shallow coastal regions, occasionally ranging far up into rivers. The offshore form is apparently less restricted in range and movement. Some offshore dolphins are residents around oceanic

islands. In many inshore areas Bottlenose Dolphins maintain definable, long-term multi-generational home ranges, but in some locations near the extremes of the species range they are migratory. Off the coasts of North America, they tend to inhabit waters with surface temperatures ranging from about 10°C to 32°C (Wells and Scott, 1999). Black Sea Bottlenose Dolphins are common over the continental shelf; they sometimes occur far offshore (Birkun 2006).

Bottlenose Dolphins are commonly associated with many other cetaceans, including both large whales and other dolphin species (Wells and Scott 1999). Mixed schools with Indo-Pacific bottlenose dolphins have been found, for instance off China and Taiwan (J. Wang pers. comm.).

Bottlenose Dolphins consume a wide variety of prey species, mostly fish and squid (Barros and Odell 1990, Barros and Wells 1998, Blanco *et al*. 2001, Santos *et al*. 2001). They sometimes eat shrimps and other crustaceans.

Systems: Marine

Use and Trade **(see Appendix for additional information)**

It is hunted in many areas for human consumption, and as bait in fisheries. In addition, animals are removed from the widely for captive display.

Threats **(see Appendix for additional information)**

Coastal and island-centred populations are especially vulnerable to hunting, incidental catch, and habitat degradation (Curry and Smith 1997). Acute conservation problems are known or suspected in at least: (a) the Mediterranean and Black seas (IWC 1992, Reeves and Notarbartolo di Sciara 2006); (b) Sri Lanka (Leatherwood and Reeves 1989); (c) Peru, Ecuador and Chile (Read *et al*. 1988; Van Waerebeek *et al*. 1990, 1997; Sanino *et al*. 2004; K. Van Waerebeek pers. comm.); (d) Taiwan (Hammond and Leatherwood 1984, Perrin 1989, Wang *et al*. 1999); and (e) Japan (Miyazaki 1983, Kasuya 1985, Reeves *et al*. 2003). Dolphin catches for bait, human consumption, or to remove competition with fisheries have been reported worldwide (Wells and Scott 1999, 2002). In Peru, coastal fisheries still take *Tursiops* and other cetaceans for human consumption and bait, using harpoons and gill nets (K. Van Waerebeek pers. comm.). It is taken opportunistically by harpoon in Sri Lanka (Ilangakoon 1997). In Taiwan, Common Bottlenose Dolphins comprise a major part of the small cetaceans taken by harpoon (J. Wang pers. comm.).

The only Mediterranean area with quantitative historical information is the northern Adriatic Sea, where Bottlenose Dolphins likely have declined by at least 50% over the past 50 years, largely as a consequence of historical killing in extermination campaigns to reduce competition for fish, followed by habitat degradation and overfishing. The extermination campaigns were conducted until the early 1960s (Bearzi *et al*. 2004, Bearzi and Fortuna 2006). For the north-western Mediterranean, the available information suggests similar trends (Bearzi and Fortuna 2006).

Drive fisheries have been reported from the Faroe Islands and Japan. Up to 308 are taken annually in the Faroe Islands drive fishery (dating back to 1803), often with Long-finned Pilot Whales (Reyes 1991; Bloch 1998). Drive and harpoon fisheries in Japan catch Bottlenose Dolphins for human consumption and to remove perceived competition with commercial fisheries (Wells and Scott 1999). Average catch from

1995–2004 was 594 per annum (Kasuya 2007).

The Black Sea subspecies has had extensive directed takes for commercial products (Kleinenberg 1956, Tomilin 1957, Buckland *et al*. 1992), including takes of at least 24,000–28,000 during 1946–1983 in the Black Sea off Turkey. However, the total number of dolphins killed was certainly much greater (probably by tens of thousands) as figures do not include, or only partially include, catch statistics from other Black Sea countries (Birkun 2006).

Live capture of Common Bottlenose Dolphins for public display, research, and military applications have occurred in several parts of the species' range. Worldwide estimates of removal are unavailable, but more than 1,500 were caught in United States, Mexican, and Bahamian waters through 1980 (Leatherwood and Reeves 1982, Fisher and Reeves 2005). Some live-capture removals continue in other countries including Cuba where at least 238 were captured in 1986–2004 (Van Waerebeek *et al*. 2006), the Solomon Islands, Japan, and China (Wells and Scott 1999, R.S. Wells pers. comm.). Live-capture removal of Black Sea Bottlenose Dolphins, including mortality during capture operations, is estimated at 1,000–2,000 since the early 1960s. Live-captures continue in the Russian Federation, with 10-20 animals taken annually from a small area in the Kerch Strait, Russia (Birkun 2002a, 2006). According to CITES statistics, at least 92 individuals were removed from the Black Sea region during 1990-1999 (Reeves *et al*. 2003), and Russia reportedly has exported at least 66 for travelling shows since 1997 (Fisher and Reeves 2005).

Incidental catches of Common Bottlenose Dolphins are known from throughout the species' range, in gillnets, driftnets, purse seines, trawls, long-lines, and on hook-and-line gear used in commercial and recreational fisheries, but the level of mortality is often poorly documented (Wells and Scott 1999). Gillnet and purse-seine fisheries off Peru take an unknown number annually. An estimated 42 common Bottlenose Dolphins were taken and landed at Cerro Azul, a Peruvian port, in 1994; while an annual gillnet fisheries bycatch of 227 animals was estimated for the Gulf of Guayaquil, Ecuador, also in 1994 (Van Waerebeek *et al*. 1997). The estimated annual incidental mortality in the eastern tropical Pacific fishery for tuna ranged up to almost 200, but the mortality has declined to less than 10 since 1998 (M. Scott pers. comm.). Incidental catches in Chinese fisheries reach several hundred per year (Yang *et al*. 1999). Coastal gillnets and shark drift gillnets in the mid-Atlantic region of the US take on average 66 annually (Waring *et al*. 2008). They are taken incidentally in gillnets in Sri Lanka (Ilangakoon 1997). Taiwanese coastal and distant water longline fisheries for tuna and sharks take bottlenose dolphins incidentally (for the latter, the origin of the animals is unknown), as do a variety of gillnets, including driftnets (Wang and Yang 2002; J. Wang pers. comm.).

Annual Black Sea Bottlenose Dolphin incidental mortality in bottom-set gillnets from 1946 through the 1980s is roughly estimated in the hundreds. The scale of this mortality almost certainly increased in the 1990s-2000s owing to the rapid expansion of illegal, unreported and unregulated fishing (Birkun 2006). According to Öztürk (1999) at least 200–300 Bottlenose Dolphins per year may be taken incidentally in Turkish fisheries in a variety of fishing nets, especially bottom-set gill nets.

Common Bottlenose Dolphins in coastal areas are exposed to a wide variety of threats in addition to direct and indirect takes. Threats that are cause for concern include: 1) the toxic effects of xenobiotic chemicals; 2) reduced prey availability caused by environmental degradation and overfishing (Pauly *et al*. 1998; Jackson *et al*. 2001); 3) direct and indirect disturbance and harassment (e.g. boat traffic and

commercial dolphin watching and interactive programs); 4) marine construction and demolition and 5) other forms of habitat destruction and degradation (including anthropogenic noise). Although these and other threats are technically challenging to quantify by comparison with takes, their cumulative impact is likely to result in longitudinal population declines. Lack of historical data in many cases hampers understanding of long term trends, possibly resulting in shifting baselines. The contribution of anthropogenic factors to an increasing number of Unusual Mortality Events involving Bottlenose Dolphins remains to be determined (Spradlin *et al*. 2005).

Environmental contaminants likely impact health and reproductive success of the Common Bottlenose Dolphins in parts of its range. Lahvis *et al*. (1995) correlated concentrations of PCBs and DDT in the blood of inshore Bottlenose Dolphins with decline in immune system function. Males in some areas such as Florida accumulate levels of PCBs more than an order of magnitude greater than the threshold for adverse health effects identified by Kannan *et al*. (2000) (Wells *et al*. 2005). A risk assessment relative to PCB burdens suggested elevated probabilities of first-born mortality at several sites in the U.S. (Schwacke *et al*. 2002, Wells *et al*. 2005).

Bottlenose Dolphins sometimes forage around fish-farm cages or take fish from gillnets (e.g., Reeves *et al*. 2001; Read *et al*. 2003), commercial trawling gear, crab traps, or recreational fishing gear (Wells and Scott 1999). This can result in incidental mortality through entanglement and ingestion of fishing gear.

Conservation Actions **(see Appendix for additional information)**

The species is listed in Appendix II of CITES.

The Bottlenose Dolphin has been afforded special protected status under Annex II of the European Union's Habitats Directive. Commercial hunting of Black Sea cetaceans including Bottlenose Dolphins was banned in 1966 in the former USSR, Bulgaria and Romania, and in 1983 in Turkey.

Credits

Assessor(s): Hammond, P.S., Bearzi, G., Bjørge, A., Forney, K.A., Karkzmarski, L., Kasuya, T., Perrin, W.F., Scott, M.D., Wang, J.Y. , Wells, R.S. & Wilson, B.

Reviewer(s): Rojas-Bracho, L. & Smith, B.

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External Resources

For Images and External Links to Additional Information, please see the Red List website.

Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	-	Marginal	-
9. Marine Neritic -> 9.1. Marine Neritic - Pelagic	-	Suitable	Yes
9. Marine Neritic -> 9.10. Marine Neritic - Estuaries	-	Suitable	Yes
10. Marine Oceanic -> 10.1. Marine Oceanic - Epipelagic (0-200m)	-	Suitable	Yes
13. Marine Coastal/Supratidal -> 13.4. Marine Coastal/Supratidal - Coastal Brackish/Saline Lagoons/Marine Lakes	-	Marginal	-

Use and Trade

(http://www.iucnredlist.org/technical-documents/classification-schemes)

End Use	Local	National	International
Food - human	Yes	Yes	No
Food - animal	Yes	Yes	No
Pets/display animals, horticulture	No	Yes	Yes

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
4. Transportation & service corridors -> 4.3. Shipping lanes	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

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		2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.1. Intentional use: (subsistence/small scale)	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.3. Unintentional effects: (subsistence/small scale)	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.5. Persecution/control	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.2. Species disturbance		
8. Invasive & other problematic species & genes -> 8.2. Problematic native species	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
9. Pollution -> 9.1. Domestic & urban waste water -> 9.1.3. Type Unknown/Unrecorded	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
9. Pollution -> 9.2. Industrial & military effluents -> 9.2.3. Type Unknown/Unrecorded	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.4. Type Unknown/Unrecorded	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		

Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Conservation sites identified: Yes, over entire range
In-Place Education
Included in international legislation: Yes
Subject to any international management/trade controls: Yes

Conservation Actions Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions Needed
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Population
Population severely fragmented: No

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