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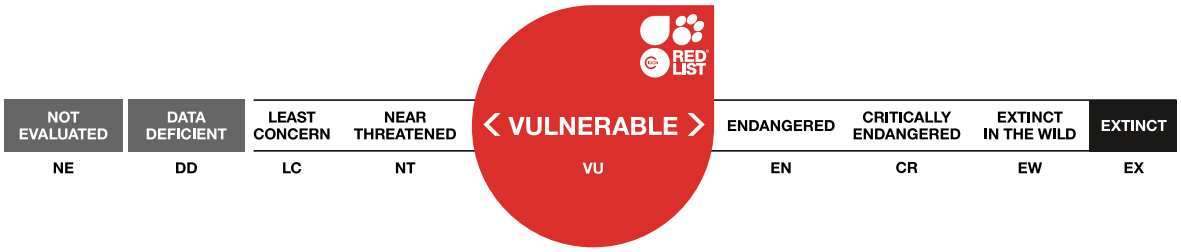
# *Alopias vulpinus*, Common Thresher

## Amendment version

**Assessment by: Rigby, C.L.** *et al.*

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# Taxonomy

| Kingdom | Phylum | Class | Order | Family |
|---|---|---|---|---|
| Animalia | Chordata | Chondrichthyes | Lamniformes | Alopiidae |

**Scientific Name:** *Alopias vulpinus* (Bonnaterre, 1788)

**Synonym(s):**

- *Squalus vulpinus* Bonnaterre, 1788

**Regional Assessments:**

- Mediterranean
- Europe

**Common Name(s):**

- English: Common Thresher, Atlantic Thresher, Fox Shark, Grayfish, Green Thresher, Sea Fox, Slasher, Swingletail, Swiveltail, Thintail thresher, Thrasher, Whip-tailed Shark, Zorro Thresher Shark
- French: Faux, Loup de mer, Poisson-épée, Pèis rato, Renard, Renard de mer, Renard marin, Requin renard, Requin renard commun, Singe de mer
- Spanish; Castilian: Azotador, Chichi espada, Coleto, Coludo, Coludo Pinto, Grillo, Guadaña, Peje sable, Peje zorra, Peje zorro, Pejerrabo, Pejezorro, Pez espada, Pez palo, Pez zorro, Pichirata, Rabo de zorra, Raposa, Raposa marina, Tiburón pez zorro, Tiburón zorro, Tiburón zorro común, Zorra de mar, Zorro, Zorro blanco
- Afrikaans: Fynstert-sambokhaai
- Albanian: Peshkaqeni bishtshpatë, Peshkaqeni dhelpër, Peshkdhelper, Peshkdhelpën, Peshku dhelpër
- Arabic: Jarjur, Kalb, Qatwa al bahar, Watwa albahar, القرش الثّعلب
- Bantu (Other): Ndandau, Ndrandrau, Panganile Ndandau, Tchissouéndji
- Catalan; Valencian: Guilla
- Chinese: 弧形長尾鯊, 弧形长尾鲨, 狐形长尾鲨, 狐鮫, 狐鲛, 長尾鯊, 长尾沙, 长尾鲨
- Corsican: Pesciu volpe
- Creoles and pidgins, French-based (Other): Renard de mers
- Croatian: Lisica, Morska Lisica, Pas lisica, Pas macun, Pas sabljas, Sabljorep
- Czech: Žralok mlatec obecný
- Danish: Almindelig Rævehaj, Raevehai, Rævehaj, Tærsker
- Divehi; Dhivehi; Maldivian: Nigudigumiyaru
- Dutch; Flemish: Voshaai
- Estonian: Harilik Rebashai
- Faroese: Revaháur, Revahávur
- Finnish: Kettuhai
- German: Drescher, Drescherhai, Fuchshai, Gewöhnlicher Fuchshai, Langschweif, Seefuchs
- Gilbertese: Te bakoa, Te kimoa
- Greek, Modern (1453-): Aleposkylos, Skylópsaro, Αλεπού της θάλασσας, Αλεπούσκυλος, Σκυλόψαρο
- Hawaiian: Mano 'ula

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- Italian: Pei ratu, Pesce bandiera, Pesce pavone, Pesce spada, Pesce volpe, Pesce volpe comune, Pesciu rattu, Pisci bannera, Pisci cuda longa, Pisci cudutu, Pisci sciabula turca, Pisci surci, Ratto, Sorcio, Squalo volpe, Surci 'mperiali, Topo, Volpe, Volpe di mare
- Japanese: Mao-naga
- Korean: 흰배환도상어
- Malagasy: Santira
- Maltese: Budenb, Pixxivolpi
- Maori: Mango-ripi
- Norwegian: Raevehai
- Philippine (Other): Pating
- Polish: Kosogon
- Portuguese: Cação-pena, Cação-raposa, Peixe-rato, Rabilongo, Raposo, Romano, Romão, Tubarão-raposa, Tubarão-raposa, Tubarão-zorra, Zoro cauda longa, Zorra
- Romanian: Rechin-vulpe
- Russian: Лисица морская обыкновенная, акула-лисица
- Salishan languages: K'wet'thenéchte
- Serbian: Lisica, Pas lisica, Psina lisica
- Swahili: Karage, Papa Kinengo, Papa Kinengwe
- Swedish: Rävhaj
- Tahitian: Ma'o Aero
- Tokelau: Toke kimoa
- Turkish: Sapan, Sapan balığı, Sapan köpekbaligi
- Vietnamese: Cá Nhàm đuôi dài
- Welsh: Llwynog Môr

**Taxonomic Source(s):**

Eschmeyer, W.N. (ed.). 2015. Catalog of Fishes. Updated 5 March 2015. Available at: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp. (Accessed: 5 March 2015).

**Taxonomic Notes:**

A study using allozymes as a genetic marker (Eitner 1995) indicated that an unrecognized fourth species of *Alopias* may exist, however this claim was based on data from a single shark specimen likely to have been *A. vulpinus*. Recent work investigating population structure of all three *Alopias* species using mitochondrial DNA control region sequences (Trejo 2005) has found no evidence indicating that a fourth species of thresher sharks exists.

# Assessment Information

**Red List Category & Criteria:** Vulnerable A2bd ver 3.1

**Year Published:** 2022

**Date Assessed:** November 6, 2018

**Justification:**

The Common Thresher (*Alopias vulpinus*) is a large (to 573 cm total length), circumglobal, coastal and pelagic shark that occurs from the surface down to depths of 650 m. It is long-lived (38 years), yet with larger litters (2–6 pups) and possibly an annual reproductive cycle, it consequently has a higher rate of

population increase (0.254) than the Pelagic Thresher (*A. pelagicus*) and the Bigeye Thresher (*A. superciliosus*). The species is caught as target and bycatch in pelagic and coastal commercial and small-scale longline, purse seine, and gillnet fisheries. The species is often retained for the meat and fins unless domestic or international regulations prohibit retention. However, high post-release mortality remains a threat where retention is prohibited. The species is estimated to be declining in the North Atlantic and Mediterranean Sea and increasing in the Eastern Pacific, following regulations implemented in the mid 1980s. Based on levels of exploitation and the estimated global population reduction of 30–49% over the last three generations (76.5 years), globally, the Common Thresher is assessed as Vulnerable A2bd.

### Previously Published Red List Assessments

2019 – Vulnerable (VU)
https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T39339A2900765.en

2009 – Vulnerable (VU)
https://dx.doi.org/10.2305/IUCN.UK.2009-2.RLTS.T39339A10205317.en

2002 – Data Deficient (DD)

2000 – Data Deficient (DD)

## Geographic Range

### Range Description:

The Common Thresher occurs worldwide in tropical to cold-temperate seas (Last and Stevens 2009, Ebert *et al.* 2013). Occurrence of the Common Thresher in the equatorial and northern tropical Indian Ocean could be mis-identification with the Pelagic Thresher.

### Country Occurrence:

**Native, Extant (resident):** Albania; Algeria; Angola; Argentina; Aruba; Australia; Belgium; Benin; Bonaire, Sint Eustatius and Saba (Bonaire); Bosnia and Herzegovina; Brazil; British Indian Ocean Territory (Chagos Archipelago); Canada; Chile; China; Colombia (Colombia (mainland)); Costa Rica; Croatia; Cuba; Curaçao; Cyprus; Côte d'Ivoire; Denmark; Disputed Territory; Ecuador (Ecuador (mainland)); Egypt; El Salvador; France (France (mainland)); French Polynesia; Gambia; Germany; Ghana; Gibraltar; Greece; Grenada; Guatemala; Guernsey; Guinea; Guinea-Bissau; Hong Kong; Indonesia; Ireland; Isle of Man; Israel; Italy; Japan; Jersey; Korea, Democratic People's Republic of; Korea, Republic of; Lebanon; Liberia; Libya; Macao; Malaysia; Malta; Mauritania; Mexico; Monaco; Montenegro; Morocco; Namibia; Netherlands; New Caledonia; New Zealand; Nicaragua; Nigeria; Norway; Panama; Peru; Portugal (Azores, Portugal (mainland)); Senegal; Sierra Leone; Singapore; Slovenia; South Africa; Spain (Spain (mainland)); Syrian Arab Republic; Taiwan, Province of China; Togo; Trinidad and Tobago; Tunisia; Turkey; United Kingdom; United States (Hawaiian Is.); Uruguay; Venezuela, Bolivarian Republic of; Western Sahara

**Native, Possibly Extant (resident):** American Samoa; Anguilla; Antigua and Barbuda; Bahamas; Bangladesh; Barbados; Belize; Bermuda; Bonaire, Sint Eustatius and Saba (Saba, Sint Eustatius); Brunei Darussalam; Cabo Verde; Cambodia; Cameroon; Cayman Islands; Christmas Island; Cocos (Keeling) Islands; Colombia (Colombian Caribbean Is.); Congo; Cook Islands; Disputed Territory (Paracel Is., Spratly Is.); Djibouti; Dominica; Dominican Republic; Ecuador (Galápagos); Equatorial Guinea (Annobón, Equatorial Guinea (mainland)); Falkland Islands (Malvinas); Fiji; France (Clipperton I.); French Guiana; Gabon; Guadeloupe; Guam; Guyana; Haiti; Honduras; India; Iran, Islamic Republic of; Jamaica; Kenya; Kiribati; Madagascar; Maldives; Marshall Islands; Martinique; Mauritius; Mayotte; Micronesia,

Federated States of ; Montserrat; Mozambique; Myanmar; Nauru; Niue; Norfolk Island; Northern Mariana Islands; Oman; Pakistan; Palau; Papua New Guinea; Philippines; Pitcairn; Portugal (Madeira); Puerto Rico (Navassa I., Puerto Rico (main island)); Réunion; Saint Barthélemy; Saint Helena, Ascension and Tristan da Cunha (Ascension, Saint Helena (main island), Tristan da Cunha); Saint Kitts and Nevis; Saint Lucia; Saint Martin (French part); Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Samoa; Sao Tome and Principe; Seychelles; Sint Maarten (Dutch part); Solomon Islands; Somalia; Spain (Canary Is.); Sri Lanka; Suriname; Tanzania, United Republic of; Thailand; Timor-Leste; Tokelau; Tonga; Turks and Caicos Islands; Tuvalu; United Arab Emirates; United States Minor Outlying Islands (Howland-Baker Is., Johnston I., Midway Is., US Line Is., Wake Is.); Vanuatu; Viet Nam; Virgin Islands, British; Virgin Islands, U.S.; Wallis and Futuna; Yemen

### FAO Marine Fishing Areas:

**Native:** Atlantic - northwest

**Native:** Atlantic - northeast

**Native:** Atlantic - eastern central

**Native:** Atlantic - western central

**Native:** Atlantic - southwest

**Native:** Pacific - western central

**Native:** Pacific - southwest

**Native:** Pacific - southeast

**Native:** Pacific - northeast

**Native:** Pacific - eastern central

**Native:** Atlantic - southeast

**Native:** Mediterranean and Black Sea

**Native:** Indian Ocean - western

**Native:** Indian Ocean - eastern

**Native:** Pacific - northwest

**Native:** Atlantic - northwest

**Native:** Atlantic - northeast

**Native:** Atlantic - eastern central

**Native:** Atlantic - western central

**Native:** Atlantic - southwest

**Native:** Pacific - western central

**Native:** Pacific - southwest

**Native:** Pacific - southeast

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**Native:** Pacific - northeast

**Native:** Pacific - eastern central

**Native:** Atlantic - southeast

**Native:** Mediterranean and Black Sea

**Native:** Indian Ocean - western

**Native:** Indian Ocean - eastern

**Native:** Pacific - northwest

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# Distribution Map


Legend

EXTANT (RESIDENT)

Compiled by:

IUCN SSC Shark Specialist Group 2018


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

There are no data for population size of the Common Thresher. Genetic results indicate one global population, however there is some genetic structuring between the Northwest Atlantic and the Pacific Oceans (Trejo 2005).

Population trend data are available from two sources: (1) relative abundance data in the North Atlantic (Young *et al*. 2016); and, (2) nominal catch-per-unit-effort (CPUE) in the Eastern North Pacific (Teo *et al*. 2016). The trend data from each source were analysed over three generation lengths using a Bayesian state-space framework (a modification of Winker *et al*. 2018). This analysis yields an annual rate of change, a median change over three generation lengths, and the probability of the most likely IUCN Red List Category percent change over three generations (see the Supplementary Information).

First, the relative abundance observer time-series from the United States pelagic longline fishery for 1992–2013 indicated that the abundance in the Northwest Atlantic had stabilized, while noting that fishing pressure had been present for more than two decades prior to 1992 and that the abundance had stabilized at lower abundance than unexploited biomass (Young *et al*. 2016). The trend analysis of the same time-series for 1992–2013 (22 years) revealed annual rates of reduction of 4.6%, consistent with an estimated median reduction of 97.0% over three generation lengths (76.5 years), with the highest probability of >80% reduction over three generation lengths. Although reported to have stabilized, the 4.6% annual rate of reduction in the time-series produced a high reduction when extrapolated beyond the length of the data time-series to three generation lengths.

Second, the nominal logbook CPUE from California, United States west coast swordfish/shark drift gillnet fishery for 1981–2013 (33 years) was used as it considered the most important west coast commercial fishery for Common Thresher (Teo *et al*. 2016). The Common Thresher stock declined steeply in the early 1980s, then stabilized in the mid-1980s after regulations were implemented, and then increased through to ~2000 before stabilizing again, with the current stock considered close to unexploited level and unlikely to be overfished (Teo *et al*. 2016). The trend analysis of the CPUE for 1981–2013 (33 years) revealed annual rates of increase of 0.6%, consistent with an estimated median increase of 18.7% over three generation lengths (76.5 years), with the highest probability of an increase over three generation lengths.

Further to the above data and trend analyses, in the Southwest Atlantic CPUE of Common Thresher declined by 97% between 2002 and 2005 (Berrondo *et al*. 2006). Steep declines have occurred in the Mediterranean Sea; Ferretti *et al*. (2008) compiled nine time-series of abundance indices from commercial and recreational fishery landings, scientific surveys, and sighting records, to reconstruct long-term population trends of large sharks in the northwestern Mediterranean Sea. The Common Thresher showed an average instantaneous rate of decline in abundance of -0.11 (time range 108 years) and biomass of -0.10 (time range 108 years), which equates to an estimated decline of 99.9% in abundance and biomass since the early 19th century (Ferretti *et al*. 2008).

The Common Thresher is estimated to be declining in the North Atlantic and increasing in the Eastern North Pacific. However, the increasing trend in the Eastern North Pacific is from a managed fishery and may not be representative of trends in the wider Pacific. To estimate a global population trend, the estimated three generation population trends for each region were weighted according to the relative

size of each region. The overall estimated median population reduction was 47.0%, with the highest probability of a <20% reduction over three generation lengths (76.5 years). However, as the trends are uncertain and there is a lack of data from other regions of the world, expert judgement elicitation was used to estimate a global population reduction of 30–49% over the last three generations, based on abundance data and levels of exploitation. Therefore, the species is assessed as Vulnerable A2bd.

For further information about this species, see Supplementary Material.

**Current Population Trend:** Decreasing

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

The Common Thresher is oceanic and coastal to depths of 650 m (Ebert *et al.* 2013, Wiegmann 2016). It is more frequently found close to land and in temperate waters (Ebert *et al.* 2013). The species reaches a maximum size of 573 cm total length (TL), and possibly 635 cm TL; size at birth is 120–150 cm TL, males mature at 260–420 cm TL, and females mature at 260–465 cm TL (Ebert *et al.* 2013, Young *et al.* 2016). Reproduction is aplacental viviparous oophagous with litter sizes of 2–6 pups and an annual or biennial reproductive cycle (Gubanov 1978, Cailliet and Bedford 1983, Ebert *et al.* 2013, Gervelis and Natanson 2013). The potential annual rate of population increase under sustainable fishing is higher than that of the Pelagic Thresher and Bigeye Thresher and has been estimated at 0.254 (Dulvy *et al.* 2008). Female age at maturity is estimated at 13 years and maximum age is 38 years based on bomb-radiocarbon validated ages from the Northwest Atlantic (Natanson *et al.* 2016). In the Eastern Central Pacific, age-at-maturity estimates are much younger, though not validated with female age-at-maturity at 5.3 years and maximum age at 22 years off California (Smith *et al*. 2008). It is possible these are regional differences in life history parameters, but adopting a precautionary approach, the validated bomb radiocarbon ages are used for both regions to give a generation length of 25.5 years.

**Systems:** Marine

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

The species is used for its meat, fins, liver oil, and skin (Compagno 2001, Goldman 2005, Jabado *et al.* 2015). Three species of thresher shark, Common Thresher, Bigeye Thresher, and Pelagic Thresher, collectively accounted for 2–3% in 1991–2001 and 0.5% in 2014, of the fin imported in Hong Kong (Clarke *et al.* 2006a, Fields *et al.* 2018).

## Threats (see Appendix for additional information)

The Common Thresher is caught globally as target and bycatch in commercial and small-scale pelagic longline, purse seine, and gillnet fisheries. Most catch is taken as bycatch of industrial pelagic fleets in offshore and high-seas waters (Camhi *et al.* 2008). It is also captured in coastal longlines, gillnets, trammel nets and sometimes trawls, particularly in areas with narrow continental shelves (Camhi *et al.* 2008, Martinez-Ortiz *et al.* 2015).The species is generally retained for the meat and fins (Clarke *et al.* 2006a, Clarke *et al.* 2006b, Dent and Clarke 2015, Fields *et al.* 2018), unless regulations prohibit retention. Under-reporting of catches in the pelagic and domestic fisheries is likely (Dent and Clarke 2015). The species is highly valued by big-game recreational fishers, and although many practice catch

and release, recreational fishing could be a threat due to post-release mortality that has been estimated for the Common Thresher as 78% for tail-hooked and 0% for mouth-hooked animals (i.e. all mouth-hooked animals survived) (Camhi *et al.* 2008, Sepulveda *et al.* 2015). At vessel mortality of 66.7% was estimated on Portuguese longlines in the Atlantic (Coelho *et al.* 2012).

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

The success of actions agreed through international wildlife and fisheries treaties depends on implementation at the domestic level; for sharks, such follow up actions have to date been seriously lacking. In 2009, the International Commission for the Conservation of Atlantic Tunas (ICCAT) adopted a measure banning retention of Bigeye Thresher that also discourages targeted fishing of Common Thresher. In 2009, the Indian Ocean Tuna Commission (IOTC) banned the retention, transshipment, landing, storage, and sale of all three species of thresher sharks. In 2014, all thresher shark species were listed on Appendix II of the Convention on Migratory Species (CMS), which reflects Parties' commitments to work regionally toward conservation. The species are also covered by the CMS Memorandum of Understanding for Migratory Sharks, which is aimed at facilitating conservation. In 2016, all three thresher sharks were added to Appendix II of the Convention on International Trade in Endangered Species (CITES), which requires exports from CITES Parties to be accompanied by permits based on findings that parts are sourced from legal and sustainable fisheries. To prevent overfishing, it is recommended that Common Thresher be subject to regional and national catch limits based on scientific advice and/or the precautionary approach, as well as improved reporting of catch and discard data and full implementation of all commitments agreed through international treaties.

## Credits

| | |
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| **Facilitator(s) and Compiler(s):** | Rigby, C.L., Kyne, P.M., Pollom, R., Herman, K. & Dulvy, N.K. |
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## External Resources

For Supplementary Material, and 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? |
|---|---|---|---|
| 9. Marine Neritic -> 9.1. Marine Neritic - Pelagic | Resident | Suitable | Yes |
| 10. Marine Oceanic -> 10.1. Marine Oceanic - Epipelagic (0-200m) | Resident | Suitable | Yes |
| 10. Marine Oceanic -> 10.2. Marine Oceanic - Mesopelagic (200-1000m) | Resident | Suitable | Yes |

## Threats

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

| Threat | Timing | Scope | Severity | Impact Score |
|---|---|---|---|---|
| 5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.1. Intentional use: (subsistence/small scale) [harvest] | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |
| 5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.2. Intentional use: (large scale) [harvest] | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | 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) [harvest] | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |
| 5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.4. Unintentional effects: (large scale) [harvest] | Ongoing | Majority (50-90%) | Slow, significant declines | Medium impact: 6 |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |

## Conservation Actions in Place

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

| Conservation Action in Place |
|---|
| In-place research and monitoring |
| Action Recovery Plan: No |
| Systematic monitoring scheme: No |
| In-place land/water protection |
| Conservation sites identified: No |

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| Conservation Action in Place |
|---|
| Area based regional management plan: No |
| Occurs in at least one protected area: Unknown |
| Invasive species control or prevention: Not Applicable |
| In-place species management |
| Harvest management plan: No |
| Successfully reintroduced or introduced benignly: No |
| Subject to ex-situ conservation: No |
| In-place education |
| Subject to recent education and awareness programmes: No |
| 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 Action Needed |
|---|
| 1. Land/water protection -> 1.1. Site/area protection |
| 3. Species management -> 3.1. Species management -> 3.1.1. Harvest management |
| 3. Species management -> 3.1. Species management -> 3.1.2. Trade management |
| 3. Species management -> 3.2. Species recovery |

## 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 -> 1.4. Harvest, use & livelihoods |
| 3. Monitoring -> 3.1. Population trends |
| 3. Monitoring -> 3.2. Harvest level trends |
| 3. Monitoring -> 3.3. Trade trends |

## Additional Data Fields

| Distribution |
| --- |
| Lower depth limit (m): 650 |
| Upper depth limit (m): 0 |
| **Habitats and Ecology** |
| Generation Length (years): 25.5 |

# Amendment

**Amendment reason:** This amended assessment corrects the countries of occurrence list (changing presence to Possibly Extant for Somalia, Djibouti, Yemen, Oman, Iran, Pakistan, India, Sri Lanka and Maldives) and includes a corrected distribution map.

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# The IUCN Red List Partnership


The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: ABQ BioPark; Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; Missouri Botanical Garden; NatureServe; Re:wild; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.