

**TRAFFIC**

FACTSHEET

2024

# NETTED IN ILLEGAL TRADE

SHARKS OF INDIA



# INTRODUCTION

Having evolved over 400 million years ago, Elasmobranchs or Elasmobranchii – are a subclass of Chondrichthyes (cartilaginous fish) that include sharks, rays and skates; and are among the oldest and most diverse groups found in a variety of aquatic ecosystems worldwide (Compagno, 1990; Jabado *et al.*, 2018). Worldwide, there are more than 500 shark species (Ebert *et al.*, 2021), and approximately 160 species have been reported in India (Kizhakudan *et al.*, 2015).

Being top predators and detritivores in the oceanic food web, sharks prey on a wide variety of species (including plankton, fish, crustaceans and marine mammals) and hence, exert a powerful influence in maintaining ecosystem health and species diversity (Bornatowski *et al.*, 2014). As sharks search for prey, their movement helps transport vital nutrients across the marine ecosystem (Peel, 2019).

# SHARK TRADE

Demand for shark products varies from affordable meat for local consumption to high-value export products like shark fins used as a culinary delicacy in Asia (Steinke *et al.*, 2017; Dulvy *et al.*, 2021). Other shark products that are less frequently used include shark skin (for leather); liver oil (squalene); cartilages for chondroitin sulphate extraction to prepare medicines; and jaws and teeth for jewellery and other curios (Raje *et al.*, 2007; Sim *et al.*, 2007). International markets that cater to this demand drive overfishing of sharks (Dent and Clarke, 2015; Jabado and Spaet, 2017; Dulvy *et al.*, 2017; Shea and To 2017).

Overfishing, coupled with low biological productivity, put shark species at a higher risk of extinction when compared to most other vertebrates and thus sharks have garnered global conservation attention in recent years (Pacoureaux *et al.*, 2021). Over one-third of sharks and their Chondrichthyes relatives are threatened worldwide (Dulvy *et al.*, 2021).

India is one of the world's largest shark fishing nations globally (Kizhakudan *et al.*, 2015). In India, shark meat is a local delicacy and it enjoys a large clientele, especially along the Southern coast (Kizhakudan *et al.*, 2015).



Tracy Tsang/ WWF-Hong Kong

# PROTECTION STATUS

In India, 26 sharks and rays have been accorded the highest protection status under the amended Wild Life (Protection) Act, 1972\* by listing them in Schedules I and II. CITES-listed (Appendix I and II) species have been listed in Schedule IV of the Act. (*Gazette Notification; REGISTERED NO. DL-(N)04/0007/2003-22; 20th December, 2022*)

The listing of sharks in the Wild Life (Protection) Act, 1972 and CITES has changed over the years. For instance, in 2001, ten elasmobranchs including four sharks were added in the Schedule I of the Wild Life (Protection) Act, 1972. In 2022, after the amendment of the Act, 26 elasmobranchs including three sharks were

included in the Schedule I and four sharks in Schedule II. Within the CITES Appendices, elasmobranchs began to be listed in 2003, when two shark species were added. Post the CITES CoP 19, nearly 100 shark species have been included in the CITES Appendices.

Various other policies have also been formulated to regulate the trade in sharks. In 2013, the Ministry of Environment, Forest and Climate Change, Government of India, banned shark finning in the sea under its 'Fins Naturally Attached' policy. In 2015, a blanket ban on shark fin trade was declared in India; under the EXIM (Export-Import) policy of the Foreign Trade (Development and Regulation) Act, 1992.

# SHARK SEIZURES IN INDIA

**\*BASED ON PUBLICLY AVAILABLE DATA (DETAILS IN APPENDIX I)**

The demand for shark fins and meat is a major driver of the global shark fishery. Shark fins are the most sought-after shark product used to make 'shark-fin soup' considered a delicacy. Other shark products are also demanded, albeit to a lesser extent. Shark's meat is consumed as food; skin as leather; liver oil as a lubricant, in cosmetics and as a source of vitamin A; cartilages for chondroitin sulphate extraction in the preparation of medicines and jaws and teeth for making curios (Dent and Clark 2015; Shea and To 2017).

Tamil Nadu accounted for nearly 65% of the seizure incidents. The other states reporting seizures were Karnataka, Delhi, Gujarat, Kerala, and Maharashtra. The confiscated derivatives were destined for Singapore in 24% of seizure incidents, Hong Kong SAR in 18% of incidents, Sri Lanka in 12% of incidents, and China in 6% of incidents. In the remaining 41% of incidents, the destination of the confiscated derivatives was unreported.

The highest number of seizures was reported in 2019 and the total seized quantities (kg) were highest in 2018, with 9,600 kg derivatives seized.

To highlight the threat of illegal trade to sharks in India, TRAFFIC analysed open-sourced media reports on incidences of seizure of shark derivatives from January 2010 - December 2022. For this analysis, the reported seizure information was assumed to be correct, and the parts seized were considered genuine.

TRAFFIC found a total of 17 incidents reporting shark derivatives in illegal trade for 2010-2022. Shark fins were the most seized derivative (15,839.5 kg) and were reported in 82% of the seizures. Other derivatives seized included - cartilage (1,600 kg) and teeth (2,445 in number).

In 35% of seizure incidences, other wildlife contraband were also seized along. These included sea cucumbers, sea horses, pipefish, corals, seashells, pangolin scales, skin and antlers of deer, elephant tusks, tiger claws, camel bone, kangaroo pelts, porcupine quills and tortoise shells.

## DISCLAIMER

The analysis is based on shark seizure incidences available in public domain and given on Page 7 of the Factsheet. The reported seizure information has been assumed to be correct, and the parts seized were considered genuine.

Most seizure incidents used a generic term 'sharks' in the seizure reports pertaining to derivatives such as fins and cartilage. These derivatives can also be sourced from shark-like rays including sawfish, guitarfish and wedgefish. Due to paucity of species-specific information, and due to protection and regulatory status being undertaken during different years, the annual trends could not be assessed.

# OVERVIEW OF FINDINGS

2010-2022



# 17

seizure incidents of shark derivatives

# 82%

of the incidents were of shark fins (15,839.5 kg)

Additionally, cartilage (1,600 kg) and teeth (2,445 in number) were seized.

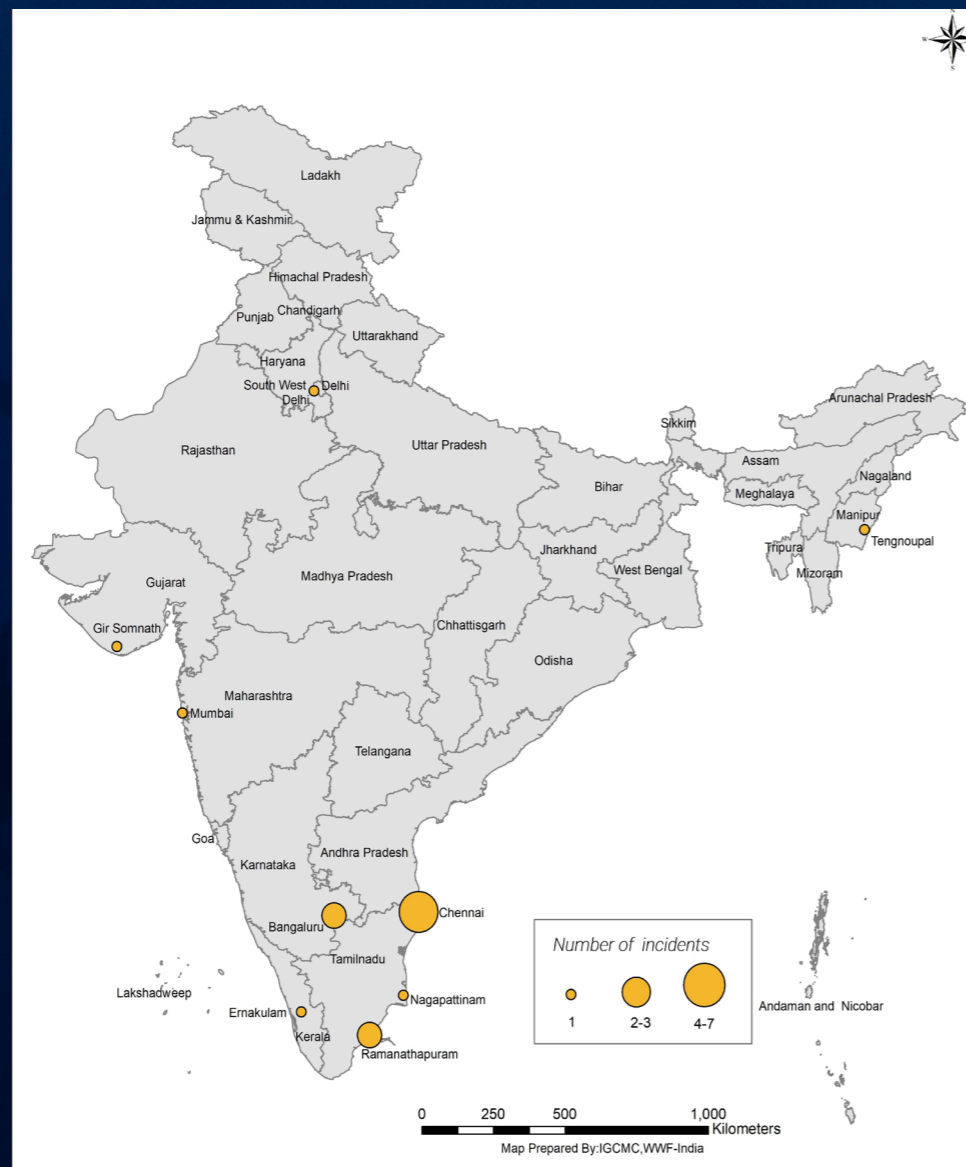
In 

# 24%

of the incidents, the confiscated derivatives were destined for **Singapore, Hong Kong SAR in 18.57%** of incidents, and **Sri Lanka and China in 6.25%** of incidents

# 65%

of the seizure incidents were reported in **Tamil Nadu**



Seizure incidents of sharks indicated by yellow points, marked on the centroid of India's districts

The highest number of seizures was reported in

# 2019



The total seized quantities (kg) were highest in

# 2018

# RECOMMENDATIONS

## CAPACITY BUILDING

**Species identification:** Species-level information is rarely considered during seizures of sharks, making it challenging to assess species-specific exploitation rates. It is here that the capacity of law enforcement agencies such as the Forest Department, Coast Guards, Customs Department, and Police Departments of the Coastal States and Island Union Territories especially, needs to be enhanced so they develop skills to identify protected and regulated species accurately. Visual identification tools such as 2C rg`qj`m models developed by TRAFFIC and various molecular identification techniques can help.

**Enhance capacity for interdiction:** Shark derivatives, including shark fins, shark teeth, shark jaw, etc., concealed for transport through entrepôts (air/sea ports) can be identified through X-ray screenings. Enhancing the capacity of officers from the Customs, Central Industrial Security Force, Railway Protection Force, international Post Office and private airline carriers at baggage screening points—to identify characteristics of shark fins, and shark teeth is imperative. Furthermore, training and deploying sniffer dogs at entrepôts to detect shark products could also be beneficial.

Supply chains for shark products remain largely concealed. Traceability helps elucidate the link between marine products, from harvest to consumption. Initiatives such as [SharkTrace](#) and similar applications can be institutionalised through stakeholder engagement, specifically involving fishers, traders, promoters, and enforcement agencies to verify provenance of shark products in transit.

Know more about [SharkTrace](#); a traceability system developed by TRAFFIC.

## ADOPTION OF TRACEABILITY SYSTEM

## IMPLEMENTATION OF CITES

Despite being one of the largest shark fisheries in the world, India has little to no reports of legal trade for regulated shark species. The institutionalisation and application of molecular tools will enable and facilitate towards compliance in national legislation and India's commitments towards the provisions of CITES. Along with enhancing traceability, this will encourage trading companies to have a more transparent supply chain.

## COMMUNITY ENGAGEMENT

Engagement with coastal communities dependent on marine resources is crucial for holistic conservation of marine ecosystems. This can be done through ongoing government initiatives—such as village-level Biodiversity Management Committees (BMC)—and guided through the State and National-level Biodiversity Boards. They are institutions which can facilitate and act as a force multiplier towards the conservation and management of marine species. Engaging these institutions will help raise awareness, monitor, and assist in releasing protected sharks bycatch. This will further bolster protection and conservation of the species.

# REFERENCES

- Bornatowski, H., Navia, A. F., Braga, R. R., Abilhoa, V., and Corrêa, M. F. M. (2014). Ecological importance of sharks and rays in a structural foodweb analysis in southern Brazil. *ICES Journal of Marine Science*, 71(7), 1586–1592.
- Compagno, L. J. V. (1990). Alternative life-history styles of cartilaginous fishes in time and space. *Environmental Biology of Fishes*, 28(1–4), 33–75.
- Dent, F., and Clarke, S. (2015). State of the global market for shark products. (p. 187). *FAO Fisheries and Aquaculture Technical Paper No. 590*.
- Dulvy, N. K., Simpfendorfer, C. A., Davidson, L. N. K., Fordham, S. V., Bräutigam, A., Sant, G., and Welch, D. J. (2017). Challenges and Priorities in Shark and Ray Conservation. *Current Biology*, 27(11), R565–R572.
- Dulvy, N. K., Pacoureau, N., Rigby, C. L., Pollom, R. A., Jabado, R. W., Ebert, D. A., Finucci, B., Pollock, C. M., Cheok, J., Derrick, D. H., Herman, K. B., Sherman, C. S., VanderWright, W. J., Lawson, J. M., Walls, R. H. L., Carlson, J. K., Charvet, P., Bineesh, K. K., Fernando, D., Simpfendorfer, C. A. (2021). Overfishing drives over one-third of all sharks and rays toward a global extinction crisis. *Current Biology*, 31(21), 4773-4787.e8.
- Ebert, D. A., Dando, M. and Fowler, S. (2021). *Sharks of the world: a complete guide* (Vol. 22). Princeton University Press
- Jabado, R. W., and Spaet, J. L. Y. (2017). Elasmobranch fisheries in the Arabian Seas Region: Characteristics, trade and management. *Fish and Fisheries*, 18(6), 1096–1118.
- Jabado, R. W., Kyne, P. M., Pollom, R. A., Ebert, D. A., Simpfendorfer, C. A., Ralph, G. M., Al Dhaheri, S. S., Akhilesh, K. V., Ali, K., Ali, M. H., Al Mamari, T. M. S., Bineesh, K. K., El Hassan, I. S., Fernando, D., Grandcourt, E. M., Khan, M. M., Moore, A. B. M., Owfi, F., Robinson, D. P., Romanov, E., Soares, A.L., Spaet, J.L.Y., Tesfamichael, D., and Dulvy, N. K. (2018). Troubled waters: Threats and extinction risk of the sharks, rays and chimaeras of the Arabian Sea and adjacent waters. *Fish and Fisheries*, 19(6), 1043–1062.
- Kizhakudan, S.J., Zacharia, P.U., Thomas, S., Vivekanandan, E., and Muktha M. (2015). *Guidance on National Plan of Action for Sharks in India*. CMFRI Marine Fisheries Policy Series No. 2, 104p.
- Mohamed, K S and Veena, S. (2016). How long does it take for tropical marine fish stocks to recover after declines? Case studies from the Southwest coast of India. *Current Science*, 110(4), 584–594.
- Okes, N., and Sant, G. (2019). An overview of major global shark traders, catchers and species. TRAFFIC International, Cambridge, United Kingdom.
- Pacoureau, N., Rigby, C. L., Kyne, P. M., Sherley, R. B., Winker, H., Carlson, J. K., Fordham, S. V., Barreto, R., Fernando, D., Francis, M. P., Jabado, R. W., Herman, K. B., Liu, K.-M., Marshall, A. D., Pollom, R. A., Romanov, E. V., Simpfendorfer, C. A., Yin, J. S., Kindsvater, H. K., and Dulvy, N. K. (2021). Half a century of global decline in oceanic sharks and rays. *Nature*, 589 (7843), 567–571.
- Peel LR (2019) Movement patterns and feeding ecology of the reef manta ray (*Mobula alfredi*) in Seychelles. PhD Thesis, University of Western Australia,
- Raje, S G, Sivakami, S, Mohanraj, G, Manojkumar, P P, Raju, A, and Joshi, K K. (2007). Atlas on the Elasmobranch fishery resources of India. CMFRI Special Publication pp. 1–253.
- Shea, K. H., and To, A. W. L. (2017). From boat to bowl: Patterns and dynamics of shark fin trade in Hong Kong – implications for monitoring and management. *Marine Policy*, 81, 330–339.
- Sim, J.-S., Im, A.-R., Cho, S. M., Jang, H. J., Jo, J. H., and Kim, Y. S. (2007). Evaluation of chondroitin sulfate in shark cartilage powder as a dietary supplement: Raw materials and finished products. *Food Chemistry*, 101(2), 532–539.
- Steinke, D., Bernard, A. M., Horn, R. L., Hilton, P., Hanner, R., and Shivji, M. S. (2017). DNA analysis of traded shark fins and mobulid gill plates reveals a high proportion of species of conservation concern. *Scientific Reports*, 7(1), 9505.

# APPENDIX I: SEIZURE INCIDENTS

- <https://www.thehindu.com/news/cities/Kochi/police-seize-6000-kg-of-suspected-shark-fins/article19392270.ece#>
- [https://www.dri.nic.in/writereaddata/9376444\\_2018-09-20.pdf](https://www.dri.nic.in/writereaddata/9376444_2018-09-20.pdf)
- [https://www.dri.nic.in/writereaddata/9376444\\_2018-09-20.pdf](https://www.dri.nic.in/writereaddata/9376444_2018-09-20.pdf)
- <https://www.deccanherald.com/amp/state/illegal-export-1600-kg-shark-696920.html>
- <https://www.thehindu.com/news/cities/chennai/shark-fins-worth-45-lakh-seized-at-chennai-airport/article30271440.ece#>
- <https://www.newindianexpress.com/cities/chennai/2019/apr/20/smuggling-bids-rise-in-chennai-airport-1966626.html>
- <https://www.deccanchronicle.com/nation/current-affairs/280219/chennai-660-kgs-of-marine-species-worth-rs-7-crore-seized.html>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1593603>
- <https://timesofindia.indiatimes.com/city/chennai/smuggling-bid-foiled-rs-32-lakh-worth-shark-fins-seized-at-airport/articleshow/69569398.cms>
- <https://timesofindia.indiatimes.com/city/delhi/over-2400-shark-teeth-recovered-from-passenger-at-igi-airport/articleshow/15257845.cms>
- <https://www.thehindu.com/news/national/karnataka/techies-collection-of-animal-pelts-tusks-seized/article35845665.ece>
- [http://wccb.gov.in/WriteReadData/UserFiles/file/EBook/WCCB%20Quarterly%20Newsletter%20Issue-04%20\(Oct-Dec,%202021\).pdf](http://wccb.gov.in/WriteReadData/UserFiles/file/EBook/WCCB%20Quarterly%20Newsletter%20Issue-04%20(Oct-Dec,%202021).pdf)
- [https://www-malaimurasu-com.translate.goog/posts/tamilnadu/items-including-shark-fin-seized-after-trying-to-smuggle-them-to-Sri-Lanka?\\_x\\_tr\\_sl=ta&\\_x\\_tr\\_tl=en&\\_x\\_tr\\_hl=en&\\_x\\_tr\\_pto=sc](https://www-malaimurasu-com.translate.goog/posts/tamilnadu/items-including-shark-fin-seized-after-trying-to-smuggle-them-to-Sri-Lanka?_x_tr_sl=ta&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc)
- <https://timesofindia.indiatimes.com/city/madurai/500kg-shark-fins-and-sea-cucumber-seized/articleshow/88653750.cms>
- <https://timesofindia.indiatimes.com/city/chennai/tamil-nadu-marine-species-worth-rs-20-lakh-seized-in-nagapattinam/articleshow/89960356.cms>
- <https://www.newindianexpress.com/states/tamil-nadu/2022/mar/02/1080-kg-of-sea-cucumber-seized-from-building-near-nagapattinam-temple-2425389.html>
- <https://www.trendsmap.com/twitter/tweet/1477942716793163776>
- <https://newsd.in/shark-fins-being-smuggled-to-dubai-seized-at-chennai-airport/>

TRAFFIC is a leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

**For further information contact:**

TRAFFIC, India Office  
C/O WWF-India Secretariat  
172-B, Lodi Estate  
New Delhi- 110003

[trafficind@wwfindia.net](mailto:trafficind@wwfindia.net)

[trafficindia.org](http://trafficindia.org)

[traffic.org](http://traffic.org)

[wwfindia.org](http://wwfindia.org)