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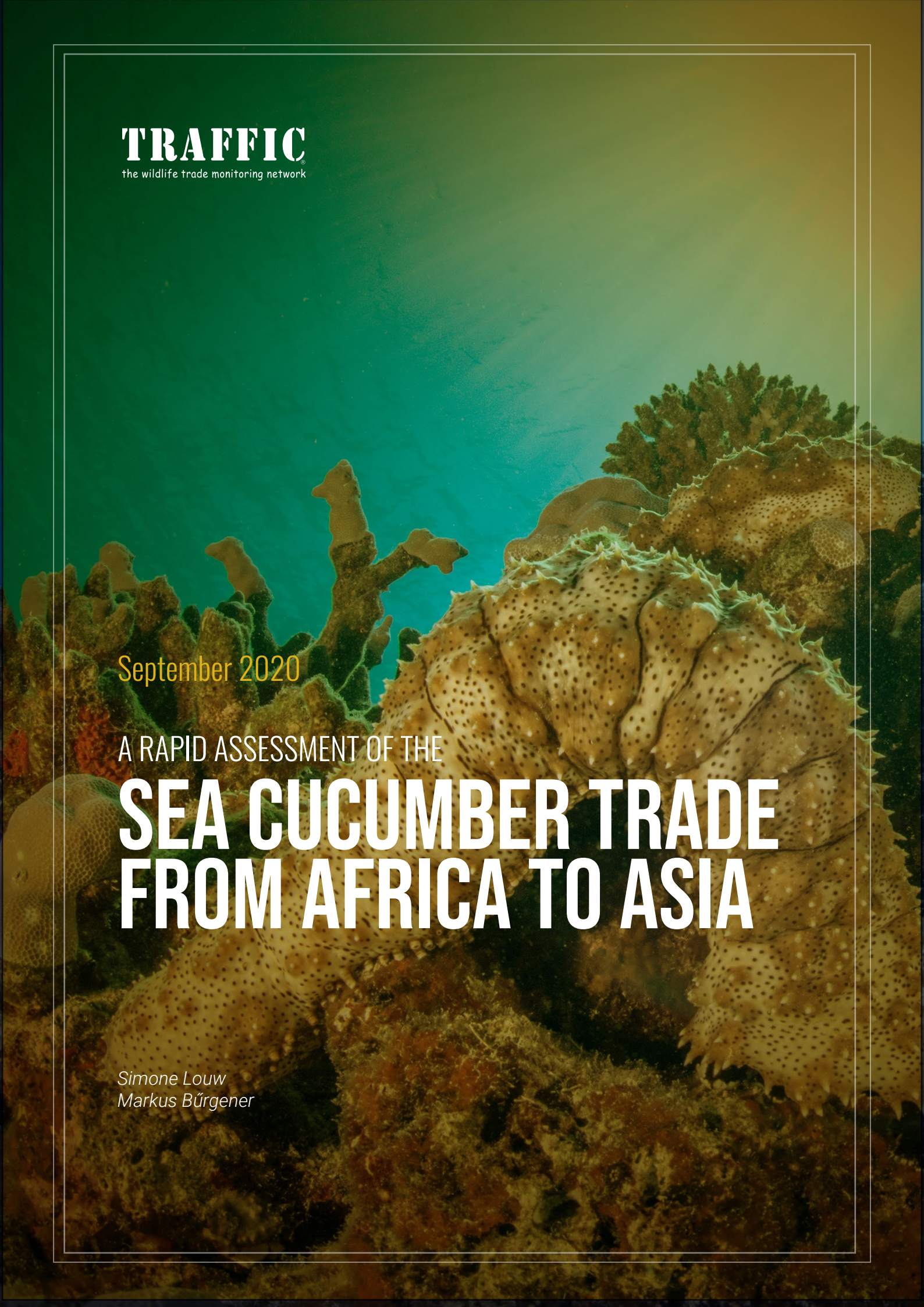

September 2020

A RAPID ASSESSMENT OF THE

SEA CUCUMBER TRADE FROM AFRICA TO ASIA

Simone Louw
Markus Bűrgener

SHORT REPORT

AUTHORS
Simone Louw
Markus Bűrgener

PROJECT SUPERVISOR
Camilla Floros

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Dried sea cucumbers destined for export, confiscated by the South African Postal Service in 2016

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ARCADIA
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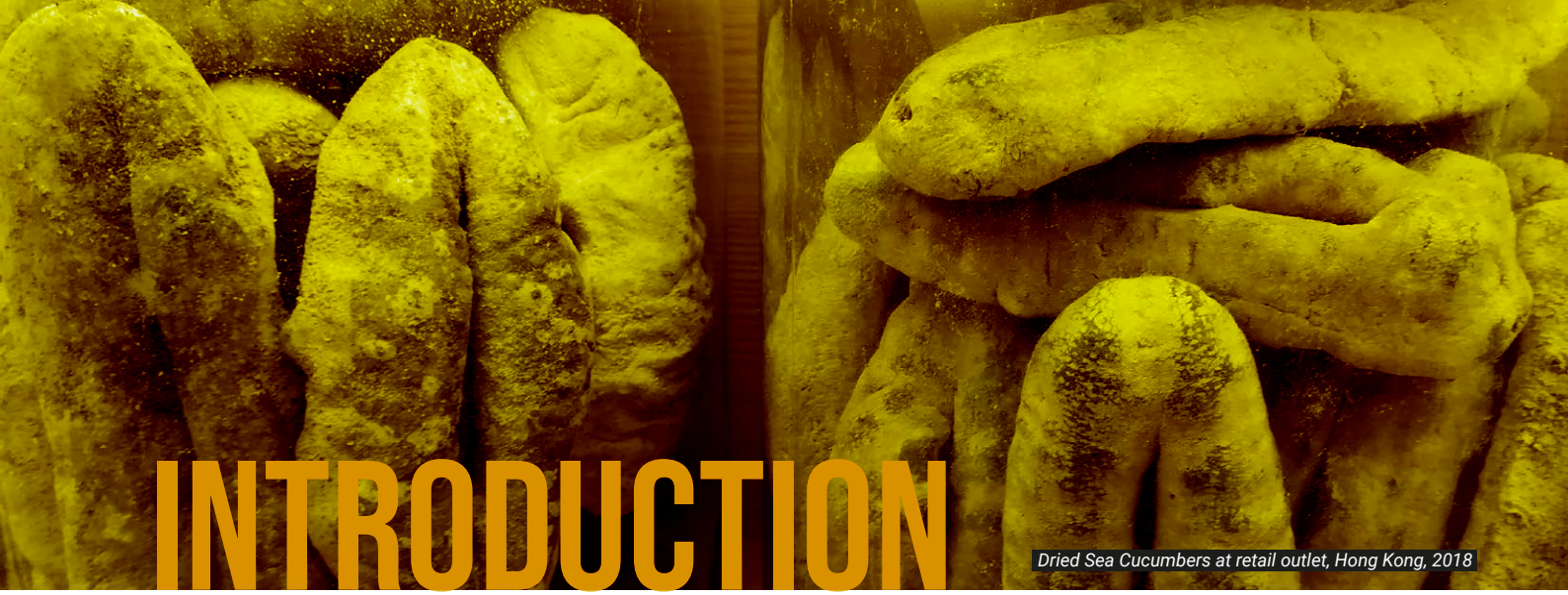

INTRODUCTION

Dried Sea Cucumbers at retail outlet, Hong Kong, 2018

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sea cucumber species are threatened with extinction, with many fisheries having collapsed in recent years

Over the last few decades, there has been a marked increase in the expansion and development of invertebrate fisheries, which is largely attributed to the increasing demand and need for new resources to harvest (Anderson *et al.*, 2011). One increasingly harvested group is sea cucumbers, which are echinoderms from the class Holothuroidea. There are approximately 1,717 known sea cucumber species occurring worldwide, and 15 species have a conservation status of either Endangered or Vulnerable, with declining population trends as a result of overharvesting (Rahman & Yusoff, 2017). Sea cucumbers are harvested and traded in more than 70 countries worldwide, with exploitation occurring at scales ranging from semi-industrial fisheries (Seychelles) to small artisanal fisheries (Tanzania) (Purcell *et al.*, 2012). Harvesting of sea cucumbers is predominantly to supply the dried seafood market in Asia (Conand, 2018). The processed and dried sea cucumbers, known as bêche-de-mer or trepang, are exported in large quantities to Asia where it is a highly valued product and considered a seafood delicacy, commonly consumed at banquets, weddings and festive meals (Clarke, 2002).

The increasing market demand and high value for dried sea cucumbers across Asia has facilitated the development and growth in many sea cucumber fisheries across the world (Eriksson *et al*., 2012). Sea cucumbers are an ideal fishery resource as they are easily accessible in shallow waters across the world and the collection and processing (cooking and sun-drying) methods require no specialised skill or equipment (Eriksson *et al*., 2012). Additionally, once the sea cucumber is processed, it has a shelf life of many years allowing the opportunity to stockpile the products. In the international seafood trade, dried sea cucumber forms part of the same niche markets as other high-value dried seafood products such as shark fins, abalone, and fish maws (Rahman & Yussof, 2017).

Countries in the Western Indian Ocean, which extends from the East African coastline of Somalia to South Africa, have harvested and traded in sea cucumbers for centuries (Conand, 2008). Sea cucumbers are not commonly consumed by locals, although the fisheries provide a vital source of employment for fishers and their dependents along the sea cucumber supply chain, and therefore the decline of sea cucumber stocks in the region would have negative impacts on the lives of coastal communities (Torre-castro *et al*., 2007). In Tanzania, local communities along the coastline are heavily dependent on the sea cucumber fishery, providing a source of income to fishers; processors (drying) and middle-men or traders (Mmbaga, 2015). In Madagascar, the sea cucumber fisheries are very active, and fishermen often move from one village to the next as each site becomes overexploited (Conand, 2008). In Seychelles, sea cucumber fisheries employ approximately 100 people, and it was estimated that 125 households are dependent on the sea cucumber harvesting and processing business for their income/livelihoods (Conand, 2008).

In the past two decades, many sea cucumber fisheries have collapsed or have been forced into moratoria, as a result of overfishing. In Egypt, commercial sea cucumber stocks have been severely overexploited due to the development of commercial fisheries (Lawrence *et al*., 2004). As a result, a ban on sea cucumber fishing was initiated in 2001 for the stock to recover, which ultimately led to the development of a large illegal fishery along the coast of Egypt (Lawrence *et al*., 2004). Similarly, fears of overfishing resulted in a ban on the harvest and trade of sea cucumbers from mainland Tanzania in 2006; however, harvesting of sea cucumbers remains legal in Zanzibar (Hampus Eriksson *et al*., 2010; Mmbaga, 2015). The different management regimes across Tanzania has caused much confusion over the regulation of the fishery and resulted in cases of continued harvest for sea cucumbers in mainland Tanzania (Eriksson

et al., 2010; Muthiga & Conand, 2014). In Kenya, overfishing resulted in a ban on the use of SCUBA equipment in 2003, however, post implementation studies on compliance indicated the continued use of SCUBA equipment in Kenya (Beadle, 2005). Across the Western Indian Ocean, there is a general lack of awareness of regulations by fishers and no monitoring of compliance by fisheries officials (Muthiga & Conand, 2014).

The international market price for dried sea cucumbers is believed to have risen in recent years which has contributed to the increased fishing pressure in many poorly managed fisheries across Africa (Purcell *et al*., 2018). Species with high economic value (*Holothuria fuscogilva*, *H. Scabra, H. nobilis,* and *Actinopygna miliaris*) are harvested in most countries and are more threatened, but as their numbers are decreasing, other species with lower economic value are being harvested (Muthiga *et al*., 2010). Overharvesting of sea cucumbers is a worldwide phenomenon and recovery of depleted populations is slow and sporadic (Lawrence *et al*., 2004). As a result of the declining populations and increasing demand, many countries in Africa (Madagascar, Tanzania, and Mozambique) have begun assessing the viability of sea cucumber farms to sustain the trade and improve the livelihoods of coastal communities (Eriksson *et al*., 2012; Thierry *et al*., 2014).

The high value of sea cucumber species, the ease with which they can be harvested in shallow waters, and their vulnerability due to their population dynamics (late maturation, density dependent reproduction and low rate of recruitment) all contributes to the overexploitation and collapse of fisheries reported in most regions across Africa (Purcell *et al*., 2013). In many locations, sea cucumber fisheries have gone through boom and bust cycles, where high value species are rapidly depleted shortly after a fishery is established, after which the focus is shifted to populations in nearby locations (Branch *et al*., 2013).

Due to international concern over the high exploitation levels, three sea cucumber species, *H. whitmaei, H. nobilis* and *H. fuscogilva* were listed in CITES Appendix II at CoP18 (CoP18, Prop 45) in 2019. This means that any international trade in these species must be documented and regulated by the granting of an export permit and making of a non-detriment finding (essentially a sustainability finding). In order to regulate the trade in CITES listed species effectively, it is vital that customs officials are able to distinguish between sea cucumbers that are CITES listed and require export permits, and those that do not require an export permit (non-CITES listed species). Two of the newly listed species occur in the Indian Ocean, from the east coast of South Africa to Egypt in the north of Africa (Figure 1).

This rapid assessment aims to evaluate the trade dynamics of sea cucumbers between Africa and Asia, as a result of the increasing market demand for dried sea cucumbers across Asia and the declining sea cucumber populations observed across Africa. The report identifies key exporting countries, evaluates trade volumes and any trends that may aid the regulation of sea cucumbers in Africa.

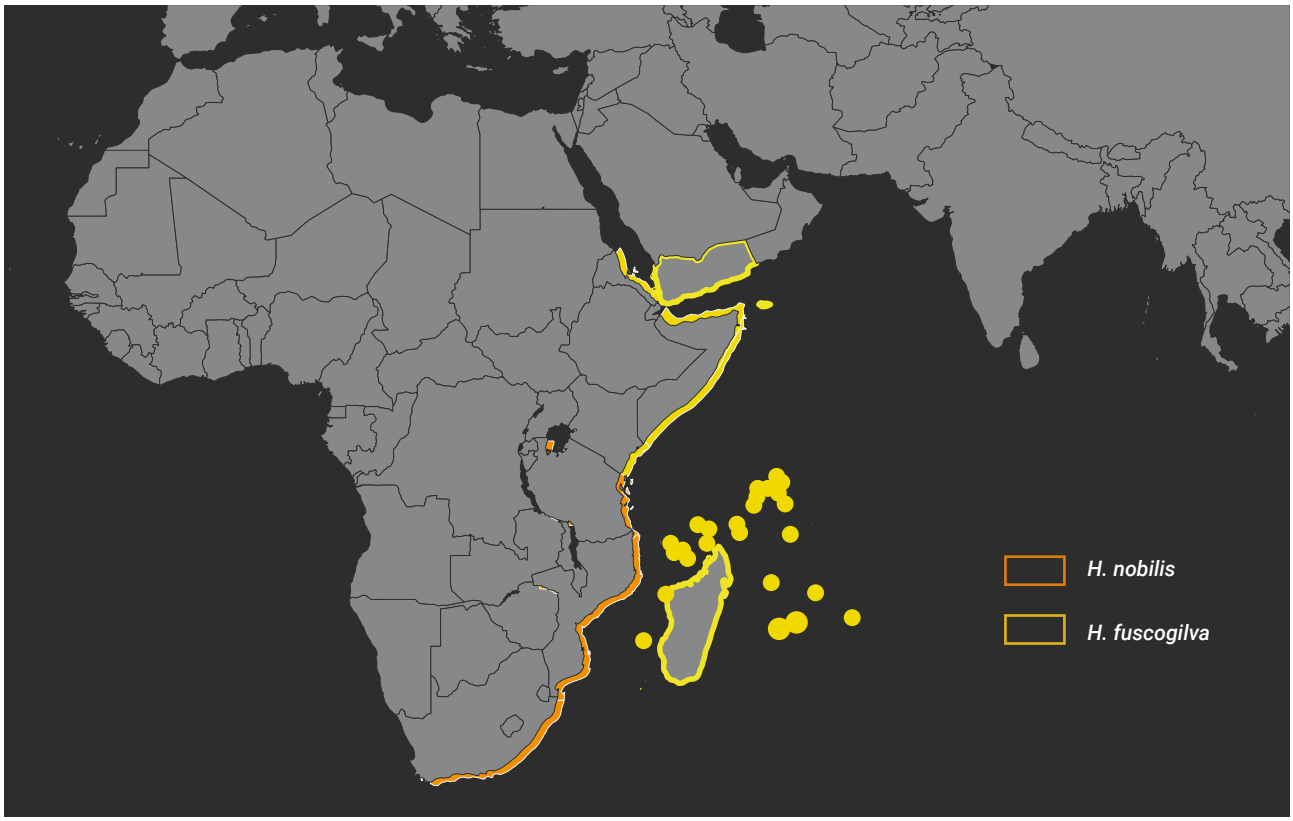

FIGURE 1

*The distribution of two sea cucumber species (*H. nobilis *and* H. fuscogilva*) listed in CITES Appendix II along the African coastline.*

METHODS

To understand better the trade dynamics, a comparative trade data analysis of sea cucumber imports and exports from the top African exporting countries to the major Asian importing nations was conducted. The data were analysed to focus on trade volumes, trade flows, and the value of sea cucumber trade between Africa and Asia. In 2012, more detailed codes encompassing sea cucumber specific products were introduced by the United Nations International Trade Statistics Database (UN Comtrade), therefore the data were sourced for the period 2012–2019 according to the four Harmonized System (HS) codes that include sea cucumbers (Table 1) as well as the Hong Kong Interactive Data Dissemination Service for Trade Statistics (Trade – IDDS) (Table 2).

UN COMTRADE DATA

The Harmonized System is administered by the World Customs Organization and used globally to standardise the representation of commodities in trade using HS codes. The codes are harmonised internationally at a detailed six-digit (HS-6) level with the allowance for countries to use additional digits to narrow commodity classifications even further according to specific tariff and statistical requirements they may decide to introduce unilaterally.

TABLE 1

Harmonised system codes used to describe sea cucumbers.
Source: United Nations International Trade Statistics Database (UN Comtrade).

CODE:	DESCRIPTION:
030811	Aquatic invertebrates; sea cucumbers, live, fresh or chilled
030812	Aquatic invertebrates; sea cucumbers, frozen
030819	Aquatic invertebrates; sea cucumbers, dried, salted or in brine, or smoked
160561	Aquatic invertebrates; sea cucumbers, prepared or preserved

HONG KONG TRADE STATISTICS

Hong Kong Special Administrative Region (SAR) (hereafter Hong Kong) is a major transit hub and the world's largest importer and re-exporter of dried sea food products, including sea cucumbers. Accordingly, the analysis provided here focuses on reported imports of dried sea cucumbers into Hong Kong and compares these data to the reported exports from African countries. In 2012, Hong Kong developed more detailed 8-digit HS Codes, specifically encompassing sea cucumbers (Table 2). The trade statistics for Hong Kong were sourced from the Interactive Data Dissemination Service for Trade Statistics (Trade – IDDS) which captures import and export data reported by the Census and Statistics Department of Hong Kong.

TABLE 2

Hong Kong's HS codes (8-digit level) used to describe sea cucumbers.
Source: Hong Kong Trade Statistics

CODE:	DESCRIPTION:
03081190	Sea cucumbers, live, fresh or chilled
03081200	Sea cucumbers, frozen
03081990	Sea cucumbers, dried, salted or in brine
16056100	Sea cucumbers, prepared or preserved

Dried Sea Cucumbers at retail outlet, Hong Kong, 2018

RESULTS

UN COMTRADE

Hong Kong is the largest importer for sea cucumber products in Asia—importing approximately 56 million kilogrammes from the world over the past eight years. Hong Kong accounts for 63% of the total sea cucumber imports to Asia (Figure 2), followed by mainland China (21%), Malaysia (7%), Singapore (4%) and Taiwan Province of China (4%). Other sea cucumber importers in Asia include Macao SAR, Viet Nam and Myanmar, together accounting for 1% of the total imports reported by Asia.

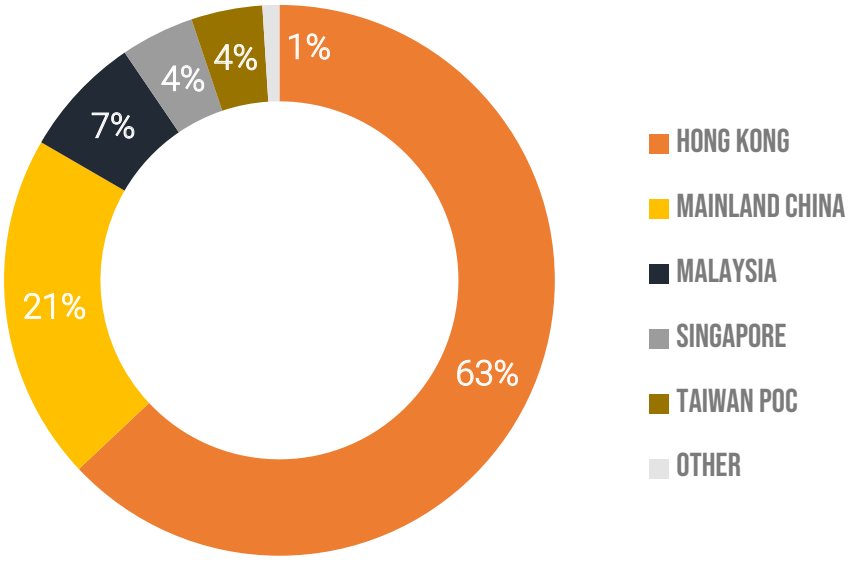

FIGURE 2

The top importers (kg) for sea cucumber products in Asia, 2012–2019. Source: UN Comtrade

From the top importers in Asia, Hong Kong reported the highest quantity of sea cucumber imports from Africa (7% of the total imports) compared to the rest of the top importers in Asia, reporting less than 1% of their total sea cucumber imports from countries in Africa. Therefore, the rest of this report focuses on the trade dynamics between Africa and Hong Kong. According to Hong Kong's import records, 124 countries worldwide exported sea cucumber products to Hong Kong between 2012 and 2019—with Japan, mainland China, USA, and Canada ranking amongst the largest exporters in the world. In Africa, 33 countries were recorded as supplying sea cucumbers to Hong Kong. When comparing the reported exports and imports, there are major discrepancies in the data reported by African countries (Figure 3): exports are only reported for a certain number of years and in much lower quantities compared to the reported imports by Hong Kong. Additionally, Table 3 shows that between 2012 and 2019, Hong Kong reported imports from 33 African countries, while only six countries in Africa reported exports to Hong Kong.

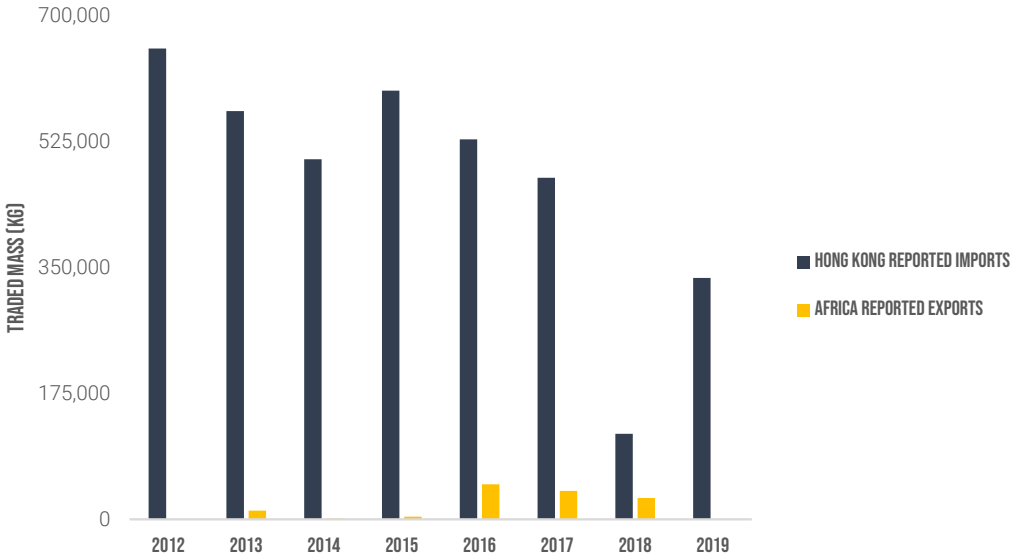

FIGURE 3

Reported exports of dried sea cucumbers from African countries to Hong Kong vs. Hong Kong imports from all African countries between 2012 and 2019. Source: UN Comtrade

TABLE 3

The countries in Africa from which Hong Kong imported dried sea cucumbers vs. The countries in Africa reporting exports to Hong Kong listed by decreasing value, 2012–2019. Source: UN Comtrade.

	HONG KONG REPORTING IMPORTS	AFRICAN COUNTRIES REPORTING EXPORTS
Madagascar	X	X
Seychelles	X	X
Tanzania	X	X
Mozambique	X	
Mauritania	X	
Egypt	X	
Kenya	X	
South Africa	X	X
Mauritius	X	
Morocco	X	X
Tunisia	X	
Sudan	X	
Nigeria	X	
Senegal	X	X
Guinea	X	
Somalia	X	
Djibouti	X	
Sierra Leone	X	
Cabo Verde	X	
Lesotho	X	
Uganda	X	
Algeria	X	
Gabon	X	
Congo	X	

Ethiopia	X	
São Tomé and Príncipe	X	
Cameroon	X	
Benin	X	
Mali	X	
Ivory Coast	X	
Zambia	X	
Zimbabwe	X	
Angola	X	

For this reason, Hong Kong's reported imports were used to identify the top African countries exporting sea cucumber products—of which 99% are dried sea cucumbers (HS Code: 030819). Hong Kong imported approximately 3.8 million kilogrammes of dried sea cucumbers from Africa between 2012 and 2019. The number of African countries involved in the trade increased significantly over the last eight years, from 18 countries in 2012 to a total of 33 African countries exporting sea cucumber products by the end of 2019. Madagascar is the largest exporter of dried sea cucumbers in Africa, accounting for 40% of the total exports between 2012 and 2019 (Figure 4), followed by Seychelles (12%), Tanzania (12%), Mozambique (8%), Mauritania (8%), Egypt (5%), and Kenya (4%). The higher quantities of sea cucumber products exported from Madagascar, in particular, may be a result of the successful sea cucumber farms and aquaculture initiatives implemented during the early 2000s, in order to improve livelihoods and sustain the sea cucumber fisheries (see Box 1). There is no differentiation between the source (wild or aquaculture) in the Comtrade data.

	2012	2013	2014	2015	2016	2017	2018	2019
Madagascar	311,664	293,857	259,616	197,569	216,300	123,710	48,971	47,569
Seychelles	100,671	72,797	66,533	73,357	52,396	51,820	4,665	51,969
Tanzania	74,297	33,605	61,907	108,119	82,444	54,865	2,007	27,754
Mozambique	14,493	12,239	22,693	39,017	54,440	119,675	5,371	57,032
Mauritania	38,451	39,151	35,784	37,757	52,708	31,636	31,076	45,721
TOTAL	539,576	451,649	446,533	455,819	458,288	381,706	92,090	230,045

TABLE 4

The total mass (kg) of dried sea cucumbers reported by Hong Kong as imported from the top five African exporting countries between 2012 and 2019. Source: UN Comtrade.

The declared import value of sea cucumbers as determined by the country of import and the value of sea cucumbers imported by Hong Kong varied significantly depending on the source country (Figure 5). Sea cucumbers imported from Mauritania had a much higher value per kg compared to the rest of the top countries, averaging approximately 58USD/kg over the study period. Mozambique followed with an average import value of 21USD/kg, followed by Seychelles (17USD/kg), Madagascar (15USD/kg), and Tanzania (10USD/kg). As the HS codes are not species-specific, it is unclear why the value of sea cucumbers is so much higher for Mauritania compared to the rest of the top countries in Africa. A study conducted on the retail price of sea cucumbers in Hong Kong, indicated that the price per kg increased exponentially with the length of sea cucumbers (Purcell *et al*., 2018). Sea cucumber species that are amongst the highest value products include; *H. fuscogilva* and *H. scabra*, which had an average retail price of 219 USD/kg and 369 USD/kg respectively (Purcell *et al*., 2018)

The total import value for all five countries peaked in 2018, at approximately 80USD/kg (Figure 5). This price increase coincides with the major decline in sea cucumber exports from Africa in 2018 (approximately 380,000 kg in 2017 to less than 100,000 kg in 2018, see Table 4). It is possible that the lower supply of sea cucumbers from African countries in 2018 may have resulted in the increased value of sea cucumbers exported from these countries, although this has not been confirmed. In 2019, the value of sea cucumbers declined yet again, which may be reflective of the increased supply of sea cucumbers from these countries in 2019.

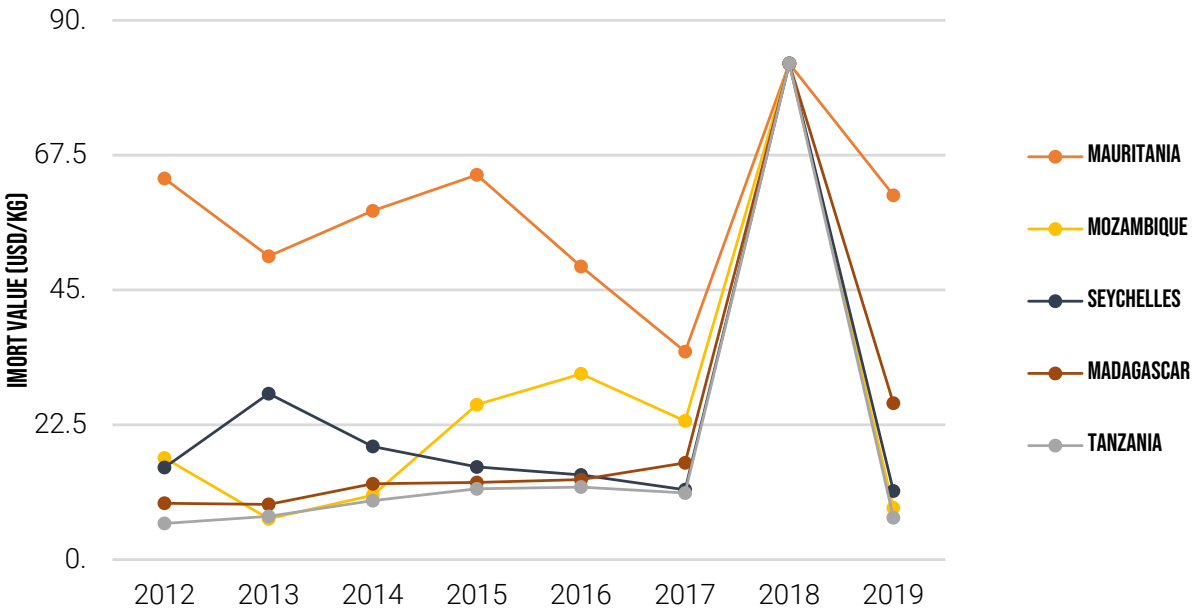

FIGURE 5

The total import value (USD/kg) of dried sea cucumbers from the top African exporting countries, 2012–2019. Source: UN Comtrade.

HONG KONG BUREAU OF STATISTICS

According to the detailed data on sea cucumber trade reported by Hong Kong, African countries exported approximately 4 million killogrammes of dried sea cucumbers, accounting for 13% of the total dried sea cucumbers imported by Hong Kong (Figure 6). This figure is higher than the imports reported to UN Comtrade and may be reflective of the detailed 8-digit codes associated with Hong Kong's sea cucumber import records compared to the 6-digit codes used for UN Comtrade.

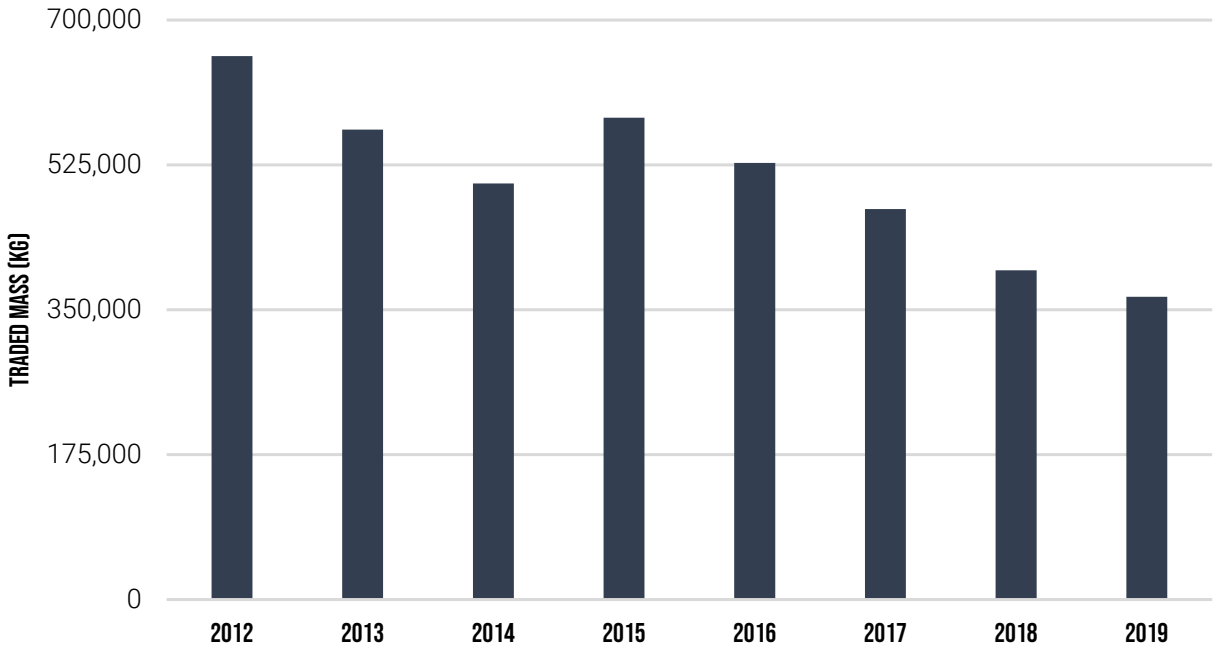

FIGURE 6

The total mass (kg) of dried sea cucumbers imported from African countries, 2012–2019. Source: Hong Kong Bureau of Statistics

Holothuria scabra *caught in artisanal fishery, Maputo Province, Mozambique*

From the total sea cucumber products imported from Africa, 99% consisted of the dried sea cucumber commodity (HS: 03081990). Madagascar was the highest exporter of dried sea cucumbers over the time period, however, quantities have been consistently declining over the years (Figure 7). Imports from Seychelles also declined over the study period and imports from Tanzania have been quite inconsistent throughout the years—showing declines in some years and significant increases in the following years (Figure 7). The inconsistent quantities exported from Tanzania may be a result of a ban initiated in 2006 for the collection and trade of sea cucumbers from mainland Tanzania, despite sea cucumber harvesting and trade being allowed in Zanzibar.

The facilitation of a trade network involving smuggled sea cucumbers from the mainland entering the legal trade in Zanzibar has been attributed to the different management regimes in Tanzania (Conand and Muthiga, 2010; Eriksson *et al*., 2010; *et al*., 2012). Mauritania has shown fairly consistent exports over the study period with a general increase from 2012 to 2019. Finally, Mozambique has shown the greatest increase in quantity of exports over the study period, from being the lowest exporter of the top five countries in 2012 to becoming the highest exporter in 2019 (Figure 7).

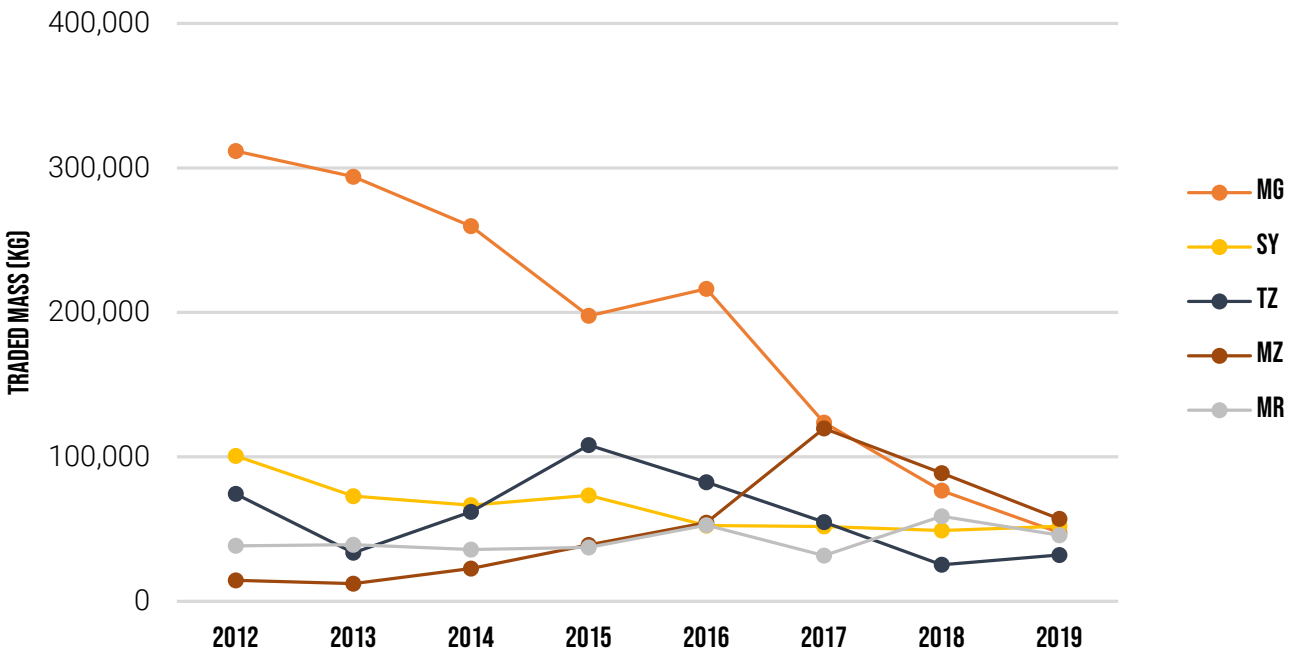

FIGURE 7

Top countries accounting for 80% of the total dried sea cucumbers (kg) exported from Africa as reported by Hong Kong imports between 2012 and 2019. (MG = Madagascar, SY = Seychelles, TZ = Tanzania, MZ = Mozambique, MR = Mauritania). Source: Hong Kong Bureau of Statistics.

In comparing Hong Kong's import records between the two data sources (Table 5), there were discrepancies between the data reported to UN Comtrade and the customs data reported to the Hong Kong Bureau of Statistics, although these were not significant. The Hong Kong Bureau of Statistics data showed slightly higher volumes of reported imports than was reported to UN Comtrade.

TABLE 5

A comparison of Hong Kong's total import records for the top African exporting countries between UN Comtrade and Hong Kong Bureau of Statistics, 2012–2019. Source: UN Comtrade and Hong Kong Bureau of Statistics..

HONG KONG TOTAL DRIED IMPORTS FROM TOP AFRICAN COUNTRIES		
	UN COMTRADE (KG)	HONG KONG BUREAU OF STATISTICS (KG)
Madagascar	1,499,256	1,526,911
Seychelles	474,208	518,534
Tanzania	444,998	472,564
Mozambique	324,960	408,331
Mauritania	312,284	339,646
TOTAL	**3,059,593**	**3,270,318**

Dried Sea Cucumbers at retail outlet, Hong Kong, 2018

Juvenile sea cucumbers at a hatchery

SEA CUCUMBER FARMING PROVIDES A BOOST TO LOCAL ECONOMY AND THE ENVIRONMENT IN MADAGASCAR

Along the south-west coast of Madagascar, a range of sea cucumber farming initiatives have been established since the early 2000s, to provide a major boost for the livelihoods of local fishermen and relieve fishing pressure on wild sea cucumber populations (Eeckhaut *et al*., 2008). In 2008, a joint initiative between local NGOs, Blue Ventures and Madagascar Holothurie SA (MHSA)—the first private company for sea cucumber aquaculture in the region—provided an opportunity to evolve the project with a range of diverse backgrounds and expertise in sea cucumber aquaculture (Robinson & Pascal, 2009).

The objectives of the project were not to replace fishing in these areas, but rather to provide a complementary activity for local fishermen, including women and children in coastal communities, intended to provide a supplementary source of income (Robinson & Pascal, 2009). Although the sea cucumber farms have proven successful in community-based benefits, there have been a number of challenges faced by these farms. The high value of sea cucumbers and high levels of poverty in Madagascar require nightly surveillance of farms as a result of theft from communities. **For example, 3,000 market sized sea cucumbers were stolen from five farms in Madagascar which constituted 9% of the total stock (Eriksson *et al*., 2012).**

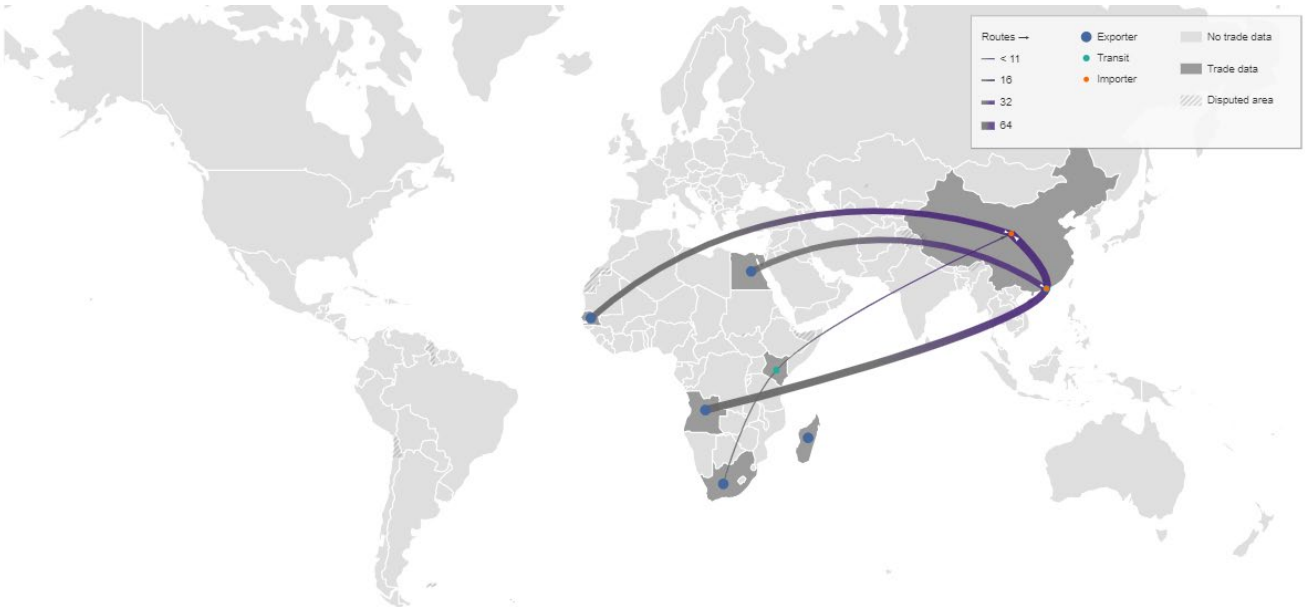

FIGURE 8

Sea cucumber seizures and transport routes implicating African countries, 2017–2019.
Source: TRAFFIC International (2020) Wildlife Trade Portal. Available at ***www.wildlifetradeportal.org.***

Dried Sea Cucumbers seized in Hong Kong

FIGURE 9

A seizure of 1900 kg of dried sea cucumbers, declared as squid bones, originating from Egypt and intercepted in Hong Kong by the Kwai Chung Cargo examination compound.

The illegal trade in sea cucumbers is mainly a result of illegal fishing operations in source countries, or they have been traded under the declaration of other species, or they have not been declared and were smuggled with other commodities. Of the limited data available on illegal trade in sea cucumbers; there were nine seizures (reported) for sea cucumbers involving African countries between 2017 and 2019 (Figure 8). The countries implicated include Madagascar, where sea cucumbers were sourced from illegal fishing operations. In 2017, a major fishing control operation in Juan de Nova island resulted in the seizure of 12 fishing boats and 60 kg of sea cucumbers which were prohibited from being caught within the area (Anon, 2017:1). Additionally, in 2017, the Fisheries Surveillance Centre (CSP) intercepted a vessel containing a large catch of illegally caught sea cucumbers within a protected area in Nosy Be island that was being transported to mainland Madagascar for export to Hong Kong (Anon, 2017:2). In 2018, 200 kg of sea cucumbers were seized on board a sailboat located in the French Economic Zone of Glorieuses (Glorioso Islands). The sea cucumbers were illegally caught within a marine protected area and were transported to Madagascar for export to Asia (Anon, 2018:1).

Dried Sea cucumbers have increasingly been observed as transported with other high value wildlife commodities, often being seized with pangolin scales, ivory, abalone, and seahorses. In 2018, Angola was implicated in exporting undeclared sea cucumbers and pangolin scales to Hong Kong, as the transit location, and then reaching mainland China as the final destination, where the seizure took place in the city of Wuhan (Anon, 2018:2). South Africa was implicated in three sea cucumber seizures—two of these were seized on land through joint operations which included 140 kg of illegal harvested sea cucumbers, 287 units of abalone *Haliotis* spp. and 1,020 Giant Mud Crabs *Scylla serrata* (Anon, 2019:1). Additionally, three suspects were arrested in Johannesburg, South Africa, for being in possession of rhino horn, abalone, seahorses *Hippocampus* spp., and sea cucumbers under the endangered species regulation (Anon, 2019:2). A Chinese national was arrested for transporting undeclared African termite queens, meat products and dried sea cucumbers in his checked luggage from South Africa to Kenya, as the transit nation, and China as the final destination (Anon, 2019:3). In 2019, two Chinese traffickers were arrested for concealing seahorses, shark fins, sea cucumbers, ivory, and lion teeth within their checked luggage, travelling from Senegal to China where the seizure took place at Blaise Diagne International Airport (Anon, 2019:4). Egypt was implicated in exporting an illegal shipment containing 1900 kg of dried sea cucumbers (Figure 9) that was declared as "squid bones" to Hong Kong where the seizure took place for exporting un-manifested cargo (Anon, 2017:3).

CONCLUSIONS

This rapid assessment has shown that the legal reported sea cucumber trade from Africa to Asia has gradually decreased over the years, mainly attributed to the decline in quantities exported from Madagascar.

The overall decline in exports from Africa may be the result of declining sea cucumber populations over time as many sea cucumber fisheries in the Western-Indian ocean have collapsed or have been forced into moratoria as a result of overfishing (Bruckner *et al*., 2003). Nevertheless, the demand for sea cucumbers remains high as the number of countries involved in the trade continues to grow, and as commercially caught sea cucumber species are being over exploited, species of lower value are being caught to sustain the demand (Purcell *et al*., 2018).

This rapid assessment showed there are major discrepancies in reporting of dried sea cucumber trade data by African countries. Only six countries in Africa reported exports of sea cucumbers to Hong Kong between 2012 to 2019 while Hong Kong reported imports from 33 countries in Africa over this same period. These discrepancies may be indicative of the incorrect use of HS tariff codes in African exporting countries either mistakenly or where exporters have intentionally misdeclared consignments to avoid taxes or tariffs (Toral-granda *et al*., 2008), or where the trade is associated with illegal sea cucumber fishing operations. The ease with which sea cucumbers can be harvested along the coastline, in addition to the high value of species, leaves these populations highly vulnerable to illegal fishing and over exploitation.

RECOMMENDATIONS

1

FISHERIES MANAGEMENT

Fisheries management in Tanzania and Zanzibar should evaluate the regulations associated with the sea cucumber trade as there needs to be consistency in the legislative landscape so that illegal trade from mainland Tanzania cannot be carried out disguised as legal trade from Zanzibar.

2

LOCAL CONSERVATION NGOS

Local conservation NGOs within emerging exporting countries, like Mozambique and Mauritania, are encouraged to investigate the feasibility of the aquaculture model used by Madagascar to implement sea cucumber farming in order to alleviate pressure on wild populations and support local livelihoods.

3

LAW ENFORCEMENT AND CUSTOMS

Increased awareness is required within law enforcement and customs agencies (fisheries compliance officers, port officials, and border police), through capacity building workshops and information dissemination, for the improved reporting of sea cucumber exports and the correct use of HS tariff codes for the majority of sea cucumber exporting countries in Africa.

4

UNDER-REPORTING

Further research is needed to understand the under-reporting/non-reporting of exports from a number of countries in West Africa, specifically Mauritania, given the high value of sea cucumbers and the potential loss of much needed revenue by not declaring exports.

5

CAPACITY BUILDING

Capacity building and training of customs and law enforcement officials (such as fisheries compliance officers, port officials, and border police) is needed to provide support in species identification of CITES Appendix II listed sea cucumber species (*H. fuscgoliva* and *H. nobulis)* and to raise awareness of the potential for illegal shipments in Madagascar, Tanzania, Seychelles, and Mozambique.

6

IDENTIFICATION SUPPORT

TRAFFIC has undertaken the development of 3D printed shark fins and the same could be developed for sea cucumber species (*H. fuscgoliva* and *H. nobulis*), to aid law enforcement and customs agencies with the identification of CITES Appendix II sea cucumbers and subsequent granting of export permits.

7

NATIONAL REGULATION

In the absence of CITES listed sea cucumber species occurring in Mauritania, the Government could create a national regulation associated with sea cucumbers in Mauritania, to help monitor the trade and limit opportunities for sea cucumbers sourced from illegal fishing operations to enter the international trade.

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For further information contact:
TRAFFIC
Global Office
David Attenborough Building
Pembroke Street
Cambridge CB2 3QZ
UK

+44 (0)1223 277427
traffic@traffic.org
traffic.org

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