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Scope(s): Global
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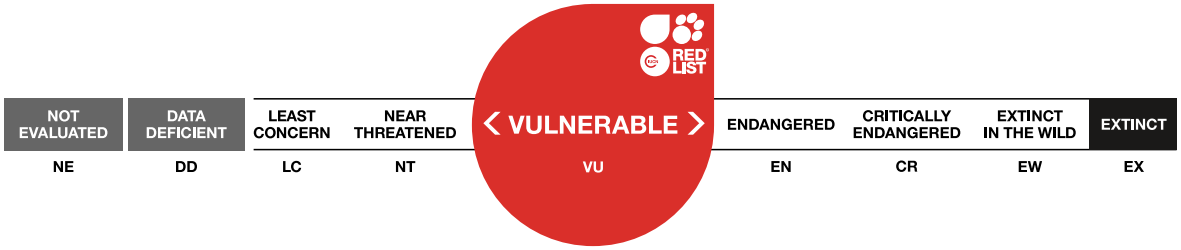
Chiloscyllium griseum, Grey Bamboo Shark

Assessment by: VanderWright, W.J., Bin Ali, A., Bineesh, K.K., Derrick, D., Haque, A.B., Krajangdara, T., Maung, A. & Seyha, L.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Orectolobiformes	Hemiscylliidae

Scientific Name: *Chiloscyllium griseum* Müller & Henle, 1838

Synonym(s):

- *Hemiscyllium griseus* (Müller & Henle, 1838)
- *Hemiscyllium griseum* (Müller & Henle, 1838)
- *Scyllium griseum* (Müller & Henle, 1838)

Common Name(s):

- English: Grey Bamboo Shark
- French: Requin-chabot Gris
- Spanish; Castilian: Bamboa Gris
- Arabic: قرش الخيزران الرمادي

Taxonomic Source(s):

Fricke, R., Eschmeyer, W.N. and Van der Laan, R. (eds). 2020. Eschmeyer's Catalog of Fishes: genera, species, references. Updated 03 August 2020. Available at: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp.

Assessment Information

Red List Category & Criteria: Vulnerable A2d ver 3.1

Year Published: 2020

Date Assessed: May 28, 2020

Justification:

The Grey Bambooshark (*Chiloscyllium griseum*) is a small (to 77 cm total length) shark that occurs in the Western and Eastern Indian, and Western Central Pacific Oceans from Pakistan to Thailand including Sri Lanka, Bangladesh, Myanmar and Malaysia. It inhabits shallow coastal inshore and coral reef habitats at depths of 5–100 m. This species is a bycatch of a range of artisanal and industrial gears including demersal trawl, longline, and gillnet and is retained for human consumption. Reconstructed catches of all sharks, skates, and rays from the Bangladesh and Malaysia Exclusive Economic Zones indicate population reductions of 41–46% over the past three generation lengths (21 years) of the Grey Bambooshark. Further, a population reduction of 35% was inferred for the Grey Bambooshark based on a 50% decrease in fisheries-independent research survey catch rate of elasmobranchs (all species combined) between 1978–80 and 2013 in Myanmar. These levels of declines are not species-specific but are informative for understanding the broader levels of decline of elasmobranchs in the region. Fishing pressure is high across much of the spatial and depth range of this species. The relative proportion of bamboosharks in shark landings has increased significantly over recent decades in the region, which may be in response to the overfishing of large sharks resulting in meso-predator release of the Grey Bambooshark. Alternatively, the increase in landings may imply some resilience to, or refuge from,

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fishing pressure. It is suspected that the Grey Bambooshark has undergone a population reduction of 30–49% over the last three generation lengths (21 years) due to levels of exploitation, and it is assessed as Vulnerable A2d.

Previously Published Red List Assessments

2003 – Near Threatened (NT)
https://dx.doi.org/10.2305/IUCN.UK.2003.RLTS.T41792A10547859.en

Geographic Range

Range Description:

The Grey Bambooshark occurs in the Eastern and Western Indian and Western Central Pacific Oceans. It has a patchy distribution from Pakistan to Thailand, including Sri Lanka, Bangladesh, Myanmar and Malaysia. (Hoq *et al.* 2011, Ebert *et al.* 2013, Psomadakis *et al.* 2019). The species also possibly occurs across further north to Viet Nam and China and further east across Indonesia and Papua New Guinea (Ebert *et al.* 2013).

Country Occurrence:

Native, Extant (resident): Bangladesh; India; Malaysia; Myanmar; Pakistan; Sri Lanka; Thailand

Native, Presence Uncertain: China; Indonesia; Papua New Guinea; Viet Nam

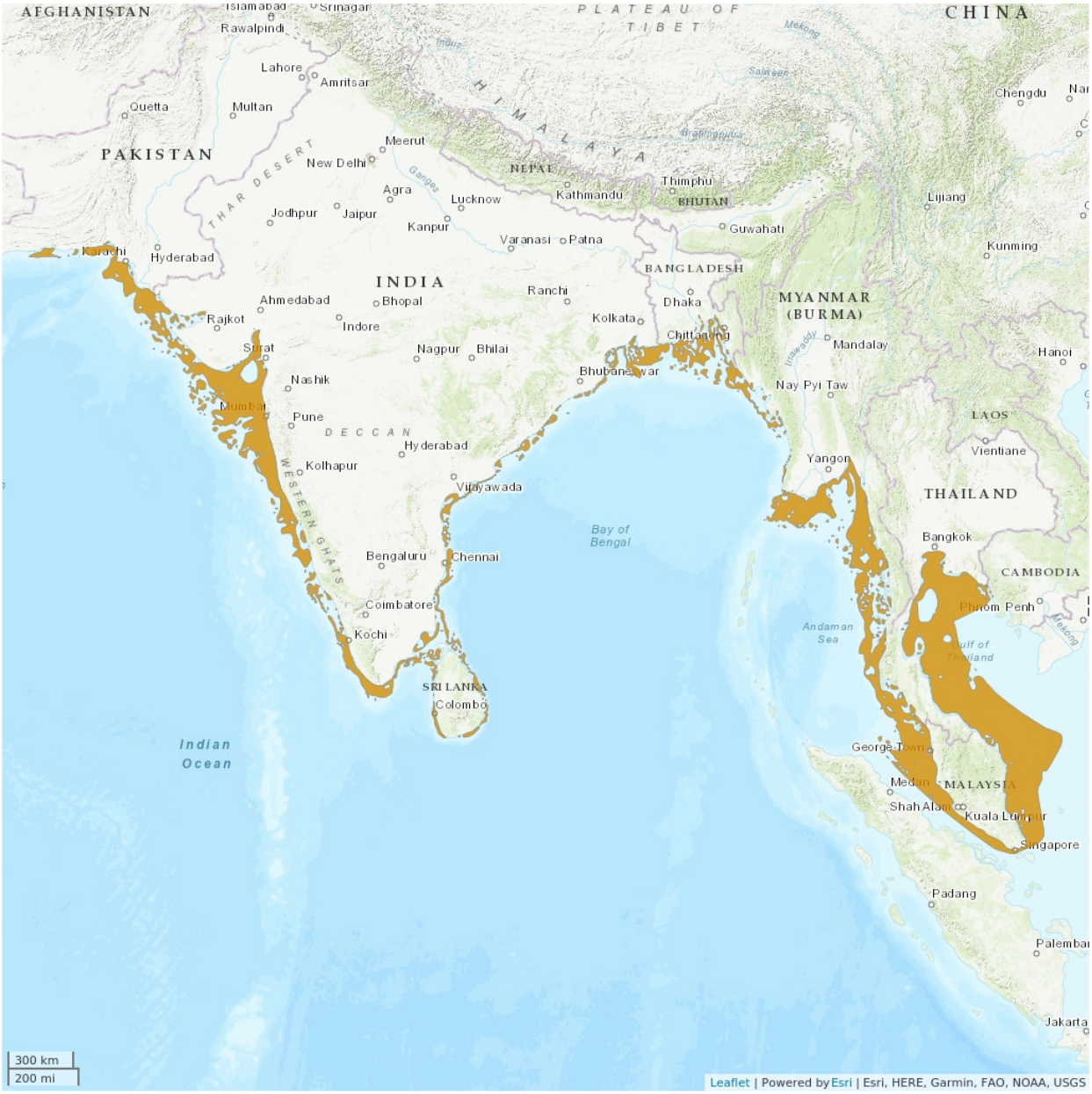
FAO Marine Fishing Areas:

Native: Pacific - western central

Native: Indian Ocean - eastern

Native: Indian Ocean - western

Distribution Map



Legend

EXTANT (RESIDENT)

Compiled by:

IUCN SSC Shark Specialist Group 2020

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 is no species-specific trend information for the Grey Bambooshark. Monitoring of fish landing sites in Southeast Asia reveals that the relative proportion of bamboosharks in shark landings has increased significantly over recent decades due to declines in large sharks and increased targeting and retention of the remaining smaller species (Lam and Sadovy de Mitcheson 2011, Lack and Sant 2012, Arunrugstichai *et al.* 2018). In India, this species is commonly found in landings and it is taken as retained bycatch with bottom trawls, gillnets, and beach seines. Joshi *et al.* (2008) estimated the number of individuals landed during 2000–2002 was eight specimens per month at Cochin Fisheries Harbor, Kerala. This species is still common but is landed in fewer numbers compared to 2008–2010 period due to a reduced catch rate (K. Bineesh unpubl. data 2020). Population declines are inferred from intensive trawling in shallow depth areas in the Eastern Indian Ocean.

Elsewhere, despite the lack of species-specific trend data, catches of sharks, rays, and skates from 1950 to 2014 have been reconstructed for the Bangladesh, Malaysia, and Thailand Exclusive Economic Zones (EEZ), based on landings data (Pauly *et al.* 2020). Although landings data are not a direct measure of abundance, these can be used to infer population reduction where landings have decreased while fishing effort has remained stable or increased. In Bangladesh, reconstructed landings data showed a 34% decline in landings over 15 years from 2000 to 2014. Catches gradually rose from 195 t in 1950 to 7,540 t in 1973 the declined to the 3,500 t in the mid-1980s, then rose steeply to a peak of 10,909 t in 2000 followed by a fluctuating decline to 7,163 t in 2014 (Pauly *et al*. 2020). These declines in landings can be inferred to represent reductions in their populations, as the fishing effort has increased substantially during the period of a decline in landings (Pauly *et al.* 2020).

In Myanmar, estimates of shark and ray landings, from 1950 to the late 1990s, varied between 15,000 t to 35,000 tonnes with no substantial trend. From the late 1990s to 2014 landings increased to around 40,000 t per year which was concurrent with an increase in fishing effort (Pauly *et al.* 2020). This infers there has been no significant reduction in the shark and ray populations as landings have increased as effort has increased. Trawl surveys by the Norwegian research vessel Dr Fridtjof Nansen showed a 50% decline in catch rates of elasmobranchs over the 33 years between surveys in 1978–80 and 2013 and a shift from larger long-lived species to smaller short-lived species (Krakstad *et al.* 2014). For a species with a three-generation span of 21 years this equates to a population reduction of 35%. Market surveys reveal a decline in landings 49% over a four-year period (2006–2010) despite no reduction in fishing effort and increasing domination by small short-lived species (San San Khine 2010).

In Malaysia, monitoring of fish landing sites has shown that the relative proportion of bamboosharks (*Chiloscyllium* spp.) in landings has doubled over recent years (Arshad *et al.* 2006, Lack and Sant 2012, SEAFDEC 2016). Overall, reconstructed catches of sharks, rays and skates declined by 30% on the east coast of Malaysia between 1999 and 2014 (Pauly *et al.* 2020). Similarly, on the west coast of Malaysia, shark and ray catches declined by 18% over the same period. These declines can be inferred to represent population reductions, as fishing effort was increasing during the period of declines in catch (Pauly *et al.* 2020). In the Gulf of Thailand, catches of sharks, rays, and skates showed a 74% decline over 12 years from 2003 to 2014 (Pauly *et al.* 2020). Historically, catches fluctuated since 1950–1998 at 5,000–13,000 t then rose steeply to a peak catch of 20,340 t in 2003 followed by a sharp decline in catches to 5,380 t in 2014 (Pauly *et al.* 2020). It is difficult to infer a population trend as the steep decline in catches from 2003 to 2014 coincided with a decline in fishing effort.

When these declines are scaled to three generation lengths of the Grey Bambooshark (21 years) they represent declines of 46% and 41% in Bangladesh and Malaysia, respectively. In Myanmar, a population reduction of 35% was inferred based on a 50% reduction in research survey catch rate of bulk elasmobranchs between surveys in 1978–80 and 2013. These levels of declines are not species-specific but are informative for understanding the broader levels of decline in sharks in the region. The relative proportion of bamboosharks in shark landings has increased over recent decades and the Grey Bambooshark may have benefited from meso-predator release due to the overfishing of large sharks. It is still commonly landed in India, although catch rates have reduced. Overall, it is suspected that the Grey Bambooshark has undergone a population reduction of 30–49% over the last three generation lengths (21 years) based on actual levels of exploitation.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The Grey Bambooshark occurs in shallow inshore habitats including rocky and coral reefs at depths of 5–100 m (Ebert *et al*. 2013, Weigmann 2016). This species reaches a maximum size of 77 cm total length (TL), males mature at 45–55 cm TL and female size-at-maturity is unknown (Ebert *et al.* 2013). Reproduction is oviparous with individuals hatching at less than 12 cm TL (Ebert *et al.* 2013). Bamboosharks are difficult to age and the most reliable age estimates to date are from the Whitespotted Bambooshark (*Chiloscyllium plagiosum*) that has an age-at-maturity of 4.5 years and maximum age of 14, resulting in a generation length of 9 years (Chen *et al.* 2007). The Whitespotted Bambooshark is larger than the Grey Bambooshark (95 cm vs 77 cm TL) and thus based on scaled-size, the generation length is inferred as 7 years for the Grey Bambooshark.

Systems: Marine

Use and Trade

The species is used for its low-value meat for local consumption (SEAFDEC 2016). In Bangladesh, species of the genus *Chiloscyllium* are often landed and sold to crocodile farmers as animal feed (A.B. Haque unpubl. data 2020).

Threats (see Appendix for additional information)

The Grey Bambooshark is subject to fishing pressure across its range. It is regularly taken as bycatch in industrial and artisanal fisheries with multiple fishing gears including by demersal inshore trawl, gillnet and line, and retained for human consumption (SEAFDEC 2016, Psomadakis *et al.* 2020). Fishing effort and power has been increasing in the Asian region and is generally unregulated and unmanaged (Anticamara *et al.* 2011, Watson *et al.* 2013).

In India, shark fisheries peaked in the 1980s as the demand for meat and fins grew across southeast Asia (Karnad *et al.* 2019). There is high level of fisheries exploitation with most stocks fully exploited (FAO 2020). There were about 6,600 trawlers operating in the Indian state of Gujarat in the early 2000s (Zynudheen *et al.* 2004). This number increased to 11,582 trawlers in 2010 (CMFRI 2010). Trawling is also intense elsewhere with 3,678 trawlers in Kerala and 5,767 trawlers in Tamil Nadu waters, with severe declines in fish stocks, including elasmobranchs (Raje *et al.* 2002, Mohanraj *et al*. 2009, CMFRI 2010, Karnad *et al.* 2014).

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In Sri Lanka, fishing effort has been increasing since 1950 across subsistence, artisanal and industrial fisheries (Pauly *et al.* 2020). The number of vessels across all sectors has increased substantially from 14,000 vessels in 1950 to 63,745 vessels in 2014, with most of the increase since 2000 and >90% of the fleet subsistence and artisanal fisheries operating in coastal fisheries on the continental shelf (Pauly *et al.* 2020). The coastal fisheries are likely to be increasingly overfished due to the high fishing effort with offshore fisheries increasing in effort since the early 1980s (Samaraweera and Amarasiri 2004, Dissanayake 2005).

In Bangladesh, there continues to be extensive fishing activity throughout all coastal habitats with artisanal fisheries operating at depths of 0–40 m on average but can operate down to 80 m (Hoq et al. 2014). Artisanal shark landings have increased from 2,000 tonnes (t) in 1986 to 6,234 t in 2001 (Ullah *et al.* 2014). Industrial shark landings have increased three-fold from 400 t in 1986 to 1,247 in 2001 (Ullah *et al.* 2014). Artisanal fishing effort in Bangladesh rapidly increased four-fold from 143,000 kilowatt hours (kW) in 2000 to 582,000 kW in 2014 (Pauly *et al.* 2020). In 2017–2018 there were 67,669 vessels reported to be operating in Bangladesh (DoF 2018).

In Myanmar, fishing effort has been increasing since 1950 across subsistence, artisanal and industrial fisheries (Pauly *et al.* 2020). The number of vessels across all sectors has increased substantially from 2,000 vessels in 1950 to 125,222 vessels in 2014, with >80% of the fleet subsistence fisheries operating in coastal waters on the continental shelf (Pauly *et al.* 2020). In the Andaman Sea, there has been a shift to smaller, fast-growing, and productive sharks where *Chiloscyllium* spp. comprise 65% of the landings in the Ranong province of Thailand (Arunrugstichai *et al.* 2018). An indirect threat is the extensive loss and degradation of habitats such as coastal mangroves. Southeast Asia has seen an estimated 30% reduction in mangrove area since 1980 (FAO 2007, Polidoro *et al.* 2010).

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

There are no species-specific conservation measures currently in place. In Myanmar, two shark reserves were designated in the Myeik Archipelago in 2004 where targeting sharks and rays is prohibited (Notification 2/2004) (Howard *et al.* 2015). In 2008, a nationwide ban on the targeting of sharks was announced. Despite the nationwide ban, sharks and rays continue to be captured in large numbers, partly because there is little or no enforcement, and little knowledge of the ban in fishing communities (T. MacKeracher pers. comm. 02/04/2020). In Thailand, all commercial fishing vessels greater than 10 gross tonnes are prohibited to fish within three nautical miles from the shore (DoF 2015). Throughout Malaysia there are 51 Marine Protected Areas making up 5,462 km² that may provide some refuge to this species (CTI 2020). Research is required to better define the population size and trends, and life history of the Grey Bambooshark, and catch rates should be monitored.

Credits

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Reviewer(s): Rigby, C.L. & Dulvy, N.K.

Contributor(s): Cavanagh, R.D. & Lisney, T.J.

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Facilitator(s) and Compiler(s): Dulvy, N.K., Rigby, C.L., Sherman, C.S. & Simpfendorfer, C.

Authority/Authorities: IUCN SSC Shark Specialist Group (sharks and rays)

Bibliography

Anticamara, J.A., Watson, R., Gelchu, A. and Pauly, D. 2011. Global fishing effort (1950–2010): Trends, gaps, and implications. *Fisheries Research* 107(2011): 131-136.

Arshad, Abd.H.H.A., Ali, A., Gambang, A.C., Sade, A., Lim, C.F., Ahmad, A.T. and Nuruddin, A.A. 2006. Data collection and fisheries management of sharks in Malaysia. *Report on the Study on Shark Production, Utilization, and Management in the ASEAN Region, 2003-2004*, pp. 69–97. Southeast Asian Fisheries Development Center, Bangkok, Thailand.

Arunrugstichai, S., True, J.D. and White, W.T. 2018. Catch composition and aspects of the biology of sharks caught by Thai commercial fisheries in the Andaman Sea. *Journal of Fish Biology* 92: 1487–1504.

Chen, W.K., Chen, P.C., Lue, K.M. and Wang, S.B. 2007. Age and growth estimates of the whitespotted bamboo shark, *Chiloscyllium plagiosum*, in the northern waters of Taiwan. *Zoological Studies* 46: 92-102.

CMFRI. 2010. Marine Fisheries Census (2010), Part 1. India, Govt. of India, Ministry of Agriculture, Dept. of Animal Husbandry, Dairying & Fisheries and Central Marine Fisheries Research Institute, Indian Council of Agricultural Research. New Dehli.

Coral Triangle Initiative (CTI). 2020. Marine Protected Areas. Coral Triangle Initiative of Coral Reefs, Fisheries and Food Security. Available at: http://www.coraltriangleinitiative.org/mpa. (Accessed: 19 June 2020).

Department of Fisheries (DoF). 2015. Marine Fisheries Management Plan of Thailand- A National Policy for Marine Fisheries Management 2015–2019. Department of Fisheries Ministry of Agriculture and Cooperatives, Bangkok.

Department of Fisheries (DoF). 2018. Yearbook of Fisheries Statistics of Bangladesh, 2017-18. Fisheries Resources Survey System (FRSS). Department of Fisheries, Ministry of Fisheries, 2018. Volume 35: p. 129, Bangladesh.

Dissanayake, D.C.T. 2005. Monitoring and assessment of the offshore fishery in Sri Lanka. The United Nations University, Reykjavik, Iceland.

Ebert, D.A., Fowler, S. and Compagno, L. 2013. *Sharks of the World*. Wild Nature Press, Plymouth.

FAO. 2007. The World's Mangroves 1980-2005, FAO Forestry Paper 153. In: FAO (ed.). Rome.

FAO. 2020. Fishery and Aquaculture Country Profiles. The Republic of India (2019). Country Profile Fact Sheets. FAO Fisheries and Aquaculture Department. Food and Agriculture Organization of the United Nations. Rome Available at: http://www.fao.org/fishery/. (Accessed: 29 July 2020).

Hoq, M.E., Haroon, M.K.Y., Karim, E. 2014. Shark fisheries status and management approach in the Bay of Bengal, Bangladesh. In: Wahab, M.A., Shah, M.S., Hossain, M.A.R., Barman, B.K. and Hoq, M.E. (eds), Advances in Fisheries Research in Bangladesh: I. Proc. of 5th Fisheries Conference & Research Fair 2012. 18-19 January 2012 1 1: 233-246. Dhaka, Bangladesh.

Hoq, M.E., Yousuf Haroon, A.K. and Hussain, M.G. 2011. Shark fisheries in the Bay of Bengal, Bangladesh: Status and potentialities. Support to Sustainable Management of the BOBLME Project. Bangladesh Fisheries Research Institute, Bangladesh.

Howard, R., Ahmad, A. and Saw Han Shein, U. 2015. Shark and Ray Fisheries of Myanmar – status and socio-economic importance. Fauna & Flora International.

IUCN. 2020. The IUCN Red List of Threatened Species. Version 2020-3. Available at: www.iucnredlist.org.

(Accessed: 10 December 2020).

Joshi, K.K., Balachandran, K. and Raje, S.G. 2008. Changes in the shark fishery at Cochin. *Journal of Marine Biology Association India* 50(1): 103 - 105.

Karnad, D., Gangal, M. and Karanth, K.K. 2014. Perceptions matter: how fisherman's perceptions affect trends of sustainability in Indian fisheries. *Oryx* 48(2): 218-227.

Karnad, D., Sutaria, D. and Jabado, R.W. 2019. Local drivers of declining shark fisheries in India. *Ambio* 49: 616–627.

Krakstad, J-O., Michalsen, K., Krafft, B., Bagøien, E., Alvheim, O. and Strømme, T. 2014. Myanmar Ecosystem Survey: Cruise Report. Institute of Marine Research, Bergen, Norway.

Lack, M. and Sant, G. 2012. An overview of shark utilisation in the Coral Triangle region. TRAFFIC & WWF.

Lam, V.Y.Y., and Sadovy de Mitcheson, Y. 2011. The sharks of South East Asia – unknown, unmonitored and unmanaged. *Fish and Fisheries* 12(1): 51-74.

Mohanraj, G., Rajapackiam, S., Mohan, S., Batcha, H. and Gomathy, S. 2009. Status of elasmobranchs fishery in Chennai, India. *Asian Fisheries Science,* 22(2): 607-615.

Pauly, D., Zeller, D. and Palomares, M.L.D. 2020. Sea Around Us Concepts, Design and Data. Available at: seaaroundus.org. (Accessed: April 2020).

Polidoro, B.A., Carpenter, K.E., Collins, L., Duke, N.C., Ellison, A.M., Ellison, J.C., Farnsworth, E.J., Fernando, E.S., Kathiresan, K., Koedam, N.E., Livingstone, S.R., Miyago, T., Moore, G.E., Ngoc Nam, V., Eong Ong, J., Primavera, J.H., Salmo, S.G., Sanciangco, J.C., Sukardjo, S., Wang, Y. and Hong Yong, J.W. 2010. The Loss of Species: Mangrove Extinction Risk and Geographic Areas of Global Concern. *Public Library of Science One* 5(4): 10.

Psomadakis, P.N., Htun Thein, Russell, B.C. and Mya Than Tun. 2019. *Field identification guide to the living marine resources of Myanmar. FAO Species Identification Guide for Fishery Purposes*. FAO and MOALI, Rome.

Raje, S.G., Mathew, G., Joshi, K.K., Nair, R.J., Mohanraj, G., Srinath, M., Gomathy, S. and Rudramurthy, N. 2002. Elasmobranch fisheries of India - an appraisal. CMFRI Special Publication Number 71.

Samaraweera, E.K.V. and Amarasiri, C. 2004. Present status of billfish fishery in Sri Lanka. IOTC-2004-WPB-03. Indian Ocean Tuna Commission Working Party on Billfish in 2004.

San San Khine. 2010. Species diversity, population abundance and reproductive condition of elasmobranch species from the Ayeyarwady Division. PhD Thesis, University of Yangon.

SEAFDEC. 2016. Report on Regional Sharks Data Collection 2015 to 2016. Results from data collection 2015 to 2016: Results from data collection in sharks project participating countries. SEAFDEC Secretariat. Southeast Asian Fisheries Development Center.

Ullah, H., Gibson, D., Knip, D., Zylich, K. and Zeller, D. 2014. Reconstruction of total marine fisheries catches for Bangladesh:1950–2010. Working Paper #2014–15. University of British Columbia, Vancouver Available at: http://www.seaaroundus.org.. (Accessed: July 14 2020).

Watson, R.A., Cheung, W.W.L., Anticamara, J.A., Sumaila, R.U., Zeller, D. and Pauly, D. 2013. Global marine yield halved as fishing intensity redoubles. *Fish and Fisheries* 14(4): 493–503.

Weigmann, S. 2016. Annotated checklist of the living sharks, batoids and chimaeras (Chondrichthyes) of

the world, with a focus on biogeographical diversity. *Journal of Fish Biology* 88(3): 837-1037.

Zynudheen, A.A., Ninan, G., Sen, A. and Badonia, R. 2004. Utilization of trawl bycatch in Gujarat (India). *27* NAGA Worldfish Center Quarterly((3&4)): 20-23.

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Disclaimer

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 -> 9.2. Marine Neritic - Subtidal Rock and Rocky Reefs	Resident	Suitable	Yes
9. Marine Neritic -> 9.4. Marine Neritic - Subtidal Sandy	Resident	Suitable	Yes
9. Marine Neritic -> 9.5. Marine Neritic - Subtidal Sandy-Mud	Resident	Suitable	Yes
9. Marine Neritic -> 9.6. Marine Neritic - Subtidal Muddy	Resident	Suitable	Yes
9. Marine Neritic -> 9.8. Marine Neritic - Coral Reef	Resident	Suitable	Yes

Use and Trade

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

End Use	Local	National	International
Food - animal	Yes	No	No
Food - human	Yes	Yes	No

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 -> 5.4.3. 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

Conservation Action in Place
In-place land/water protection
Conservation sites identified: No
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: No
Subject to any international management / trade controls: No

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
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level

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
2. Conservation Planning -> 2.1. Species Action/Recovery Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends

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Additional Data Fields

Distribution
Lower depth limit (m): 100
Upper depth limit (m): 5
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Unknown
Generation Length (years): 7

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: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.