Meat on the menu and fins for export: Latin America's shark trade with Asia

ifaw

Photo: Melanie Mahoney

Vision:
Animals and people thriving together.

Photo: © IFAW

Mission:
Fresh thinking and bold action for animals, people and the place we call home.

Contents

About IFAW
For over a decade, IFAW has been working with governments around the world to support better management for sharks and rays. From the development of shark identification materials for fisheries, customs, and enforcement officers, to raising awareness of the conservation needs of shark species and building the capacity of governments to meet their obligations under international conventions such as the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on the Conservation of Migratory Species of Wild Animals (CMS). IFAW also provides technical support for governments looking to enact progressive and precautionary management for shark catch limits, or prohibitions when warranted, at a national level.

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Cover photo: Silky shark in Queen's Gardens, Cuba.

Abbreviations

CBD – Convention on Biological Diversity
CC - Country of Consignment
CITES - Convention on the International Trade in Endangered Species of Wild Fauna and Flora
CMS - Convention on the Conservation of Migratory Species of Wild Animals
CO - Country of Origin
C&SD - Census and Statistics Department of the Government of Hong Kong SAR
EU – European Union
FAO - Food and Agriculture Organization of the United Nations
HS - Harmonized Commodity Description and Coding System, commonly referred to as the Harmonized System
LAC – Latin America and Caribbean region covering the main continent of South America, Central America, and the scattered islands in the Caribbean Sea which includes the West Indies including the Great and Lesser Antilles, and the Lucayan Archipelago. For the full list of countries and territories included, see Annex 1.
RTASLD - Real-Time Automated Species-Level Detection of trade
mt - metric tons
WCO - World Customs Organization

Photo: © Q. Phia, CC BY 2.0

Section 1

Introduction

Visual overview: Latin America and Caribbean region's shark trade with Asia*

Shark fin trade**

Study period 2003-2020

Photo: © Steve De Neef

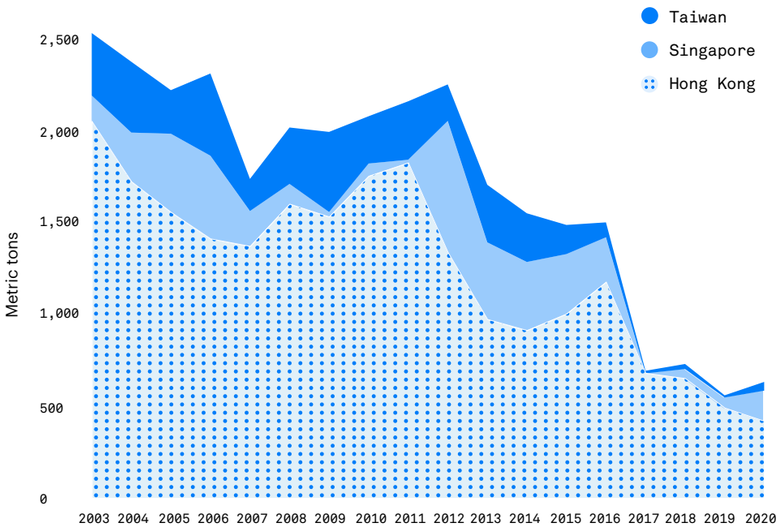
188,369 mt

of shark-fin related products were reported in imports into Hong Kong SAR, Singapore, and Taiwan province combined, with an annual average of 10,465 metric ton[1]

16%

equivalent to 30,608 mt of the total 188,369 mt of shark fin products imported into Asian trade hubs were sourced from the LAC region

Total shark fin imports



Total shark fin-related imports into Hong Kong SAR, Singapore, and Taiwan province (aggregated) from the LAC region 2003–2020.

Despite a declining trend in the volume of shark fins traded with Asia, the LAC region remains a significant supplier

Top fin sources

	Reported source of imports	Total reported trade (metric tons), 2003-2020
1	Costa Rica	5,613
2	Peru	3,714
3	Uruguay	3,475
4	Mexico	3,429
5	Argentina	2,429
6	Trinidad and Tobago	2,223
7	Brazil	2,067
8	Panama	2,066
9	Ecuador	1,875
10	El Salvador	721
11	Chile	701
12	Guyana	472
13	Suriname	446
14	Guatemala	333
15	Colombia	312
16	Venezuela	253
17	Belize	156
18	Nicaragua	150
19	St Vincent and the Grenadines	99
20	Cuba	23

Top 20 reported LAC region sources for total shark fin-related products imported into Hong Kong SAR, Singapore, and Taiwan province, 2003-2020.

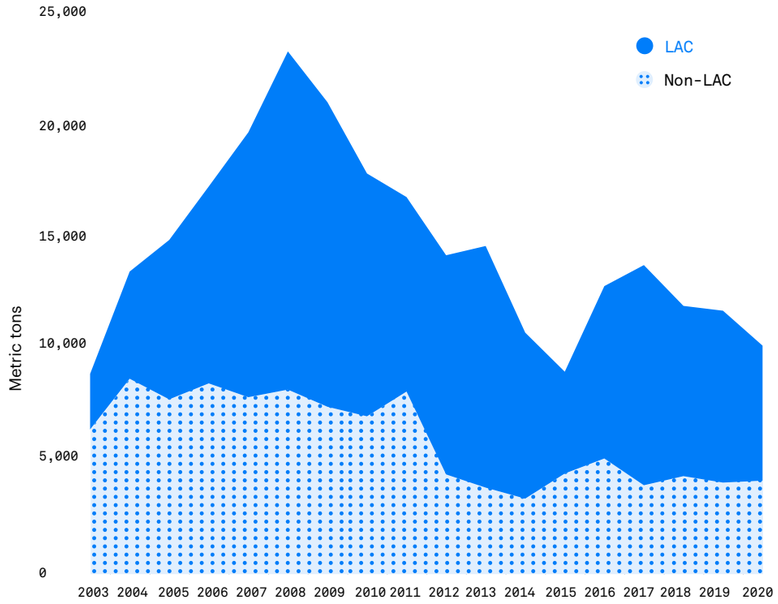
* Asia in this report refers to the three Asian trade hubs Hong Kong SAR, Singapore and Taiwan province since we only analysed their raw customs data. As a follow-up research, data from major traders like China should also be analysed.

**'shark meat' covers all data from shark meat-related customs codes
'shark fin' covers all data from shark fin-related customs codes

Shark meat trade

Study period 2003-2020

Total shark meat exports



Total shark meat-related exports from Hong Kong SAR, Singapore, and Taiwan province (aggregated) 2003–2020. Taiwan was the main exporter of meat to the LAC region, but it is not possible to tell from the trade data if the products were re-exports or domestic exports from local shark fisheries, as Taiwan is also one of the top shark fishing actors.[2]

The LAC region received the majority of all shark meat exports in 2020 and represents the main destination globally for meat exports from Asian trade hubs

267,345 mt

of shark-meat related products were reported in exports from Hong Kong SAR, Singapore and Taiwan province with an annual average of 14,853 metric tons

58%

equivalent to 157,240 mt of the total 267,345 metric tons of shark meat products exported from the Asian trade hubs went to the LAC region. This reiterates previous research which shows South America (and South Korea) to be key consumers of shark meat[3].

Due to its key role as fin supplier and meat consumer, the LAC region has to ensure that its participation in the global trade is not driving shark species towards extinction.

Top meat destinations

	Reported export destinations	Total reported trade (metric tons)
1	Uruguay	69,444
2	Brazil	60,361
3	Mexico	25,006
4	Trinidad and Tobago	1,158
5	Guatemala	456

Top five reported LAC region destinations for the total shark meat-related products exported from Hong Kong SAR, Singapore, and Taiwan province.

Discrepancies

Bigger discrepancies in data Peru and Ecuador

Hong Kong SAR data recorded far more in imports from Peru (an average of 257 mt from 2015-2020) than Peru reportedly exported (an average of 2 mt). This comparison only considers Hong Kong SAR import data and had not investigated trade data from other destinations. Discrepancies were also noted in comparison to Ecuador's data. This may suggest possible under-reporting in Ecuador and Peru's total exports. Smaller discrepancies were noted in the data of Chile and Colombia. Data from other countries could not be compared due to lack of comparable data and/or no response to our data request.

Photo: © Steve De Neef

97

additional shark species included on Appendix II by CITES parties in 2022

>90%

of global fin trade is now under CITES control

Introduction

Global shark conservation has come a long way, with the Convention on International Trade in Endangered Species (CITES) 19th Conference of the Parties (CoP19) in November 2022 being a real tipping point; CITES parties supported the inclusion of 97 additional shark species on Appendix II and, together with already listed species, more than 90% of global fin trade is now under CITES control.

Different regions play an active role in the global shark trade; supplying the Asian markets with shark fins, receiving shark meat for domestic consumption or making profit through internationally operating fishing fleets and/or facilitating the transit of shark products for re-export. Prior to CoP19 in 2022, Bloom Association in collaboration with the International Fund for Animal Welfare (IFAW) undertook an extensive analysis of official raw customs data of Hong Kong Special Administrative Region (referred to as Hong Kong SAR hereafter), Singapore and Taiwan province, China (referred to as Taiwan province hereafter) and published the findings in the report *Supply and Demand: The EU's role in the global shark trade, www.ifaw.org/international/resources/eu-role-global-shark-trade,* in March 2022, demonstrating that the EU is one of the top sources of shark fin products for these Asian markets[4].

To complement the 2022 trade analysis, IFAW followed up with its 2023 report *Shark safeguards: Elevating EU controls on shark trade, www.ifaw.org/resources/eu-safeguards-shark-trade,* giving more insights into the legal and illegal trade flows by looking at both the legal trade data as reported by the EU, covering import into and export by the EU 27 Member States to all countries worldwide, and also illegal trade data as registered by the Member States[5]. The study illustrated the economic value of the trade and the dominant trade flows by identifying the main suppliers and export destinations.

The current report follows in the series of trade analyses of raw customs data of Hong Kong SAR, Singapore, and Taiwan province from 2003-2020, this time mapping out the role of Latin America and Caribbean countries, with the aim of helping governments in the region to understand, monitor and regulate their shark-related trade. Several of the recommendations focus on improving transparency and traceability of the traded products. Given the global scale of the shark-related trade, and the multiplicity of trading partners, countries trading in the products will need to proactively work together to share trade data, standardise trade reporting formats and greatly improve the quality of the trade data collected. Such steps are required to bring the level of data transparency and traceability to where it needs to be for a trade as complex and potentially detrimental as the shark trade.

The trade analysis series aims to contribute to this much-needed endeavour by mapping out trade flows, highlighting discrepancies, increasing transparency of the global shark trade and making recommendations for this and other regions in order to prevent them from contributing further to the extinction of shark species.

Barbara Slee
Author,
IFAW Senior Program Manager,
International Policy

▲ Mako shark.

▶ Mako shark caught on San Lazaro, Baja California Sur, Mexico.

▶ Various wildlife and plant products including dried shark fins being sold at a retail market food market in Kowloon, Hong Kong SAR, China.

Photo: © Carlos J Polo Silva

Sharks and climate change

Driven by demand for meat and fins, sharks are declining at a staggering rate. Sharks are vital to ocean health and are being increasingly recognised for the important role they play in the fight against climate change. As predators, many sharks are responsible for maintaining a balanced ecosystem which helps keep greenhouse gases in the ocean and out of the atmosphere.

Coral reefs and seagrass meadows are important ocean ecosystems for retaining blue carbon – the carbon captured by the world's oceans. Sharks are key to keeping these ecosystems healthy and functioning. For example, if reef shark populations decline, fewer snapper and grouper fish will be eaten. As snapper and grouper numbers increase, their food source - algae-eating fish – will decrease. Without adequate populations of algae-eating fish, algae could take over and kill the coral. For seagrass, the presence of sharks helps to scare sea turtles away which keeps their grazing to a sustainable level. Plummeting shark numbers means sea turtles are more likely to overgraze the seagrasses[6]. Once destroyed, seagrass and corals release their blue carbon stores which contributes to global warming.

A shark's body is another source of blue carbon. It is estimated that sharks are made up of 10-15 percent carbon and when they die, they sink to the bottom of the ocean and become deep-sea carbon sinks. Overfishing disrupts this process and means much of that stored carbon is released into our atmosphere[7].
Having more sharks around to perform their critical ecosystem functions keeps the oceans healthy and reduces the impacts of global climate change. That means efforts to conserve sharks benefit more than just the sharks themselves; they help the entire planet.

Shark consumption[8]

Global demand for shark products, and trade associated with this demand, has expanded at an unprecedented rate over the past few decades. Shark products include fins, meat, skin, and liver oil. While shark fins used to be the product most in demand, in recent years demand for shark meat has increased significantly.

Fins are utilised primarily in the preparation of soups and other dishes in East Asia, consumed at weddings and other celebrations. Shark fins can be extremely high value, with prices ranging significantly depending on quality and shark species. Overall, fin size determines the price, with a single large, processed fin reaching up to USD $846 per kg in Hong Kong SAR.

Meat is consumed around the world. The price of shark meat varies depending on species, region, and where in the supply chain the product is sold. For example, prices can range from less than $1 per kg on a beach in Mexico to $24 per kg on the retail market in Australia.

Other products in trade include:
- Crude shark cartilage - sold as traditional remedy for a range of human diseases.
- Shark skin - used for making leather products such as belts, purses, bags, and shoes.
- Shark liver oil - used in the production of sunscreen, beauty and skin care products, and pharmaceuticals.
- Shark jaws and teeth - used for decorations, souvenirs, and jewellery.

Mislabelling of shark products across the supply chain is common and obstructs the effective management of fisheries and regulation of trade in these products. Shark products are often sold under vernacular names that disguise the species. For example, shark meat is frequently labelled in Latin American countries as "cazón" (dogfish), "corvinata" (croaker fish), or simply served as "ceviche" (dish usually prepared with fish). Without correct information on species identity and origin, consumers could unintentionally be eating species at risk of extinction.

Photo: © Carlos Grillo - stock.adobe.com

Section 2

Methods

Photo: © Steve Momot, CC BY-SA 4.0

Photo: © Carlos | Polo-Silva

Methods

This study uses the official trade (import, re-export & domestic export) data from key players in the global shark fin and meat trade to trace trade routes and conduct cross comparisons using Harmonized System (HS) commodity codes. Trade data under all HS codes related to shark fin and meat products was collected from three key trade hubs in the international shark fin trade: Hong Kong SAR, Singapore, and Taiwan province, for the years where trade data is available; that is from 2003 through to 2020. This also matches the study period for a similar trade analysis completed for the European Union[9] in 2023.

All three studied datasets were collected from their respective official data sources to ensure that the original data is used for the study. From Hong Kong SAR, the data was collected from the Census and Statistics Department (C&SD) of the Government of Hong Kong SAR. From Taiwan province, it was obtained through the Directorate General of Customs Headquarters in Taipei and the Customs Administration, Ministry of Finance's online trade statistics search engine. From Singapore, the datasets were purchased from IE STATLINK service (the official source of statistics for Singapore's trades). It is also noted that the global database of the Food and Agriculture Organization of the United Nations (FAO) aggregates national figures for the shark fin-related trade. However, while providing a broader perspective of the trade, it potentially oversimplifies product categories (Clarke, 2004). FAO data is therefore not included in this study.

All sources/destinations found in each dataset were grouped under one of the two following categories in the analysis: "LAC" and "Non-LAC". "LAC" (Latin America and the Caribbean) used in this study covers those countries and territories trading in shark products as recorded in the trade data, from the main continent of South America, Central America, and the scattered islands in the Caribbean Sea, which includes the West Indies including the Great and Lesser Antilles, and the Lucayan Archipelago. "Non-LAC" refers to any other country/territory not falling under the definition above.

In the final section data of a selected group of four countries (Chile, Colombia, Ecuador and Peru) is compared with Hong Kong SAR's reported imports to show how reporting between importing and exporting countries can differ significantly. Trade data from those specific countries has been used because this data was reported on in detail by Polo-Silva C. (2021) in the report *Analysis of CITES implementation measures as input for the Regional Action Plan for the Conservation and Management of Sharks, Rays and Chimeras of the Member States of the Permanent Commission for the South Pacific – CPPS Permanent Commission of the South Atlantic*[10]. To complement this research, it is recommended to undertake an analysis of trade data of other key trading countries which are willing to share the data and improve their reporting.

▲ Pelagic thresher shark caught for small artisanal fisheries at Playa Tarqui, Manta, Ecuador.

◀ Thresher shark jumping in Costa Rica.

Section 3

Findings

In this section, trade data from the trade hubs of Hong Kong SAR, Singapore, and Taiwan province are combined to form an aggregated dataset (unless specified otherwise).

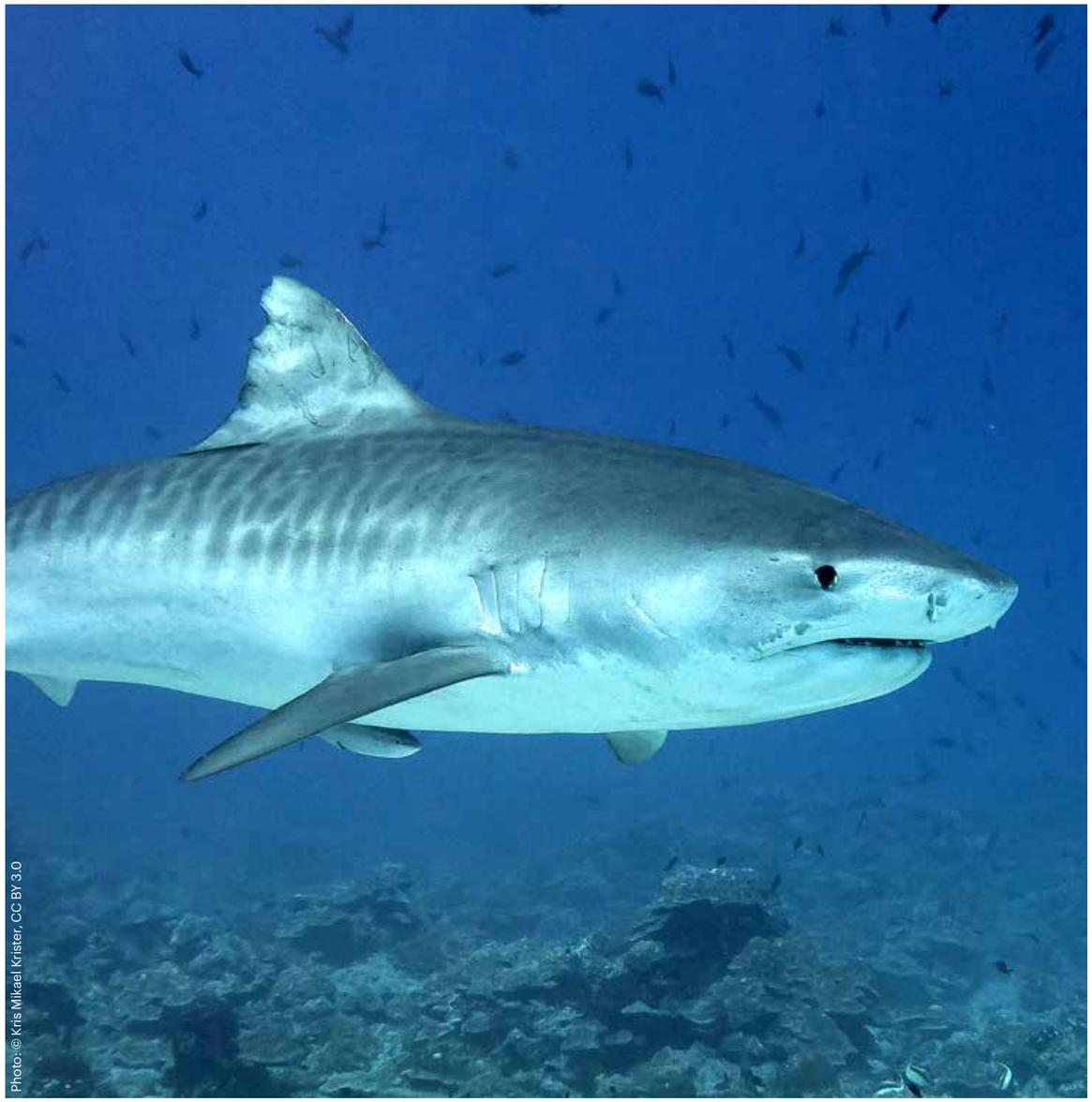


Photo: © Kris Mikael Krister, CC BY 3.0

Shark fin-related imports from the LAC region

From the period 2003–2020, the LAC region was found to be a consistent source of shark-related products for shark trade hubs Hong Kong SAR, Singapore, and Taiwan province.

From all reported sources globally, a grand total of 188,369 metric tons of shark-fin related products were reported in imports into Hong Kong SAR, Singapore, and Taiwan province combined, with an annual average of 10,465 metric tons.[11] The LAC region contributed 15.66% equivalent to 30,608 mt of the total reported imports, averaging 1,700 mt per annum over the studied period. The percentage of the LAC region's imports was quite steady between 2003 and 2016. The percentage declined to a low of 7.65% in 2019 and rose back up to 11.38% in 2020.

Between 2003 and 2020, of all reported imports from the LAC region, Costa Rica was by far the largest reported source of imports for the three trade hubs, with a total of 5,613 metric tons recorded and an annual average of 312 metric tons.

Peru accounted for the second highest volume of imports into the trade hubs, with a total of 3,714 metric tons, followed by Uruguay (3,475 metric tons) and Mexico (3,429 metric tons).

188,369 mt

of shark-fin related products were reported in imports into Hong Kong SAR, Singapore, and Taiwan province combined, with an annual average of 10,465 metric ton[12]

15.66%

equivalent to 30,608 mt of the total reported imports was sourced from the LAC region with an annual average of 1,700 metric tons

1,700 mt

per annum was contributed by the LAC region

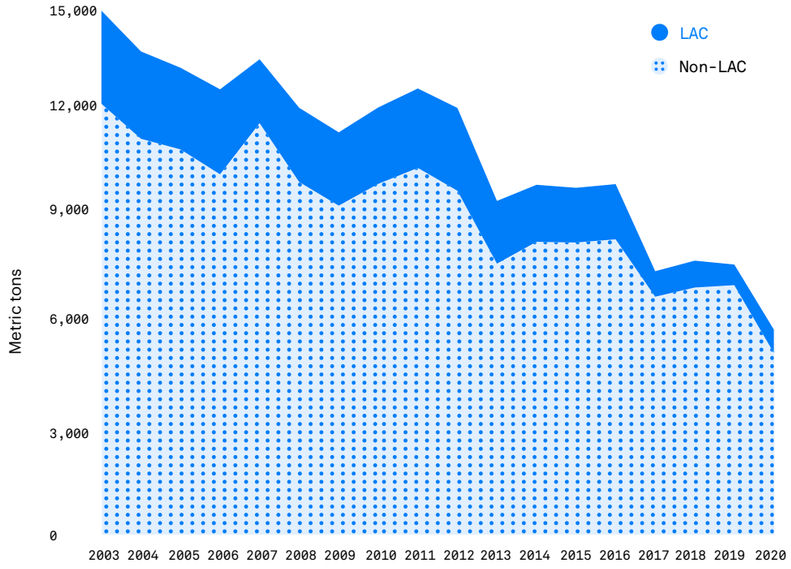


Figure 1. Total shark fin-related imports into Hong Kong SAR, Singapore, and Taiwan province (aggregated) 2003–2020.

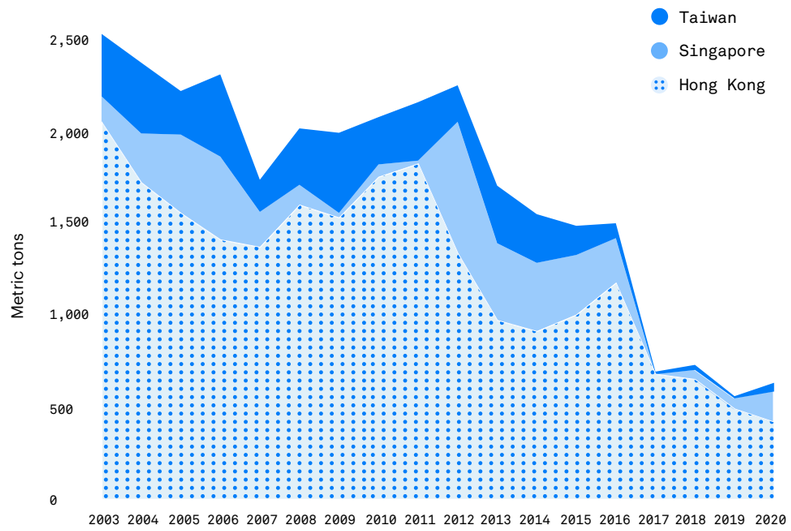


Figure 2. Total shark fin-related imports into Hong Kong SAR, Singapore, and Taiwan province (aggregated) from the LAC region 2003–2020.

	Reported source of imports	Total reported trade (metric tons), 2003-2020
1	Costa Rica	5,613
2	Peru	3,714
3	Uruguay	3,475
4	Mexico	3,429
5	Argentina	2,429
6	Trinidad and Tobago	2,223
7	Brazil	2,067
8	Panama	2,066
9	Ecuador	1,875
10	El Salvador	721
11	Chile	701
12	Guyana	472
13	Suriname	446
14	Guatemala	333
15	Colombia	312
16	Venezuela	253
17	Belize	156
18	Nicaragua	150
19	St Vincent and the Grenadines	99
20	Cuba	23

Table 1. Top 20 reported LAC region sources for total shark fin-related products imported into Hong Kong SAR, Singapore, and Taiwan province, 2003-2020.

◀ Tiger shark, Costa Rica.

Photo: © Vanessa Mignon

Photo: © Carlos j Polo-Silva

Shark fin-related exports to the LAC region

Most of the aggregated total fin-related exports and re-exports from Hong Kong SAR, Singapore, and Taiwan province were outbound to non-LAC region destinations. This is not surprising and supports the conclusion that the LAC region, although active in the international trade, is not generally a consumer of shark fin-related products.

Less than 0.02% (a total of 19.48 metric tons) of the aggregated total exports were reportedly outbound to the LAC region from 2003–2020.

▲ Cut off fins from whale shark. The fins were caught by artisanal fishermen in Playa Tarqui, Manta, Ecuador.

◀ Whale shark.

	Reported export destinations	Total reported trade (metric tons)
1	Mexico	13
2	Uruguay	5
3	Peru	1
4	Trinidad and Tobago	0.23
5	Ecuador	0.19

Table 2. Top five reported LAC region destinations for total shark fin-related products 2003-2020.

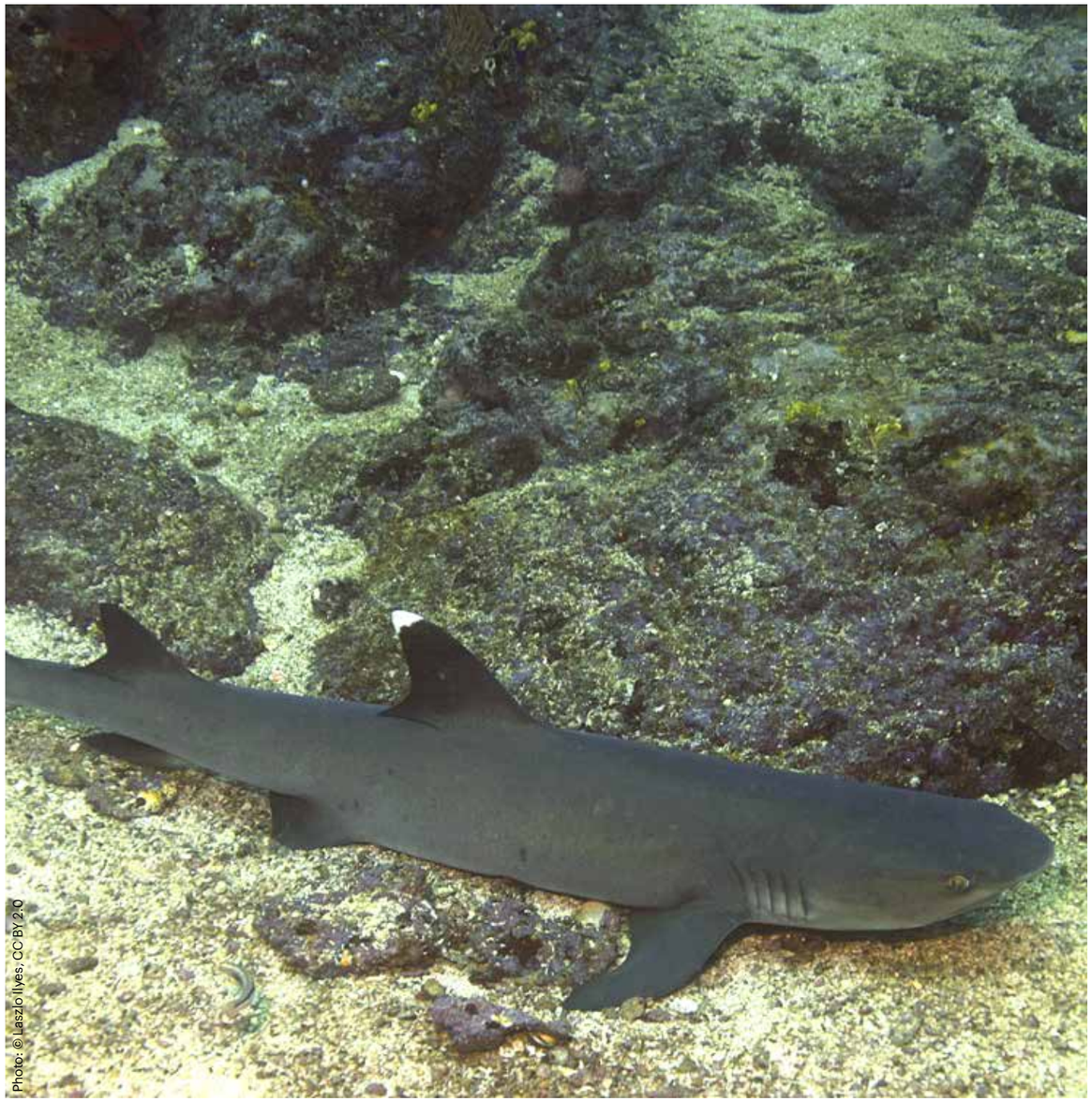


Photo: © Laszlo Ilyes, CC BY 2.0

Shark meat-related imports from the LAC region

Aggregated trade records from all three trade hubs (Hong Kong SAR, Singapore, and Taiwan province) show that while the LAC region was a significant source of shark meat its role in the trade has fluctuated in recent years. From the aggregated import data, a total of 96,361 metric tons of meat was reportedly imported into the three trade hubs from global sources, with an average of 5,353 metric tons per year. The LAC region contributed 10"% equivalent to 9,818 mt of the total reported imports, averaging 545 metric tons per year over the studied period. The imports from the LAC region fluctuated from 2003 until reaching the peak of 1,613 metric tons in 2011; volumes then took a sharp decline from 2011 to the lowest record of 33 metric tons in 2013. Since 2015, imports once again rose steadily to almost 1,000 metric tons in 2018. Despite declines in 2019, over 700 metric tons were reportedly imported from the LAC region in 2020. Uruguay was responsible for a total of 3,182 metric tons, with an annual average of 177 metric tons, making it the highest reported source of imports from the LAC region. Panama was the second highest, with a total of 2,716 metric tons.

96,361mt

of shark meat-related products were reported in imports into Hong Kong SAR, Singapore, and Taiwan province combined, with an annual average of 5,353 metric tons

10%

equivalent to 9,818 mt of the total reported shark meat imports was sourced from the LAC region

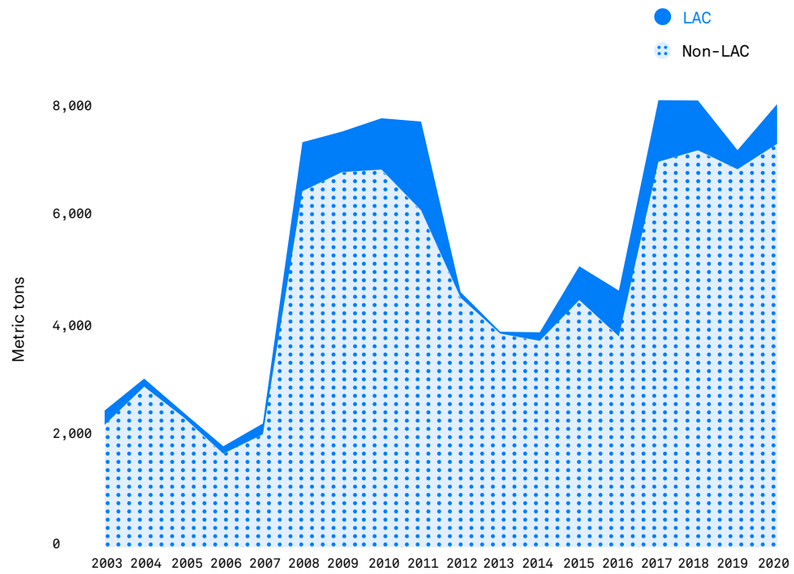


Figure 3. Total shark meat-related imports into Hong Kong SAR, Singapore, and Taiwan province (aggregated) 2003–2020.

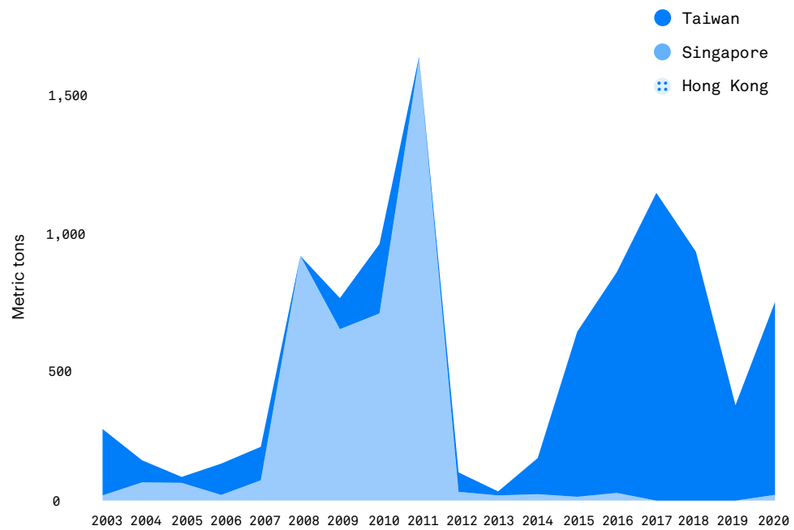


Figure 4. Total shark meat-related imports into Hong Kong SAR, Singapore, and Taiwan province (aggregated) from the LAC region sources 2003–2020.

	Reported source of imports	Total reported trade (metric tons)
1	Uruguay	3,182
2	Panama	2,716
3	El Salvador	1,021
4	Costa Rica	909
5	Suriname	702

Table 3. Top five reported LAC region sources for total shark meat-related products imported into Hong Kong SAR, Singapore, and Taiwan province 2003-2020.

◀ A whitetip reef shark resting on the sea-bottom at Viuda (Widow) dive site, in Coiba National Park, Panama.

Photo: © Elias Levy, CC BY 2.0

Shark meat-related exports to the LAC region

A grand total of 267,345 metric tons of shark-meat related products was reported as exports to global destinations from Hong Kong SAR, Singapore, and Taiwan province combined, with an annual average of 14,853 metric tons. A total of 157,240 metric tons of shark meat-related products was reportedly exported to the LAC region, which is 58% of the grand total exports in the aggregated data. The annual average was 8,736 metric tons.

Compared to Hong Kong SAR and Singapore, Taiwan province was the main exporter of meat to the LAC region, but it is not possible to tell from the trade data if the products were re-exports or domestic exports from local shark fisheries, as Taiwan province is also one of the top shark fishing actors.[13]

Uruguay received by far the highest volume among all LAC region destinations, with a total of 69,444 metric tons recorded and an average of 3,858 per annum. Brazil ranked second highest, with a total of 60,361 metric tons recorded. Mexico ranked third, with a total of 25,006 metric tons. It is worth noting that the total reported exports to Uruguay, Brazil, and Mexico represent more than 98% of the total reported trade for all LAC region destinations. It is also worth mentioning that Uruguay is both the highest reported import source and at the same time highest reported destination for the shark meat-related trade, which may suggest that the shark meat-related products are potentially processed here for re-export, or that there is a large domestic consumption market for shark meat-related products.

267,345 mt

of shark-meat related products were reported in exports from Hong Kong SAR, Singapore and Taiwan province combined, with an annual average of 14,853 metric tons.

58%

equivalent to 157,240 mt of the total reported shark meat exports went to the LAC region

98%

of the total reported shark meat exports destined for the LAC region went to Uruguay, Brazil and Mexico

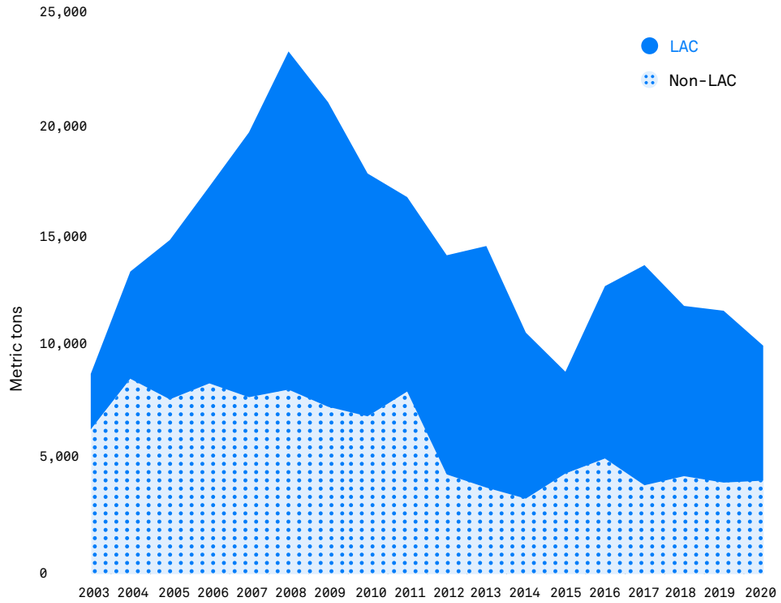


Figure 5. Total shark meat-related exports from Hong Kong SAR, Singapore, and Taiwan province (aggregated) 2003–2020.

	Reported export destinations	Total reported trade (metric tons)
1	Uruguay	69,444
2	Brazil	60,361
3	Mexico	25,006
4	Trinidad and Tobago	1,158
5	Guatemala	456

Table 4. Top five reported LAC region destinations for shark meat-related products exported from Hong Kong SAR, Singapore, and Taiwan province 2003-2020.

◀ Whitetip reef sharks in the Revillagigedo Islands, Mexico.

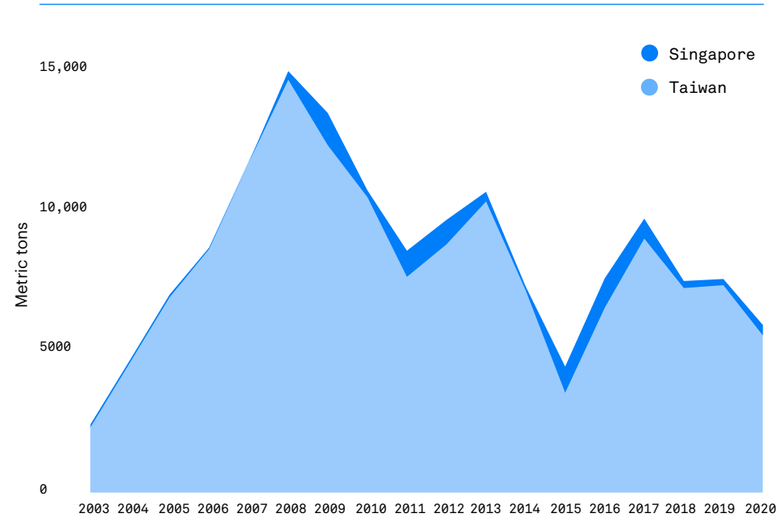


Figure 6. Total shark meat-related exports from Hong Kong SAR, Singapore, and Taiwan province (aggregated) to the LAC region destinations 2003–2020.

Section 4

Discovering data discrepancies

In this section, trade data from four countries, where data was available, are compared with the Hong Kong SAR trade data (country of consignment “CC” for import data) to identify discrepancies that possibly indicate data reporting issues. Key findings are highlighted in the following pages. Please note that scale values in the graphs have been adjusted per country.

Photo: © Vanessa Mignon

Peru

Peru's trade data present mixed fin and meat products for imports from and exports to all destinations. Based on Peru's data from 2015–2020, total reported exports to global destinations were less than two metric tons per annum.

However, when compared only to Hong Kong SAR's import data for the related commodities imported from Peru, the large discrepancies are immediately apparent with Hong Kong SAR's data showing that it has recorded far more in imports from Peru (reportedly, an average of 257 metric tons between 2015 and 2020) than Peru reportedly exported. Keeping in mind that this comparison has only considered Hong Kong SAR's import data and has not even begun to investigate trade data from other destinations, the discrepancy suggests huge under-reporting in Peru's total exports. Further investigation is therefore recommended to understand any misreporting and/or illegal wildlife trade activities that could be taking place.

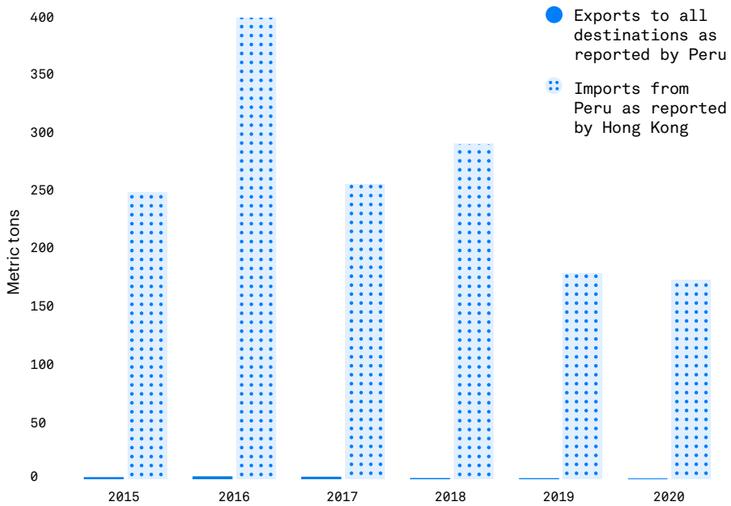


Figure 7. Shark-related exports to all destinations in Peru's trade data vs. imports into Hong Kong SAR directly from Peru 2015-2020.

257 mt

average of shark-related products was reportedly imported from Peru to Hong Kong SAR between 2015-2020 in comparison to 2 metric tons in Peru's data

▲ Two whale sharks approach the ocean's surface.

Ecuador

The shark fin and shark meat trade are recorded separately in Ecuador's trade data. Comparison of Ecuador's reported shark fin-related exports to Hong Kong SAR and Hong Kong SAR's reported shark fin-related imports from Ecuador shows that the data matches closely from 2016–2018. However, before 2016 and after 2019 Hong Kong SAR's data recorded higher imports from Ecuador than Ecuador reported as total exports.

Looking at a further comparison of the total reported exports from Ecuador to global destinations, the data shows that the majority of shark fin-related exports were destined for Hong Kong SAR. The exception is during the time period of 2016–2018, when Hong Kong SAR's imports were reportedly lower, potentially indicating that Ecuador had exported to other destinations. Notably, in the time period of 2018–2020, Hong Kong SAR's reported imports were higher than the reported exports from Ecuador, indicating discrepancies in the data.

It is also noted that, where Ecuador's data stated that in 2018 approximately 148 metric tons of shark meat were exported to Peru, Peru's import data for shark fin and meat imports that year from global sources amounted to only 0.73 metric tons. This discrepancy warrants further investigation as it could point to under-reporting or different reporting times with Peru potentially having registered the import in 2019 instead of 2018, for example.

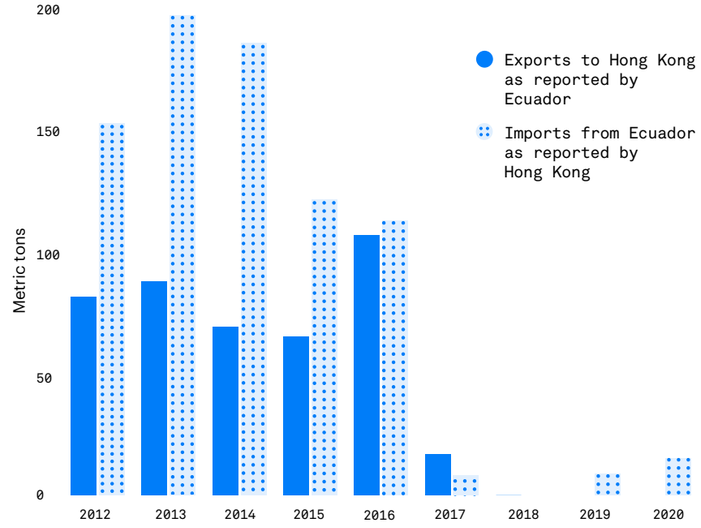


Figure 8. Total shark fin-related exports to Hong Kong SAR in Ecuador's trade data vs. reported imports into Hong Kong SAR directly from Ecuador 2012-2020.

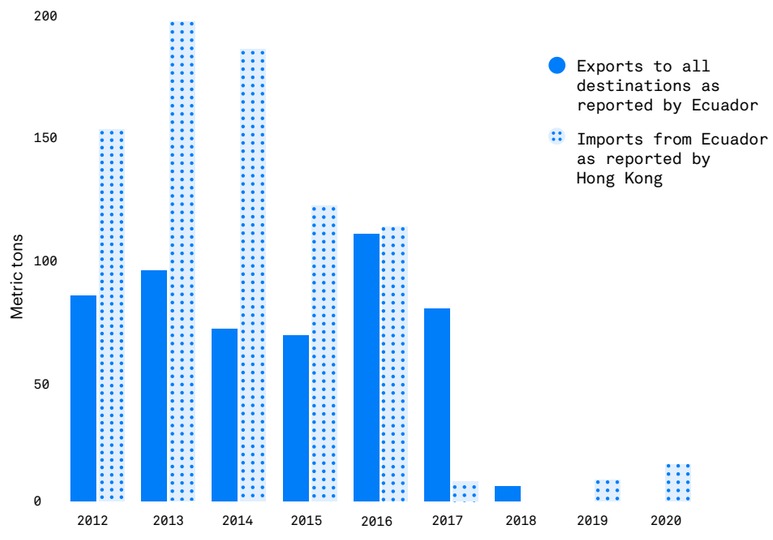


Figure 9. Total shark fin-related exports to all destinations in Ecuador's trade data vs. reported imports into Hong Kong SAR directly from Ecuador 2012-2020.

▲ Hammerhead sharks in a coastal village in Ecuador.

Photo: © Peter van der Sluijs, CC BY-SA 3.0

Photo: © Stan Shea

Chile

Chile's trade data presentation shows species level information for some commodities but does not provide a breakdown of destinations. A comparison of Chile's export data with Hong Kong SAR's imports from Chile shows discrepancies every other year. The cause of this is unclear, and possible explanations include differing reporting periods between authorities or variations in product forms (e.g fresh or dried so with or without water content). These and other possible causes may be worth exploring further.

Please note that the data discrepancies in the case of Chile and Colombia are smaller compared to Peru and Ecuador, and scale values in the graphs have been adjusted accordingly.

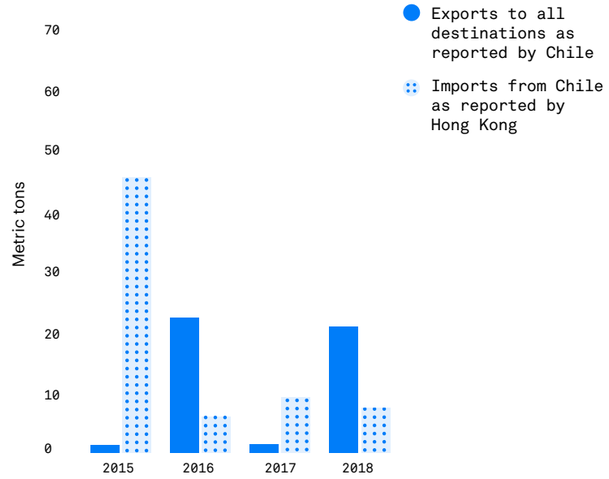


Figure 10. Total shark fin-related exports to all destinations in Chile's trade data vs. reported imports into Hong Kong SAR directly from Chile 2015-2018.

Colombia

Colombia's trade data presentation does not show a breakdown of destinations. A comparison of Colombia's export data to global destinations with Hong Kong SAR's imports from Colombia shows that from 2003–2015, the majority of the fins were headed to Hong Kong SAR although other destinations outside of Hong Kong SAR, Singapore, and Taiwan province were also likely involved. The only major discrepancy was recorded in 2016, when Hong Kong SAR reportedly imported far more than Colombia's reported exports. It may be worthwhile to further investigate any potential events in that specific year that could have caused the discrepancy. It is worth noting that discrepancies between Colombia's export data and Hong Kong SAR customs data is relatively low from 2003-2015, and 2017-2020. The only major difference was in 2016, with a discrepancy of 56 metric tons. Other than that, discrepancies averaged less than two metric tons.

◀ A typical dry seafood market storefront in Hong Kong SAR, China selling various of wildlife products such as dried shark fins.

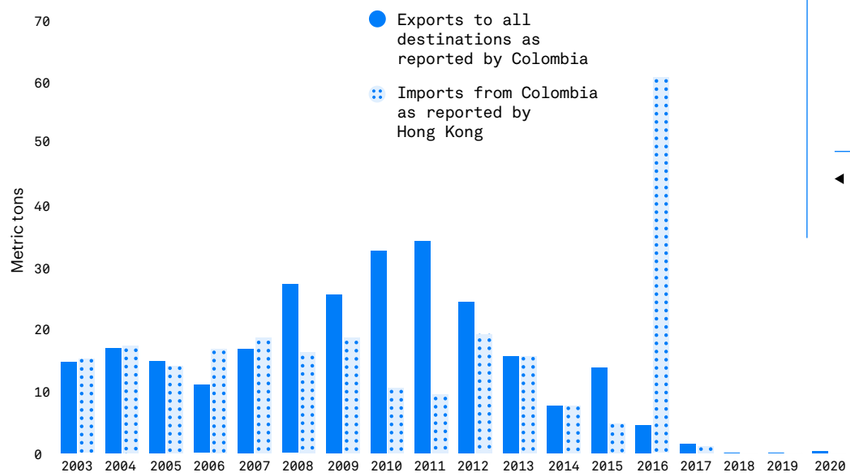


Figure 11. Total shark fin-related exports to all destinations in Colombia's trade data vs. reported imports into Hong Kong SAR directly from Colombia.

Section 5

Recommendations

Photo: © Robert Marc Lehmann

Recommendations

This study illustrates the role of the LAC region in the global shark-related trade, with clear indications that LAC countries (*See Annex 1*) are key players in the trade. The findings show that the LAC region plays an important role not only in the shark meat trade, but also supplies a significant proportion of shark fin trade to Asia. Given its significance in the trade with Asia, it is recommended that further research into the LAC region's shark-related trade with other key trade players, such as the European Union (EU), is undertaken to find out the extent of the LAC region's role (both in volume and in its diversity of trade partners) in the global trade.

Because of its role as a source, trade hub, and destination in the global trade and market, the LAC region is in a position to put in place and enforce regulations that can improve traceability and set a new standard for the international shark-related product trade. More importantly, with the large number of species listed onto Appendix II of CITES at CoP19, most of which were found to be commonly traded, countries active in the global trade will need to step up their work to monitor and regulate international trade, to ensure traceability, legality, sustainability, and the proper implementation of CITES. This study's findings highlight the importance of such efforts for LAC countries, particularly for products or routes where discrepancies in the trade data were identified, suggesting potential misreporting or illegal trade activities.

Recommendations for the LAC region to improve capacities to understand, monitor, and regulate its shark-related trade are presented in this section. Several of the recommendations focus on improving transparency and traceability of the traded products. Given the global scale of the shark-related trade, and the multiplicity of trading partners, countries trading in the products will need to proactively work together to share trade data, standardise trade reporting formats and greatly improve the quality of the trade data collected. Such steps are required to bring the level of data transparency and traceability to where it needs to be for a trade as complex as the shark trade.

1. Ensure the effective implementation of CITES Appendix II listings of shark species

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is currently one of the best available mechanisms as a legally binding international treaty to regulate and monitor the international trade of endangered wildlife. Species whose unmanaged trade is contributing to population declines meet the CITES criteria for Appendix II (CITES, 2021). For these species, international trade may only continue with the appropriate permits issued by national authorities, to ensure that trade is not detrimental to the species concerned. An additional benefit of such a permitting system is the ability to collect detailed information on how threatened shark species are traded by countries/territories where CITES is properly implemented. Notably, for some places such as Hong Kong SAR, CITES is the only legal tool regulating international wildlife trade.

With the latest listings of shark species at CITES CoP19, in November 2022, bringing more than 90% of the shark fin trade under trade regulation (Cardeñosa et al., 2022), countries will need to build capacity to ensure effective implementation. To achieve this, governments are recommended to strengthen both internal capacities for implementation and collaborations between governments of at least key trading partners.

To increase capacity for detailed trade reporting and to deter illegal trade activities, specialised training should be undertaken for frontline customs and border control staff on visually recognising products belonging to CITES-listed shark species. These training workshops should be aimed at engaging frontline officers to improve their understanding of CITES permitting processes and their ability to conduct inspections quickly and accurately, by introducing the best available tools for identification of CITES-listed products among shipments. Such training can be aided by dissemination of product identification materials (e.g. guidance materials) throughout border control points, and by organising training sessions for key staff groups most likely to encounter shark products. When integrating these skills into the inspection protocol, specialist personnel may also be assigned in consignment screening to assist with confirmation of visual identification to more efficiently spot products of regulated species, especially where they are mixed in with similar-looking products from unregulated species. This builds confidence for the customs personnel in calling out shipments possibly containing illegally traded products and improves knowledge on the scale of illegal trade passing through local ports. Such workshops have proved to be successful in places such as Hong Kong SAR, which has conducted record-breaking seizures since first receiving the training in 2014 (SCMP, 2020).

Effective communication channels between government departments of key trading partners should be established for the sharing of information on suspect shipments. This would allow exporting countries to flag to importing countries any suspicious shipments that would require special attention for inspection at port, or for importing countries to return information to exporting countries on illegal shipments received to trigger and inform their local investigation for possible organised criminal activities. The importance of such channels has been demonstrated previously between the authorities of Hong Kong SAR and Ecuador, where the intelligence provided by Ecuador's government led to local investigation in Hong Kong SAR when the shipment arrived.

Photo: © Carlos j Polo-Silva

▲ Blue shark caught in San Lazaro, Mexico.

◀ Blue shark.

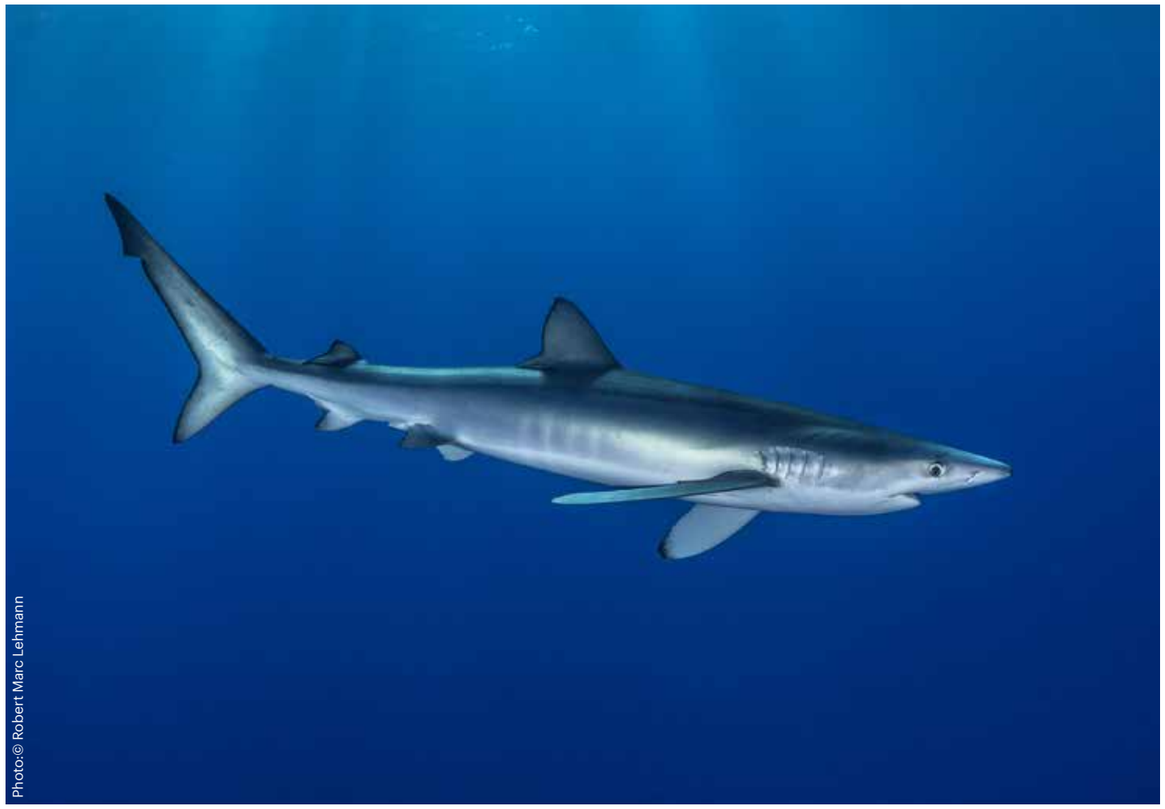


Photo:© Robert Marc Lehmann

2. **Improve recording of data and trade records** via a review of the Harmonized System (HS) commodity codes for shark products and standardise code use with key trading partners

LAC countries should initiate collaborations with key trading partners in shark-related products to review HS codes used and reach consensus on updating codes for the most traded products, to provide more detailed information on products traded and increase traceability by using compatible codes. In particular, species-specific information should be reflected in the codes for at least CITES-listed species and species threatened with extinction.

The current study is one of the few studies looking into the trade flow of shark-related products between key trading partners based on raw customs data, with details on the types of products traded. The study enables understanding of not only trade portions, scales of trade, and characteristics or forms of shark products traded, but also relative roles and relationships between key partners in the trade. Comparisons can also reveal instances of data discrepancies between trade partners. For instance, based on the discrepancies between Hong Kong SAR's trade data as compared to the data of Ecuador and Peru as analysed in the current study, further investigation is recommended to understand any misreporting and/or illegal wildlife trade activities that could be taking place.

Such a study has furthermore revealed shortcomings in the currently applied trade data recording system, specifically in the low level of detail provided by the applied HS codes in shark-trading countries and the lack of consensus on codes used, hindering the ability to achieve greater traceability and transparency in the trade. This, however, also presents an opportunity for a review of the HS codes to improve capacities to document trades moving forward.

Under the current HS codes applied, it was found that most of the shark-related products were grouped into broad categories that do not show species or even genus or family level information. Reportedly, some trade partners would even group the products into generic commodity codes for seafood (Mundy-Taylor and Crook, 2013; Dent & Clarke, 2015). As a result, taxonomic information is lost in the trade data, along with any information on the involvement of species threatened with extinction or CITES-listed species. Notably, only 9.9% of all the traded fisheries products in the world contain species level information for commodities (Chan et al., 2015).

In addition to the low detail level in applied HS codes, the lack of consensus between trading partners on what codes are applied presents a further barrier to traceability. Because of this lack of consensus, at each trade port the same product may be reported under different codes, making the trade data between trading countries incomparable, and rendering it near impossible to trace even a general trade route of products by comparing reported trades. Comparable trade data sets will enable analyses to be conducted to locate discrepancies in the trade between reported imports and exports/re-exports and identify possible misreporting through such comparisons.

The incompatibility of the trade data is observed not only in the level of taxonomic detail, but also in traded product forms. This can already be observed between just the datasets used in this study. For instance, Hong Kong SAR's customs HS codes enable a great level of detail for shark-related product forms, including descriptions such as processed/unprocessed (with/without cartilage), dried/wet/frozen, canned, in brine, etc. This level of detail allows accurate analyses of data, particularly in addressing water content for traded products to avoid double counting and reflect true traded quantities, given that wet fins may weigh up to four times as much as dried fin products (Clarke, 2004b). The same can be done for canned products in the future, although a conversion factor for canned products is not currently available and presents a research gap needing to be addressed.

Photo: © Carlos j Polo-Silva

In contrast to Hong Kong SAR's customs HS codes, HS codes applied in Singapore do not describe the product form to this level of detail, while Taiwan province's data applies codes to indicate CITES-listed species but for only some of these listed species. Similarly, the separation of Country of Origin (CO) and Country of Consignment (CC)[14] is seen in Hong Kong SAR's trade data but not applied in either Singapore or Taiwan province's data. Such incompatibility is also observed across many regions globally, including the LAC region and its trade partners.

A review of HS commodity codes used for key products to increase level of detail and standardise among key trading partners is therefore recommended. Such a review should first identify the most commonly traded products for the LAC region's international shark-related trade, its key trading partners, and involve an update to codes to distinguish between product forms and include species-specific information for at least CITES-listed species and species threatened with extinction. This would also take forward the decision by CITES Parties at the 2013 Standing Committee to liaise with the World Customs Organization (WCO) for the very purpose of including CITES-listed species in HS codes, so that enforcement capacities may be enhanced (CITES Decision, 16.62, Rev. CoP16 (2013)).

By standardising HS codes used among key trading partners and providing product form-specific and species-specific information in the new codes, at least for the most commonly traded products, many benefits can be gained. Such an update will improve data accuracy in trade records, furthering each trading country/territory's understanding for not only their own trades but also possible consumption rates (FAO, 2012 in Chan et al., 2015) and help to increase traceability and transparency in the trade chain. With increased traceability and transparency, analyses on trade datasets can inform the creation of policies for sourcing countries on fisheries management and strengthen enforcement and monitoring capacity in trading countries to help meet broader conservation targets, such as targets under the Convention on Biological Diversity (CBD), and more effectively manage trade at sustainable levels. Consistency in codes used can also improve taxation for trading countries, by providing a clear, unified system for tracing the traded products. It should be noted that while such an update may potentially result in more HS codes being created to fully capture the diverse products in the trade, not all codes will be used or applicable in every trading country/territory, as each country/territory should only need to utilise HS codes for those common/commercially-important products that they are trading. On the other hand, having the diverse codes to accurately describe products in the trade provides countries/territories with the option of enhancing traceability in trade records.

Notably, a comprehensive review of HS codes now can eliminate the need for extensive and repeated updates in the future. It has been observed that the review and update of HS codes may cause confusion for shipment declarations and reporting when first implemented (Boon, 2017; Shea and To, 2017). For instance, in Hong Kong SAR's trade data, it is suspected that some trade of shark fins was reported under the code for products related to dogfishes in 2012, and in Singapore's trade data it was found that some fins were possibly reported under categories for shark meat from 2008 to 2011. While it is expected that trade partners and traders will need a period of time to adjust to new levels of detail in the reporting, especially in a widespread and comprehensive review, this should not be seen as a barrier to establishing clear trade record systems. Instead, a comprehensive review now can avoid erratic updates in the future. To help users cope with and more smoothly adopt new changes, it is suggested that a briefing programme may be held for shipping companies and traders prior to implementation to ensure that users are aware of the change in the system and to reduce the time needed for calibration, thereby also reducing errors in the data reported, while helping them understand the importance of clear trade records (Clarke, 2004).

With more international attention being placed on combating illegal wildlife trade, it can be expected that countries will soon find the need to establish clearer systems for monitoring their related trade, including the review of HS codes.

▲ Blue sharks caught for small scale fisheries in Playa Tarqui, Manta, Ecuador.

◀ Blue shark.

Photo: © Carlos J Polo-Silva

3. Build domestic capacity for long-term trade monitoring through trade data analysis

It is recommended that the LAC region increases its capacity for long-term and detailed monitoring of its shark-related trade, through trade data analysis and research, identifying key trading partners, and combined with the above recommendation for the specialised training of frontline staff to more effectively detect illegal trade of CITES-listed species.

Alongside the two recommendations made above which would improve the quality of trade data made accessible, this recommendation encourages the use of such data in meaningful analyses to obtain information about the LAC region's shark-related trade, and maintain long-term monitoring efforts for its own trade activities (particularly in relation to threatened or CITES-listed species). Trade data research can enable identification of key trading partners on specific products and the relationship between those countries in the trade, to improve enforcement and CITES-implementation capacities, and encourage regulation compliance and even aid the interpretation of stock status (Clarke, 2014). When analysed against the trade data of other trading partners, results can provide indications on how to prioritise international efforts in trade regulation and identify trade routes most prone to illegal trade.

Furthermore, once a comprehensive dataset is made available, comparisons of the customs data can be made against the CITES trade database and FAO's FishStatJ database, to identify potential inconsistencies in reporting format or product values and quantities. Previous research including such comparisons has noted discrepancies between national customs data and data reported to FishStatJ, highlighting an important gap in trade data availability, accuracy, and consistency across platforms, including the most extensive and publicly available dataset managed by the FAO. This is significant, as such data are potentially used for further research and in informing policymaking. By building up a comprehensive, long-term trade dataset, the quality of data submitted to FishStatJ can also be improved.

Photo: © Vanessa Mignon

4. Prioritise the use of trade data to combat illegal wildlife trade in sharks and shark products

LAC countries should take the lead in contributing trade datasets and analyses to intelligence databases to combat illegal wildlife trade.

The illegal wildlife trade is one of the most lucrative crimes; globally one of the largest forms of illegal trades ranked behind only the trafficking of arms, drugs, and humans (UNODC, 2021) and estimated to be worth USD 20 billion per year (INTERPOL, 2021). As governments around the world close in on the illegal wildlife trade as organised and serious criminal activities, much of their work may rely on intelligence to conduct inspections or investigations. In Hong Kong SAR, for instance, the Customs and Excise Department collects and disseminates intelligence on trade information through an intelligence desk with other governmental departments on trade related to threatened wildlife, and applies specialised risk management techniques in identifying incoming shipments warranting inspection. Suspicious consignments or individuals may be placed on watch lists (Clarke, 2004), and partially based on such watch lists and other intelligence provided, shipments containing wildlife products can be flagged for customs inspection.

Analysis of trade data can provide an additional source of information or lead for investigations into potentially illegally traded shipments. Where the trade data provides sufficient details on the products traded, it can indicate where investigation or inspection efforts should be prioritised for imported shipments, such as by revealing the major trade routes used for the greatest volume of shark-related trade, or any trade patterns for products traded in specific forms, and flagging those countries most prone to misreporting. LAC countries should therefore make use of such data to monitor their wide network of trade closely and effectively.

Furthermore, trade data should be shared in cross-national platforms to enable the better coordination of intelligence between border checkpoints at the international level, at least with relevant key trading partners. By sharing export/re-export data with destination countries, border control at destinations will be able to flag shipments carrying shark-related products and needing inspection, thereby streamlining enforcement processes. Such a mechanism to exchange information regarding seizures can also enable the effective comparison of trade routes that can help significantly further understanding of the complex global trade routes of shark products and shed light on trade routes most likely harbouring illegal trade activities. At the very least, countries should conduct regular reviews of trade data, with comparisons of data from trade partners if available, to actively monitor for any ongoing data discrepancies that could indicate illegal trade activities.

In addition to the sharing of trade datasets, a mechanism to exchange information regarding successful seizures (excluding sensitive personal and/or intelligence data) conducted by governments and accessible by trading partners should also be established. Such sharing of information can further understanding of the scale, key players, trade routes and patterns in the illegal trade. However, currently seizure data are generally not made available, and no known comprehensive analysis exists for shark products to understand illegal trade through seizure data. In some places, seizure information is only found in media releases, but this source is also not always available, such as in the case of Singapore (Boon, 2017). While privacy issues may prevent the release of the seizure information in a public domain, enforcement intelligence should at least be shared between enforcement and management authorities of countries active in the trade, for the purposes of furthering understanding of illegal trade activities in the respective countries and supporting investigations into criminal activities related to illegal trade.

Finally, other publications have recommended the development and use of technologies such as real-time automated species-level detection (RTASLD) to assist border wildlife inspectors with identifying risk or presence of illegal wildlife trade and related activities (Tlusty et al., 2023). The RTASLD assesses documentation including declarations and invoices associated with shipments, collecting data on the traded species including on taxonomic inaccuracies, to help better track the international wildlife trade and help border control assess risks of illegal wildlife trades associated with shipments (Tlusty et al., 2023). The maintenance of clear trade datasets now will allow for more robust data to support similar technologies (for instance, the use of artificial intelligence tools) in the future.

▲ Great white shark.

◀ Bigeye thresher shark, Playa Tarqui, Manta, Ecuador.

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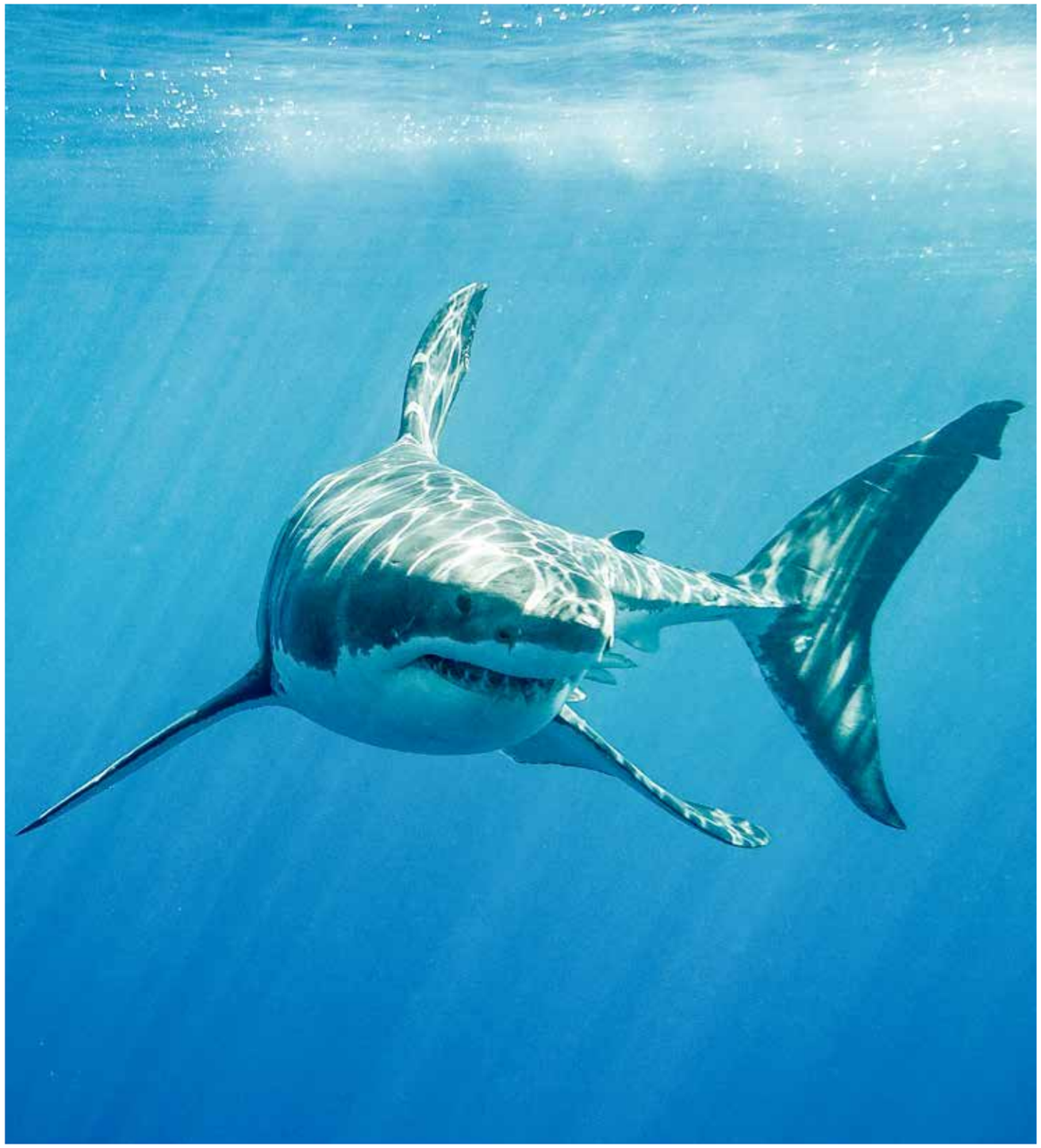
Section 6

Acknowledgements, References, End notes & Annexes



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Design by Caroline Kube at Kube Art & Design.

▲ Frontal underwater image of a great white shark swimming with its main four fins showing in the Pacific Ocean at Guadalupe Island in Mexico.

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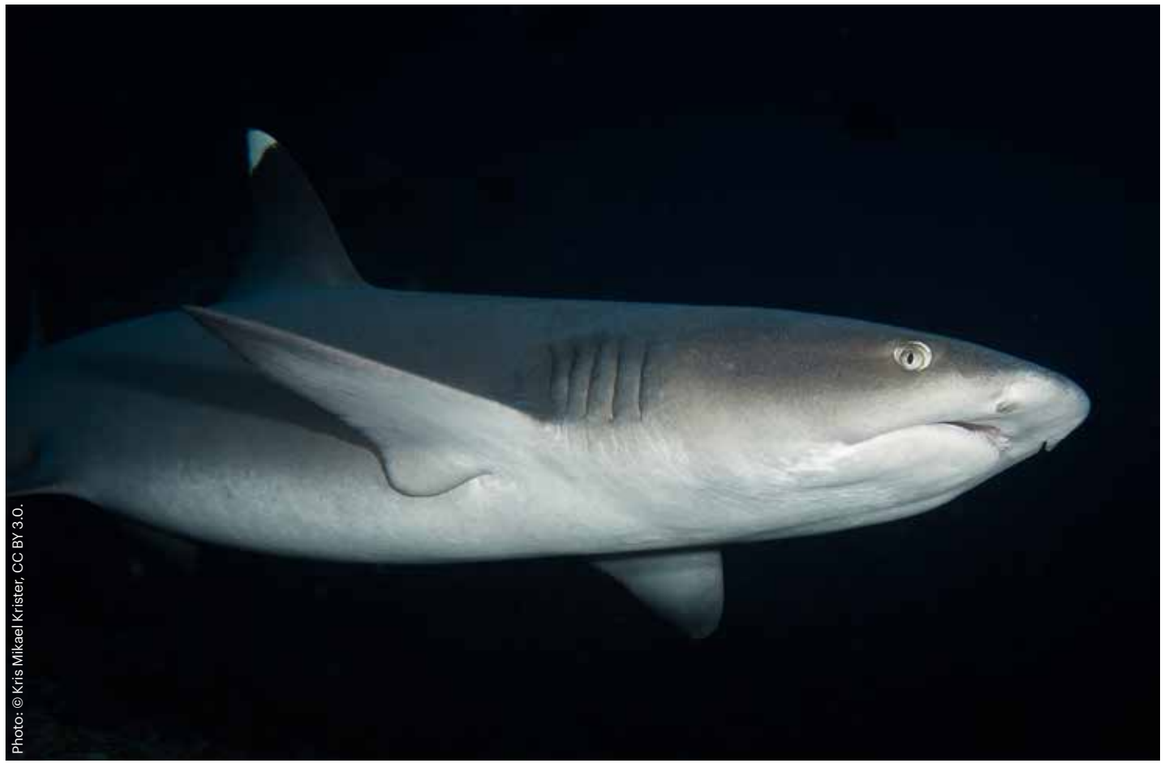

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End notes

1 In this summary report, trade data collected from Hong Kong SAR, Singapore and Taiwan province are combined to provide an "aggregated" dataset. It should also be noted that trade data from Hong Kong SAR are separated into "country of origin (CO)" and "country of consignment (CC)". In the following sections unless otherwise specified, CO data is used for import data, while CC data is used for export/ re-export data. The distinction is not made for Singapore or Taiwan province's data

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8 Unless otherwise referenced, the below text contains excerpts from the following source: Hasan, M. R., Chaplin, J. A., Spencer, P. B., & Braccini, M. (2023). *Consumption of shark products: The interface of sustainability, trade (mis)labelling, human health and human rights.* Fish and Fisheries. https://doi.org/10.1111/faf.12768

9 Shea, S., Slee, B., O'Toole, M. (2022) *Supply and Demand: the EU's role in the global shark trade.* Stichting IFAW (International Fund for Animal Welfare), The Hague, The Netherlands. 36pp. https://www.ifaw.org/resources/eu-role-global-shark-trade

10 Polo-Silva C. (2021). *Diagnóstico de las medidas de implementación CITES como insumo para Plan de Acción Regional para la Conservación y Manejo de Tiburones, Rayas y Quimeras de los Estados Miembros de la Comisión Permanente del Pacífico Sur – CPPS.* Comisión Permanente del Pacífico Sur. 77 p

11 In this summary report, trade data collected from Hong Kong SAR, Singapore and Taiwan province are combined to provide an "aggregated" dataset. It should also be noted that trade data from Hong Kong SAR are separated into "country of origin (CO)" and "country of consignment (CC)". In the following sections unless otherwise specified, CO data is used for import data, while CC data is used for export/ re-export data. The distinction is not made for Singapore or Taiwan province's data

12 In this summary report, trade data collected from Hong Kong SAR, Singapore and Taiwan province are combined to provide an "aggregated" dataset. It should also be noted that trade data from Hong Kong SAR are separated into "country of origin (CO)" and "country of consignment (CC)". In the following sections unless otherwise specified, CO data is used for import data, while CC data is used for export/ re-export data. The distinction is not made for Singapore or Taiwan province's data

13 Fischer, J., Erikstein, K., D'Offay, B., Guggisberg, S. & Barone, M. (2012). *Review of the Implementation of the International Plan of Action for the Conservation and Management of Sharks.* FAO Fisheries and Aquaculture Circular No. 1076. Rome, FAO. 120 pp.

14 Under imports, CO refers to the country/ territory where the traded goods have undergone manufacturing processes that fundamentally and permanently changed the product. CC refers to the country/territory from which the traded goods were consigned to Hong Kong SAR (by any form of transport), without further intermediate commercial transactions. CC is not necessarily the country/ territory of origin, manufacture or shipment. Under domestic exports and re-exports, CC refers to the country/territory to which the traded goods are consigned from Hong Kong SAR (by any form of transport), without further intermediate commercial transactions. CC is not necessarily the ultimate destination of the traded goods or where goods are unloaded (C&SD, 2012).

▲ Whitetip reef shark, Costa Rica.

Photo: Thalia Watmough / alfki image library / Alamy Stock Photo

Annex 1

Countries and territories from Latin-America and Caribbean as recorded in the shark trade data

Argentina	Ecuador	Peru
Aruba	El Salvador	Puerto Rico
Bahamas	Guatemala	St Vincent and the Grenadines
Belize	Guyana	Suriname
Brazil	Honduras	Trinidad and Tobago
Chile	Mexico	Uruguay
Colombia	Netherlands Antilles (Bonaire, Saba, St Eustatius)	Venezuela
Costa Rica	Nicaragua	
Cuba	Panama	
Dominican Republic		

▲ Young men lay shark meat out on the dock to dry, Livingston, Guatemala.

International Fund
for Animal Welfare

Meat on the menu and fins for export: Latin America's shark trade with Asia

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