



Scalloped hammerhead sharks

MANAGEMENT OF SHARK FIN TRADE TO AND FROM AUSTRALIA



**HUMANE SOCIETY
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Australian Marine
Conservation Society



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Defenders Office

In preparing this report the author has made all reasonable efforts to ensure the information it contains is based on evidence. The views expressed in this report are those of the author based on that evidence. The author does not guarantee that there is not further evidence relevant to the matters covered by this report and therefore urges those with an interest in these matters to conduct their own due diligence and to draw their own conclusions.



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EXECUTIVE SUMMARY

Healthy shark populations are an indicator of the health of the marine environment. Sharks play a key role in marine and estuarine environments, and people around the world rely on healthy marine ecosystems for their livelihoods. It has been predicted that by 2033, shark based ecotourism will be worth more than 785 million USD.¹ Conversely, the landed value of global shark fisheries peaked at 630 million USD in 2009 and has been in decline ever since.²

A key driver of shark fishing is the lucrative and unsustainable shark fin trade, with fins most notably used in shark fin soup. Shark fins can be obtained through regulated shark fisheries but are also obtained through the practice of shark finning, which entails cutting off a shark's fins and tail with remainder of the shark being discarded at sea, often while the shark is still alive.

Because of their life history characteristics, the majority of shark species are inherently vulnerable to over-exploitation. In 2013, it was estimated that at least 63 million individual sharks are killed each year, with an upper range of up to 275 million,³ and few, if any, shark fisheries are considered to be sustainable.⁴ There are 17 species of sharks and rays (or species complexes) listed on Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). These species were listed predominantly due to the threat posed by the shark fin trade. Consumer demand campaigns have shown some success in reducing demand for shark fin soup,⁵ however recent trade patterns identified in this report indicate that trade in shark fin is again increasing. Gaps in the regulation and tracking of shark fins means it is impossible for consumers to know what shark fins they are consuming or how those shark fins were obtained.

Australia exports shark fins into the markets of China and Hong Kong, but also imports a significant volume of shark fin, including from jurisdictions which do not ensure sustainable fishing practices. As a country that has consistently been in the top 25 countries for world captures of sharks and rays, Australia has an important role to play in improving management of shark fisheries both within its borders and internationally.

Despite being a signatory to the *International Plan of Action for the Conservation and Management of Sharks* and having developed its own *National Plan of Action on Sharks*, there have been ongoing failures over many years to implement management recommendations to improve shark conservation and sustainability across Australia. Key to improving the sustainability of shark fishing is the appropriate recording and tracking of shark catches, prevention of shark finning and the prevention of unreported discarding of sharks, including through practices such as high-grading, where only the most lucrative fins and flesh are retained, even if they are derived from different animals. If the number of fins and carcasses onboard match, compliance officers have no way to know whether illegal finning has occurred. While all fishing jurisdictions in Australia have legislation designed to prevent shark finning, there are regulatory gaps, particularly in Western Australia, the Northern Territory and Queensland, that can allow shark finning to occur in Australian waters.

This report looks at the current trends in the global shark fin trade and actions that Australia can take to drive improvement in the shark fin industry, with wider benefits for sustainable management of sharks. Immediate steps that Australia should take to become a leader in shark management include ensuring that sharks landed whole⁶ with fins naturally attached is a requirement in all jurisdictions across all fisheries that harvest sharks, and establishing appropriate traceability of shark fins within Australia and through export fisheries. In the absence of a suitable international shark fin traceability program, Australia should also be looking to ensure that no shark fins entering Australia have come from unsustainable fishing practices by requiring that all fins imported to Australia are naturally attached to the shark carcass.

⁶ Landing "whole" sharks does not necessarily mean that the head or tail are still attached but can mean keeping the shark in one piece. In many jurisdictions, fishers are permitted to dress shark trunks, meaning they can gut and remove heads whilst keeping fins on. Some jurisdictions also allow a partial cut in the fins, which allows the fins to be folded over, so the shark takes up less space on the ship, but the fin remains attached to the body of the shark.

¹ Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381-388. doi:10.1017/S0030605312001718.

² Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381-388. doi:10.1017/S0030605312001718.

³ Worm, B., Davis, B., Kettner, L., Ward-Paige, C., Chapman, D., Heithaus, M., Kessel, S. and Gruber, S. (2013) Global catches, exploitation rates, and rebuilding options for sharks *Marine Policy* 40 (2013) 194–204.

⁴ Simpfendorfer, C.A. and Dulvy, N. K., (2017), Bright spots of sustainable shark fishing, *Current Biology*, 27 (3), R97-R98, <https://doi.org/10.1016/j.cub.2016.12.017>

⁵ <https://www.wwf.org.hk/en/news/?20540/Press-Release-Hong-Kong-Shark-Fin-Imports-Down-50>, dated 08 March 2018, accessed on 30 September 2020.



RECOMMENDATIONS

1. Australia should use the recent international 'HS Codes' for shark fin trades, ensuring that trade is accurately reported entering and leaving Australia.
2. All Australian jurisdictions should implement, as a matter of urgency, best practice management recommendations in accordance with the International Plan of Action for the Conservation and Management of Sharks, the second edition of the Australian National Plan of Action on Sharks, and previous government commissioned reviews identifying key actions required to improve shark conservation and management, as outlined in Annex C to this report.
3. All relevant shark conservation management measures outlined in Annex C should be included as conditions on all export fishery Wildlife Trade Operation approvals.
4. All commercial fisheries that capture sharks should require logbooks that record catches and discards to species level where possible, and at least to genus or family level. This data should be publicly reported on a quarterly basis. There should be no "shark other" category.
5. All Australian jurisdictions should require sharks to be landed whole, with their fins naturally attached – no exceptions.
6. Fisheries observer programs for shark fisheries should be mandatory, and supported by an objective, scientific evaluation program. Onboard electronic monitoring of fishing vessels interacting with sharks should also be required.
7. All Wildlife Trade Operation conditions for export fisheries should require sharks to be landed whole, with their fins naturally attached.
8. Any fishery catching and retaining sharks should not be placed on the List of Exempt Native Species unless they are demonstrated to be sourced from a fishery that lands sharks whole with their fins naturally attached.
9. All Australian jurisdictions should work together to implement a national, enforceable shark fin traceability system, which demonstrates lawful provenance of shark fin from the time of landing to the point of final sale or export. Fisheries catching and retaining sharks should require 100% observer coverage within the fishery until such a system is in place.
10. In the absence of a suitable international traceability system for shark fin products, Australia should require all shark fin imported into Australia to be naturally attached to a shark carcass. All shark imports should be specified to species level where possible, and at least to genus or family level.

INTRODUCTION

Sharks, skates, rays and chimaeras (collectively referred to as sharks in this report) play a key role in the marine and estuarine environment – both ecologically and as a key source of livelihoods for communities across the world. Healthy shark populations are an indicator of the health of the marine environment, with research demonstrating that the depletion of sharks worldwide has had significant and, in some cases, cascading negative effects through marine ecosystems.⁷ Relatively slow growth and reproductive rates make sharks highly susceptible to threats, with one third of all sharks threatened with extinction as a result of overfishing,⁸ with significant reductions in many shark populations around the world.⁹

As of April 2021, 188 species of sharks are listed as Critically Endangered or Endangered on the International Union for Conservation of Nature Red List of Threatened Species (IUCN Red List) with a further 167 species listed as Vulnerable, 114 listed as Near Threatened, 525 as Least Concern and 206 considered data deficient and unable to be assessed.¹⁰ This equates to 39% of sharks and rays being classified as threatened and 17% classed as data deficient, i.e. there is 20% of shark species worldwide for which there is insufficient data to know whether they are threatened or whether they are being sustainably managed. In Australia, at the Commonwealth level, there are nine species listed as a threatened species,¹¹ five of which are also listed as Migratory, with a further six only listed as Migratory. There are four species of shark that were found to meet the criteria for listing as a threatened species, but have been listed as Conservation Dependent.¹² At the State/Territory level, there are individual species of shark listed as threatened or protected with whole groups, such as "sharks and rays – other than totally protected" receiving protection in some jurisdictions. Refer to Annex A for full details of the listed threatened and protected shark species in Australia.

Unsustainable fishing practices, including shark finning, are widely recognised as a key threat to shark species. This report looks at the current trends in the shark fin trade and actions that Australia can take to drive improvement in the shark fin industry both within Australia and in relation to shark fins that are imported into Australia and the wider implications for sustainable shark management.

7 See for example Heithaus, M., Wirsing, A. and Dill, L. (2012) The ecological importance of intact top-predator populations: a synthesis of 15 years of research in a seagrass ecosystem *Marine & freshwater research* 63(11) 1039-1050.

8 See IUCN Red List Assessment at www.iucnredlist.org. These figures are constantly being updated as assessments are completed on data deficient species or species are re-assessed to ensure their categories are accurate. The IUCN is currently undertaking reviews of shark species.

9 Worm, B., Davis, B., Kettner, L., Ward-Paige, C., Chapman, D., Heithaus, M., Kessel, S. and Gruber, S. (2013) Global catches, exploitation rates, and rebuilding options for sharks *Marine Policy* 40 (2013) 194–204.

10 www.iucnredlist.org: as of 2 October 2020.

11 Threatened species categories include Critically Endangered, Endangered, and Vulnerable

12 Rebuilding strategies are to be created for each species listed as Conservation Dependent but these have proven to be ineffective at preventing decline, as evidenced by the most recent stock assessments released by the Department of Agriculture: https://www.agriculture.gov.au/sites/default/files/documents/00_FishStatus2019_6.0.0%20HR.pdf

SHARK FIN TRADE

A key driver for shark fishing in many parts of the world is the lucrative shark fin trade which is mostly facilitated by the practice of shark finning. Shark finning entails cutting off a shark's fins and tail, often while the shark is still alive with the remainder of the shark being discarded at sea where the animal may drown, be predated upon, or dies via blood loss or starvation.

Shark fins are predominantly sought for products such as shark fin soup, an East and Southeast Asian dish associated with wealth, festivity and status. It has been estimated that at least 63 million sharks are killed every year for fins and flesh, with an upper limit of 275 million per year.¹³ Recent Food and Agriculture Organization of the United Nations (FAO) statistics show that in the five year period (2013-2017) 737 828 tonnes of shark (live weight) were traded, despite a significant drop in trade volumes in 2017,¹⁴ with at least 76 species of sharks being traded.¹⁵ The preferred species for shark fin soup include hammerhead, oceanic whitetip and blue sharks¹⁶ with the most traded species including the blue shark, shortfin mako, bull and hammerhead shark.¹⁷ Hong Kong, historically the centre of the global shark fin trade, hosts 30-50% of all trade from over 100 countries. Around 50% of all imports to Hong Kong are re-exported, with more than 60% going to mainland China,¹⁸ where Guangzhou, in southern China is increasingly important in the trade.¹⁹ In 2011, internationally, shark fin exports were valued at 438.6 million USD for 17 154 tonnes of shark fin traded.²⁰ Importing and exporting figures do not account for domestic consumption of sharks caught and landed within a country's jurisdiction, so are an underrepresentation of the true amount of shark fin being consumed commercially.

A number of prized shark fin species have been listed on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Hammerhead sharks (great, smooth and scalloped), oceanic whitetip sharks and porbeagle sharks were listed at the fifteenth meeting of the Conference of the Parties (CoP15), held in Bangkok in 2013, while silky and thresher sharks were listed at CoP16 in 2016 and long fin and short fin mako sharks, as well as guitarfish and wedgefish were listed at CoP18 in 2019. There are now 17 shark species or species complexes that are regulated by CITES²¹, predominantly due to the threat posed by the lucrative and unsustainable shark fin trade.



13 Worm, B, Davis, B, Kettermer, L, Ward-Paige, C, Chapman, D, Heithaus, M., Kessel, S. and Gruber, S (2013) Global catches, exploitation rates, and rebuilding options for sharks. *Marine Policy* 40 (2013), 194-204.

14 FAO. 2019. *Fishery and Aquaculture Statistics. Global capture production 1950-2017 (Fishstat)*. In: FAO Fisheries and Aquaculture Department [online]. Rome. Updated 2019. www.fao.org/fishery/statistics/software/fishstat/en.

15 Fields, A., Fischer, G, Shea, S., Zhang, H., Abercrombie, D., Feldheim, K., Babcock, E. & Chapman, D. (2017) Species composition of the international shark fin trade assessed through a retail-market survey in Hong Kong *Conservation Biology*, Volume 32, No. 2, 376-389.

16 Dent, F. & Clarke, S. 2015. State of the global market for shark products. FAO Fisheries and Aquaculture Technical Paper No. 590. Rome, FAO. 187 pp.

17 Clarke, S., Magnussen, J., Abercrombie, D., McAllister, M. & Shivji, M. (2006) Identification of Shark Species Composition and Proportion in the Hong Kong Shark Fin Market Based on Molecular Genetics and Trade Records *Conservation Biology* Volume 20, No. 1, 201-211; Fields, A., Fischer, G, Shea, S., Zhang, H., Abercrombie, D., Feldheim, K., Babcock, E. & Chapman, D. (2017) Species composition of the international shark fin trade assessed through a retail-market survey in Hong Kong *Conservation Biology*, Volume 32, No. 2, 376-389.

18 Wu, J. (2016) Shark Fin and Mobulid Ray Gill Plate Trade In mainland China, Hong Kong and Taiwan TRAFFIC.

19 WildAid (2014) Evidence of Declines in Shark Fin Demand – China.

20 Dent, F. & Clarke, S. 2015. State of the global market for shark products. FAO Fisheries and Aquaculture Technical Paper No. 590. Rome, FAO. 187 pp.

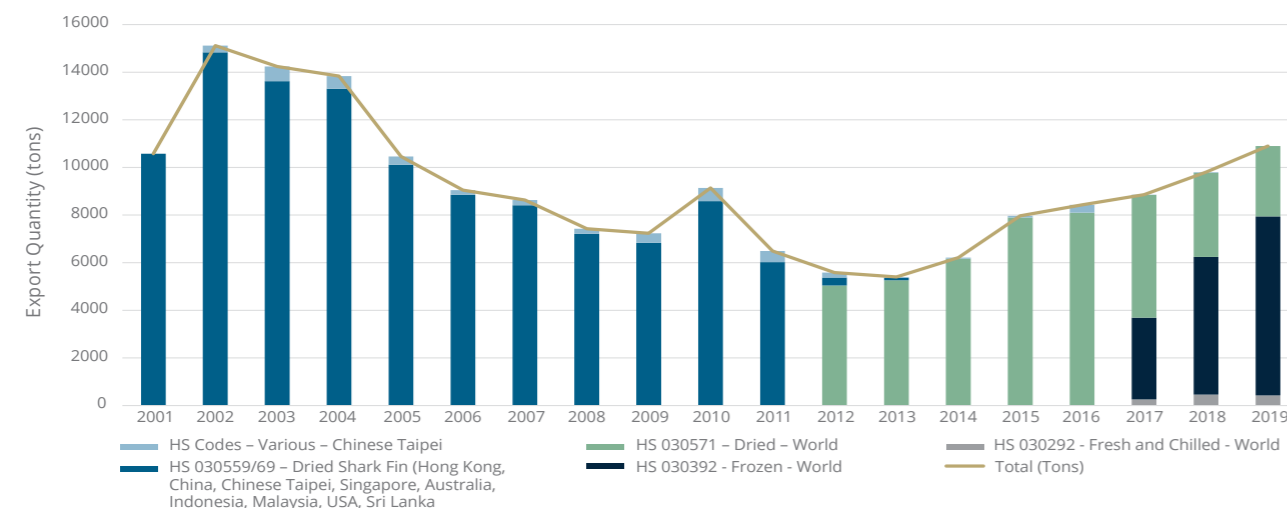
21 <https://cites.org/eng/app/appendices.php>

TRENDS IN SHARK FIN TRADE

In 2012 new 6-digit Harmonized System Codes (HS Codes) were introduced by the United Nations to better track shark fin products. Broad adoption of these codes will provide increased understanding of shark fin trade, however, countries may choose not to use the new HS Codes and their introduction has made it difficult to compare pre-2011 trade data to more recent data. Further, the new HS Codes are not species specific, so do not provide detail on prevalence of different shark species within the trade.

Many countries have their own lower level (8 digit or more) HS Codes for shark fin which may or may not align with the newer Codes (refer to Annex B for a list of HS Codes relevant to shark fin, the majority of which only record data up until 2011). The high diversity of species used in the shark fin trade has led to concerns that shark population declines are being masked by substitution of different species or shifts in source populations,²² particularly in circumstances where there is known to be limited labelling and high levels of mislabelling.²³ Currently, Australia appears to be one country continuing to use lower level HS Codes that do not align with the higher level HS Codes, such that zero or extremely limited data is reported against the new HS Codes in the UN COMTRADE dataset. To ensure shark fin trade can be easily recorded, analysed and understood, it is vital that global shark fin trading countries align their use of HS Codes. Australia should show leadership in this area by ensuring correct use of the new HS Codes, a practice which would significantly improve the governance of the shark fin trade.

In order to gain an understanding of how the current shark fin trade is operating, this paper analysed the higher-level HS Codes created for shark fin in recent years, as well as the historical lower level HS Codes for Australia and some of the largest exporting countries such as Hong Kong, China, Indonesia and Chinese Taipei. For a full list of HS Codes analysed in this paper refer to the HS Codes highlighted in blue in Annex B.²⁴

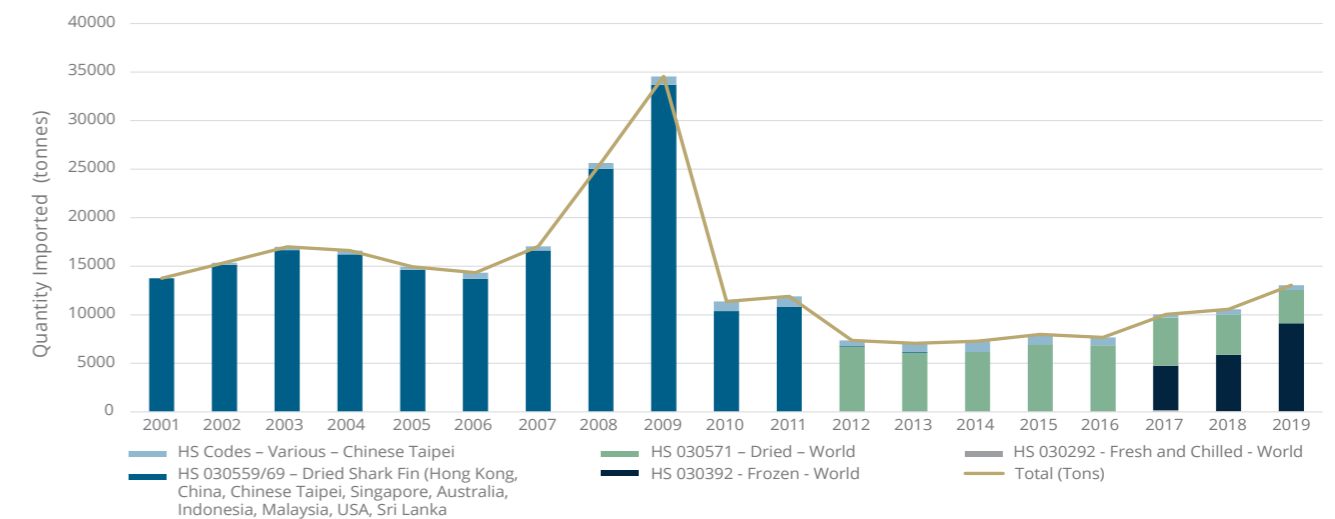


A. Shark Fin Exports - Global* from 2001 - 2019

22 Fields, A., Fischer, G., Shea, S., Zhang, H., Abercrombie, D., Feldheim, K., Babcock, E. & Chapman, D. (2017) Species composition of the international shark fin trade assessed through a retail-market survey in Hong Kong Conservation Biology, Volume 32, No. 2, 376-389.

23 Commonwealth of Australia. (2014) Rural and Regional Affairs and Transport References Committee - Current requirements for labelling of seafood products, The Senate; Pazartzi et al. (2018). High levels of mislabeling in shark meat - Investigating patterns of species utilization with DNA barcoding in Greek retailers. Food control. 98; 179-186; Hobbs et al. (2019). Using DNA Barcoding to Investigate Patterns of Species Utilisation in UK Shark Products Reveals Threatened Species on Sale, Scientific Reports, Nature Scientific Reports, 9:1028 <https://doi.org/10.1038/s41598-018-38270-3>; Bornatowski, H. et al (2013). Letters to the Editor: Shark Mislabelling Threatens Biodiversity, Science Magazine, Vol 340, p. 923, <https://science.sciencemag.org/content/340/6135/923.1> Accessed on 18 May 2013.

24 Due to large number of unique HS Codes utilized for shark fin in the past, it was not possible to retrieve all trade data. The higher-level HS Codes for many of these HS Codes include many other shark and fish products that are not able to be individually identified. Further, many country's imports and exports constitute a very small proportion of the trade in comparison to China, Hong Kong, Chinese Taipei and Indonesia and their inclusion would not alter the overall patterns shown. (* in graph above)



B. Shark fin imports - Global* from 2001 - 2019

Figure 1: Shark Fin Trade Exports and Imports across the three HS Codes for shark fin (2017 HS Code Version) from 2012 - 2019, combined with pre-2012 country specific HS Codes utilised for shark fin. Data from International Trade Centre (ITC) World Trade Map database based on UN COMTRADE data and other ITC statistics www.trademap.org

Figure 1 (A and B) depict the global shark fin exports and imports reported in UN COMTRADE for the specified HS Codes. The figures are likely to be underestimates of the total global trade because some countries are maintaining their own HS Codes for shark fin and many countries are slow to report their data. This means more recent data is subject to a higher margin of error and should be considered conservative. The sharp rise in imports shown in Figure 1 (B) in 2008 and 2009 is due to reported shark fin imports from Malaysia to Indonesia. In 2008, the reported imported volume was a 350% increase on 2007 and 2009 showed another 180% increase. These reported imports do not correspond to the reported exports into Indonesia from Malaysia, which can be an indicator of trade-based money laundering²⁵ or other illegal activity such as illegal transshipment at sea.²⁶ Another area of uncertainty relates to re-exports of shark fin that have been processed into other products. While some re-exports of processed fins (i.e. minced) may be included in the above figures from UN COMTRADE, it is impossible to tease this apart from the dataset. It is expected that this level of error will be low, as most processed shark fins have alternative HS Codes not included in the above analysis (i.e. HS Code 160418).

25 Sullivan, Clare Linda and Smith, Evan, Trade-Based Money Laundering: Risks and Regulatory Responses (2012). Australian Institute of Criminology, pp. 1-27, 2012, Available at SSRN: <https://ssrn.com/abstract=2476754>;

26 Liao, J. and Acharya, A. (2011), "Transshipment and trade-based money laundering", Journal of Money Laundering Control, Vol. 14 No. 1, pp. 79-92. <https://doi.org/10.1108/13685201111098897>

In 2018 and 2019, the volume of shark fin trade increased by 10.5% and 11.4% respectively.²⁷ Only viewing the HS Code for dried shark fin, which traditionally has been the bulk of shark fin trade and the only specific shark fin code prior to 2012, would suggest a drop in trade over the last 7 years. Unfortunately, when viewing all trade in shark fin across the three new HS Codes it is clear that shark fin trade is increasing. It has been reported by numerous non-government organisations (NGOs) that shark fin consumption has reduced by 70-80% following the 2013 CITES listing of the shark species and various demand reduction programs throughout Asia.²⁸ These figures came after a strong push to reduce the impact of shark finning by encouraging consumers to move away from consuming shark fin. In 2014, WildAid reported that as a result of these campaigns there was an “82% decline in sales reported by shark fin vendors in Guangzhou, China and a decrease in prices (47% retail and 57% wholesale) over the past two years”, a finding supported by a reported drop in consumption by restaurant owners.²⁹ Further, 85% of Chinese consumers said they had stopped consuming shark fin soup, and shark fin has been banned from the operations of 24 airlines, three shipping lines, and five hotel groups.³⁰ Despite this success, concern remained that official figures do not adequately reflect illegal shark fin trade³¹ and the most recent global trade data available indicates that shark fin trade has remained strong and appears to be growing again in recent years. This conclusion is consistent with trade data analysis published in September 2019 by TRAFFIC³² (Okes and Sant, 2019), a report which was based on FAO reported trade and landings³³ until 2016.³⁴

While there remains a risk that the analyses above may not be able to identify all trades under different HS Codes due to the different use of HS Codes, or identify all re-exports, most countries are likely to continue to report exports/re-exports the same way each year, meaning any reporting errors will be low in comparison to the overall level of trade being reported. The important factor is the overall trend or trade patterns over the 20-year period which is currently demonstrating an increasing trend in trade.

There may be a number of factors that are leading to an increasing trend. The first is that with the new shark fin specific codes, trade that was previously spread out over a number of HS Codes is now captured under one of three key HS Codes. Another likely scenario is that traders have found new trade routes for their product, avoiding new shark fin regulations within Hong Kong, and shipping their product directly to China, or via other Asian countries. This would explain why NGOs within Hong Kong have reported drops in consumption and imports while the global trend in shark fin trade is increasing. The other likely factor is that much of the previously undocumented and illegal trade in shark fin has now been brought under regulation, such that official data sources are more accurately reflecting the actual trade levels that were

27 Noting that there may be a lag in reporting that is not captured in these figures.

28 WildAid (2014) Evidence of Declines in Shark Fin Demand – China; <https://www.scmp.com/news/hong-kong/article/1469412/hong-kong-shark-fin-imports-fall-35pc>; <https://www.theguardian.com/environment/chinas-choice/2014/aug/08/sales-of-shark-fin-china-drop-70>.

29 WildAid (2014) Evidence of Declines in Shark Fin Demand – China.

30 Ibid.

31 Wu, J. (2016) Shark Fin And Mobulid Ray Gill Plate Trade In mainland China, Hong Kong and Taiwan TRAFFIC.

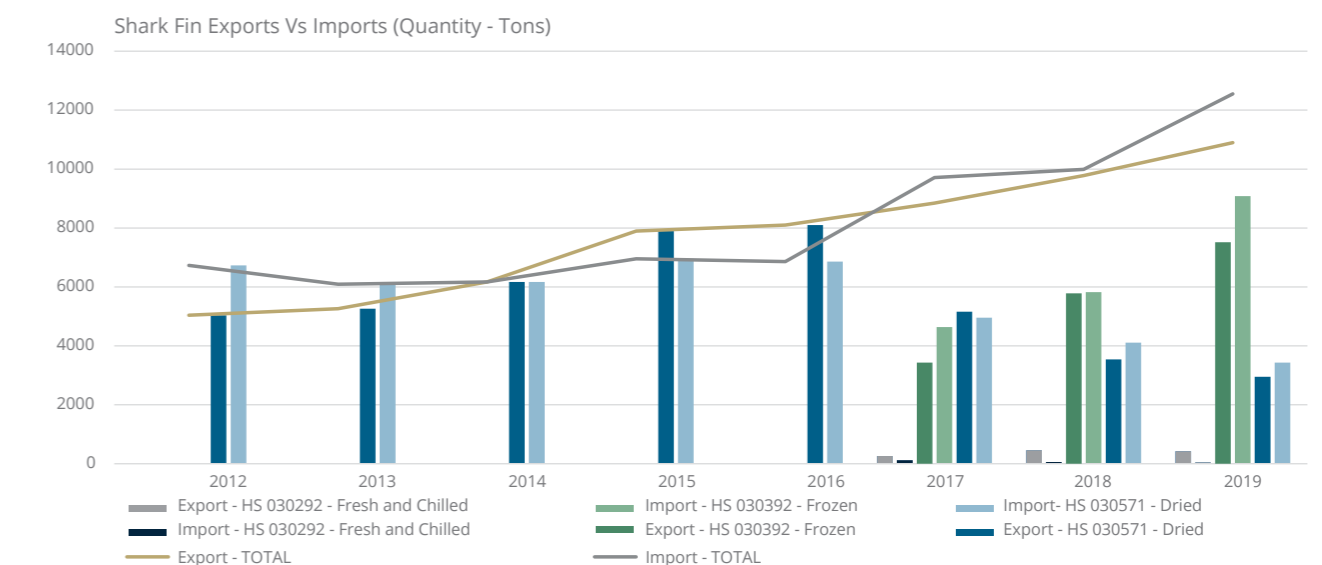
32 Okes, N. and Sant, G. (2019). An overview of major shark traders, catchers and species. TRAFFIC, Cambridge, UK.

33 <http://www.fao.org/fishery/statistics/global-capture-production/3/en> and https://www.fishbase.in/manual/fishbasefao_statistics00002679.htm

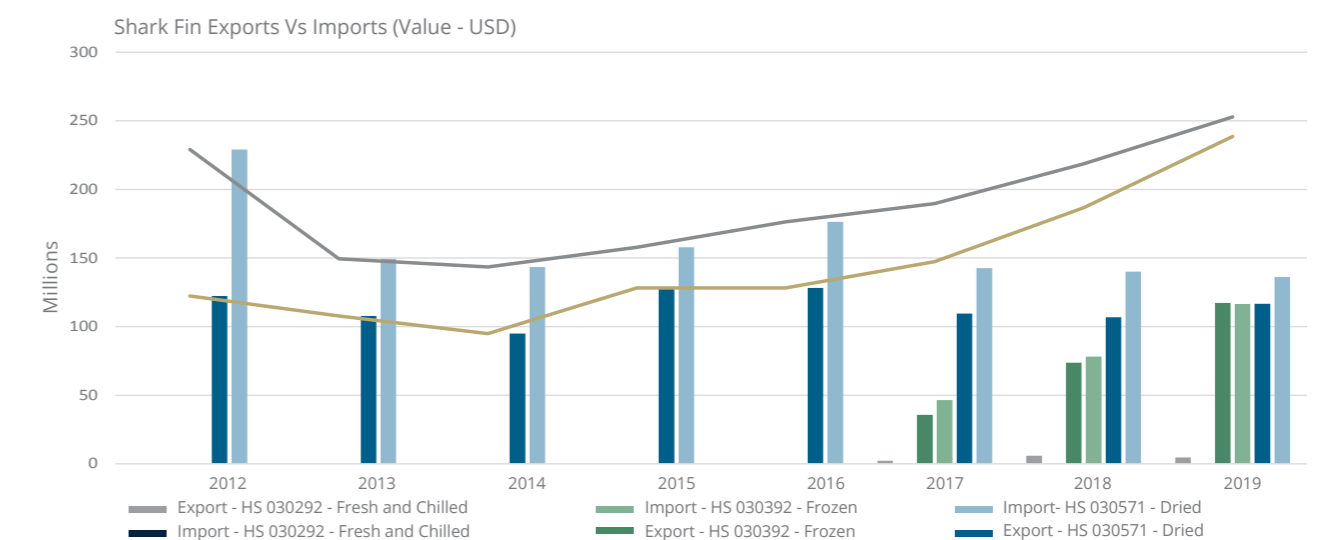
34 Only 83 countries/territories submit their data to the FAO, leading to concern that trade is under-reported, particularly in relation to Japan, Singapore, Taiwan and Yemen. This is clearly demonstrated by the data provided in Figure 1 and Figure 2 which is from the World Customs Organisation, and indicates that trade is not decreasing as has been reported by the FAO, but is in-fact on the rise again.

previously unregulated and unreported. The first and latter reasons are positive steps towards understanding the true scale of the trade and being able to implement measures to ensure that the trade is sustainable. Conversely, these trends indicate that there is still much to be done to protect shark populations and ensure they are being fished sustainably.

Figure 2 shows the comparison for imports versus exports for both (A) quantity and (B) value of shark fin for the newly created HS Codes for shark fin. There is a clear increase in trade volume year upon year from 2015 – 2016 onwards following several years of relatively stable volumes. As of 2019, the value of imports versus exports is almost at parity, however, as stated above, it is likely that reporting of this data is not yet complete and therefore any conclusions drawn from this data should be viewed with caution.



A.



B.

Figure 2: Shark fin exports vs imports for newly created shark fin specific HS Codes (minus the processed fins code 160418) (A) Quantity – Tons³⁵ (B) Value in USD. The differences between exports and imports can be an indicator of alternate HS Codes being utilised in different countries but can also be an indicator of trade based money laundering when the values of imports vs exports are significantly different.

35 This is metric tons, verified through comparison of values reported in kilograms. Throughout this report, volumes of trade are provided in the unit of measurement reported in the reference the value is taken from.



There is also a clear and definite shift in trade dynamics from dried shark fin to frozen shark fins by volume, with frozen shark fin imports and exports almost double that for dried shark fin. Notably, the value of frozen and dried fin exports is equivalent despite the large difference in volumes, indicating the value of dried shark fins per kilo is significantly higher than for frozen shark fin. This shift offers a wide range of possible measures to improve identification and traceability, as frozen shark fins are much easier to identify than dried ones (which are typically stripped of many identifying features). However, it also comes with risks, as it makes it easier and cheaper for factory vessels harvesting on the high seas to fin sharks at sea and import their catch directly to import markets without the need to land in a secondary port for the fins to be dried. This also reduces the number of links in the trade chain where law enforcement could detect illegally fished or protected shark species.

Another indicator that shark fin trade is ongoing and showing signs of increase, is the number and volume of shark fin seizures around the world. In January 2020, US Fish and Wildlife Services seized 1 million dollars worth (635 kg) of dried shark fin in Florida.³⁶ On 8 May 2020, Hong Kong intercepted the largest ever illegal shark fin haul; with 26 tons of shark fin being seized. This is estimated to correspond to 38 500 sharks and was made up of mostly threatened thresher and silky sharks,³⁷ both of which were listed on CITES in 2019. The previous record was 4.2 tonnes which was seized in 2019.³⁸ Seizures in Australia of shark fin have been relatively rare over the years, however, a seizure in 2015 of 3 206 shark fins in Queensland indicates there could be a significant unidentified black market.³⁹ This is further supported by a more recent conviction in 2019 of a skipper and a deckhand who were found with 31 shark fins onboard their vessel.⁴⁰

Given the high demand for, and value of shark fin, there is a strong incentive for illegal and unreported fishing to occur. There has been significant growth in awareness of the impact of unsustainable shark fishing and an associated increase in measures designed to limit unregulated shark finning.⁴¹ How effective these measures are remains to be seen, as there are limited quantifiable metrics to measure the impact of conservation management measures, including controls on shark finning, on sharks. Many listed threatened sharks, including in Australia, show no sign of recovery.⁴² Therefore, more decisive and strict management measures are needed to ensure sustainability of shark populations.

AUSTRALIAN SHARK FIN TRADE

The most recent Shark Assessment Report published by Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) in November 2018,⁴³ states that Australia “imports a significantly larger quantity of shark products than it exports”. Prior to 2007, Australia imported an average of 6.43 tonnes of shark fin per year. However in 2007, there was a 10 960% increase in imports, all from Thailand, where shark finning is known to still be practiced,⁴⁴ with 1 099 tonnes being imported that year alone. Subsequent years saw imports from Thailand stabilise to around 250 tonnes per year. Overall, from 2007 – 2011 Australia’s shark fin imports averaged 441 tonnes per year according to FAO data. FAO data is reported by fisheries and therefore relies on data reported directly from fishers, not exporters. UN COMTRADE data and ABARES data utilises data reported against HS Code 0305590025 – *Shark fin dried, whether or not salted, not smoked*, supplied by the Australian Bureau of Statistics from 2000 until 2019. Figure 3 highlights the large discrepancies between different reporting mechanisms and indicates that official imports into Australia can be significantly higher than those reported by government departments such as ABARES⁴⁵. There is a clear need for Australia to improve data consistency to develop a common and accurate understanding of the level of shark fin trade in Australia. As shown in Figure 3, although these three data sources do not show much alignment, they do indicate that there is a substantial trade of shark fin into Australia.

36 <https://www.ecowatch.com/shark-fins-seized-miami-2645042737.html?rebellitem=2#rebellitem2>.

37 Sophie Lewis, Hong Kong seizes record-breaking 28 tons of shark fins — worth over \$1 million, 8 May 2020, Guardian Newspaper, accessed on 10 May 2020, <https://www.cbsnews.com/news/hong-kong-seizes-record-breaking-28-tons-shark-fins-worth-1-million/>.

38 Sophie Lewis, Hong Kong seizes record-breaking 28 tons of shark fins — worth over \$1 million, 8 May 2020, Guardian Newspaper, accessed on 10 May 2020, <https://www.cbsnews.com/news/hong-kong-seizes-record-breaking-28-tons-shark-fins-worth-1-million/>.

39 <https://www.abc.net.au/radionational/programs/breakfast/how-involved-is-australia-in-the-global-shark-fin-trade/>.

40 <https://www.marineconservation.org.au/illegal-shark-finning-in-the-great-barrier-reef-shows-need-for-observers-on-boats/>, 4 April 2019, Accessed on 12 October 2020.

41 WildAid (2014) Evidence of Declines in Shark Fin Demand – China.

42 Dr Nick Rayns, 2019. Review of Recovery Planning for Threatened Sharks: Status, Analysis & Future Directions - A report prepared for Australian Marine Conservation Society and Humane Society International, Future Catch Consulting.

43 James Woodhams and Cher Harte, Shark Assessment Report 2018, Research by the Australian Bureau of Agricultural and Resource Economics and Sciences, November 2018

44 <https://wildaid.org/thailand-eating-too-much-shark-fin/>; <http://www.rapid-asia.com/blog/demand-shark-fin-potentially-increasing-thailand/>; <https://www.efe.com/efe/english/life/thailand-was-largest-exporter-of-shark-fins-during-2012-16-says-ngo/50000263-3330401>.

45 ABARES data is also reported by financial year, rather than calendar year. There is therefore a slight lag shown in Figure 3, as data for 2012/2013 financial year will be shown against 2013.

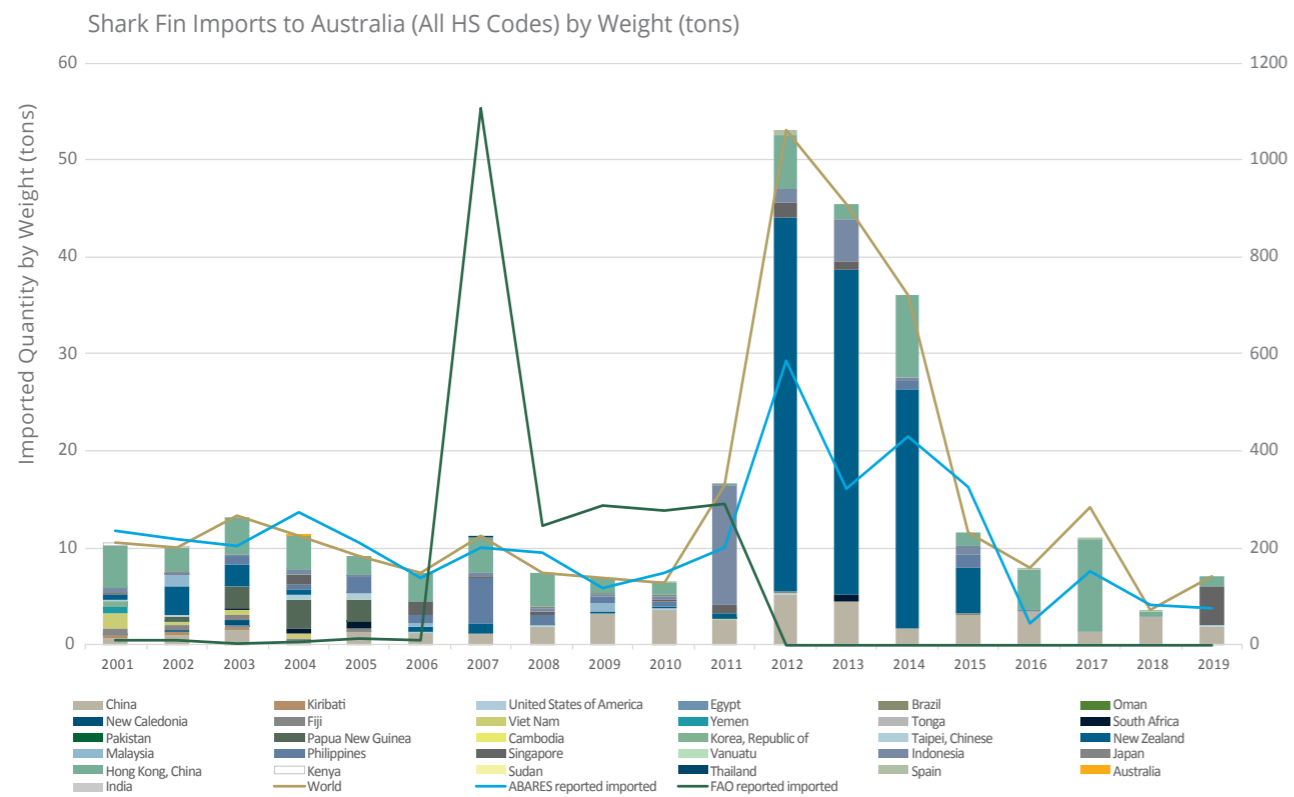


Figure 3: Shark fin reported imports in Australia using COMTRADE, FAO and ABARES datasets. The country specific data shown above is sourced from www.trademap.org which relies on COMTRADE and other country specific trade data available. The solid red line represents the most recently available data from ABARES, while the solid bright blue line is the data reported in Dent and Clarke (2015) which is the most recent publicly available FAO data that has been analysed for shark fin imports to Australia. Due to the size of imports reported under the FAO data, this is graphed against the second axis in tons.

However, Australia also captures large quantities of sharks (and therefore shark fin) as demonstrated by the fact that Australia was consistently in the top 25 countries for world captures of chondrichthyan fishes, for years 2000–2011.⁴⁶ According to FAO data, between 2000 and 2011 Australia exported an average annual volume of 105 tonnes or 8.8 million USD of mainly “dried, unprocessed” fins, which represents approximately 1% of the total imports into China and Hong Kong.⁴⁷ Unfortunately, there are no more recent records for Australian trade, as FAO has not published any recent reports and there is limited trade reported as exported from Australia in UN COMTRADE. However, it is possible to gain an understanding of Australian exports of shark fin by comparing importer reported quantities for a variety of shark fin HS Codes in UN COMTRADE. ABARES has also recently started reporting shark fin exports, however, these figures are extremely low compared to the importer reported values from UN COMTRADE and previous FAO data⁴⁸ (refer to Figure 4). It is noticeable that there are no reported imports to Hong Kong from Australia following 2015. It is unclear whether this is genuine reduction in trade, or whether it is an artefact of a lack of reporting as Hong Kong’s utilisation of the new HS Codes also appears limited. Australian data on exports across all platforms is inconsistent. Australia, as a developed country with access to advanced technology and data systems and that claims to be a leader in shark management, should have a better system of record keeping than Figure 4 suggests.

46 Dent, F. & Clarke, S. 2015. State of the global market for shark products. FAO Fisheries and Aquaculture Technical Paper No. 590. Rome, FAO. 187 pp.
 47 Dent, F. & Clarke, S. 2015. State of the global market for shark products. FAO Fisheries and Aquaculture Technical Paper No. 590. Rome, FAO. 187 pp.
 48 Dent, F. & Clarke, S. 2015. State of the global market for shark products. FAO Fisheries and Aquaculture Technical Paper No. 590. Rome, FAO. 187 pp.

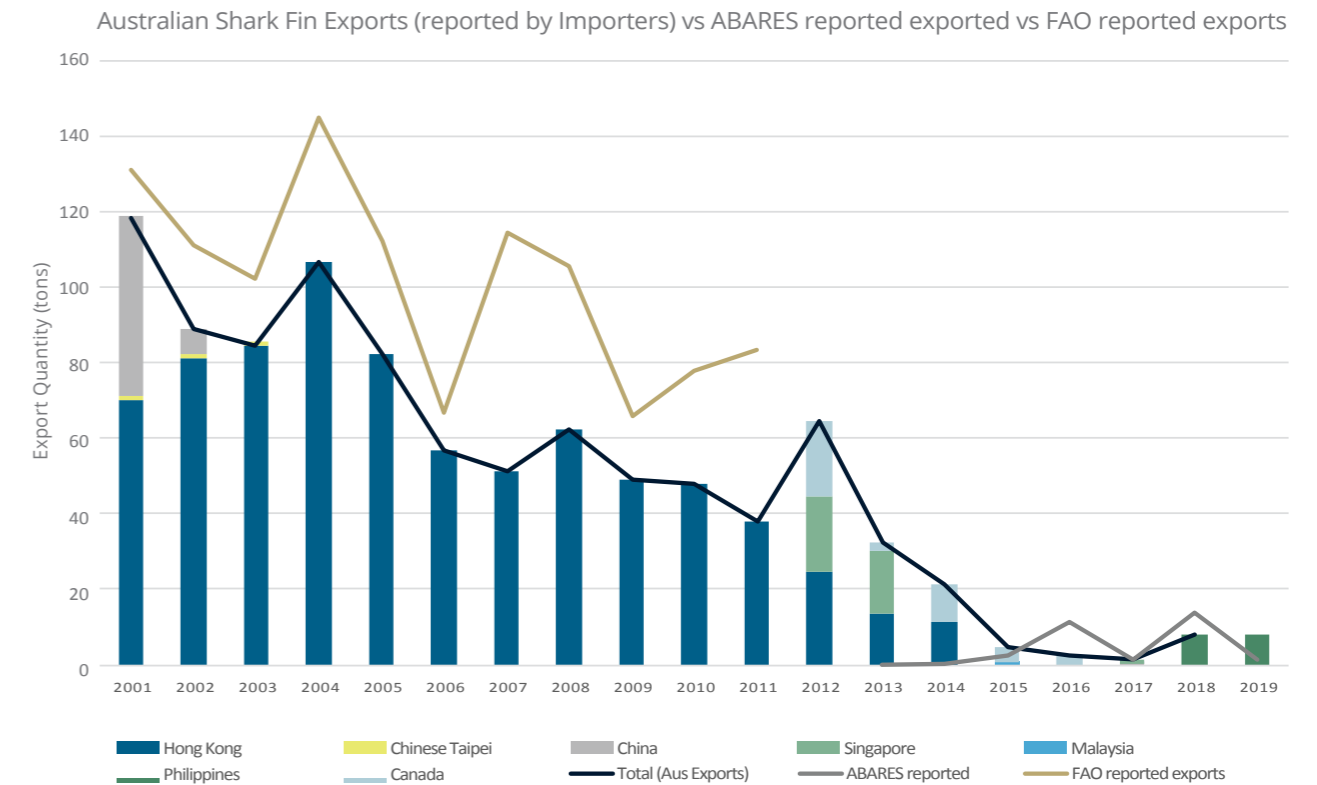


Figure 4: Australian Shark Fin Exports (reported by importers) from COMTRADE vs ABARES reported exported vs FAO reported imports from Australia by importers (from Dent, F. & Clarke, S. 2015).

Australia’s record keeping, particularly with regards to shark fin exports is not up to international standards. Australia must, as a matter of urgency, begin utilising HS Codes that allow adequate tracking and reporting of shark fin leaving and entering the country. This would provide more certainty that shark trade into and out of Australia is both accurate and demonstrably sustainable. The current level of uncertainty around shark fin imports and exports leaves Australia open to continued criticism about our role in this unsustainable fishing practice and trade.

Australia’s consistently high shark catch creates a significant moral imperative for Australia to resume its role as a world leader in marine conservation. By strengthening its commitment to sustainable shark fishing through the introduction of management measures to reduce shark fin trade resulting from unsustainable practices, Australia can help to ensure recovery of shark species to sustainable populations.

RECOMMENDATION 1

Australia should use the recent international ‘HS Codes’ for shark fin trades, ensuring that trade is accurately reported entering and leaving Australia.

SHARK FISHERY MANAGEMENT

In 1999, the FAO developed the International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks).⁴⁹ Australia has participated in this voluntary international instrument since the outset. The fundamental principles or aims of the IPOA-Sharks are:

- Ensure that shark catches from directed and non-directed fisheries are sustainable;
- Assess threats to shark populations, determine and protect critical habitats and implement harvesting strategies consistent with the principles of biological sustainability and rational long-term economic use;
- Identify and provide special attention, in particular to vulnerable or threatened shark stocks;
- Improve and develop frameworks for establishing and co-ordinating effective consultation involving all stakeholders in research, management and educational initiatives within and between States;
- Minimise unutilised incidental catches of sharks;
- Contribute to the protection of biodiversity and ecosystem structure and function;
- Minimise waste and discards from shark catches in accordance with article 7.2.2.(g) of the Code of Conduct for Responsible Fisheries (for example, requiring the retention of sharks from which fins are removed);
- Encourage full use of dead sharks;
- Facilitate improved species-specific catch and landings data and monitoring of shark catches; and
- Facilitate the identification and reporting of species-specific biological and trade data.

The second National Plan of Action on Sharks (Shark Plan 2)⁵⁰ that was developed in 2012 is Australia's roadmap for implementation of IPOA-Sharks in Australia. The 2018 ABARES Shark Assessment Report states it will help inform the third iteration of the Shark Plan for Australia, however, the Australian Government subsequently appears to have decided to retain Shark Plan 2 in its current form.⁵¹

Over 20 years after the initial IPOA-Sharks was developed, progress towards implementing these measures remains slow. Two of the most recent reports to government on shark status, 2018 Shark Assessment Report⁵² and a 2019 Fisheries Research and Development Corporation (FRDC) Research Report by Simpfendorfer *et al* (2019), a sharks report card,⁵³ both report that improvements are still needed for even basic measures such as species specific reporting of catch and discards. Without having species specific reporting, it will be difficult to be able to deliver on the other aspects of IPOA-Sharks. Ecological Risk Assessments for shark species are often based on limited to no catch data, coupled with limited knowledge of factors such as pupping areas, migratory pathways and breeding patterns for the majority of shark species in Australian waters. There is also limited to no monitoring of shark populations to ensure that management measures are either driving recovery of threatened species' populations or, at least, not having a detrimental impact. Impact is usually measured by increases or decreases in

49 Found at: <http://www.fao.org/3/a-x3170e.pdf>.

50 Found at: <https://www.agriculture.gov.au/fisheries/environment/sharks/sharkplan-2>.

51 <https://www.agriculture.gov.au/fisheries/environment/shark>.

52 James Woodhams and Cher Harte, Shark Assessment Report 2018, Research by the Australian Bureau of Agricultural and Resource Economics and Sciences, November 2018.

53 Simpfendorfer, C., Chin, A., Rigby, C., Sherman, S., White, W., Shark futures: a report card for Australia's sharks and rays', Centre for Sustainable Tropical Fisheries and Aquaculture, James Cook University, May, CC BY 3.0., 2017.





catch per unit effort data for fisheries, but when this information is not kept to species level, it is difficult, if not impossible, to effectively monitor detrimental impacts. This is even more so for shark species that are non-target species and predominantly caught as by-catch in up to 100 different fisheries⁵⁴.

In Australia, the regulation of fisheries is divided between State, Territory and Commonwealth fisheries legislation, as shown in Table 1, and the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act). In general terms, permission to fish is governed under the relevant fisheries legislation, while environmental assessments for Commonwealth-regulated fisheries and export controls are contained in the EPBC Act.

Rules for exporting shark products vary depending on the fishery the shark is caught in, and the species being caught. All export fisheries are required to undertake environmental assessment and obtain a Wildlife Trade Operation (WTO)⁵⁵ approval prior to export. It is common practice in Australia, to place fisheries with a valid WTO on the List of Exempt Native Species⁵⁶ (LENS). The LENS is a regulatory mechanism that allows anything listed on it to be exported from Australia without an export permit. However, if a fishery catches a species that is CITES listed⁵⁷ or listed as a Matter of National Environmental Significance on the EPBC Act then the entire fishery is not able to be listed in the LENS. Instead, such fisheries are typically listed in the LENS subject to exclusions for CITES species, listed threatened species under the EPBC Act (excluding species listed as Conservation Dependent), and sometimes listed Migratory Species. If the shark is caught in a State/Territory or Commonwealth fishery that is covered by a valid WTO listed on the LENS, no export permit is required to export the product out of the country.⁵⁸ As a consequence, it is generally the case that a specific export permit will only be required to export shark products if the species is a listed species under the EPBC Act. These arrangements create a situation where unidentified shark fins, which may be from finned sharks, could be exported from Australia without any oversight if they are claimed to be from a LENS listed fishery (e.g. Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFF)⁵⁹). This could be one reason why there are limited exports reported from Australia compared to imports reported from other countries.

54 Koopman, M. and Knuckey, I. (2014). Advice on CITES Appendix II Shark Listings. Report to Department of Sustainability, Environment, Water, Population and Communities. Fishwell Consulting. 144 pp. Available at <https://www.environment.gov.au/system/files/resources/39c06695-8436-49c2-b24f-c647b4672ca2/files/cites-appendix-ii-shark-listing-advice.pdf>.

55 See EPBC Act, s303FN.

56 See EPBC Act, s303DB and List of Exempt Native Species Instrument 2001.

57 See EPBC Act ss303CC – 303CK (in relation to export permits for CITES species).

58 See EPBC Act ss303DA(b) and 303DB (in relation to export permits for regulated native species).

59 Current as at November 2020

Listing sharks under the EPBC Act generally occurs when either CITES⁶⁰ or the Convention on Migratory Species (CMS)⁶¹ lists the species on one of their appendices, or when the Threatened Species Scientific Committee (TSSC) assesses the species against the threatened categories of the EPBC Act and lists it independently of an international convention listing.⁶² This occurred recently with the scalloped hammerhead, which was originally listed on CITES in 2016 (along with great and smooth hammerheads as lookalike species) in acknowledgement of their prized status in the fin trade. This means these species require a CITES Permit for export. The TSSC subsequently assessed the species for potential inclusion on the list of threatened species under the EPBC Act (species may be listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable or conservation dependent⁶³). While the TSSC found that scalloped hammerhead met the criteria for listing as Endangered; they recommended that the species be listed as Conservation Dependent⁶⁴ despite there being no rebuilding strategy in place to recover the species. Of note however, is that the TSSC has recently added the Scalloped Hammerhead onto the Finalised Priority Assessment List⁶⁵ for reassessment as Endangered. This is presumably due to the failure to implement conservation management measures for the recovery of the species – a requirement for their Conservation Dependent listing. The Assessment completion time is expected in April 2022.

Being listed as Conservation Dependent means the species is not considered a Matter of National Environmental Significance.⁶⁶ Another consequence of a Conservation Dependent listing is that other activities such as dredging or port construction that may have impacts on key habitat for this species (e.g. inshore pupping grounds), will not trigger the need for environmental assessment and approval under the EPBC Act on this basis. While this presents additional challenges for best practice shark management in Australia, it is outside the scope of this paper to address these issues.

Prior to approving a commercial export permit for CITES listed species, the relevant government agency must determine that the activity will not be detrimental to, or contribute to trade which is detrimental to, the survival of the species. Following the 2013 CITES listing of five species of sharks, the Australian Government developed species specific non-detriment findings for the following shark species:

60 EPBC Act, s303CA.

61 EPBC Act, s209.

62 EPBC Act, s178 – 180.

63 See EPBC Act, s178 and 179.

64 See *Sphyrna lewini* (scalloped hammerhead) Listing Advice, dated 12 September 2017, found here: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/85267-listing-advice-15032018.pdf>.

65 <https://www.environment.gov.au/system/files/pages/e0a90020-a411-4508-adac-53758c304de1/files/2020-finalised-priority-assessment-list.pdf>

66 See EPBC Act, s18A(4)(a)(ii).



- oceanic whitetip shark (*Carcharhinus longimanus*),
- smooth hammerhead (*Sphyrna zygaena*),
- great hammerhead (*Sphyrna mokorran*),
- scalloped hammerhead (*Sphyrna lewini*),
- porbeagle shark (*Lamna nasus*).

Koopman and Knuckey (2014)⁶⁷ were engaged to investigate the state of shark fishing in Australia for the above five species, but their findings are also highly relevant for other shark species. The report identified the numbers of fisheries that interact with these species, and therefore the likelihood of interaction with other shark species that occupy similar habitats. The report recommended the following minimum management measures be implemented across all fisheries to ensure shark fishing is sustainable in Australia:

- An improved understanding and management focus on particular fisheries where Illegal, Unreported and Unregulated (IUU) fishing may be a problem;
- Species level reporting in log books;
- Landing of sharks with fins naturally attached;
- Mandatory discard reporting to species level;
- Maximum size limits;
- Trip limits; and
- Further measures to reduce incidental capture and post release mortality as practically appropriate to specific fisheries and gear types.

Koopman and Knuckey (2014) also recommended fishery specific management measures, which are reproduced in Annex C.

More recently, Simpfendorfer *et al* (2019)⁶⁸ stated that only 18 species (9%) of sharks are overfished in Australia, however there was insufficient information to determine the status of a further 39 species or 21% of the species assessed. Simpfendorfer *et al* (2019) emphasises the importance of government having “access to comprehensive and accurate information” but

67 Koopman, M. and Knuckey, I. (2014). Advice on CITES Appendix II Shark Listings. Report to Department of Sustainability, Environment, Water, Population and Communities. Fishwell Consulting, 144 pp. Available at <https://www.environment.gov.au/system/files/resources/39c06695-8436-49c2-b24f-c647b4672ca2/files/cites-appendix-ii-shark-listing-advice.pdf>.

68 Simpfendorfer, C., Chin, A., Rigby, C., Sherman, S., White, W., Shark futures: a report card for Australia's sharks and rays', Centre for Sustainable Tropical Fisheries and Aquaculture, James Cook University, May. CC BY 3.0., 2017

that “the available information is often fragmentary and difficult to access [with] most [ecological risk] assessment[s] focussed on only a few species targeted by fisheries”. Even for many of those species, such as the pelagic and bigeye thresher sharks, which have been assessed as declining, there is no catch data available within the assessments in the shark report card⁶⁹ beyond a simple statement that they are rarely caught and, when they are, they are “often released alive”. Four out of eight Australian jurisdictions with fisheries responsibilities (NSW, Victoria, Queensland and Tasmania) have “unspecified shark” or “unspecified whaler” as one of their top 10 “shark species” captured within their jurisdictions (78-99% of their total shark catch).⁷⁰ Even Indonesia, a country that is often poorly regarded in relation to shark management measures, records shark catches to species level. This was recently demonstrated by their ability to provide detailed catch data to species level to the Indian Ocean Tuna Commission (IOTC)/CITES Shark Data Mining Workshop (2017), whereas Australia could not.⁷¹

69 Appendix E of Simpfendorfer, C., Chin, A., Rigby, C., Sherman, S., White, W., Shark futures: a report card for Australia's sharks and rays', Centre for Sustainable Tropical Fisheries and Aquaculture, James Cook University, May. CC BY 3.0., 2017

70 James Woodhams and Cher Harte, Shark Assessment Report 2018, Research by the Australian Bureau of Agricultural and Resource Economics and Sciences, November 2018.

71 Joel Rice, Final summary report of the stock status of oceanic whitetip sharks and CITES-listed hammerhead sharks based on the results of the IOTC/CITES Shark Data Mining Workshop (IOTC-2017-WPEB13-INF01), 117pp.

RECOMMENDATION 2

All Australian jurisdictions should implement, as a matter of urgency, best practice management recommendations in accordance with the International Plan of Action for the Conservation and Management of Sharks, the second edition of the Australian National Plan of Action on Sharks, and previous government commissioned reviews identifying key actions required to improve shark conservation and management, as outlined in Annex C.

RECOMMENDATION 3

All relevant shark conservation management measures outlined in Annex C should be included as conditions on all export fishery Wildlife Trade Operation approvals.¹

1 See Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), s303FN.

RECOMMENDATION 4

All commercial fisheries that capture sharks should require logbooks that record catches and discards to species level where possible, and at least to genus or family level. This data should be publicly reported on a quarterly basis. There should be no “shark other” category.

FINS NATURALLY ATTACHED

ustainable shark fishing requires improving confidence that all shark fins are obtained from sustainable shark catches and are not being sourced from IUU fishing. A key tool in preventing finning and ensuring fins are sourced sustainably, is by requiring fins to remain naturally attached. Fifty-five countries and twelve US States have implemented regulations specific to the management of shark finning.⁷² Countries with legislation preventing finning or requiring fins naturally attached include Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, El Salvador, European Union, Gambia, Guinea, India, Malta, Nicaragua and Seychelles.⁷³

Several countries are also in the process of strengthening finning legislation. For example, amendments made to US fisheries laws in 2000 and 2010 (16 USC §1857(P) – FOr a) created prohibitions designed to curtail shark finning. Those prohibitions included removing the fins of a shark at sea, having possession of detached fins aboard a fishing vessel, landing fins not naturally attached to the corresponding carcass, and undertaking trade in fins taken or sold in violation of foreign laws, treaties or domestic conservation measures. There are also exceptions to these prohibitions, including for certain dogfish species and for traditional fisheries, education and scientific purposes. Unfortunately, these prohibitions did not prevent lawful trade in shark fins, including fins imported from countries without adequate regulation of finning. This has left open the possibility of fins from threatened species entering the US. House Bill HR 737 and Senate Bill 877 (which had not passed the Senate at the date of writing) are intended to add to the existing protections by prohibiting the possession, offer for sale, sale or purchase of shark fins or product containing shark fins across all of the US. Currently, 14 US States have such laws,⁷⁴ but there is evidence that trade has simply shifted to neighbouring states whenever new legislation at the State level is passed.⁷⁵

Whilst all Australian jurisdictions have some controls on shark finning,⁷⁶ as summarised in Table 1, the management measures in some jurisdictions are insufficient to prevent illegal finning and, in some cases, continue to allow legal finning. Some jurisdictions, such as NSW, generally prohibit fishers from removing a fin from any species of shark while on board a boat so that the sharks must be landed whole.⁷⁷ However, in other jurisdictions⁷⁸ fishers are permitted to land fins separately from shark bodies under certain circumstances. This approach creates a regulatory gap which may facilitate live shark finning, discarding of shark trunks and high grading (i.e. retaining the most lucrative fins and flesh even if they are derived from different animals). These arrangements also complicate the species identification and data collection that is necessary to prevent overfishing and exploitation of protected species.



Hammerhead. © Liquid Productions, LLC

72 <https://awionline.org/content/international-shark-finning-bans-and-policies>.

73 WildAid (2014) Evidence of Declines in Shark Fin Demand – China. A list of national laws, multi-lateral agreements, regional and global regulations on shark protection and shark finning as at October 2019 is available at: <https://www.hsi.org/wp-content/uploads/2019/06/2019-Shark-Fishing-and-Finishing-Regulations.pdf>.

74 <https://www.humanesociety.org/news/new-jersey-gov-murphy-signs-shark-fin-prohibition-law>.

75 <https://usa.oceana.org/press-releases/texas-becomes-10th-state-ban-trade-shark-fins>; <https://usa.oceana.org/blog/congress-introduces-bill-ban-trade-shark-fins-united-states>.

76 Commonwealth (Fisheries Management Regulation 2019 (Cth), s67), NSW (Fisheries Management Act 1994 (NSW), s20B), Victoria (Fisheries Regulations 2019 (Vic), ss5 and 130), South Australia (Fisheries Management (General) Regulation 2017 (SA), s18), Western Australia (Fish Resources Management Regulation 1995 (WA), s16B), Queensland (Fisheries Act 1994 (Qld), s34 and Fisheries Declaration 2019 (Qld), Chapter 3, Part 2 and Schedule 2), Northern Territory (Fisheries Regulations 1992 (NT), s100F) and Tasmania (Fisheries (Scalefish) Rules 2015 (Tas), s16).

77 Fisheries Management Act 1994 (NSW) 20B. Exemptions Fisheries Management (General) Regulation 2010 Part 5 Division 8 Clause 95A Removal and possession of certain parts of sharks permitted.

78 See, for example, Queensland (Fisheries Act 1994 (Qld) s34 and Fisheries Declaration 2019 Chapter 3, Part 2 and schedule 2) and Western Australia (Fish Resources Management Regulations 1995 (WA) s16B(2)).

Table 1: Australian regulation of shark finning and whether it delivers fins naturally attached

Jurisdiction	Regulatory Instrument	Regulation terms
Commonwealth	<i>Fisheries Act 1991</i> <i>Fisheries Management Regulations 2019</i> s67	Commonwealth waters, from three to 200 nautical miles offshore, are regulated by the Australian Government. The Regulation prohibits the taking or retention of a dorsal, pectoral or caudal fin of a shark, if it has been removed from the carcass of a shark before landing.
Australian Capital Territory	N/A	N/A
New South Wales	<i>Fisheries Management Act 1994</i> s20B <i>Fisheries Management (General) Regulation 2019</i> , s90	All sharks ⁷⁹ must be landed with fins attached, including when the shark has been cut into portions. There are exceptions in the regulations including to allow the belly flaps and ventral fins to be removed from certain species and to allow the gill, guts and/or head to be removed in most cases.
Northern Territory	<i>Fisheries Regulations 1992</i> s100F, s107S, s141JK	The commercial Offshore Net and Line Fishery is subject to a rule requiring all sharks (which is defined to mean all fish of Class Chondrichthyes) to be landed with fins naturally attached. This rule is subject to an exception which allows the Joint Authority to give written authorisation for sharks to be landed without fins attached. The Demersal Fishery and Timor Reef Fishery are subject to rules prohibiting fish from being processed ⁸⁰ before unloading. Other fisheries are not subject to similar rules.
Queensland	<i>Fisheries Act 1994</i> , s34; <i>Fisheries Declaration 2019</i> , Chapter 3 and schedule 2	Shark ⁸¹ finning is generally not permitted in Queensland waters, however, there are some exceptions based on location and licence type, as well as other factors which may allow practices such as high grading to occur. The substitution of higher value meat with higher value fins, and unnecessary discarding of useable product is known as 'high grading'. On 30 September 2020, the Queensland Government amended the Fisheries Declaration to require sharks caught on the east coast of Queensland to be landed with their fins naturally attached. These new requirements are not applicable to fisheries in the Gulf of Carpentaria, who are expressly exempt from the newly introduced provisions for fins naturally attached. The GOCIFF is also listed on the List of Exempt Native Species, meaning any sharks caught in this fishery, can be finned, and have their fins exported without the need for an export permit – a huge loophole in the current regulator system.
South Australia	<i>Fisheries Management (General) Regulations 2017</i> r18	All sharks (which is defined to include any species belonging to Class Chondrichthyes) must be landed with dorsal, pectoral and anal fins attached. It is illegal to 'mutilate' a fish at sea (r 18(5)(2)). 'Mutilate' is defined as to 'divide, cut up, mangle or dismember fish in any way but does not include: a. the removal of the guts or scales of fish; or b. in the case of sharka i. the removal of pelvic fins and claspers; or ii. the removal of the tail at the sub-terminal notch, leaving the caudal lobe attached to the body.'

79 'Shark' is not defined, with the result that it is unclear whether this provisions also applies rays, skates and chimeras.

80 'Process' is defined in the Act to include cutting, shelling and the use of all methods of manufacture.

81 Schedule 2 of the Fisheries Declaration 2019 includes general rules for sharks and general rules for rays, as well as separate rules for some specific shark and ray species. The rules vary depending upon factors such as the person taking the fish, the licence class and location.

Jurisdiction	Regulatory Instrument	Regulation terms
Tasmania	<i>Fisheries (Scalefish) Rules 2015</i> Division 3 s16	It is an offence for a person to be in possession of a shark if the dorsal, pectoral and caudal fins of the shark ⁸² are not attached to its body and must not be in possession of shark fins without the trunks or bodies from which they came.
Victoria	<i>Fisheries Regulations 2019</i> (Vic), ss130 and 5 (definition of 'carcass')	Sharks and rays (which includes any species of ray, skate or guitarfish) must be landed with fins naturally attached. ⁸³
Western Australia	<i>Fish Resources Management Regulations 1995</i> r16B	All parts of sharks and rays are required to be on the boat together however, there is an exemption that allows for sharks to be filleted at sea. This creates a regulatory gap which makes it possible to remove fins from most species of shark while at sea.

A better solution is for all jurisdictions to introduce fins naturally attached legislation whereby sharks can only be landed whole. Key states requiring further work in this area are Western Australia, the Northern Territory and Queensland who all have some measures to prevent finning but still allow various exemptions that mean the practice can still occur within their waters.

In 2019, Queensland updated its fisheries legislation with the *Fisheries (Sustainable Fisheries Strategy) Amendment Act 2019* (Qld) and associated subordinate legislation. The legislation made some positive changes, including introducing an offence for trafficking of priority fish (which includes unauthorised trafficking of shark fins), with a maximum penalty of 3000 penalty units or 3 years imprisonment.⁸⁴ However, the legislation failed to redress shark finning regulatory gaps and major issues within the East Coast Inshore Fin Fish Fishery (ECIFFF) have highlighted the lack of implementation of the fishery regulations, and agreed management measures within their WTO.⁸⁵

On 30 September 2020, the Federal Environment Minister took the significant step of cancelling the WTO of the ECIFFF, primarily for failure to meet WTO conditions requiring implementation of shark management measures for hammerheads, and other threatened species.⁸⁶ There have been wide ranging reports of discarding of endangered hammerheads within the fishery, with several arrests and seizures of shark fin on operators within the fishery.⁸⁷ The Queensland Government responded by passing new

82 Note that 'shark' is not defined in this regulation or in the Living Marine Resources Management Act 1995 (Tas) in a way that clarifies whether this regulation applies to rays, skates and chimeras.

83 There is an exemption which applies to fishing concessions under the Commonwealth Act permitting the person to possess a shark or guitarfish.

84 Fisheries Act 1994 (Qld), ss89 – 89C (inserted by clause 54 of the Fisheries (Sustainable Fisheries Strategy) Amendment Act 2019 (Qld).

85 <https://www.abc.net.au/news/rural/2020-09-08/fishery-exports-under-threat-over-vast-eciff-reforms/12640210>, <https://www.theguardian.com/environment/2020/sep/08/federal-minister-revokes-queensland-fishery-licence-over-inaction-on-threatened-species>.

86 <https://www.legislation.gov.au/Details/F2020N00111>.

87 <https://www.marineconservation.org.au/endangered-hammerhead-sharks-dumped-by-thousands-data-queensland/>

regulations⁸⁸ that require all sharks landed on the east coast of Queensland to have their fins naturally attached. These rules have also increased the trip limit for incidentally caught sharks to ten for all species except hammerheads (which are predominantly limited to four). This was to encourage fishers to land caught sharks, rather than discard them overboard. In addition, the Queensland sharks and rays logbooks have been amended to require fishers to report shark discards, by number, not weight, and to identify hammerhead sharks to species level. All other sharks discarded are simply recorded under the “other sharks” category. The issue of discarding shark species overboard, without being recorded, or being recorded as “shark other” is a serious hinderance to ensuring sustainable fisheries and that ecological risk assessments conducted by state fisheries are based on accurate data and stock status assessments.

While the action to revoke the ECIFFF WTO is commendable, there are a large number of other fisheries across Australia that are failing to meet these same standards – including Queensland fisheries operating in the Gulf of Carpentaria which are not subject to the same requirements.⁸⁹ This is particularly the case for the GoCIFF, that targets sharks, and is on the LENS⁹⁰ but still allows sharks to be processed at sea, which can lead to high grading and unreported discarding. All other shark fisheries that are failing to implement suitable shark conservation management measures should be subject to the same level of scrutiny and enforcement of management requirements and remaining regulatory gaps must be closed. For example, many fishing operators have fishing licences in more than one fishery. The boundaries of fisheries may overlap meaning different fishing rules and/or gears will be allowed in the same geographic area depending on the licences a fisher has available. This makes it relatively easy for current management measures to be flouted, for example if an operator catches a shark in a restricted fishery where the species should be released, but they have a licence for another fishery where they are allowed to retain that same species. There are no measures to prevent them claiming the shark was caught under the unrestricted fishery and present that shark for export. Some jurisdictions also provide special purpose authorisations that allow fishers to fish outside normal fisheries management rules, for example, general fisheries permits (s25 of the *Fisheries (General) Regulation 2019* (Qld)) in Queensland. It is of considerable concern that special purpose authorisations can allow the additional removal of threatened species from the ecosystem and that they could be presented for export⁹¹ without having been through the same rigorous process of assessment against the sustainability guidelines that occurs for all other fisheries that have export approval. These regulatory gaps can have significant impacts on threatened

88 <https://www.legislation.qld.gov.au/view/html/asmade/sl-2020-0236>.

89 <https://www.legislation.qld.gov.au/view/html/asmade/sl-2020-0236>. Shark finning provisions in the GoCIFFF were proposed as early as 2010, but were rejected by industry in the Regulatory Impact Statement - <https://cabinet.qld.gov.au/documents/2010/Sep/Fin%20Fish%20Fishery/Attachments/Gulf-RIS-web.pdf>

90 <https://www.legislation.gov.au/Details/F2018L01734>

91 https://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=jsct/12march2008/subs/sub9.pdf.

RECOMMENDATION 5

All Australian jurisdictions should require sharks to be landed whole, with their fins naturally attached – no exemptions.

RECOMMENDATION 6

Fisheries observer programs for shark fisheries should be mandatory, and supported by an objective, scientific evaluation program. Onboard electronic monitoring of fishing vessels interacting with sharks should also be required.

shark species, where the total catch under these special use permits are not considered in fisheries assessments or their subsequent ecological risk assessments, or under non-detriment finding assessments for CITES. It is recommended that Queensland promulgate the most recent regulatory changes that require sharks to be landed with their fins naturally attached across all fisheries. While the recent Queensland regulatory changes go some way to ensuring targeted sharks are landed with their fins naturally attached, it does not stop shark finning from occurring in all Queensland waters.

In Western Australia, according to a 2018 report by the Fisheries department “*There are anti-finning and anti-filleting regulations in place in all WA shark fisheries and there are significant penalties for contravention of these regulations*”.⁹² In October 2000, regulations prohibiting the landing of shark fins only (*Fish Resources Management Act 1994* (FRMA) regs. 38E and 38F) were passed,⁹³ however these regulations do not effectively prohibit shark finning. The regulations do require that all parts of the shark be kept on the boat together, but there is an exemption that allows for sharks to be filleted at sea. This creates a regulatory gap which makes it possible to remove fins from shark while at sea leading to the practice of high grading. It is therefore recommended that Western Australia introduce a blanket prohibition on the removal of fins and filleting of sharks at sea. This could be achieved by repealing the filleting exception in r 16B(3).

In the Northern Territory, only the commercial Offshore Net and Line Fishery (ONLF) is subject to a rule requiring all sharks (which is defined to mean all fish of Class Chondrichthyes) to be landed with fins naturally attached. This rule is subject to an exception which allows the Joint Authority to give written authorisation for sharks to be landed without fins attached. In addition, the management arrangements for the ONLF identify the circumstances in which the regulator may grant an exemption under s100F(4) on a case-by-case basis. The examples given of the ‘special circumstances’ in which such an exemption may be granted include lack of

92 Braccini, M., Blay, N., Hesp, A. & Molony, B. 2018. Resource Assessment Report Temperate Demersal Elasmobranch Resource of Western Australia. Fisheries Research Report No. 294, Department of Primary Industries and Regional Development, Western Australia. 149 pp.

93 Ibid.



Blue shark. © PhotoScape

viable ports, or maintenance issues with cold storage of whole animals. However it is indicated that such exemptions are only likely to be granted on the condition that the operator must install Fishing Monitoring Equipment (FME)/electronic monitoring (such as sensors, video cameras and a computer system), to detect when and where fishing occurs and to record catch information. Protocols to govern the use of information obtained by FME are still being developed. The Demersal Fishery and Timor Reef Fishery are subject to rules prohibiting fish from being processed before unloading. No other fisheries that might catch sharks in the Northern Territory are subject to similar rules.

Legislation banning shark finning outright without any exceptions is necessary, and it must be supported by increases to observer programs, where trained independent observers monitor catches at sea and ensure appropriate reporting and compliance. Observer programs are generally accepted as the best way to ensure full compliance with fisheries requirements but the number of observer programs in place across Australia have been reduced in recent years (without scientific justification) or are completely absent, as is the case in Queensland. Observer programs remain a key feature to ensure that the Australian public can be confident that shark finning practices are not occurring despite legislative restrictions. In the absence of a proper traceability system (as outlined in the following section), 100% observer coverage or a properly designed onboard electronic monitoring system is the only way consumers can be confident that sharks are being caught in compliance with Australian fisheries regulations. Unless fisheries meet these standards, they should not be placed on the LENS.

RECOMMENDATION 7

All Wildlife Trade Operation conditions for export fisheries should require sharks to be landed whole, with their fins naturally attached.

RECOMMENDATION 8

Any fishery catching and retaining sharks should not be placed on the List of Exempt Native Species unless they are demonstrated to be sourced from a fishery that lands sharks whole with their fins naturally attached.

TRACEABILITY

Illegal, unreported and unregulated (IUU) fishing is a major issue around the world, particularly for sharks and shark fin. While many countries have banned shark fishing or shark finning within their waters, the practice continues on the high seas, with illegally harvested shark product and fins making it into the legal supply chain with relative ease.

Australia prides itself on being a world leader in oceans management⁹⁴ and shark conservation and often makes these claims at international fora around the world, particularly at CITES, CMS and various Regional Fisheries Management Organisation (RFMO) meetings.⁹⁵ The Australian Government states that it holds Commonwealth managed fisheries to high standards:⁹⁶

Australian Government managed fisheries are prohibited to practice shark finning, which involves removing the fins and discarding the body of the shark at sea. Similar measures are in place in fisheries managed by the state and territory governments. While the practice of shark finning is banned in commercial fisheries in Australia, some fisheries allow for the harvest of whole sharks of certain species. Once landed, the sharks may be processed for the sale of meat and fins and other shark products. Fishers are required to operate consistent with national, state or territory laws.

However, in addition to the regulatory gaps identified in previous sections of this report, Australia fails to ensure shark fin product entering Australia meets the same standards of protection required locally. As noted above, Australia only exported an average of 105 tonnes of shark fin a year (2000-2011), but from 2007 has imported an average of 441 tonnes of shark fin per year.⁹⁷ Those purchasing shark fin cannot know whether the shark products they are buying have come from sustainable sources, including whether product is from an endangered species or whether it was finned at sea. End-user knowledge that a product has been sustainably sourced using reputable fishing methods can only be ensured through an effective traceability system for domestic product, supported by an effective catch documentation scheme for both imports and exports. Australia cannot continue to claim to be a world leader in fisheries management and shark conservation without implementing an effective traceability system.

Being able to accurately trace product on the market back to a legal source could also increase marketability of Australia products, and could increase the value of Australia shark products in overseas markets as consumer concerns about illegal and unsustainable shark fin grow. This will only be achievable if Australia can categorically state that fins have come from sharks that were landed whole in accredited fisheries and there are no regulatory gaps that could allow finning to occur, such as fishers illegally finning and substituting more lucrative fins and meat while at sea.

Currently in Australia, there is limited traceability of product from fishery catch site to export or final domestic point of sale. While there has been improved traceability of shark fin for CITES listed species, sustainable fisheries and shark conservation management requires traceability to be applied to all sharks caught in Australian waters. A robust traceability system is essential for ensuring that illegally harvested product does not enter the legal market. A carefully designed catch documentation scheme with inbuilt traceability would prevent regulatory gaps from being exploited and placing additional risk on already threatened or vulnerable species.

⁹⁴ "Australia is a world leader in the management, conservation and sustainable use of the marine environment" Department of environment Website, 17 June 2020; <https://www.environment.gov.au/marine/international-activities>.

⁹⁵ <https://cites.org/sites/default/files/eng/com/ac/30/E-AC30-20-A1.pdf>.

⁹⁶ <https://www.environment.gov.au/marine/marine-species/sharks>.

⁹⁷ Dent, F. & Clarke, S. 2015. State of the global market for shark products. FAO Fisheries and Aquaculture Technical Paper No. 590. Rome, FAO. 187 pp.

CASE STUDY: CANADA

In June 2019, Canada introduced changes to the Canadian Fisheries Act (RSC, 1985) to strengthen requirements relating to importing and exporting shark fin to and from Canada. Following the changes, any imports or exports of shark fin must be undertaken with the fins naturally attached to a shark carcass. This represents a significant step forward in ensuring that international shark fin trade involving Canada is sourced using more responsible fishing practices.

However, equivalent provisions for domestic fisheries have not been enacted in legislation. In 2016, the Canadian Government reported that new 'mandatory measures' requiring all sharks to be landed with their fins naturally attached were to be phased in by 2018. This was a change from their previous 5% fin to weight ratio (in place since 1994).¹ Despite widespread media stating "All sharks caught in Canadian domestic fisheries must be landed at the dock with their fins naturally attached";² there are no such provisions within the legislation. It is possible that these requirements are imposed through individual fisher licences, however these are not available for public review.

While the 2019 legislative amendments (Sec 32 (1)), prohibit fishers from removing the fins from a shark and discarding the remainder of the shark overboard, there are no specific provisions that require the sharks to be landed with their fins naturally attached as there is for imports and exports. This creates an ongoing risk of high-grading. While fishers providing product for international markets will be more inclined to land sharks with their fins naturally attached, there appears to be a sizeable domestic market for which fins naturally attached is not required. This means it is not possible to be sure that shark fin that is consumed within Canada comes from a shark that was landed with its fins attached. The lack of definitive and clear cut legislation and regulations can make enforcement difficult, and risks the development of a black market in shark fin within Canada.

- 1 <https://www.dfo-mpo.gc.ca/fisheries-peches/commercial-commerciale/atl-arc/shark-finning-ailerons-de-requins-eng.html>
- 2 <https://www.canada.ca/en/fisheries-oceans/news/2019/06/government-of-canada-bans-shark-finning.html>



Three recent documents presented to CITES – Lehr (2015),⁹⁸ Mundy and Sant (2015),⁹⁹ and Lehr (2016)¹⁰⁰ – deal with traceability of shark products, provide best practices and lessons learnt, and include a case study of a recently developed catch documentation scheme in Costa Rica, the source of a large majority of shark fin products in Hong Kong. In addition to these documents, there are a range of other publications that have recommended best practice guidelines for traceability of fisheries products. These include:

- **2014:** Draft best practice guidelines for traceability – presented at the Fourteenth Session of the FAO Committee on Fisheries (COFI) Sub-Committee on Fish Trade (COFI:FT) (Bergen, Norway, 24-28 February 2014).¹⁰¹
- **2015:** Recommendations for a Global Framework to Ensure the Legality and Traceability of Wild-Caught Fish Products – Final Report, March 2015. Prepared by the Expert Panel on Legal and Traceable Wild Fish Products, a multi-disciplinary expert group convened by WWF.¹⁰²
- **2015:** Traceability Principles for Wild-caught Fish Products. WWF, April 2015.¹⁰³

While the design of a traceability system is dependent on the needs of the commodity being traded, there are three common principles for an efficient and effective traceability system:¹⁰⁴

PRINCIPLE 1: UNIQUE IDENTIFICATION

It is essential that any "unit" within the supply chain can be identified. The definition can vary depending on the product and can be an individual specimen (as is the case for Southern Bluefin Tuna) or a lot or batch. This identifier must accompany the unit throughout the supply chain and any operator who modifies the product must also be uniquely identified.

For shark fin, it would be impractical to individually mark each shark fin, however, if Australia was to implement a "fins naturally attached" policy across all fisheries, each individual shark could be provided with an individual identifier. Once the sharks are landed; and then processed; fins could be processed into batches with a new batch number identifier. With the trade data shown earlier indicating the increasing prevalence of frozen shark fins being exported compared to dried shark fin, this process would be much easier than in the past when the majority of exports were dried shark fin. The mechanism for exporting frozen shark fin is likely to result in smaller batches than historically occurred with dried shark fin which are often exported in large bags of mixed species. In any new traceability system, fins could be much more easily identified to species level if the sharks were landed whole, and processed into species specific, or genus batches for export.

PRINCIPLE 2: DATA CAPTURE AND MANAGEMENT

Traceability systems are dependent on there being a reliable, efficient, effective and comprehensive data management system in place to capture and record the steps in the supply chain where products are transformed or ownership changed (external traceability). Traceability systems that are solely paper based (or electronic moving forward) with no checks, balances and regular verification are easily abused. Experience with products such as the CITES regulated rosewood trade, which has been subject to fake permits and falsified export records,¹⁰⁵ shows the risks inherent in traceability systems where inadequate verification systems are in place.

98 Dr Heiner Lehr, Traceability study in Shark Products, CITES Secretariat, SC66 Information Document 11, 2015.

99 Victoria Mundy and Glenn Sant, Traceability systems in the CITES context: A review of experiences, best practices and lessons learned for the traceability of commodities of CITES-listed shark species, TRAFFIC, SC66 Information Document 12, 2015.

100 Dr Heiner Lehr, Catch documentation and traceability of shark products in Costa Rica – A Case Study Report, Syntesa Partners and Associates, February 2016.

101 Available at: <http://www.fao.org/cofi/29510-0d3ea0e690044579673debe9c27579459.pdf>.

102 Available at: <http://solutions-network.org/site-legaltraceablefish/>.

103 Available at: <https://www.worldwildlife.org/publications/traceability-principles-for-wild-caught-fish-products>.

104 Victoria Mundy and Glenn Sant, Traceability systems in the CITES context: A review of experiences, best practices and lessons learned for the traceability of commodities of CITES-listed shark species, TRAFFIC, SC66 Information Document 12, 2015.

105 See for example https://www.cites.org/eng/news/sundry/2007/fraud_warning.shtml; <https://eia-international.org/report/vietnam-violation-action-required-fake-cites-permits-rosewood-trade/>; <https://conservationaction.co.za/media-articles/wild-apes-traded-cites-false-permit-scam/>; <https://www.karlammann.com/pdf/cites-permitting-system.pdf>; accessed on 8 June 2020.

Data must be captured, not only along the supply chain, but also within organisations carrying out processing, recording discarded product as well as processed product (internal traceability). This can be done based on Key Data Elements (KDE) which are “essential information from a traceability perspective that needs to be captured along a supply chain”.¹⁰⁶ The level of detail required depends on the product being traded, however, the recommended minimum requirements for fish and therefore shark products, are a “who, what, where, when and how” of the fishing conducted,¹⁰⁷ including vessel registration details, fisheries licences and catch documentation considered “sufficient to provide strong evidence of legality”.¹⁰⁸

Critical Tracking Events (CTEs) are the points in the supply chain where product is transformed, for example from a whole shark into shark fins, and/or location or ownership changes. They also identify the stages in the supply chain where KDE elements must be captured to ensure an effective traceability system. Ensuring robustness of this system is essential to ensuring illegal product is not laundered into the system and given legitimacy. Therefore, ensuring adequate mechanisms are in place for verification of input data is paramount.

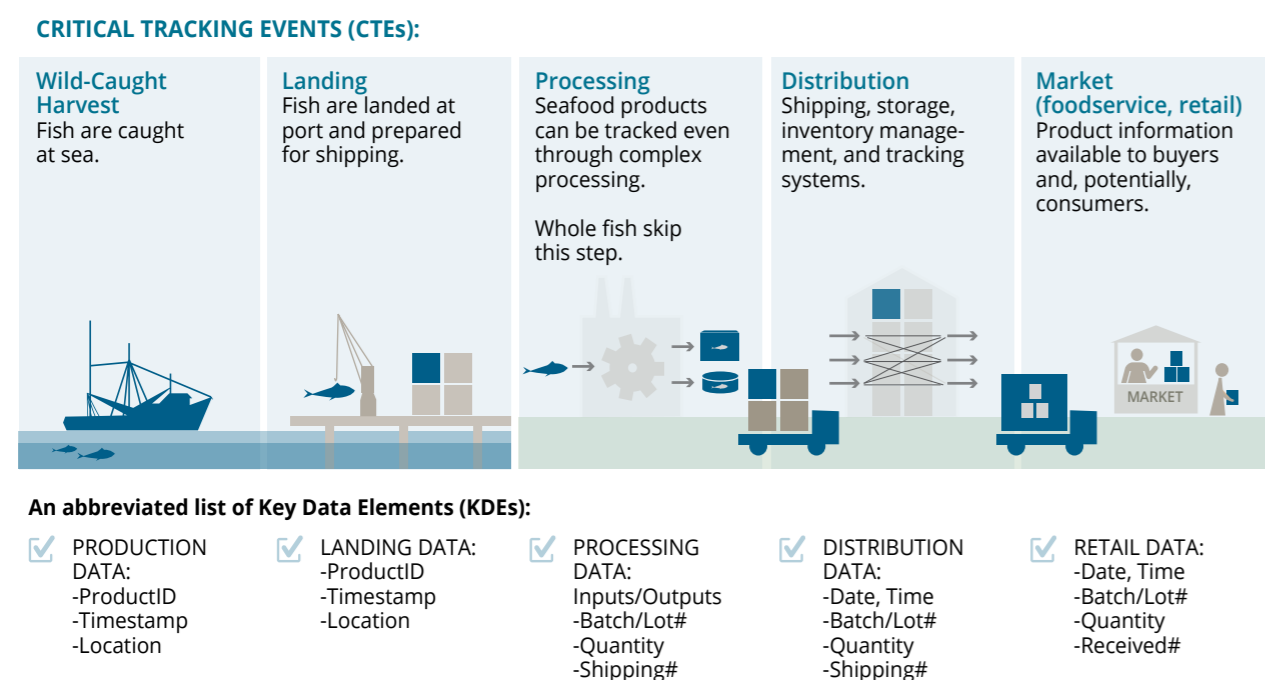


Figure 5: Critical Tracking Events for Seafood Traceability. This figure identifies the core business processes where traceability data capture is necessary to ensure a successful traceability process. Source: Expert Panel on Legal and Traceable Wild Fish Products (2015)- Figure 1, adapted from National Fisheries Institute (2011). The report is available for download at: <http://solutions-network.org/site-legaltraceablefish/>.

Traceability systems until recently have been mostly paper based, which are easily manipulated and not easy to verify across an entire supply chain. Increasingly, traceability systems are moving to electronic platforms, or a mixture of paper and electronic tracking. The system chosen will dictate the level of verification necessary at each stage and will affect the degree of accuracy.

Currently TRAFFIC is working on a shark traceability project called “SharkTrack”; where shark and their products will be tagged at point of capture on board vessels. Coast Rica has recently trialled a new a catch documentation scheme based on the OSPESCA (Central America Fisheries and

Aquaculture Organization – the relevant regional fisheries body for Costa Rica) scheme, to try and reduce the amount of illegally captured sharks in their region making it into legal markets. One of the main findings of this pilot was that the traceability system would be most effective if it were fully electronic, and would facilitate data sharing across organisations more easily, thus creating a more transparent and effective traceability system.¹⁰⁹

PRINCIPLE 3: DATA COMMUNICATION

Traceability systems rely on robust information that is able to be accessed along the entire supply chain. According to Mundy and Santt (2015), there are two types of information flow models for supply chain information.

- 1. One step up – one step down information flow model:** this is the most used model in the food industry. It requires each operator to hold information on the link in the supply chain that they received their product from and who they supply product to. However, end users of a product cannot easily trace where their product came from under this system and it does not easily allow final consumers to be assured that their shark products have come from a reputable fisher or sustainably fished stock.
- 2. Aggregated information flow model:** this system is used where it is necessary to have oversight of the entire supply chain at once. It requires data to be stored either within a single database, or through accumulation of records across the entire supply chain. This is often known as source to table traceability and is what is necessary for shark sustainability to be effectively achieved while still allowing fishing of these highly vulnerable species.

There are currently several product traceability systems available, with work underway to develop shark specific traceability systems. To be effective any system must be supported by a total prohibition on shark finning with a legally enforceable requirement to have fins naturally attached, at least at the point of landing. Under current fisheries management arrangements there is no consistent approach across Australia that ensures sharks are not finned. Once the shark is finned, traceability becomes opaque, as it allows for high-grading and easier transshipment at sea of excess fins that cannot be landed in an Australian port.

Simplifying the process for landing sharks, such that only whole sharks with fins naturally attached may be landed would greatly increase the ability to implement an effective catch documentation scheme and ensure compliance with shark finning legislation and traceability of shark products from point of capture to the end consumer. This would in turn allow for additional measures to improve the management of shark fin products into and out of Australia, such as legislation banning the import or export of fins unable to be traced to sources where sharks are landed whole with their fins naturally attached.

¹⁰⁹ Dr Heirner Lehr, Catch documentation and traceability of shark products in Costa Rica – A Case Study Report, Syntesa Partners and Associates, February 2016.

RECOMMENDATION 9

All Australian jurisdictions should work together to implement a national, enforceable shark fin traceability system, which demonstrates lawful provenance of shark fin from the time of landing to the point of final sale or export. Fisheries catching and retaining sharks should require 100% observer coverage within the fishery until such a system is in place.

¹⁰⁶ Victoria Mundy and Glenn Sant, Traceability systems in the CITES context: A review of experiences, best practices and lessons learned for the traceability of commodities of CITES-listed shark species, TRAFFIC, SC66 Information Document 12, 2015.

¹⁰⁷ Expert Panel on Legal and Traceable Wild Fish Products, 2015, <http://solutions-network.org/site-legaltraceablefish/>

¹⁰⁸ Victoria Mundy and Glenn Sant, Traceability systems in the CITES context: A review of experiences, best practices and lessons learned for the traceability of commodities of CITES-listed shark species, TRAFFIC, SC66 Information Document 12, 2015.

MANAGING INTERNATIONAL TRADE

Given the high volume of shark fin traded on international markets, strengthening regulation of international trade is widely seen as a key component of best practice shark fin management.¹¹⁰ In the absence of a suitable traceability system for shark species and their products, some international jurisdictions have begun implementing blanket bans on the possession and sale of shark fins within their jurisdictions. This has occurred in 14 US States and three territories in the Pacific with a Federal bill pending approval by the Senate, four Canadian provinces (Brandford, Oakville, Mississauga and Toronto) and several other nations including Congo (Brazzaville), Bahamas, Brunei Darussalam, Egypt, French Polynesia, Maldives, Guam, Republic of the Marshall Islands, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia and American Samoa.¹¹¹ Notably, many of these are small island nations that rely heavily on tourism. With the growing popularity of global shark diving and tourism, countries are seeing first-hand the higher value of live sharks to their economy, rather than being killed within the fishing industry.¹¹² It has been predicted that by 2033, shark based eco-tourism will be worth more than 785 million USD. Conversely, the landed value of global shark fisheries peaked at 630 million USD in 2009 and has been in decline ever since.¹¹³

In addition, many of these nations have established shark sanctuaries within their territorial waters.¹¹⁴ In 2019, Canada also implemented a ban on the import and export of shark fin unless it is naturally attached to whole shark carcass, however, possession and sale of shark fin caught within Canadian waters is still allowed.¹¹⁵

Within Australia, fisheries are multi-species fisheries, meaning a ban on possession, sale and trade on shark fins within Australia would not prevent shark catches, particularly in fisheries that target tuna. If a ban on possession of shark fin was enacted in Australia it would mean no sharks could be landed, which would encourage discarding of captured shark, regardless of whether they are alive or dead. There is currently no species-specific reporting for discards (except for hammerheads in Queensland), therefore, this would result in perverse outcomes for sharks in a number of ways. Firstly, there would be no oversight of the number of sharks being caught, even though species level reporting is not commonplace, there is currently general reporting of sharks. Secondly, there would be no ability to sustainably manage shark catch through implementing innovative conservation measures that can have a positive impact on the sustainability of shark fishing. These outcomes would also be in opposition to Australia's Sharks Plan 2 which requires minimising wastage. A policy to ban the possession and sale of shark fins within Australia is unlikely to achieve the desired outcomes to create sustainable shark fisheries. A more effective conservation management measure that could be implemented in Australia is the traceability system described above.

However, as noted previously, Australia is also a substantial importer of shark fin. To ensure improved sustainability of imported shark species, Australia should require all imports of fins to be naturally attached to the shark carcass. As shown earlier, the majority of shark fin imports come from countries where shark finning is known to still be occurring. In the absence of a suitable international shark fin traceability program, requiring imported fins to be naturally attached will assist in ensuring that no shark fins are entering the Australian market that have come from unsustainable fishing practices. The combination of internal traceability and a fins naturally attached requirement would make a substantial contribution to re-establishing Australia as a leader in shark conservation management that it prides itself on being.



RECOMMENDATION 10

In the absence of a suitable international traceability system for shark fin products, Australia should require all shark fin imported into Australia to be naturally attached to a shark carcass. All shark imports should be specified to species level where possible, and at least to genus or family level.

110 See for example Clarke, S. & Eriksson, H. (2015) Chinese market responses to overexploitation of sharks and sea cucumbers *Biological Conservation* 184 (2015) 163–173.

111 Saeed Kamali Dehghan, 'Marine 'gold rush': demand for shark fin soup drives decimation of fish', *The Guardian* (newspaper, online), available at: <https://www.theguardian.com/environment/2019/jun/04/marine-gold-rush-demand-shark-fin-soup>.

112 See for example https://e360.yale.edu/digest/sharks_worth_far_more_alive_than_dead_new_study_shows, <https://blogs.scientificamerican.com/expeditions/an-interconnected-environment-and-economy-shark-tourism-in-palau/>; <https://usa.oceana.org/blog/sharks-worth-new-report-finds-sharks-far-more-valuable-alive-dead>; accessed on 8 June 2020.

113 Cisneros-Montemayor, A., Barnes-Mauthe, M., Al-Abdulrazzak, D., Navarro-Holm, E., & Sumaila, U. (2013). Global economic value of shark ecotourism: Implications for conservation. *Oryx*, 47(3), 381–388. doi:10.1017/S0030605312001718.

114 <https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/03/shark-sanctuaries-around-the-world>.

115 Canadian Fisheries Act (RSC, 1985), available at: <https://laws-lois.justice.gc.ca/eng/acts/f-14/>.

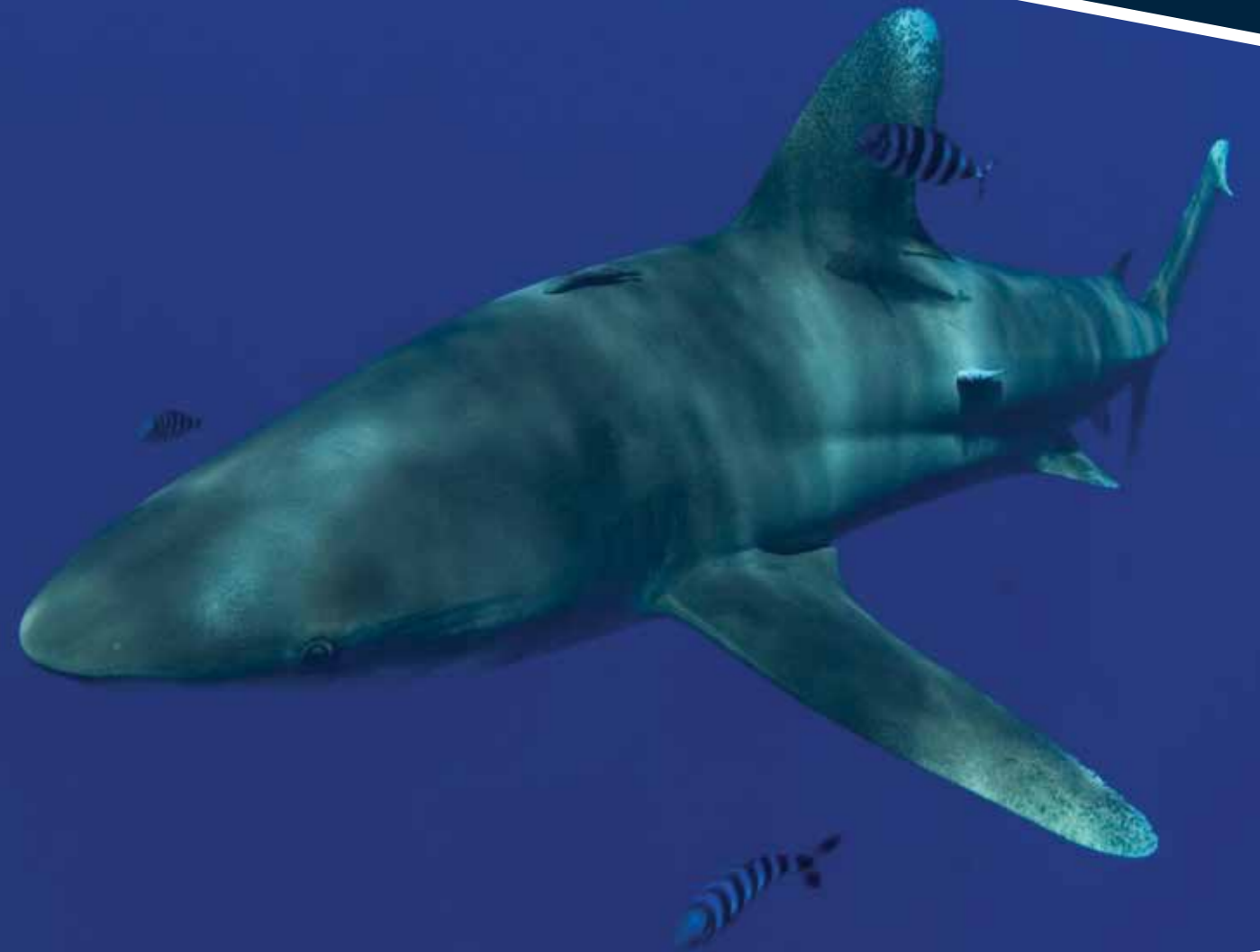
CONCLUSION

Australia prides itself on having strong credentials when it comes to shark management measures and sustainability.¹¹⁶ Yet over the past decade, progress towards substantive new management measures that would increase protections for shark species and ensure sustainable shark fishing has been slow. Jurisdictions around Australia do not have consistent measures in place to ensure sharks are not finned at sea. State/Territory fisheries are not held to the same standards as Commonwealth fisheries, with several jurisdictions still allowing sharks to be processed at sea, which allows for the possibility of finning and high grading at sea. Commonwealth fisheries, which have some of the strictest management measures, do not record catch and discards of sharks to species, genus or family level making it difficult to assess the true extent of impact of these fisheries on sharks. Where appropriate management measures are in place there is insufficient oversight to ensure that these measures are complied with, as evidenced by the cases of shark finning occurring in Australian waters in the past five years. The fact that the Australian Government allows shark fisheries that allow shark finning to occur at sea to be placed on the LENS further reduces fisheries oversight.

Key to addressing these concerns is a comprehensive catch documentation scheme with traceability of shark products and a fins naturally attached policy in all fisheries, but especially those species that are placed on the LENS. There is currently no traceability system in place within Australia waters that allows consumers to know where their shark products come from, or how they were caught. Further, Australia imports far more shark products and shark fins than is exported, with no process in place to ensure that those products meet the environmental management standards required of Australian fisheries. With the lack of a suitable traceability system, Australia should require all imports of shark fins to be naturally attached to a carcass, as Canada has done.

For Australia to regain its position as a world leader in shark management and conservation, it needs to pursue new sustainability measures that are applied across the country, and to any product being imported. Australians want to know that they are supporting sustainable fisheries and fishing practices, but under the current arrangements in Australia this cannot be assured for shark species. The recommendations in this report, if adopted, would help to ensure that Australia's claims of being world leaders in ocean management remains accurate.

¹¹⁶ <https://www.agriculture.gov.au/fisheries/environment/sharks/response-amca-sharks>.



ANNEX A

PROTECTED SPECIES AS OF OCTOBER 2020

Jurisdiction	Regulatory Instrument	Status	Species
Commonwealth	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Critically endangered	Speartooth Shark (<i>Glyphis glyphis</i>) Grey Nurse Shark (<i>Carcharias taurus</i>) - East coast population
		Endangered	Northern River Shark (<i>Glyphis garricki</i>)
		Vulnerable	Grey Nurse Shark (<i>Carcharias taurus</i>) - West coast population Whale Shark (<i>Rhincodon typus</i>) Great White Shark (<i>Carcharodon carcharias</i>) Dwarf Sawfish (<i>Pristis clavata</i>) Freshwater sawfish (<i>Pristis pristis</i>) Green sawfish (<i>Pristis zijsron</i>)
		Conservation Dependent	Scalloped Hammerhead (<i>Sphyrna lewini</i>) School Shark (<i>Galeorhinus galeus</i>) Harrison's Deepsea Dogfish (<i>Centrophorus harrissoni</i>) Southern Dogfish (<i>Centrophorus zeehaani</i>)
		Migratory	Porbeagle Shark (<i>Lamna nasus</i>) White Shark (<i>Carcharodon carcharias</i>) Whale Shark (<i>Rhincodon typus</i>) Basking Shark (<i>Cetorhinus maximus</i>) Shortfin Mako (<i>Isurus oxyrinchus</i>) Longfin Mako (<i>Isurus paucus</i>) Silky Shark (<i>Carcharhinus falciformis</i>) Dwarf Sawfish (<i>Pristis clavata</i>) Freshwater Sawfish (<i>Pristis pristis</i>) Green Sawfish (<i>Pristis zijsron</i>) Narrow Sawfish (<i>Anoxypristis cuspidate</i>)
New South Wales	<i>Fisheries Management Act 1994</i>	Critically endangered	Grey Nurse Shark (<i>Carcharias taurus</i>)
		Endangered	Scalloped Hammerhead (<i>Sphyrna lewini</i>)
		Vulnerable	White Shark, Great White Shark (<i>Carcharodon carcharia</i>) Great Hammerhead Shark (<i>Sphyrna mokarran</i>)
Queensland	<i>Nature Conservation Act 1992 & Nature Conservation (Animals) Regulation 2020 (QLD)</i>	Endangered	Grey Nurse Shark (<i>Carcharias taurus</i>)
		Near-threatened wildlife	Estuary Stingray (<i>Dasyatis fluviorum</i>)
	<i>Fisheries Declaration 2019</i>	No-take recreational species (i.e. regulated in commercial fisheries to catch or trip limits, i.e. hammerhead sharks = 4 or 10)	Great Hammerhead Shark (<i>Sphyrna mokarran</i>) Scalloped Hammerhead Shark (<i>Sphyrna lewini</i>) Smooth Hammerhead Shark (<i>Sphyrna zygaena</i>)
		No take species	Manta Rays (<i>Manta birostris</i> and <i>Manta alfredi</i>) Sand Tiger Shark/Grey Nurse Sharks (<i>Carcharias taurus</i>) Spear tooth Shark (<i>Glyphis glyphis</i>) Great White Shark (<i>Carcharodon carcharias</i>) Whitetip reef shark (<i>Triaenodon obesus</i>)

Jurisdiction	Regulatory Instrument	Status	Species
Western Australia	<i>Fish Resources Management Act 1994, s45 - 48A</i> <i>Fish Resources Management Regulations 1995, s10 and Schedule 2</i>	Commercially protected fish	Sharks and rays - other than totally protected
		Totally protected	Rays in the waters bounded by a line commencing north-east of White Cliff Point at the intersection of 34° 13.382' south latitude and 115° 1.470' east longitude; thence generally north-westerly along the geodesic to the intersection with 34° 13.283' south latitude and 115° 1.408' east longitude; thence generally north-easterly to the intersection of 34° 13.062' south latitude and 115° 1.763' east longitude; thence generally south-easterly to the intersection of 34° 13.164' south latitude and 115° 1.826' east longitude. Sawfish Great White Shark (<i>Carcharodon carcharias</i>) Whale Shark (<i>Rhincodon typus</i>) Northern River Shark (<i>Glyphis spp</i>)
	<i>Biodiversity Conservation Act 2016</i>	Recreationally protected fish	Black stingray taken from the waters of the South Coast Region or the West Coast Region Smooth stingray taken from the waters of the South Coast Region or the West Coast Region. Whaler Sharks (from South Coast Region or West Coast Region and interdorsal fin >70cm)
		Specially protected	Grey Nurse Shark (<i>Carcharias taurus</i>) White shark (<i>Carcharodon carcharias</i>) Northern River Shark (Priority 1) (<i>Glyphis garricki</i>) Whale Shark (Priority 1) (<i>Rhincodon typus</i>)
South Australia	<i>Fisheries Management Act 2007</i> <i>Fisheries Management (General) Regulations 2017</i>	Protected	Great White Shark (<i>Carcharodon carcharias</i>)
Victoria	<i>Flora and Fauna Guarantee Act 1988</i>	Threatened	Great White Shark (<i>Carcharodon carcharias</i>) Grey Nurse Shark (<i>Carcharias taurus</i>)
Tasmania	<i>Threatened Species Protection Act 1995</i>	Vulnerable	Great White Shark (<i>Carcharodon carcharias</i>) Port Davey Skate (<i>Zearaja maugeana</i>)
Northern Territory	<i>Territory Parks and Wildlife Conservation Act 1976</i>	Endangered	Northern River Shark (<i>Glyphis garricki</i>)
		Vulnerable	Speartooth Shark (<i>Glyphis glyphis</i>) Freshwater Sawfish (<i>Pristis pristis</i>) Dwarf Sawfish (<i>Pristis clavata</i>) Green Sawfish (<i>Pristis zijsron</i>)

ANNEX B

COUNTRY SPECIFIC HS CODES FOR SHARK FIN

Full Country Specific Code	Used By	Label
030281 - Fresh or chilled dogfish and other sharks¹		
03028110	Hong Kong, China	Shark fins, fresh or chilled
030375 - Frozen dogfish and other sharks²		
0303750010	Canada	Shark fins, frozen - Dogfish
030381 - Frozen dogfish and other sharks³		
03038110	Hong Kong, China	Shark fins, frozen (Dogfish)
0303810012	Maldives	Frozen Shark Fin
030389 - Frozen fish, n.e.s.⁴		
0303892105	Taipei, Chinese	Sharks tail, frozen
0303893006	Taipei, Chinese	Shark fins, edible, frozen
0303894201	Taipei, Chinese	Upper lobe of sharks caudal fin, frozen
030399 - Frozen fish fins, heads, tails, maws and other edible fish offal (excl. livers, roes, milt and shark fins)⁵		
0303990203	Taipei, Chinese	Upper lobe of shark's caudal fin, frozen
030410 - Fresh or chilled fillets and other fish meat, whether or not minced⁶		
03041030005	Taipei, Chinese	Shark fins, edible, fresh or chilled
030419 - Fresh or chilled fillets and other fish meat whether or not minced (excluding swordfish and toothfish)⁷		
03041930006	Taipei, Chinese	Shark fins, edible, fresh or chilled
030490 - Frozen fish meat, whether or not minced (excluding fillets)⁸		
03049030008	Taipei, Chinese	Shark fins, edible, frozen
030499 - Frozen fish meat n.e.s. (excluding fillets)⁹		
03049930009	Taipei, Chinese	Shark fins, edible, frozen
030559 - Dried fish, even salted but not smoked (excluding fillets, offal and cod)¹⁰		
03055902	Gambia	SHARK FINS
03055903	Sri Lanka	Dried fish, salted, not smoked (excl. cod and other fillets): Shark fins
03055910	Singapore, Brunei Darussalam	Sharks fins dried whether or not salted excl smoked
03055920	Brazil, China, Macao	Shark fins, dried, incl. salted but not smoked Dried sharks' fins, not smoked Sharks' fins, dried, whether or not salted but not smoked
03055930	Lesotho, South Africa, Sri Lanka	Fish nes, dried, whether or not salted but not smoked: shark fins Dried fish, salted, not smoked (excl. cod and other fillets) - Shark fins
03055950	Hong Kong, China	Sharks' Fins (With Or Without Skin), With Cartilage, Dried, Whether Or Not Salted But Not Smoked

1 HS Code created in 2012 and fins reallocated to 030292 in 2017.
2 HS Code pre 2007; removed and reallocated to 030281 in 2012.
3 HS Code created in 2012 and fins reallocated to 030292 in 2017.
4 HS Code created in 2012 and reallocated in 2017 – not supposed to be used for shark fins.
5 HS Code created in 2017 – not meant to be used for shark fins.
6 HS Code - pre 2007.
7 HS Code created in 2007; removed and reallocated in 2012.
8 HS Code created in 2007; removed and reallocated in 2012.
9 HS Code created in 2007; reallocated in 2012; reallocated again in 2017.
10 HS Code pre 2007; reallocated in 2012 and again in 2017.

Full Country Specific Code	Used By	Label
03055960	Hong Kong, China	Sharks' Fins (With Or Without Skin), Without Cartilage, Dried, Whether Or Not Salted But Not Smoked
030559001	Malaysia	Ikan bilis/fishmaw's/ sharks' fins or other marine fish
030559300	Indonesia, Malaysia	Shark fins Shark's fins, dried, whether or not salted but not smoked
030559920	Japan	Fins of Dogfish and other sharks, dried, but not smoked
0305590010	Canada	Shark fins, dried, whether or not salted but not smoked
0305590012	Maldives	Dried fish, salted, not smoked (excl. cod and other fillets): shark fins (salted dried)
0305590013	Maldives	Dried fish, salted, not smoked (excl. cod and other fillets): shark fins (dried)
0305590025	Australia	Shark fins, dried, whether or not salted, not smoked
0305591000	Indonesia	Sharks fins, dried, salted/unsalted but not smoked
0305592000	United States of America	SHARK FINS, DRIED, WHETHER OR NOT SALTED BUT NOT SMOKED
03055920008	Taipei, Chinese	Shark fins, dried
030559300	Brunei Darussalam	Sharks' fins dried whether or not salted excl smoked (kg)
0305593000	Brunei Darussalam	Sharks' fins dried whether or not salted excl smoked (kg)
030569 - Fish, salted or in brine only (excluding fillets, offal, herring, cod, anchovies, tilapia, catfish, carp, eels, Nile perch and snakeheads)¹¹		
03056920006	Taipei, Chinese	Shark fins, salted or in brine
03056910	Singapore	Other marine fish salted or in brine incl sharks fins
030569001	Malaysia	Fish maw's or sharks' fins or other marine fish, salted but not dried or smoked and in brine
030569200	Malaysia	Sharks' fins, salted but not dried or smoked and in brine
0305691000	Indonesia	Marine fish, incl sharks fin, salted but not dried or smoked and in brine
03056930	Hong Kong, China	Sharks' Fins (With Or Without Skin), With Cartilage, Salted Or In Brine, But Not Dried Or Smoked
03056940	Hong Kong, China	Sharks' Fins (With Or Without Skin), Without Cartilage, Salted Or In Brine, But Not Dried Or Smoked
030572 - Fish heads, tails and maws, smoked, dried, salted or in brine¹²		
03057200103	Taipei, Chinese	Sharks tail, smoked, dried, or salted
030579 - Fish fins and other edible fish offal, smoked, dried, salted or in brine (excluding heads, tails, maws and shark fins)¹³		
03057900106	Taipei, Chinese	Upper lobe of sharks caudal fin, smoked, dried, or salted
0305790	Bermuda	Fish fins and other edible fish offal, smoked, dried, salted or in brine (excl. heads, tails, maws and shark fins)

11 HS Code pre 2007; reallocated in 2012 and again in 2017.
12 HS Code created in 2012.
13 HS Code created in 2012.

Full Country Specific Code	Used By	Label
160420 - Prepared or preserved fish (excluding whole or in pieces)		
16042010	Philippines	Prepared or preserved fish (excl. whole or in pieces) : Sharks' fins, prepared and ready for use
16042011	China, Philippines, Singapore, Brunei Darussalam, Hong Kong	Prepared/preserved shark's fin in airtight containers, minced, Prepared or preserved fish (excl. whole or in pieces) : Shark fins, ready for immediate consumption: In airtight containers, Sharks fins prepared ready for use in airtight containers, Sharks' fins prepared or preserved, for immediate consumption, in airtight containers (kg) Prepared or preserved fish (excl. whole or in pieces): Shark's fins, canned
16042019	Philippines, Cambodia, Brunei Darussalam, Singapore	Prepared or preserved fish (excl. whole or in pieces) : Shark fins, ready for immediate consumption: Other Sharks' fins prepared or preserved, for immediate consumption, not in airtight containers (kg), Sharks fins prepared ready for use not in airtight containers
16042091	China	Other prepared/preserved shark's fin, minced
160420001	Malaysia	Sharks' fins, prepared & ready for use, in air tight container
160420002	Malaysia	Sharks' fins, prepared & ready for use, o/t in airtight container
160420910	Malaysia	Sharks' fins
1604201100	Indonesia	Sharks fins, ready for immediate
1604201900	Indonesia	Sharks fins, prepared and ready for use in other than airtight contain
16042020117	Taipei, Chinese	Fins (incl. shark, skate and ray fins), prepared or preserved, frozen
16042020126	Taipei, Chinese	Fins (incl. shark, skate and ray fins), prepared or preserved, canned
16042020199	Taipei, Chinese	Other fins (incl. shark, skate and ray fins), prepared or preserved
16042091	Hong Kong, China	Prepared or preserved fish (excl. whole or in pieces): Shark's fins, not canned

New HS Codes in 2017

030292 - Fresh or chilled shark fins		
03029200	South Africa, Australia, China, Hong Kong, Europe, Switzerland	Fresh or chilled shark fins
0302920000	Indonesia	Fish; fresh or chilled, shark fins - Shark fins
0302920000	United States of America	Shark fins, fresh or chilled, except fillets
0302920002	Australia	Fresh or chilled shark fins
03029200	Kuwait, Namibia, Seychelles, South Africa	Fresh or chilled shark fins (detailed label not available)
0302920000	Canada, Kazakhstan	Fresh or chilled shark fins (detailed label not available)
030392 - Frozen shark fins		
03039200	Brazil, China, Hong Kong, Norway, Singapore, South Africa, United Arab Emirates, Europe	Shark fins, frozen
030392000	Japan	Shark fins, frozen
0303920000	Indonesia, New Zealand, United States of America	Fish; frozen, shark fins - Shark fins
0303920091	Australia	Frozen shark fins
03039200000	Thailand	Frozen shark fins
03039200003	Taipei, Chinese	Shark fins, frozen
03039200	Namibia, Iceland	Frozen shark fins (detailed label not available)
03039200	Iceland	Frozen shark fins (detailed label not available)
03039290	Chile	Frozen shark fins (detailed label not available)

Full Country Specific Code	Used By	Label
0303920000	Canada, Guyana	Frozen shark fins (detailed label not available)
0303920040	Ecuador	Frozen shark fins (detailed label not available)
030571 - Shark fins, smoked, dried, salted or in brine		
03057100	Brazil, Kiribati, Saudi Arabia, Seychelles, Iceland, Macao, India, Singapore, Tonga, United Arab Emirates, Yemen, Zambia, Mauritius, Oman, Papua New Guinea, Philippines, Qatar, Bahrain, Belize, Solomon Islands, Cambodia, Canada, Sri Lanka, China, Europe	Shark fins, smoked, dried, salted or in brine (detailed label not available)
03057110	Botswana, Namibia, South Africa, Europe	Shark fins, smoked, dried, salted or in brine + detailed label not available +
03057112	Chile	Shark fins, smoked, dried, salted or in brine (detailed label not available)
03057121	Hong Kong, China	Shark fins , in brine or salted but not dried or smoked , with or without skin, with cartilage
03057122	Hong Kong, China	Shark fins , in brine or salted but not dried or smoked , with or without skin, without cartilage
03057143	Chile	Shark fins, smoked, dried, salted or in brine (detailed label not available)
03057190	Namibia, South Africa, Botswana, Chile, Hong Kong	Shark fins, smoked, dried, salted or in brine + detailed label not available +
030571000	Japan	Shark fins
030571090	Japan	Shark fins, smoked, dried, salted or in brine: Other
0305710000	Europe, Canada, Indonesia, New Zealand, Senegal, United States of America	Shark fins, smoked, dried, salted or in brine (detailed label not available)
0305711000	Kazakhstan, Russian Federation	Shark fins, smoked, dried, salted or in brine (detailed label not available)
0305719000	Kazakhstan	Shark fins, smoked, dried, salted or in brine (detailed label not available)
03057100000	Congo, Thailand	Shark fins, smoked, dried, salted or in brine (detailed label not available)
03057120002	Taipei, Chinese	Shark fins, dried
03057130000	Taipei, Chinese	Shark fins, salted or in brine
030571000000	Angola	Shark fins, smoked, dried, salted or in brine + detailed label not available +
03057100	Aruba, Fiji, Australia, Iran	Shark fins, smoked, dried, salted or in brine : shark fins, smoked, dried, salted or in brine
03057110	South Africa	Shark fins, smoked, dried, salted or in brine: dried, whether or not salted but not smoked
03057111	Hong Kong, China	Shark fins , dried, whether or not salted but not smoked, with or without skin, with cartilage
03057112	Hong Kong, China	Shark fins , dried, whether or not salted but not smoked, with or without skin, without cartilage
03057190	Europe	Shark fins, dried, salted or in brine (excl. smoked)
0305710091	Australia	Shark fins, dried, salted, in brine or smoked, whether or not cooked before or during the smoking process

Full Country Specific Code	Used By	Label
160418 - Prepared or preserved shark fins, whole or in pieces (excl. minced) ¹⁴		
16041800	Oman, India, Europe	Prepared or preserved shark fins, whole or in pieces (excl. minced) (detailed label not available)
16041810	South Africa Hong Kong Singapore	Prepared or preserved shark fins, whole or in pieces (excl. minced): Frozen Shark fins, prepared or preserved, canned Shark fins whole or pieces prepared or preserved not minced ready for immediate consumption
16041810	South Africa	Prepared or preserved shark fins, whole or in pieces (excl. minced): frozen
16041820	Hong Kong, China	Shark fins, prepared or preserved, not canned
16041891	Singapore	Shark fins whole or pieces prepared or preserved not minced not ready for immediate consumption in airtight cont
16041899	Singapore	Shark fins whole or pieces prepared or preserved not minced not ready for immediate consumption not in airtight
160418000	Japan	Shark fins, prepared or preserved, whole or in pieces
1604180000	Ghana, Kazakstan, Europe, United States of America, Russian Federation	Prepared or preserved shark fins, whole or in pieces (excl. minced) (detailed label not available)
1604181010	New Zealand	Fish preparations; shark fins, prepared or preserved, whole or in pieces (but not minced), in airtight cans or jars, whether or not with added liquor, oil or sauce
1604189000	United States of America	Fish, whole or in pieces, but not minced, shark fins, other nes
1604189010	New Zealand	Fish preparations; shark fin, prepared or preserved, whole or in pieces (but not minced); packed other than in a airtight cans or jars
1604189100	Indonesia	Prepared or preserved shark fins, whole or in pieces (excl. minced) (detailed label not available)
1604189900	Indonesia	Prepared or preserved shark fins, whole or in pieces (excl. minced) (detailed label not available)
16041800106	Taipei, Chinese	Shark fins, prepared or preserved, frozen
16041800204	Taipei, Chinese	Shark fins, prepared or preserved, canned
16041800909	Taipei, Chinese	Other shark fins, prepared or preserved
16041810001	Thailand	Prepared or preserved shark fins, whole or in pieces (excl. minced): ready for immediate consumption: in airtight containers
16041810090	Thailand	Prepared or preserved shark fins, whole or in pieces (excl. minced): ready for immediate consumption: other
16041891000	Thailand	Prepared or preserved shark fins, whole or in pieces (excl. minced): other : in airtight containers for retail sale
16041899000	Thailand	Prepared or preserved shark fins, whole or in pieces (excl. minced): other : other

14 HS Code created in the 2017 HS revision.

ANNEX C

FISHERIES SPECIFIC SHARK MANAGEMENT MEASURES

Reproduced from Koopman and Knuckey (2014)¹⁵

WA - Kimberley gillnet and barramundi fishery (KGBF)

- Recommendations
- 2.10 An estimate of the annual IUU catch of Great Hammerhead, Scalloped Hammerhead and Ocean Whitetip Shark within the boundary of this fishery is required.
 - 2.14 Implement trip limits for the five shark species of interest.
 - 2.19 Provide facility to report discards in commercial logbook data.
 - 2.20 Collect more recent observer data to describe species composition of the catch and discards. Ensure any catch of the five species of interest is reported at species level in the logbooks.
 - 2.26 Implement trip limits for the five shark species of interest, as well as maximum size limits.

WA - Northern shark fishery (NSF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Implement trigger limits for the five shark species of interest.
 - 2.19 Remove generic shark references in logbooks and improve species identification in logbook data.
 - 2.20 Collect more recent observer data to describe species composition.

WA - Pilbara fish trawl fishery (PFTF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.19 Allow for reporting of discarded shark in the logbooks and/or use observer program to estimate total annual discard of sharks of interest.

WA - Temperate demersal gillnet and demersal longline fisheries (TDGDLF)

- Recommendations
- 2.14 Implement trip limits for the five listed shark species.
 - 2.19 Remove generic shark references in logbooks and provide facility to report discards in commercial logbooks.
 - 2.20 Collect more recent observer data to describe species composition of the catch and quantify discards. Ensure any catch of the five species of interest is reported at species level in the logbooks.
 - 2.26 Implement trip limits for the five listed shark species, and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

NSW - Ocean Trawl Fishery (OTF)

- Recommendations
- 2.14 Implement trip limits for the listed shark species other than Scalloped and Great Hammerhead
 - 2.19 Provide facility to report discards in commercial logbooks.
 - 2.20 Collect more recent observer data to describe species composition of the catch and quantify discards. Ensure any catch of the five species of interest is reported at species level in the logbooks.
 - 2.26 Implement trip limits for the listed shark species other Scalloped and Great Hammerhead, and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

15 Koopman, M. and Knuckey, I. (2014). Advice on CITES Appendix II Shark Listings. Report to Department of Sustainability, Environment, Water, Population and Communities. Fishwell Consulting. 144 pp. Available at <https://www.environment.gov.au/system/files/resources/39c06695-8436-49c2-b24f-c647b4672ca2/files/cites-appendix-ii-shark-listing-advice.pdf>.

NSW – Ocean Hauling Fishery (OHF)

- Recommendations
- 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers could be implemented for the listed shark species other Scalloped and Great Hammerhead.
 - 2.19 Provide facility to report discards in commercial logbooks.
 - 2.20 Collect more recent observer data to describe species composition of the catch and quantify discards. Ensure any catch of the five species of interest is reported at species level in the logbooks.
 - 2.26 Implement trip limits for the listed shark species other Scalloped and Great Hammerhead, and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

NSW – Ocean Trap & Line Fishery (OTLF)

- Recommendations
- 2.14 There are reasonably strong controls on shark captures in this fishery. If they were to be strengthened at all, separate trip limits and maximum size limits for the listed shark species other Scalloped and Great Hammerhead could be introduced.
 - 2.19 Provide facility to report discards in commercial logbooks.

Queensland – River and Inshore Beam Trawl Fishery (RIBTF)

- Recommendations
- 2.10 Estimate IUU catch
 - 2.19 Provide facility to report discards in commercial logbooks.
 - 2.20 Improve species identification of observers. Required estimation of weight in observer records.

Queensland – Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for the five listed shark species could be implemented.
 - 2.19 Provide facility to report discards in commercial logbooks.
 - 2.20 Improve reporting of shark weight in observer records.

Queensland – Gulf of Carpentaria Developmental Fin Fish Trawl Fishery (GCDFFTF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.20 Improve reporting of shark weight in observer records.

Queensland – Fin Fish (Stout Whiting) Trawl Fishery (FFTF) Gulf of Carpentaria Developmental Fin Fish Trawl Fishery

- Recommendations
- 2.19 Provide facility to report discards in commercial logbooks.
 - 2.20 Improve reporting of shark weight in observer records.

Queensland – East Coast Spanish Mackerel Fishery (ECSMF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for the five listed shark species could be implemented.
 - 2.19 Provide facility to report shark species and discards in commercial logbooks.

Queensland – East Coast Otter Trawl Fishery (ECOTF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.19 Provide facility to report discards in commercial logbooks.
 - 2.20 Improve reporting of shark weight in observer records.

Queensland – East Coast Inshore Fin Fish Fishery (ECIFFF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Implement trip limits for the listed shark species by licence with an S symbol.
 - 2.19 Improve reporting to species level and provide facility to report discards in commercial logbooks.
 - 2.20 Improve reporting of shark weight in observer records.

Queensland – Coral Reef Fin Fish Fishery (CRFFF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for the five listed shark species could be implemented.
 - 2.19 Improve reporting to species level and provide facility to report discards in commercial logbooks.
 - 2.20 Improve reporting of shark to species level and shark weight in observer records.
 - 2.26 Implement trip limits for the listed shark species and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

Northern Territory – Barramundi Fishery (BF)

- Recommendations
- 2.19 Improve reporting to species level in commercial logbooks and include discard weights.
 - 2.20 Improve reporting of shark to species level and shark weight in observer records.
 - 2.26 Potentially implement maximum size limit for Smooth Hammerhead, Oceanic Whitetip Shark or Porbeagle Shark. Required estimation of weight in observer records.

Northern Territory – Demersal Fishery (DF) – multi sector that now includes the original Finfish Trawl and Demersal Fisheries

- Recommendations
- 2.10 Estimate IUU catch.
 - 2.20 Improve reporting to species level in both logbooks and by observers.

Northern Territory – Offshore Net and Line Fishery (ONLF)

- Recommendations
- Develop performance measures for Hammerheads.
 - 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 and 2.18 Implement trip limits for the listed shark species
 - 2.18 Require landing with of sharks with fins naturally attached
 - 2.19 Remove generic group reference and improve reporting to species level in commercial logbooks.
 - 2.20 Improve reporting of shark to species level and shark weight in observer records.
 - 2.26 Implement trip limits for the listed shark species, and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

Commonwealth – Western Tuna and Billfish Fishery (WTBF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.19 Only slight improve needed in reporting to species level in commercial logbooks.
 - 2.20 Improve reporting of shark to species level and shark weight in observer records.

Commonwealth – Western Deepwater Trawl Fishery (WDTF)

- Recommendations
- 2.14 Implement trigger limits for the five shark species of interest.
 - 2.26 Implement catch limits or trip limits for the listed shark species and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

Commonwealth – North West Slope Trawl Fishery (NWSTF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Implement trigger limits for the five shark species of interest.
 - 2.20 Improve reporting of shark to species level in observer records.
 - 2.26 Implement catch limits or trip limits for the listed shark species and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

Commonwealth – Torres Strait Prawn Fishery (TSPF)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.20 Improve reporting of shark to species level in observer records, and require reporting of discards of sharks in commercial logbooks.

Commonwealth – Southern and Eastern Scalefish and Shark Fishery (multiple sectors)

- Recommendations
- 2.14 Implement catch or trip limits for the five shark species of interest.
 - 2.20 Improve reporting of shark to species level in observer records. Check on the correct identification of shark species in commercial logbook data
 - 2.26 Implement catch limits or trip limits for the listed shark species and potentially implement maximum size limits to ensure stricter protection of a portion of the mature shark population.

Commonwealth – Northern Prawn Fishery

- Recommendations
- 2.10 An estimate of the annual IUU catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but may require a specific project to identify species (mostly by fins) on seized vessels.
 - 2.20 Improve reporting of shark to species level in observer records, and require reporting of discards of sharks in commercial logbooks.

Commonwealth – Eastern Tuna and Billfish Fishery

- Recommendations
- 2.20 Improve reporting of hammerhead shark to species level in observer records.

Commonwealth – Coral Sea (multi-sector)

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required. This was done across all of northern Australia (Marshall 2011) but needs to be disaggregated to fishery level.
 - 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for the five listed shark species could be implemented.
 - 2.20 Observer data on retained and discarded shark species should be identified down the species level. Commercial logbook data is generally identified to species level for hammerheads but whalers and weasel sharks are often grouped but any Oceanic Whitetip Sharks should be specifically identified (there was none apparent in the observer data).
 - 2.26 A maximum size limit could be implemented to ensure stricter protection of a portion of the mature population.

Commonwealth – Australian High Seas Fisheries

- Recommendations
- 2.10 An estimate of the annual catch of each of the five species of interest by IUU fishing is required.
 - 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for the five listed shark species could be implemented.
 - 2.26 A maximum size limit could be implemented for the non-trawl sector to ensure stricter protection of a portion of the mature population.

South Australia – Marine Scalefish Fishery (MSF)

- Recommendations
- 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for Smooth Hammerhead and Porbeagle Shark could be implemented.
 - 2.19 Improve reporting of sharks to species level in commercial logbooks and record any discards.
 - 2.26 A maximum size limit could be implemented to ensure stricter protection of a portion of the mature population.
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Victorian – Ocean Access Fishery (OAF)

- Recommendations
- 2.14 Quotas are not appropriate for infrequently caught byproduct/ bycatch species, but trip limits or catch triggers for Smooth Hammerhead and Porbeagle Shark could be implemented.
 - 2.19 Improve identification of shark catches in commercial logbooks.
 - 2.20 An observer program should be implemented and data on retained and discarded shark species should be identified down the species level.
 - 2.26 A maximum size limit could be implemented to ensure stricter protection of a portion of the mature shark population.

Tasmanian – Scalefish Fishery (SF)

- Recommendations
- 2.19 Improve identification of shark catches in commercial logbooks.
 - 2.20 An observer program should be implemented and data on retained and discarded shark species should be identified down the species level.
 - 2.26 A maximum size limit could be implemented to ensure stricter protection of a portion of the mature shark population.
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