



STRENGTHENING MARITIME RESOURCES

*to Combat Illegal Fishing
in the Indian Ocean*

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UNODC
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A Caught Red-Handed Paper:

STRENGTHENING MARITIME RESOURCES TO COMBAT ILLEGAL FISHING IN THE INDIAN OCEAN

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Cover Image: Seychelles Special Forces participate in a visit, board, search and seizure training during the Exercise Cutlass Express 2019, intended to improve regional cooperation, maritime domain awareness and information sharing practices in the Indian Ocean. Photo: Mass Communications Specialist 2nd Class Logan C. Kellums, US Navy.

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I. EXECUTIVE SUMMARY

Indian Ocean coastal states have a shared interest in the management and conservation of the region's fisheries resources, which are critical to ensuring food and economic security and provide food to hundreds of millions of people. Illegal fishing, overfishing, and climate change have caused a reduction of major fish stocks within the region.

As Indian Ocean fish stocks have declined in recent years, there has been increased action to combat illegal fishing in order to ensure continued food and economic security in the region. However, there is growing concern that most Indian Ocean states still lack the basic resources and capabilities needed to monitor their maritime domains and regulate maritime activities to prevent illegal fishing and ensure food security.

This concern spurred a unique partnership between One Earth Future's (OEF) Secure Fisheries program, the United Nations Office on Drugs and Crime's (UNODC) Global Maritime Crime Programme, and US Naval Forces Africa (NAVAF) to conduct a series of workshops during 2018 in ten Western Indian Ocean states to advance interagency collaboration on illegal fishing and promote low-cost improvements for the collection of human intelligence on vessels suspected of illegal fishing.

Delegates from the Caught Red-Handed workshops concluded that:

- there is a problematic gap between agencies with capacity and agencies with mandates related to illegal fishing;
- state agencies that have the most maritime resources, including patrol vessels, aircraft, and satellite capabilities, need stronger mandates to fight fisheries-related crime;
- there must be a reprioritization of resources and improved coordination between fisheries and non-fisheries agencies to achieve better maritime domain awareness and fight illegal fishing; and
- states must create a governmental framework that will ensure state-based maritime agencies are in close collaboration and coordination, and that these agencies are aligned with regional and international efforts to fight illegal fishing.

Caught Red-Handed provided a venue for collaboration and information sharing, but there is still much to be done. For Indian Ocean states to address maritime crime and conflict, illegal fishing must be prioritized, and agencies must be empowered with the resources and mandates to fight it.

Three state-based actions are essential to ending illegal fishing in the Western Indian Ocean:



ACTION 1: CREATION OF A COORDINATION TASK FORCE AGAINST ILLEGAL FISHING

This would be the primary national mechanism for information sharing, coordination, and collaboration between maritime agencies in the fight against illegal fishing.



ACTION 2: STRENGTHENING OF MANDATES AGAINST ILLEGAL FISHING FOR MARITIME AGENCIES

All relevant maritime agencies should receive new or updated mandates that allow them to act on and prioritize illegal fishing. These proposed mandates would recognize that all maritime agencies have a role to play in fighting illegal fishing and would create a framework for effective interagency collaboration and coordination.



ACTION 3: DEVELOPMENT OF POLICIES FOR SHARING INFORMATION ON ILLEGAL FISHING WITH EXTERNAL PARTNERS

Maritime agencies are often hindered from sharing information because they lack a trusted network of peers and a way to securely exchange sensitive information, and have internal protocols that often prevent information exchange.



Top left: Officers study a map at a maritime information center. Photo: Jean-Pierre Larroque, One Earth Future.

Top right: A Mauritian boarding team crosses the bow of guided missile frigate USS Simpson (FFG 56) during a training exercise. Photo: David R. Krigbaum, US Navy.

Bottom left: A Somali officer radios information at a maritime operations center. Photo: Jean-Pierre Larroque, One Earth Future.

LIST OF ACRONYMS

AFRICOM	US Africa Command
AIS	Automatic identification system
EEZ	Exclusive economic zone
FAO	Food and Agriculture Organization
GMCP	Global Maritime Crime Programme
INTERPOL	International Criminal Police Organization
IOTC	Indian Ocean Tuna Commission
IUU	Illegal, unreported, and unregulated
MASE	Program to Promote Regional Maritime Security
MCS	Monitoring, control, and surveillance
MDA	Maritime domain awareness
NAVAF	US Naval Forces Africa
OEF	One Earth Future
PSMA	Port State Measure Agreement
RCOC	Regional Coordination Operations Center
RMIFC	Regional Maritime Information Fusion Center
UNODC	United Nations Office on Drugs and Crime
VMS	Vessel monitoring system

II. INTRODUCTION

The Indian Ocean’s littoral states share a collective interest in managing and conserving the region’s fisheries resources, which are critical to ensuring food and economic security. Indian Ocean fisheries provide food to hundreds of millions of people and also make important contributions to alleviating poverty, creating jobs, and improving livelihoods.

About 282,250 metric tons of tuna are consumed annually within Indian Ocean countries, equaling 56 percent of world tuna volume, with Indonesia representing the largest market.¹ In Indonesia, Sri Lanka, Comoros, and the Maldives, tuna and other pelagic species account for more than half of the animal protein consumed. Maldivians are the world’s largest consumers of fish, with annual per capita consumption of around 140 kg. But illegal fishing, overfishing, and climate change have caused a reduction of major fish stocks within the region. In 2018 the Indian Ocean Tuna Commission (IOTC) conducted a stock assessment for yellowfin tuna which determined that the species is drastically overfished and subject to overfishing.^{a, 2}



Yellowfin tuna



Skipjack tuna



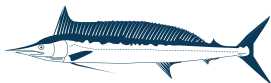
Spanish mackerel



Striped marlin



Blue marlin



Indo-Pacific sailfish

The cause of the decline in stock status to below maximum sustainable yield is not well understood, but it has resulted in an urgent call for a reduction in yellowfin tuna catch to allow the species to recover.³ Similarly, the IOTC has determined that striped marlin, longtail tuna, and narrow-barred Spanish mackerel are both overfished, while overfishing is occurring for blue marlin and Indo-Pacific sailfish.

As Indian Ocean fish stocks have declined in recent years, there has been increased action to combat illegal fishing to ensure continued food and economic security in the region. In 2012, the European Union started the MASE program to enhance maritime security and combat illegal fishing.⁴ That same year, the FISH-i Africa Task Force was formed to aid in investigations of fisheries crime, improve the sharing of information and intelligence, and increase enforcement of laws against illegal fishing.⁵ In 2013 Project Scale was started as part of INTERPOL’s work on environmental compliance and enforcement to “raise awareness of fisheries crime and its consequences.”⁶ Just two years later, South Africa hosted the inaugural international symposium on FishCRIME, during which nearly 200 delegates represented 31 countries, all focused on combating illegal fishing.⁷

These efforts to curb illegal fishing led to the Jeddah Amendment to the Djibouti Code of Conduct in 2017,⁸ which broadened the scope of security coordination in the Indian Ocean and Horn of Africa region from a focus on piracy and armed robbery to include other illicit maritime activities, including illegal fishing.

And these actions just scratch the surface of recent work done to combat illegal fishing and other maritime crimes in the Indian Ocean. As an expansion of regional efforts to counter maritime piracy, 2018 saw both the Regional Maritime Information Fusion Center (RMIFC) and the Regional Coordination Operations Center (RCOC) increase staffing and their operational capabilities to process information and launch enforcement actions around illegal fishing and other maritime crimes.

IMPORTANT FISHING STOCKS IN THE INDIAN OCEAN (source: IOTC)

■ Overfished ■ Overfishing Occuring

a “Overfishing” occurs when more fish are caught than the population can replace through natural reproduction; in other words, when the rate of removal from stock is too high. When a fish population is too low, or below a prescribed threshold, it’s considered “overfished.” A population can be overfished but can be managed under a rebuilding plan that, over time, returns the population to optimal levels.

However, despite the expansion of these regional engagement efforts, there is growing concern that most Indian Ocean states still lack the basic resources and capabilities needed to monitor their maritime domains and regulate maritime activities to prevent illegal fishing and ensure food security. Government agencies with mandates to address illegal fishing, such as fisheries departments, frequently lack the resources needed to combat it. And those agencies that have maritime resources, such as navies, are often not mandated to focus their efforts on illegal fishing.

This concern spurred a unique partnership between One Earth Future’s (OEF’s) Secure Fisheries program, the United Nations Office on Drugs and Crime’s (UNODC’s) Global Maritime Crime Programme, and US Naval Forces Africa (NAVAF) to conduct a series of workshops during 2018 in ten Indian Ocean states to advance interagency collaboration on illegal fishing and promote low-cost improvements for the collection of human intelligence on suspected illegal fishing vessels.

There is growing concern that most Indian Ocean states still lack the basic resources and capabilities needed to monitor their maritime domains and regulate maritime activities to prevent illegal fishing and ensure food security.

History of Caught-Red Handed

The collection of human intelligence is a valuable, though sometimes unrefined, tool for combating illegal fishing and associated maritime crime. Few resources are available to ensure that information gathered on vessels suspected of illegal fishing is collected in a standardized way; this undermines successful prosecutions of fisheries crime cases.

In response, Secure Fisheries and the UNODC assembled an Expert Working Group in February of 2017 to discuss strengthening human intelligence capabilities in the Indian Ocean to help combat illegal fishing. The working group consisted of maritime law enforcement agencies from Comoros, Kenya, Madagascar, Maldives, Mauritius, Seychelles, Somalia, Sri Lanka, and Tanzania. The Indian Ocean Commission, the Indian Ocean Tuna Commission, the World Bank, EUNAVFOR, and the Pew Charitable Trusts provided additional technical support.

The working group identified an urgent need to increase the value, sophistication, and standardization of human intelligence-gathering in the Western Indian Ocean. As a first step in meeting this need, the working group developed the Fishing Activity Sightings Checklist (Appendix 1), which systematically details information to be collected and analyzed when fisheries officers or other government personnel see or board a suspected illegal fishing vessel.

Secure Fisheries and the UNODC’s Global Maritime Crime Programme then created an accompanying series of workshops, called Caught Red-Handed (CRH), which



Participants at Caught Red-Handed workshops in Somalia, Mozambique, and Seychelles.

focused on improving collection of and procedures for sighting data from various platforms including vessels, aircraft, and shore-based positions, as well as photo collection. The result was data standards and procedures that have been used by several Indian Ocean states and utilized as part of the Naval Forces Africa's Cutlass Express 19 exercise.⁹ The main goals of the Caught Red-Handed workshops were threefold:

1. improve the standardized collection of actionable human intelligence;
2. improve communication and dissemination of this intelligence; and
3. improve regional response to suspected cases of illegal fishing.

In addition to the workshops, the Caught Red-Handed project also worked with regional coordination bodies including the Regional Information Coordination Center in Mombasa, Kenya, and the Regional Maritime Coordination Centre in Victoria, Seychelles, toward accepting human intelligence as a reliable source of maritime domain awareness (MDA) information.

The Caught Red-Handed workshops were developed in collaboration with NAVAF and government representatives from Somalia, Seychelles, Comoros, Maldives, Kenya, Mauritius, Sri Lanka, Madagascar, Tanzania, and Mozambique.

In addition to this report, three briefs were created based on the results of the Caught Red-Handed workshop series:

1. [*Catching Maritime Criminals: A Whole-of-Government Approach*](#) explores how greater interagency coordination can solve a misalignment of mandates among government agencies.
2. [*Who's in your Backyard: Strengthening Maritime Domain Awareness in the Indian Ocean*](#) highlights five state-based solutions to increase maritime domain awareness and decrease illegal fishing in the Indian Ocean.
3. [*Maritime Security in the Indian Ocean: Perceived Threats, Impacts, and Solutions*](#) is based on surveys of more than 100 representatives from maritime agencies in ten Indian Ocean countries, and highlights perspectives about the most significant maritime security threats, the impacts of IUU fishing on human security and conflict, and the most effective approaches and needed resources for combating IUU fishing in each country.

Goals of this Report

In this report, we provide conclusions and their policy implications from the Caught Red-Handed project as a whole, while proposing three essential state-based actions to tackle illegal fishing. We also give an overview of the fisheries sector for each Caught Red-Handed country, detail their known and perceived levels of illegal fishing and their maritime human resources and agency coordination efforts, and summarize the recommendations that resulted from each country's workshop. Our goals for this report are to:

1. **MEMORIALIZE THE RECOMMENDATIONS** that each country's delegates put forward as part of the Caught Red-Handed workshop;
2. incorporate these recommendations into **PROPOSED REGIONAL ACTIONS** to fight illegal fishing in the Indian Ocean; and
3. **STRENGTHEN THE POLITICAL WILL TO IMPLEMENT THE RECOMMENDATIONS** of workshop delegates.

III. CONCLUSIONS AND POLICY IMPLICATIONS

According to the International Maritime Organization, maritime domain awareness (MDA) is “the effective understanding of anything associated with the maritime domain that could impact security, safety, economy, or the environment.”

Robust MDA is closely aligned with combating illegal fishing. But many Indian Ocean states lack sufficient resources—including patrol vessels, aircraft surveillance, satellite technologies, and personnel trained in fighting fisheries crimes—to successfully monitor for and respond to suspected illegal fishing activity. Caught Red-Handed delegates determined that in order to address this lack of MDA, Indian Ocean states must create a governmental framework that will ensure state-based maritime agencies are in close collaboration and coordination, and that these agencies are aligned with regional and international efforts to fight illegal fishing. But according to delegates, this has not happened in most states.

Caught Red-Handed workshop delegates called for a reprioritization of resources and improved coordination between fisheries and non-fisheries agencies to achieve better MDA and fight illegal fishing. Workshop delegates believe that the state agencies that have the most maritime resources, including patrol vessels, aircraft, and satellite capabilities, need stronger mandates to fight fisheries-related crime. Workshop participants also highlighted a problematic gap between agencies with capacity and agencies with illegal fishing-related mandates.

Caught Red-Handed workshop delegates called for a reprioritization of resources and improved coordination between fisheries and non-fisheries agencies to achieve better MDA and fight illegal fishing.



Members of the Kenyan navy prepare for a training exercise. The Kenyan navy is the only agency in Kenya with vessels that can operate beyond 12 nm, but its mandate does not include combating illegal fishing. Photo: Staff Sgt. Amy Picard, US Navy.

For instance, Tanzania’s marine police patrol territorial waters up to 12 nautical miles, while the navy is charged with securing and patrolling the rest of Tanzania’s Exclusive Economic Zone (EEZ) out to 200 nautical miles from shore. The Tanzanian navy has ten boats of various sizes and capabilities and the marine police unit has four small boats. However, the Deep Sea Fishing Authority—the agency charged with fisheries management, licensing, and enforcement—currently has no vessels.¹⁰

Kenya faces a similar problem. The navy is the only Kenyan agency with vessels that can operate beyond 12 nautical miles, but the navy’s national security mandate does not include combating illegal fishing. As a result, the Kenya Fisheries Service must rely on the navy for information collection and surveillance. Recently, the Kenya Fisheries Service obtained a patrol boat to monitor illegal fishing within the EEZ, but it is still being commissioned.

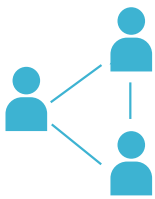
Even if navies have mandates to gather information on vessels suspected of illegal fishing, they still face gaps in knowledge and technical training that hinder their investigative capacity.¹¹ As a result, vessels suspected of illegal fishing are often one step ahead of surveillance personnel. In Mozambique, navy participants discussed how challenging it is to recognize illegal fishing because suspicious vessels change their names and appearance and disable their vessel detection systems.

State agencies in the Caught Red-Handed workshops also identified the need for training in maritime investigations to extend beyond inspections for illegal fishing. As the complexity of maritime crimes increases, key maritime agencies

say they are ill-equipped to conduct effective investigations. For instance, in Sri Lanka the navy is the lead agency in investigating human trafficking, drug smuggling, and illegal weapons trafficking, but they have had little coordination with the state's national police bureau, which has direct access to INTERPOL's global infrastructure of technical and operational support. Often this support is critical to an investigation's success. The ownership of illegal fishing vessels and the criminals themselves are frequently hidden behind complex networks of limited-liability companies, multinational crews, and "flag-of-convenience" states.

Caught Red-Handed states face significant challenges to combating illegal fishing and workshop participants emphasized the heavy toll illegal fishing takes on their economies and the livelihoods of artisanal fishers. Illegal fishing is something that many of them confront on a regular basis and have been fighting against for decades. This fight may seem futile for underfunded agencies vying for the vessels and technology to do their jobs. However, multiagency collaboration leverages the information and resources available to combat illegal fishing.

Caught Red-Handed provided a venue for collaboration and sharing information, but there is still much to be done. For Indian Ocean states to address maritime crime and conflict, illegal fishing must be prioritized, and agencies must be empowered with the resources and mandates to fight it. This report proposes three essential state-based actions:



ACTION 1: CREATION OF A COORDINATION TASK FORCE ON ILLEGAL FISHING

This would be the primary national mechanism for information sharing, coordination, and collaboration between maritime agencies in the fight against illegal fishing. The task force would have representation from all maritime agencies, including but not limited to the ministry or department of fisheries, coast guard, navy, customs, ports, and prosecutors, and have a memorandum of understanding that outlines collective responsibilities. The task force would also be charged with interfacing with regional and international efforts to fight illegal fishing, such as efforts by the FISH-i Africa Task Force, the Regional Maritime Information Fusion Center in Madagascar, the Regional Coordination Operations Center in the Seychelles, the Program to Promote Regional Maritime Security, and the UNODC's Global Maritime Crime Programme.



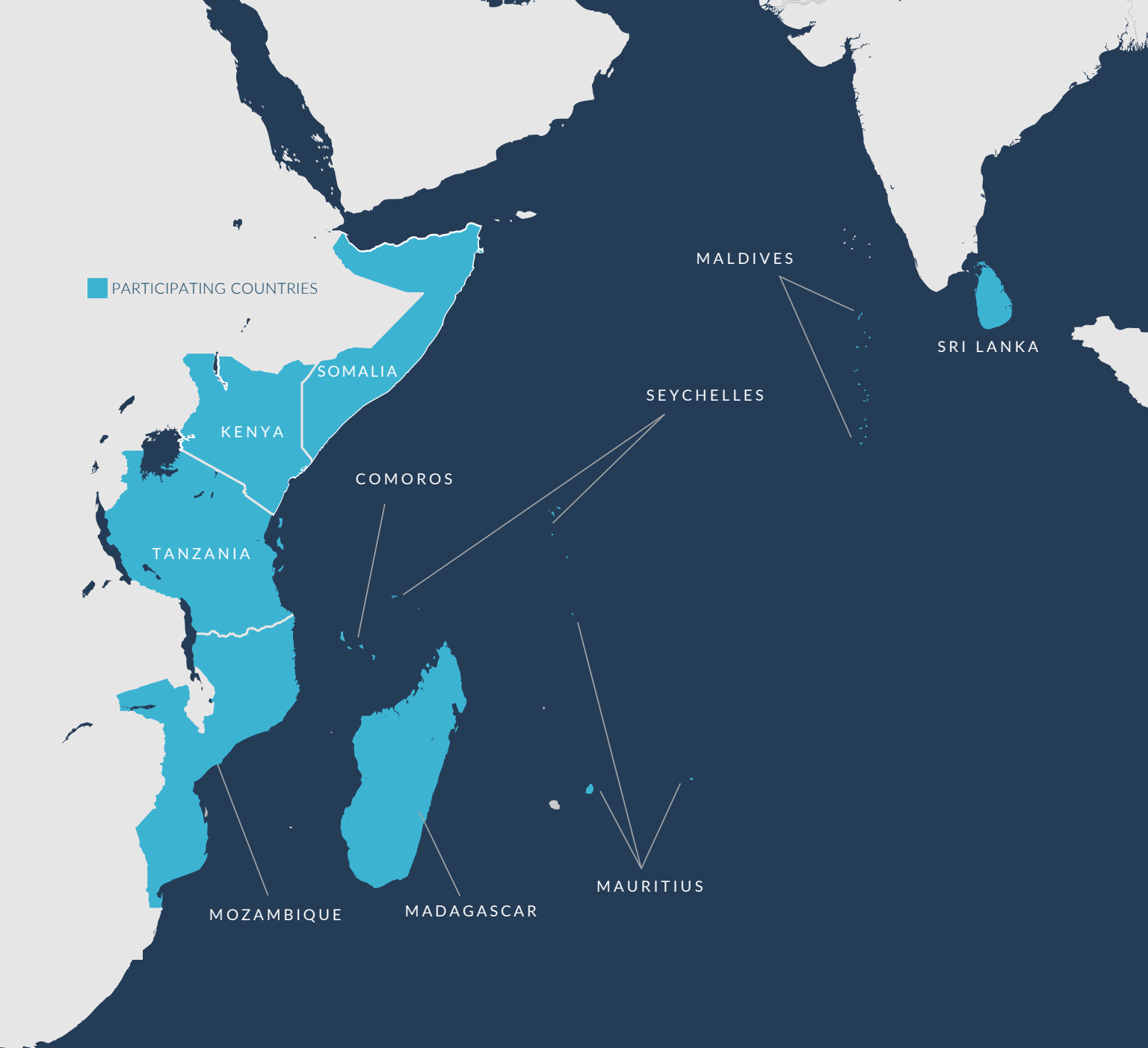
ACTION 2: STRENGTHENING OF MANDATES AGAINST ILLEGAL FISHING FOR MARITIME AGENCIES

All relevant maritime agencies should receive new or updated mandates that allow them to act on and prioritize illegal fishing. These proposed mandates would recognize that all maritime agencies have a role to play in fighting illegal fishing and would create a framework for effective interagency collaboration and coordination. These mandates would also ensure that maritime resources are used effectively in the collection of MDA, that agencies share information on suspected illegal fishing vessels, and that agencies work together toward successful prosecutions against illegal fishing.



ACTION 3: DEVELOPMENT OF POLICIES FOR SHARING INFORMATION ON ILLEGAL FISHING WITH EXTERNAL PARTNERS

Maritime agencies are often hindered from sharing information because they lack a trusted network of peers and a way to securely exchange sensitive information, and have internal protocols that often prevent information exchange. Agencies charged with MDA and fisheries law enforcement should create policies and procedures for the sharing of information on illegal fishing with the Indian Ocean Tuna Commission, the Indian Ocean Commission, INTERPOL, the FISH-i Africa Task Force, the Regional Maritime Information Fusion Center, the Regional Coordination Operations Center, and other related entities that are working to combat illegal fishing.



IV. COUNTRY WORKSHOP SUMMARIES

SRI LANKA

Overview of Fisheries Sector

Sri Lanka is an island country located southeast of India within the Bay of Bengal. It has a coastline extending 1,770 km and an EEZ that covers 517,000 km², of which some 27,800 km² form a continental shelf.

Sri Lanka's fisheries industry is a significant source of nutrition, food security, employment, and government revenue. Over the past several decades almost 2 percent¹² of Sri Lanka's GDP has come from fisheries, while 60,000 people are employed, both directly and indirectly, in the fishing industry.

Sri Lanka's fishing fleet consists of about 50,000 boats, and while the majority of these are considered single-day fishing vessels, about 2,500 are large enough for multi-day use, including around 1,600 capable of high-seas fishing.

Fish contribute over 70 percent¹³ of the animal protein consumed in Sri Lanka. And with a population expected to grow by 2.4 million people by 2050, Caught Red-Handed delegates saw the strengthening of fisheries management to be of paramount importance. According to workshop delegates, illegal fishing, overfishing, and bycatch are significant challenges to continued food security and sustainable livelihoods in Sri Lanka.

Scope of Illegal Fishing

Workshop delegates considered illegal fishing to be the single largest threat to maritime security in Sri Lanka, and a major obstacle to sustainable fisheries. A 2015 study showed Sri Lanka could lose an estimated \$336 million USD to illegal fishing each year.¹⁴ Also in 2015, a report by the UN Food and Agriculture Organization's (FAO) Asia-Pacific Fishery Commission listed the Sri Lankan territorial waters in and around the Palk Strait as the fifth-largest illegal, unreported, and unregulated (IUU) fishing hotspot in Asia, ranked by both total landings and value.¹⁵

According to another FAO report,¹⁶ thousands of illegal trawlers from the Indian state of Tamil Nadu cross regularly into Sri Lanka and use damaging fishing methods such as bottom trawling to fish for shrimp and crab without any established rights to the fishery or permission from the Sri Lankan government.

SRI LANKA & ILLEGAL FISHING AT A GLANCE

Coastline: 1,770 km
EEZ: 517,000 km²

FISHERIES SECTOR:

- important source of: nutrition, food security, employment, government revenue
- accounts for **2%** of GDP
- 60,000** people employed
- fish contribute **70%** of animal protein consumed
- fishing fleet of **50,000** boats

CHALLENGES:

- Illegal fishing
- Overfishing
- Bycatch
- ILLEGAL FISHING costs SRI LANKA **\$336 MILLION** per year

MARITIME AGENCIES COMBATING ILLEGAL FISHING:

- Ministry of Fisheries and Aquatic Resources Development & Dept. of Fisheries & Aquatic Resources
- Coast Guard & Port Authority

In the past, Sri Lankan policies enabled illegal fishing. In 2014 Sri Lanka was “red-carded” by the European Commission,¹⁷ which identified the country as a “non-cooperating third country” on the basis that they were not taking enough action to prevent, deter, and eliminate illegal fishing. This resulted in a ban on importing raw and processed fish from Sri Lanka to the EU.

The red card and the ban were lifted¹⁸ in the first half of 2016 in recognition of the efforts made by the government to address illegal fishing. Some of these efforts included increasing fines¹⁹ by over 100 times on illegal foreign vessels to deter them from fishing in the Sri Lankan EEZ. This increase was part of a bill that amended Sri Lanka’s Foreign Fisheries Boats Regulation Act. However, it is difficult to tell if this has resulted in a decrease in illegal fishing in Sri Lanka.

According to Caught Red-Handed delegates, illegal fishing is also related to other maritime crimes in Sri Lanka, such as drug smuggling and piracy. Illegal fishing has a considerable influence on political, economic, military, societal, and environmental security in the context of the national security of Sri Lanka.²⁰ For example, in the mid-1980s the issue of poaching between Sri Lanka and India came to the forefront with the emergence of violent ethnic conflict between the Tamil militants and the Sri Lankan government.

Poaching continues today with trespassing by fishermen from both Sri Lanka and India, mostly around the Palk Strait, Palk Bay, and Gulf of Mannar. According to Caught Red-Handed delegates, fishers from both countries rarely respect the maritime boundaries because the earnings from fishing are far more important to them than the costs associated with getting caught.

Maritime Human Resources and Interagency Coordination

Administratively, Sri Lanka’s efforts to combat illegal fishing are led by the Ministry of Fisheries and Aquatic Resources Development and the Department of Fisheries and Aquatic Resources (DFAR), and interdiction of illegal fishing vessels is handled by the Sri Lanka Coast Guard and Port Authority. The coast guard has several patrol vessels, but only one—the *Suraksha*, commissioned in 2017—is capable of patrols beyond coastal waters. Beginning in 2013, due to the increase in the number of multi-day fishing boats, Sri Lanka expanded their fisheries management mandate to include Sri Lankan vessels operating outside their EEZ.

According to Caught Red-Handed workshop participants, Sri Lanka has several other traditional and non-traditional maritime agencies that can assist the government in fighting illegal fishing, including the army, air force, police, customs department, and prosecutor’s office. But workshop delegates stressed that very little collaboration or coordination occurs between both the traditional and the non-traditional maritime agencies. To aid in interagency coordination, the High Seas Fisheries Unit was established by the DFAR in 2018 as an institutional arrangement supporting monitoring, control, and surveillance (MCS) of Sri Lanka’s EEZ.

The logbook data for all vessels in Sri Lanka are now managed by the High Seas Fisheries Unit. They also play a significant role in supporting the collection and analysis of vessel monitoring system (VMS) data. The unit analyzes VMS alerts, conducts investigations on suspect vessels, and provides support for legal action against any vessel found to be engaging in illegal fishing.

The Investigation Unit of DFAR also provides institutional support on illegal fishing investigations by:

- analyzing and investigating VMS alerts and cruise track data provided by the High Seas Unit;
- investigating vessel departures without approvals;
- investigating suspect logbook entries or logbook records provided by fisheries inspectors; and
- proceeding with legal actions against illegal fishing activities and the violation of fisheries regulations.

Workshop Recommendations

The Caught Red-Handed workshop in Sri Lanka took place on May 24–25, 2018, and was attended by senior staff from Sri Lanka’s Department of Fisheries, Attorney General’s Department, and Coast Guard. In addition, 48 members of the Sri Lanka Navy were in attendance, as was the former Sri Lankan representative to the United Nations.

The delegates continued to identify interagency collaboration as one of the main roadblocks to combating illegal fishing, even with the High Seas Fisheries Unit in place. The delegates also discussed the best ways to strengthen interagency collaboration in order to collect and process information on suspect illegal fishing vessels and ensure successful prosecution. This resulted in:

1. **IDENTIFYING KEY AGENCY STAKEHOLDERS** in the collection of information and intelligence on illegal fishing vessels;
2. recommending the **CREATION OF BOTH NATIONAL AND LOCAL-LEVEL INTERAGENCY TASK FORCES** which would be dedicated to illegal-fisheries–related information collection and sharing; and
3. **IDENTIFYING KEY AGENCY FOCAL POINTS** for the collection, analysis, and communication of intelligence on illegal fishing.

MALDIVES

Overview of Fisheries Sector

The Republic of Maldives is an archipelagic country of 1,190 islands in the Indian Ocean, with an EEZ covering 859,000 km² and 26 atolls. Around 200 islands are inhabited; 140 islands are used exclusively as tourist resorts, and the rest of the islands are uninhabited and used mostly for industrial and agricultural purposes.^{21, 22} The country has a population of about 400,000 people.²³

The Maldives relies on coastal and marine resources for subsistence and its economic development. The fisheries sector plays a critical role in food supply,²⁴ as tuna is the primary source of protein in the local diet. According to the FAO, average fish consumption per capita is 140 kg per person per year, with 94 kg coming from tuna.

Fisheries also provide a means of livelihood for over 20 percent of Maldivians. About 2,626 villages rely on fisheries as their main income source, including indirectly from working in maritime industries such as boatbuilding, ice production, fish processing, trading and marketing, and fishing vessel maintenance.²⁵ The tuna fisheries sector is a driver of economic growth and development, with close to 20,000 formal and informal fishers.

Fisheries account for 6 percent of GDP, 11 percent of employment, and 98 percent of the country's export commodities. And though fisheries' contribution to GDP has shown a continual declining trend since 1978, this has mainly been caused by the introduction and rapid growth of the tourism sector and the diversification of fisheries-related businesses into other economic sectors such as export and labor.

Maldivian tuna fishery uses mostly pole-and-line, handline, longline, and troll line fishing methods.²⁶ The most important is the traditional live-bait pole-and-line tuna fishery, targeting primarily skipjack tuna and smaller amounts of bigeye and juvenile yellowfin tuna.

Scope of Illegal Fishing

The delegates from the Caught Red-Handed workshop in the Maldives considered illegal fishing to be their biggest maritime threat and a major obstacle to sustainable fisheries management. This concern is backed up by the Maldives

THE MALDIVES & ILLEGAL FISHING AT A GLANCE

EEZ: 859,000 km² covering 26 atolls

FISHERIES SECTOR:

- accounts for **6% of GDP**
- means of livelihood for **20% of Maldivians**
- accounts for **98% of export commodities**
- 20,000+** tuna fishers alone

CHALLENGES:

- Illegal fishing was considered **BIGGEST MARITIME THREAT**
- 432 VESSELS** operating illegally between 2014-2016

MARITIME AGENCIES COMBATING ILLEGAL FISHING:

- Ministry of Fisheries
- Maldives National Defence Force

Ministry of Fisheries and Agriculture, which commissioned a study that found 432 foreign fishing vessels operating without the required permits or licenses between the years 2014 and 2016.²⁷ This assessment, conducted using AIS data, also identified 542 unauthorized buoys deployed or drifting through Maldivian waters.

Moreover, in 2018 there were several high-profile illegal fishing incidents in the Maldives, including the following.

- In January 2018 two Somali-flagged fishing vessels, *FV Chotpattanna 55* and *FV Chotpattana 51*, were apprehended with 10 and 12 Thai crew members, respectively. Each vessel had approximately 200 tons of illegally caught fish.^{28, 29}
- In November 2018 the Maldives Coast Guard intercepted and seized two illegal Sri Lankan fishing vessels fishing in Maldivian waters, along with 10 Sri Lankan crew members.

In December 2018 the Sri Lankan vessel *FV Oshadi 1* was caught illegally fishing and carrying about a ton of fish, mostly shark.³⁰ Shark fishing was banned in the Maldives in 2010 and the vessel's six crew members were arrested by the coast guard.

Maritime Human Resources and Interagency Coordination

Several government departments are responsible for ensuring the sustainable use of marine and coastal biodiversity in the Maldives, including the Ministry of Environment and Energy; Ministry of Economic Development; Ministry of Fisheries, Marine Resources, and Agriculture; and the Local Government Authority. The Maldives' efforts to combat illegal fishing are led by the Ministry of Fisheries and the Maldives National Defence Force (MNDF).

Workshop Recommendations

The Caught Red-Handed workshop took place on the island of Malé on May 28 and 29, 2018, and was attended by senior staff from the coast guard (part of the MNDF), the Maldives Attorney-General's Office, the Maldives Prosecutor-General's Office, the Maldives Police Marine Operations Unit, and the Maldives Customs Service.

The delegates recognized the need to strengthen interagency collaboration in order to increase the collection and processing of information on suspected illegal fishing vessels. Workshop participants discussed collaborative ways to collect, store, analyze, and share fishing vessel information, resulting in the following four recommendations:

1. **DEVELOPMENT OF A NATIONAL MARITIME INTELLIGENCE BUREAU** in the Maldives;
2. **DEVELOPMENT OF A JOINT INTERAGENCY WORKING GROUP** on illegal fishing;
3. **DEVELOPMENT OF A MARITIME FUSION CENTER**, which will have MDA capabilities; and
4. **CLOSER COORDINATION WITH THE INDIAN OCEAN MARITIME FUSION CENTERS** to share information on suspected illegal fishing and other maritime crimes.

Additionally, delegates discussed the establishment of a joint operations center to fight illegal fishing and a system for sharing information with international stakeholders.

KENYA

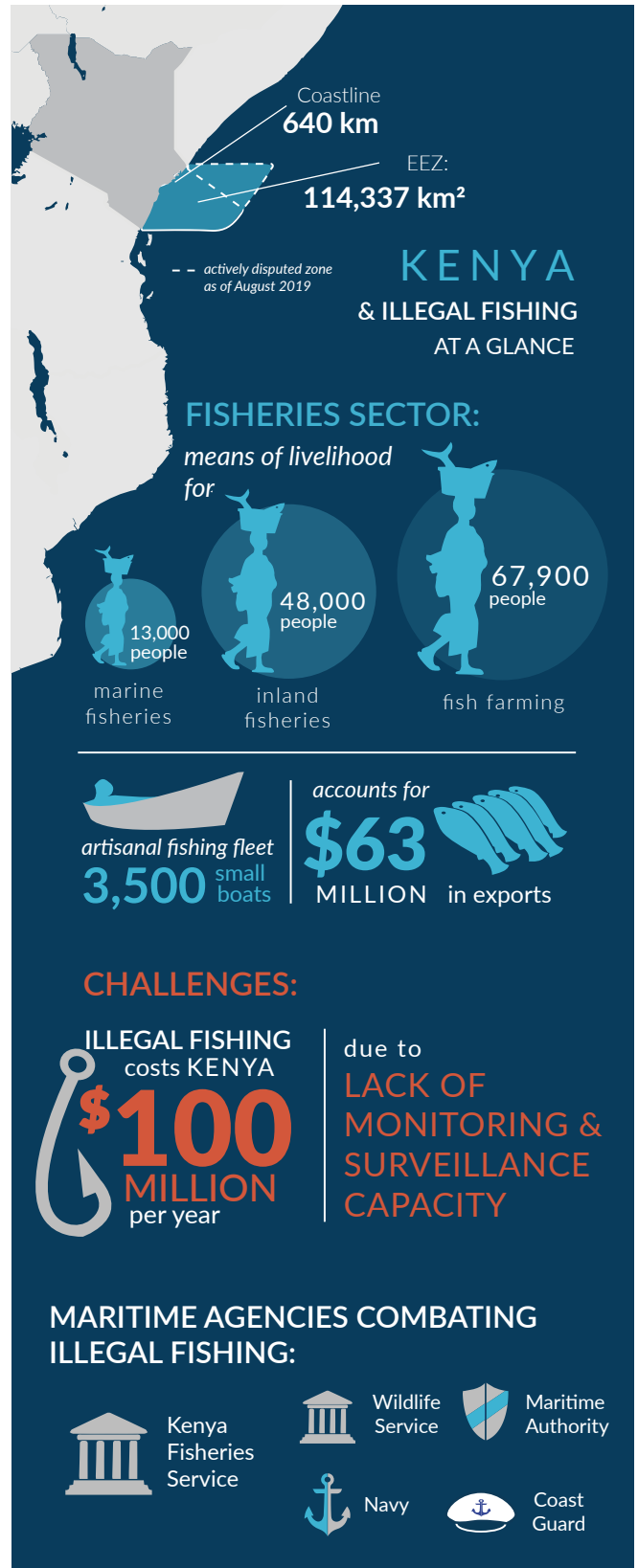
Overview of Fisheries Sector

The Republic of Kenya straddles the equator and encompasses a portion of the Indian Ocean and Lake Victoria. Kenya’s marine coastline is over 640 km long, with an EEZ of 114,337 km². The country has varied marine habitats, including deep oceanic waters that support productive ecosystems.³¹ Kenya has an almost continuous fringing coral reef which stretches parallel to the coast.

Kenya’s marine fisheries are critical to food security and livelihoods for coastal communities.³² Average per capita fish consumption (including marine, freshwater, and aquaculture) in Kenya is about 5 kg per year.³³ Additionally, Kenya’s fisheries and aquaculture sector contributes approximately 0.54 percent to the country’s GDP.³⁴ The value of fish exports was about \$63 million in 2012, about five times greater than fish imports. It is estimated that around 13,000 people derive their livelihoods from marine fisheries, compared to 48,300 for inland fisheries and around 67,900 from fish farming.³⁵

Coastal fisheries are mainly artisanal and subsistence, and are undertaken mostly from small, non-motorized boats such as outriggers, dhows, and “planked pirogues.” Kenya’s entire artisanal fishing fleet consists of 3,500 small-scale, mostly wooden crafts usually used for single-day fishing trips. Additionally, in 2017 an estimated 414 artisanal vessels were engaged in extended fishing trips, targeting tuna and tuna-like species while using longline hooks, gillnets, monofilament nets, and artisanal trolling lines.³⁶

Kenya’s offshore fisheries are mostly exploited by distant-water fishing nations including the Seychelles, Mayotte, Spain, France, and Taiwan Province of China, with a focus on skipjack, yellowfin, and bigeye tuna. The FAO has reported licenses for 33 purse seiners and 30 longliners, while Kenya’s State of the Coast report states that 19 and 34 licenses were active in 2008 and 2010, respectively.³⁷ The Sea Around Us Project, however, has reported a much higher figure, stating that 116 vessels were licensed to fish in 2015.³⁸ Definitive numbers have been difficult to obtain.



Scope of Illegal Fishing

Kenya loses an estimated \$100 million annually due to illegal fishing activities in its EEZ^{39,40} and, according to Caught Red-Handed delegates, the lack of monitoring and surveillance capacity is thought to be a major reason.

Workshop delegates highlighted many challenges in fighting fisheries crimes in Kenya, including inadequate experience in MDA and insufficient resources to enable fisheries officers to investigate, properly gather, collect, or preserve evidence that meets standards for prosecution and conviction of offenders. The efficacy of fisheries-crime-related law enforcement is undermined by inadequate capacity, training, and technical skills and expertise in fisheries law enforcement. Thus, workshop delegates expressed the need for additional training and capacity building so officials can better detect fisheries crimes, identify relevant species, carry out investigations, and gather evidence to successfully prosecute the accused.

Kenya also lacks adequate technological resources to enable monitoring and surveillance of the activities of fishing vessels in its coastal waters, especially for Kenya's distant-water fishing fleet.⁴¹ There is also limited awareness on the impacts of fisheries crimes and fisheries offenses, which results in penalties that are often administrative in nature with low fines imposed.

According to John Karungo from the Kenya Fisheries Service, there has never been an arrest of an illegal fishing vessel in Kenya's offshore waters. Karungo believes this is because historically the Kenyan navy lacked the necessary capacity and information to inspect and apprehend illegal fishing vessels. In 2018 this led to the creation of the Kenya Coast Guard Service, which focused their efforts on enforcement matters, allowing the navy to concentrate on safeguarding the sovereignty and integrity of the Kenyan EEZ.



*A landing craft cushion heads towards Manda Bay Kenyan Naval training area.
Photo: Ted Banks, US Navy photo.*

And this recent focus on enforcement has led to more detentions. In June 2018, 109 Tanzanian fishers were detained for engaging in illegal fishing within Kenya's territorial waters off Shimoni.⁴² In November 2018, 16 Tanzanian fishermen were briefly detained by Kenyan Beach Management Unit officers and accused of illegal fishing.⁴³ And in December 2018, 26 Tanzanian and 13 Kenyan fishers were charged with using illegal fishing nets. The fishers were found with 758 pounds of fish allegedly caught using illegal nets.⁴⁴

Maritime Human Resources and Interagency Coordination

The Kenya Fisheries Service is the primary agency responsible for fisheries management in Kenya. The principal legal instrument applied by the service is the Fisheries Management and Development Act 2016 and its various subsidiaries. In fighting illegal fishing, the fisheries service is aided by the Maritime Police Unit, the Kenya Wildlife Service, the Kenya Maritime Authority, the Kenyan navy, and the new Kenya Coast Guard Service.

The Kenya Coast Guard Service is a multi-agency security agency established under the Kenya Coast Guard Service Act of 2018 to enforce law and order in Kenya's territorial waters. One of the main targets for patrols will be foreign fishing vessels trawling in Kenyan waters.⁴⁵ Apart from stopping illegal fishing, the coast guard will also be tasked with combating drug trafficking, piracy, the smuggling of contraband goods, the degradation of the marine ecosystems through the dumping of oil and toxic waste, and the destruction of coral reefs.⁴⁶ Currently Kenya's coast guard has only one boat, the MV Doria; thus the new force still relies heavily on the navy for patrols.

Workshop Recommendations

The Caught Red-Handed workshop in Mombasa, Kenya, took place on July 9–10, 2018, and was attended by representatives from the Kenya Maritime Police Unit, Kenya Fisheries Service, Kenya Wildlife Service, Kenya Maritime Authority, INTERPOL, Vulcan Inc., and the United States Navy.

Much of the discussion focused on the best ways to strengthen interagency collaboration in order to collect and process information on vessels suspected of fishing illegally. The workshop generated the following four recommendations.

1. **THE FISHING ACTIVITY SIGHTING CHECKLIST SHOULD BE USED** by every group involved in the maritime space to increase MDA in Kenya's EEZ. This information should be collated and conveyed to the Kenya Navy, the Kenya Coast Guard Service, and the Kenya Fisheries Service.
2. A **FOCUSED MULTI-AGENCY COORDINATION TASK FORCE** should be set up to fight illegal fishing, potentially under the Joint Operations Centre.
4. The multi-agency coordination task force should **ESTABLISH PROTOCOLS AND RECEIVE FURTHER TRAININGS** on information gathering, analyzing, and sharing.
5. The significance of **ILLEGAL FISHING SHOULD BE EMPHASIZED TO HIGHER-LEVEL DECISIONMAKERS**. Potential decision-making stakeholders include the Blue Economy Committee, the Court Users Committee monthly forum, the Director of Public Prosecutions, and policymakers.

MOZAMBIQUE

Overview of Fisheries Sector

Mozambique has a coastline that extends 2,770 km along the southeastern edge of the African continent and an EEZ of 562,000 km².⁴⁷ The fisheries sector is an important source of employment, income, and food for the country.⁴⁸ Fisheries production has risen from 290,915 metric tons in 2015 to an estimated 394,000 metric tons in 2018, accounting for 10.3 percent of Mozambique’s GDP.⁴⁹ Most of this growth has come from small-scale, artisanal fishers who account for 92 percent of the total catch, with the rest coming from industrial and semi-industrial fishing boats.

The industrial fishing sector is dominated by shallow-water shrimp trawling and deep-water crustacean trawling. Foreign distant-water fishing nations are the main group fishing for tuna and tuna-like species, with 23 longliners and 7 purse seiners authorized to fish in the Mozambique EEZ in 2017.⁵⁰

A fisheries agreement has been in place with the European Union which allows vessels mainly from France, Spain, Portugal, Italy, and the UK to fish in Mozambican waters.⁵¹ There is also an access agreement with Japanese fishing companies, and in 2018 there were news reports⁵² that six Chinese vessels owned by the Yu Yi Industry Company were operating in Mozambique’s waters, but this could not be confirmed.

About 187 industrial vessels are also operating in domestic fisheries. The main commercial species targeted by this sector include lobster, crabs, gamba (deep-water shrimp), fish, shallow-water shrimp, crayfish, and squid.

The small-scale and artisanal fisheries in Mozambique play a significant role in the national economy, and consist of individuals or small groups of fishers. They make use of non-motorized fishing vessels between three and eight meters in length and use beach seines, gillnets, and longlines to catch fish. This sector also consists of fish collectors and divers. It is estimated that the number of fishing boats and canoes is approximately 15,000, with only 3 percent equipped with engines. Most of the fish harvested by artisanal fishers are for subsistence or are distributed close to the landing sites. Very little of the artisanal catch is exported, with the exception of shrimp.



More than 90,000 people are involved in the fishing sector (including fishing, gathering, processing, and marketing), of which around 70,000 are involved in the marine sector and 20,000 in the freshwater sector.⁵³ It is estimated that about 500,000 people depend on fisheries for their livelihood. In addition, fisheries contribute 13 percent of Mozambique's export income, with foreign trade characterized by exports of high-value tuna products and imports of lower-value fish.⁵⁴

Mozambique's average fish consumption per capita is estimated at 5 kg annually; however, it is much higher among coastal communities, where it is estimated to be between 10–12 kg annually.⁵⁵

Scope of Illegal Fishing

Little information is available on the status of illegal fishing in Mozambique, but it has been estimated that the country loses at least \$60 million annually.^{56, 57}

Some of Mozambique's higher profile illegal fishing arrests include the following.

- In 2008 the government confiscated the *Antillas Reefer*, a Namibian-flagged fishing vessel, for fishing illegally.⁵⁸ When the *Antillas Reefer* was inspected in Maputo, 43 tons of sharks, 4 tons of shark fin, 1.8 tons of shark tail, 11.3 tons of shark liver, and 20 tons of shark oil were allegedly found on board. The total value of the catch was estimated at around \$600,000.
- In 2016 Mozambican authorities confiscated the fishing vessel *Nessa 7* for fishing illegally.⁵⁹ In addition, the owner, Anthony Rowan Pentz, was ordered to pay a fine of \$94,000, while the captain was banned from fishing in Mozambican waters for 36 months. The vessel entered Mozambican waters without any communication or prior authorization. Moreover, it was hiding identity marks, possessed gear for longline fishing of tuna, and wasn't displaying any flag or registration number. When taken into the port of Maputo, the identity of the *Nessa 7* was established to have formerly been the *Naham 4*, bought by Pentz from the South African authorities following the vessel's seizure in 2013 for operating on false documents and being linked to a significant case in which up to five vessels were thought to be operating and fishing using one identity.
- In 2018 Mozambique confiscated the Seychelles-registered longline vessel *Ocean Storm* for illegal fishing and fined the captain \$65,000.⁶⁰ The vessel was flagless, and had no identification number nor any normal fishing or navigation logs. When it was approached, the ship tried to escape, but was pursued and seized. *Ocean Storm* did not report its position when it entered Mozambican waters, and had no license to fish in Mozambique.

In 2018 there were over 700 inspections of commercial fishing vessels, with 101 fines imposed for suspected illegal fishing.⁶¹ These fines amounted to about \$1.3 million.



Artisanal fishing near Nampula, Mozambique. Photo: Stig Nygaard.

Maritime Human Resources and Interagency Coordination

Mozambique's Ministry of Fisheries is charged with combating illegal fishing. And while the ministry has policies and procedures for boarding vessels suspected of illegal fishing, Caught Red-Handed delegates said that these procedures are currently not communicated with other groups involved in ports, including navy, customs, and maritime police. Moreover, the ministry is responsible for information collection, but oftentimes this information does not reach other agencies.

The National Fishing Administration currently manages information and analysis regarding fishing and fishing vessels. Fishing vessel information, primarily VMS information, is currently shared ad hoc via email, phone, letters, and personal communication.

To aid the ministry in MDA, the Southern African Development Community (also known as SADC) is setting up a Regional Fisheries Monitoring, Control and Surveillance center in the outlying Maputo neighborhood of Katembe.^{62, 63}

Workshop Recommendations

The Caught Red-Handed workshop took place in Maputo on July 12–13, 2018. Representatives from the Mozambique Ministry of Sea, Inland Waters and Fisheries; Mozambique Coastal, Lake, and River Police; National Marine Institute; Port of Maputo; Mozambican navy; and Inhambane Provincial Directorate of the Inland Sea and Fisheries attended, as well as United States Drug Enforcement Administration and United States Embassy representatives.

According to Caught Red-Handed delegates, in cases of illegal fishing, the vessel is confiscated and the commander is reported to other countries. But the delegates stressed that Mozambique needs increased interagency collaboration on illegal fishing because such activity is associated with other crimes, including drug trafficking. In order to achieve increased collaboration, the delegates recommended:

1. the **ESTABLISHMENT OF A MARITIME COORDINATION CENTER** with representatives from each maritime agency;
2. a **FISHING VESSEL DATABASE** that should be stored and analyzed at the newly formed coordination center;
3. **PROACTIVE COOPERATION** between all relevant maritime agencies;
4. exploration of the possibility of **INCLUDING THE PRIVATE SECTOR IN THE INFORMATION-GATHERING PROCESS**; and
5. **LAW REFORM** so that illegal fishery will be mentioned in the penal code.

TANZANIA

Overview of Fisheries Sector

Tanzania’s EEZ has an area of 223,000 km² and a coastline that stretches 1,424 km, including Zanzibar and the Pemba Islands.⁶⁴ Marine fishing is predominantly inshore, as the continental shelf off the coast is relatively narrow; in most places it is only 8 to 10 km wide, but it extends about 40 km off the shore of the islands of Zanzibar and Mafia.⁶⁵

Marine fisheries in Tanzania occur both inshore in territorial waters and offshore, extending to the edge of the EEZ. Inshore fisheries mainly target shrimp, lobster, cephalopods, and crabs, and offshore industrial fisheries generally target tuna, tuna-like species, marlin, swordfish, and sharks.⁶⁶

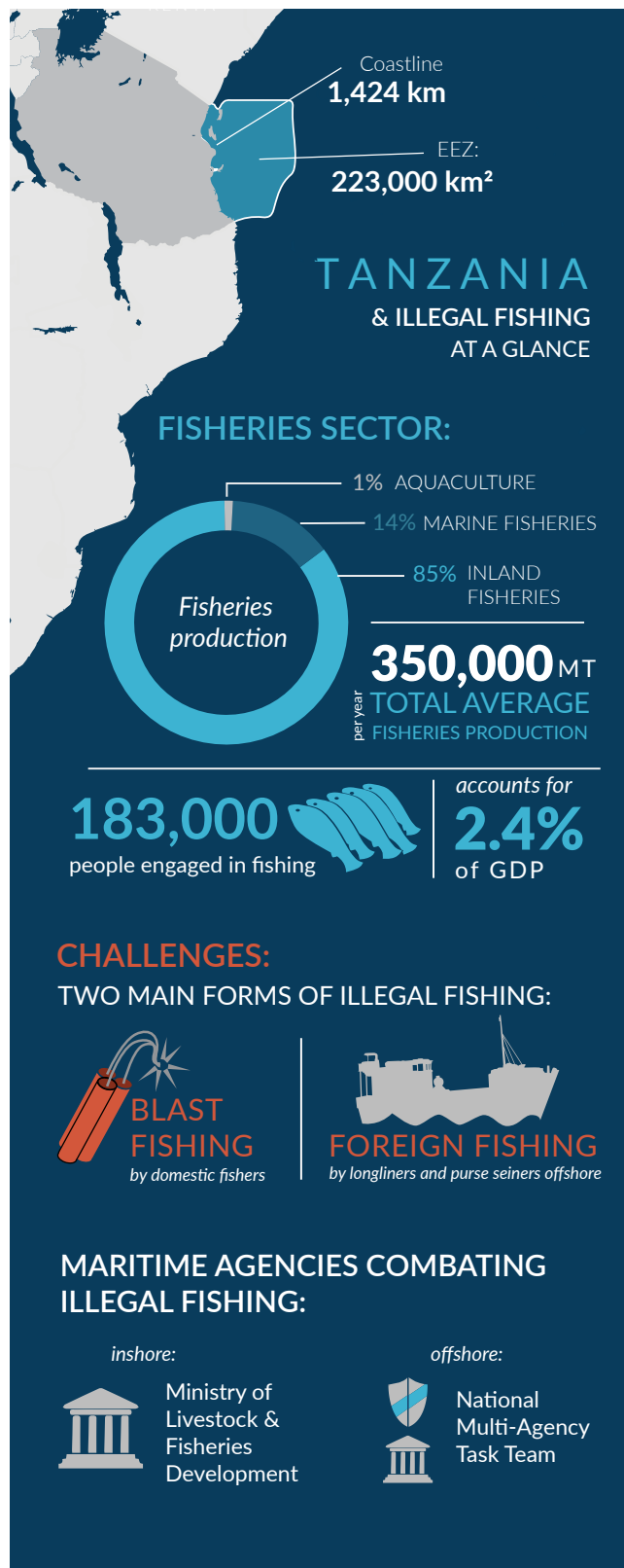
Tanzania’s artisanal fishers typically use outrigger canoes or small dhow-type planked boats (mashua) to access fishing grounds. In 2006 there were an estimated 7,190 active vessels, with smaller boats using mostly gillnets and shark nets, and larger semi-industrial vessels using larger weighted nets from trawlers.⁶⁷

Outside of territorial waters, larger purse seine and longline vessels target tuna and tuna-like species, including marlin, swordfish, and sharks. The offshore fishery is solely industrial, and the bulk of the catch is exported.⁶⁸

Tanzania’s fisheries production has been in the range of 325,000 to 380,000 metric tons annually, with about 14 percent coming from marine fisheries, as 85 percent comes from inland fisheries and 1 percent from aquaculture.⁶⁹ Overall per capita fish consumption in Tanzania is estimated to be about 7–8 kg per year, accounting for about 30 percent of the total animal-protein intake in the country.

In 2014, there were some 183,800 persons engaged in fishing, accounting for about 0.7 percent of the workforce, with a large but unknown number also engaged in fish trading and processing. Fisheries contribute about 2.4 percent to Tanzania’s GDP.

As of 2016, there were three large Tanzanian-flagged tuna longliners (between 44 and 49 meters long) registered in Zanzibar and operating throughout the Indian Ocean. There are also several foreign fishing vessels licensed to operate in the Tanzanian EEZ from Seychelles, South Korea, France, and Spain, but the number of licenses has fluctuated significantly from between zero in 2011 and 2012 to 74 in 2014.⁷⁰





Top: A blast from illegal dynamite fishing in Tanzania. Photo: WorldFish.

Bottom: Carrying a trap on the beaches of Zanzibar. Photo: Georgie Pauwels.

Scope of Illegal Fishing

Though there are no reliable statistics available to quantify illegal fishing in Tanzanian waters, Caught Red-Handed participants discussed two main forms of illegal fishing in maritime areas. The first is from blast fishing by the domestic fleet, also called dynamite fishing, which occurs in inshore areas and destroys large numbers of fish and coral reefs. The second is illegal fishing by foreign longliners and purse seiners, which occurs mostly offshore.⁷¹

To combat illegal foreign fishing, a partnership was formed in 2018 between the Tanzanian government, the FISH-i Africa Task Force, and Sea Shepherd. Operation Jodari, a multi-agency task force from the Tanzanian government, was stationed on board the MV *Ocean Warrior* with Sea Shepherd crew members. Operation Jodari provided an opportunity to increase patrols and ensure compliance with national and international regulations.⁷² During the operation, three vessels were impounded for fishing illegally and ten arrests were made.

In a few instances, evidence of shark finning was found on the vessels, with detached fins on board in contravention of Tanzanian regulations and the IOTC's conservation and management measures. In another instance, juvenile dolphins that were prepared for export were discovered on the FV *Buah Naga No. 1*. Operation Jodari also led to a \$50,000 fine being paid to Tanzania's Deep Sea Fishing Authority by the owners of longliner FV *Jin Sheng No. 2* for refusing an inspection and for the mistreatment of their crew.

Maritime Human Resources and Interagency Coordination

Inshore fisheries in Tanzania's 12-nautical-mile territorial sea are managed by the Ministry of Livestock and Fisheries Development, while offshore fisheries beyond 12 nautical miles are managed by the Deep Sea Fishing Authority. In 2015 Tanzania launched a National Multi-Agency Task Team charged with combating illegal fishing and other environmental crimes.⁷³ The team is led by the Tanzania Police Force and includes the Tanzania Forest Service, Tanzania Wildlife Division, Tanzania Fisheries Division, and Tanzania Intelligence and Security Services.

According to Caught Red-Handed workshop participants, the task team has been responsible for an increase in investigations into illegal fishing, but it is still limited by inadequate resources. Currently, there are only four navy vessels and one plane available for regular patrols of Tanzania's EEZ.

Workshop Recommendations

The Caught Red-Handed workshop in Tanzania took place in Dar es Salaam on July 16–17, 2018, and was attended by representatives from the Deep Sea Fishing Authority, Tanzania’s navy, the Tanzania Marine Police, the Multi-Agency Task Team, Tanzania Shipping Agencies Corporation, the United Nations Development Programme, the European Union, the Maritime Rescue Coordination Centre (also known as TASAC-MRCC), and the United States Embassy.

Much of the discussion focused on the best ways to leverage maritime resources in order to increase the collection and processing of illegal fishing-related information.

Delegates recommended that Tanzania:

1. **GENERATE RESOURCES** needed to combat illegal fishing, including:
 - a. increasing the government’s use of technology to detect illegal fishing; and
 - b. increasing the quantity of vessels capable of going farther in the EEZ.
2. **INCREASE PORT CONTROL** by strengthening security at ports.
3. **PREPARE SOPS AND A MEMORANDUM OF UNDERSTANDING TO SHARE INFORMATION** with regional fusion centers.
4. **USE THE VESSEL SIGHTING CHECKLIST** to collect vessel information, with the Deep Sea Fishing Authority responsible for information collection and able to call on other relevant agencies, including the navy, police, Port Authority, Fisheries Division, Deep Sea Fishing Authority, TASAC, and national security agencies.
5. **TRAIN THESE AGENCIES** and others involved, including local fishers, in information collection.
6. **CREATE A JOINT SYSTEM FOR SHARING INFORMATION** and share transparently within Tanzania and regionally through the Regional Maritime Information Fusion Center in Madagascar.
7. Work with government to **IMPROVE AND STRENGTHEN POLICIES, LAWS, AND ENFORCEMENT RELATED TO ILLEGAL FISHING**, including requiring all vessels to have International Maritime Organization (IMO) numbers.
8. **DEVELOP THE FISHING INDUSTRY** in Tanzania, starting with Tanzanian fishing vessels, and build infrastructure to support it.

MAURITIUS

Overview of Fisheries Sector

Mauritius has an EEZ of 1.9 million km² extending from the coasts of the islands of Mauritius, Rodrigues, St. Brandon, Agalega, Tromelin, and the Chagos Archipelago. Fisheries resources exploited include an inshore artisanal fishery, an offshore demersal fishery near the Mascarene Plateau and the Chagos Archipelago, and an offshore tuna fishery.⁷⁴

Fisheries are an important economic sector in Mauritius, accounting for about 1.6 percent of the GDP and employing some 12,000 people.⁷⁵ Moreover, fish is an important source of protein in local diets and the annual per capita consumption of fish averages between 22–25 kg, which represents one-quarter of animal-protein intake.⁷⁶

Coastal fisheries in Mauritius involve the lagoon and outer reef areas. This fishery is the main source of fresh fish supply for the local market. About 2,200 fishermen are involved in the coastal fishery in Mauritius using about 1,500 (mostly small) boats, mainly powered by outboard motors. These fishers use basket traps, hooks and lines, harpoons, large nets, and gillnets, mostly targeting emperors, parrotfish, rabbitfish, and mullets.

The tuna fishery is the major industrial fishery in Mauritius and the export of tuna constitutes 90 percent of the total export value of fish and fish products.⁷⁷ The Mauritian fleet is composed of both surface longliners and purse seiners. In 2017 there were two purse seiners flagged by Mauritius allowed to operate both within and beyond the EEZ.⁷⁸ Mauritius also has a longline fleet consisting of 11 boats of less than 24 meters, six of which are licensed to operate only within the EEZ, while five are licensed to operate both within and beyond the EEZ.

Licenses are also issued to foreign longliners that operate within Mauritius' EEZ. Most of these vessels land their catch in Port Louis, where it is then processed for export. In 2017, a total of 141 licenses were issued to longliners from the EU, Taiwan Province of China, South Korea, Japan, Indonesia, Belize, and Malaysia.

A new fisheries agreement between the EU and Mauritius was created in 2017, covering the period 8 December 2017 to 7 December 2021.⁷⁹ It allows vessels from Spain, France, Portugal, and Italy to fish in Mauritian waters and is part of the Tuna Network Fisheries Agreement in the Indian Ocean.



Scope of Illegal Fishing

There is little information on the extent of illegal fishing in Mauritius, but according to Subhas Chandra Bauljeewon, Divisional Scientific Officer for the Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping, IUU fishing in the EEZ of Mauritius is negligible.⁸⁰ Still, Caught Red-Handed workshop participants cited the large Mauritius EEZ and lack of surveillance as significant challenges to combating illegal fishing.

Maritime Human Resources and Interagency Coordination

Mauritius has set up a Fisheries Monitoring Centre situated at the Albion Fisheries Research Centre within the Ministry of Fisheries.⁸¹ Specific regulations have been developed to provide the legal framework for the use of VMS in prosecutions. All local fishing boats and vessels, including carrier vessels and foreign-licensed fishing vessels, must abide by the VMS regulations, under which they have to transmit VMS information every two hours to the Fisheries Monitoring Centre.⁸²

A special unit known as the Port State Control Unit has also been set up.⁸³ The unit is staffed with fisheries inspectors trained to monitor all fishing vessels calling into port and to carry out boardings and inspections.⁸⁴ In 2017 this unit inspected 667 foreign longliners and 18 purse seiners in port.

Workshop Recommendations

The Caught Red-Handed workshop in Mauritius took place between September 10–11 in 2018 and was attended by representatives from the Mauritius police force’s Anti-Drug and Smuggling Unit; the Mauritius Coast Guard; the Mauritius Revenue Authority’s Customs Office; the Mauritius Immigration Office; the Mauritius Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping; and the Mauritius Port Authority.

Much of the discussion focused on the best ways to increase maritime resources and inspections of suspected illegal fishing vessels.

Delegates recommended:

1. an **INCREASE IN FISHING VESSEL COMPLIANCE EFFORTS** and maritime observation through an increase in the number of onboard compliance officers (observers);
2. the **CREATION OF AN INTERAGENCY TASK FORCE** that is empowered to take a leadership role in decision-making;
3. the **CREATION OF A LIST THAT IDENTIFIES LICENSED FISHING VESSELS** operating in the Mauritius Exclusive Economic Zone; and
4. the **CREATION OF FISHING VESSEL REPORTS** combining VMS and sightings information.

MADAGASCAR

Overview of Fisheries Sector

Madagascar is separated from Africa by the Mozambique Channel, and has a land area of approximately 587,000 km², a coastline estimated to be 5,600 km long, and an EEZ of 1.2 million km².⁸⁵ It is the fourth-largest island in the world and an African biodiversity hotspot, with around 80 percent of its terrestrial species being indigenous.⁸⁶ Madagascar is also one of the world's poorest countries with a per capita annual income of just \$419.⁸⁷ Thus, subsistence fisheries are of vital importance for Madagascar's coastal communities, especially in the arid south and west of the country where agricultural productivity is low.⁸⁸

Marine fishery resources are exploited by artisanal vessels (mostly canoes and dhows) and industrial vessels (mostly longliners and purse seiners) used by the foreign distant-water fishing fleet. Demersal fish, with more than 50 commercial species, form the basis of traditional fisheries in Madagascar, while farther offshore the distant-water fishing fleet targets yellowfin, skipjack, and bigeye tuna, large pelagic sharks, and tuna-like species such as marlin and swordfish.

The estimate of the added value of the marine fishery sector in 2010 was \$164.8 million, which corresponds to approximately 2 percent of the GDP.⁸⁹ Current national fishery production is estimated to be around 130,000 metric tons per year, including catches by the distant-water fishing fleet. Inland fisheries and aquaculture contribute about 30,000 metric tons and 10,000 metric tons per year, respectively.⁹⁰

Fish consumption per capita is 6.9 kg per year, below the African average of 9.4 kg. At the same time, however, fisheries products are said to be the main source of animal protein, with an average consumption rate of 1.3 days per week.

Scope of Illegal Fishing

Despite considerable efforts to strengthen monitoring, control, and surveillance in Madagascar's waters in recent years, Caught Red-Handed delegates said that the level of illegal fishing is still believed to be high. This refers in particular to the existence of illegal fishing vessels operating in both territorial waters and offshore areas, and the transshipment of illegal catch at sea.

Coastline
5,600 km

EEZ:
1.2 million km²

MADAGASCAR & ILLEGAL FISHING AT A GLANCE

FISHERIES SECTOR:

- AQUACULTURE 8%
- INLAND FISHERIES 23%
- MARINE FISHERIES 69%

130,000 MT
TOTAL ANNUAL FISHERIES PRODUCTION

accounting for **2%** of GDP

CHALLENGES:

- use of **BANNED** mosquito nets in the shrimp fishery
- ILLEGAL FISHING** vessels in territorial & offshore waters

MARITIME AGENCIES COMBATING ILLEGAL FISHING

- Agence Portuaire Maritime et Fluviale, the Ministère des Ressources Halieutiques et de la Pêche
- Madagascar Naval Forces

In the traditional fishery sub-sector, the incidence of IUU fishing is high in the shrimp fisheries because of the use of banned mosquito nets.⁹¹ Additionally, there have been cases of illegal Chinese, Thai, and South Korean vessels catching high-value fish such as prawns, mackerel, tuna, and shark, which are then sold for a significant profit in the markets of Beijing, Seoul, and Kuala Lumpur.⁹²



Women fishing with mosquito nets, which are banned in Madagascar. Photo: Ton Rulkens

Maritime Human Resources and Interagency Coordination

On a national level, Madagascar’s fight against illegal fishing is coordinated jointly by the Agence Portuaire Maritime et Fluviale, the Ministère des Ressources Halieutiques et de la Pêche, and the Madagascar naval forces, with information supplied by the Madagascar National Fisheries Monitoring Centre.

Madagascar also hosts the Regional Maritime Information Fusion Centre (RMIFC). The RMIFC receives, processes, fuses, stores, shares, and exchanges information for the Western Indian Ocean, with the objective of issuing an alert in the event of imminent or proven danger to maritime security and safety, including:

1. illegal fishing,
2. violent acts at sea,
3. maritime incidents,
4. traffic and contraband by sea,
5. a maritime natural event,
6. irregular migration and human trafficking by sea,
7. proliferation of Arms and Security Initiative–relevant activity,
8. maritime critical infrastructure,
9. maritime tourism/recreation, and
10. marine environment–related issues.

This information is then conveyed through daily briefings, port traffic updates, press summaries, monthly maritime safety and security reports, and annual reports. Information generated by the RMIFC is used by the Regional Maritime Coordination Centre based in the Seychelles, which coordinates enforcement actions.

Workshop Recommendations

The Caught Red-Handed workshop in Madagascar took place on September 13–14, 2018, in Antananarivo and was attended by representatives from the Agence Portuaire Maritime et Fluviale, Ministry of Transportation, National Gendarmerie, Madagascar naval forces, Madagascar National Fisheries Monitoring Centre, Ministère des Ressources Halieutiques et de la Pêche, Regional Maritime Information Fusion Centre, Ministry of Customs, and the Ministry of Justice. The workshop discussed evidence collection relating to fisheries crime and was attended by 22 participants.

Much of the discussion focused on the best ways to increase the sustainability of maritime resources through enforcement actions against illegal fishing vessels.

Delegates recommended:

1. **INCREASING RESOURCES FOR KEY AGENCY FOCAL POINTS** in the collection of intelligence on illegal fishing;
2. **IMPROVING THE COLLECTION OF LOCATION-BASED DATA** to target illegal fishing hotspots, especially in the south;
3. **INCREASED TRAINING OF OFFICERS** in the use of Madagascar's fishing vessel information checklist; and
4. **INCREASED INTERAGENCY COORDINATION** in collecting fishing vessel intelligence.

COMOROS

Overview of Fisheries Sector

The Comoros archipelago is located in the Indian Ocean north of the Mozambique Channel, 350 km northwest of Madagascar and 250 km from the coast of Mozambique.⁹³ The archipelago is made up of four volcanic islands totaling 1,861 km² with 427 km of coastline.⁹⁴ Except for the Moheli and some smaller islands, which have a more extensive continental shelf, the islands are characterized by very deep water close to shore.

Although Comoros has an EEZ of 163,752 km², the fisheries are primarily artisanal or subsistence in nature⁹⁵ and they contribute significantly to the food of the Comorian population, with an estimated per capita consumption of 25.2 kg in 2011.

Fishing also provides 55 percent of total employment in the agricultural sector, with about 7,000 fishers participating.⁹⁶ Artisanal fisheries are conducted with small, open fiberglass boats with engines and with traditional canoes made of wood with outriggers and without engines. The main fishing gear used is hooks and lines to catch demersal fish.

Industrial longliners from Japan have fished in Comorian waters since at least the late 1950s. Although there were no formal agreements at that time, Japan has contributed funds and equipment (e.g., fiberglass vessels, fishing nets) to develop Comoros' fisheries over the years.⁹⁷ Formal agreements with the European Union have been signed in recent years, which allowed up to 45 tuna seiners and 25 longliners from France, Spain, Italy, and Portugal to fish for tuna in the Comoros EEZ.⁹⁸ This has recently been cancelled due to the EU red-carding Comoros in 2017 (see below).

Scope of Illegal Fishing

In 2017 the EU red-carded Comoros, identifying it as "non-cooperating third country," or flag-of-convenience state, under the EU's regulations to fight and deter illegal fishing.⁹⁹ Most of the Comorian-flagged distant-water fishing fleet has no connection to the country and operates in breach of national law, mainly in the waters of West Africa. According to the EU, Comorian-flagged vessels have been found to disregard the laws applicable in the national waters they operate in and transship fish from one vessel to another, a practice related to the laundering of illegal catches. Despite receiving a yellow card in October 2015, and



despite considerable effort by the European Commission to support Comoros in addressing the issue, according to the EU no progress has been made.¹⁰⁰

In regard to illegal fishing occurring in the EEZ of Comoros, Caught Red-Handed delegates said little information is available.

Maritime Human Resources and Interagency Coordination

The response to cases of illegal fishing is handled by the Centre National de Contrôle et de Surveillance des Pêches, though there is very little capacity in Comoros to investigate and prosecute illegal fishing. Other Comorian agencies that play a role in investigations of illegal fishing include the Comorian coast guard, National Maritime Agency, Ministry of Justice, Ministry of the Environment, and the Comorian Defense Forces.

Workshop Recommendations

The Caught Red-Handed workshop in Comoros took place on September 17–18 in Moroni and was attended by representatives from the Comorian coast guard, National Maritime Agency, Ministry of Justice, Ministry of the Environment, Centre National de Contrôle et de Surveillance des Pêches, Comorian Defense Forces, Ministry of Transportation, and the United States Navy. The workshop discussed evidence collection relating to fisheries crime and was attended by 21 participants.

Much of the discussion focused on the best ways to increase maritime resources and inspections of suspected illegal fishing vessels.

Delegates recommended:

1. **USING SEAVISION AS AN AID** in maritime domain awareness;
2. **INCREASING CAPACITY-BUILDING EFFORTS** to train personnel in the use of SeaVision and other monitoring technologies;
3. **INCREASED INTERAGENCY COORDINATION IN COLLECTING FISHING VESSEL INTELLIGENCE**, utilizing the sightings checklist; and
4. **INCREASED INTERAGENCY COORDINATION IN VESSEL LICENSING**, especially in regard to foreign vessels.

SEYCHELLES

Overview of Fisheries Sector

The Republic of Seychelles is an archipelago consisting of 115 islands and spread across an EEZ of about 1.3 million km².¹⁰¹ The Seychelles has a coastline length of about 491 km and an economy largely based on the tourism and fishery sectors and the related services.¹⁰²

The expansion of the fisheries sector in the Seychelles began in the mid-1980s with the construction of Port Victoria and culminated a decade later with the opening of the tuna canning factory. Today, the Indian Ocean Tuna factory in the Seychelles is the nation's largest employer, processing an average of 350 tons of tuna a day, while the fishery sector is the most important export sector, accounting for an estimated 90 percent of total export revenues.¹⁰³

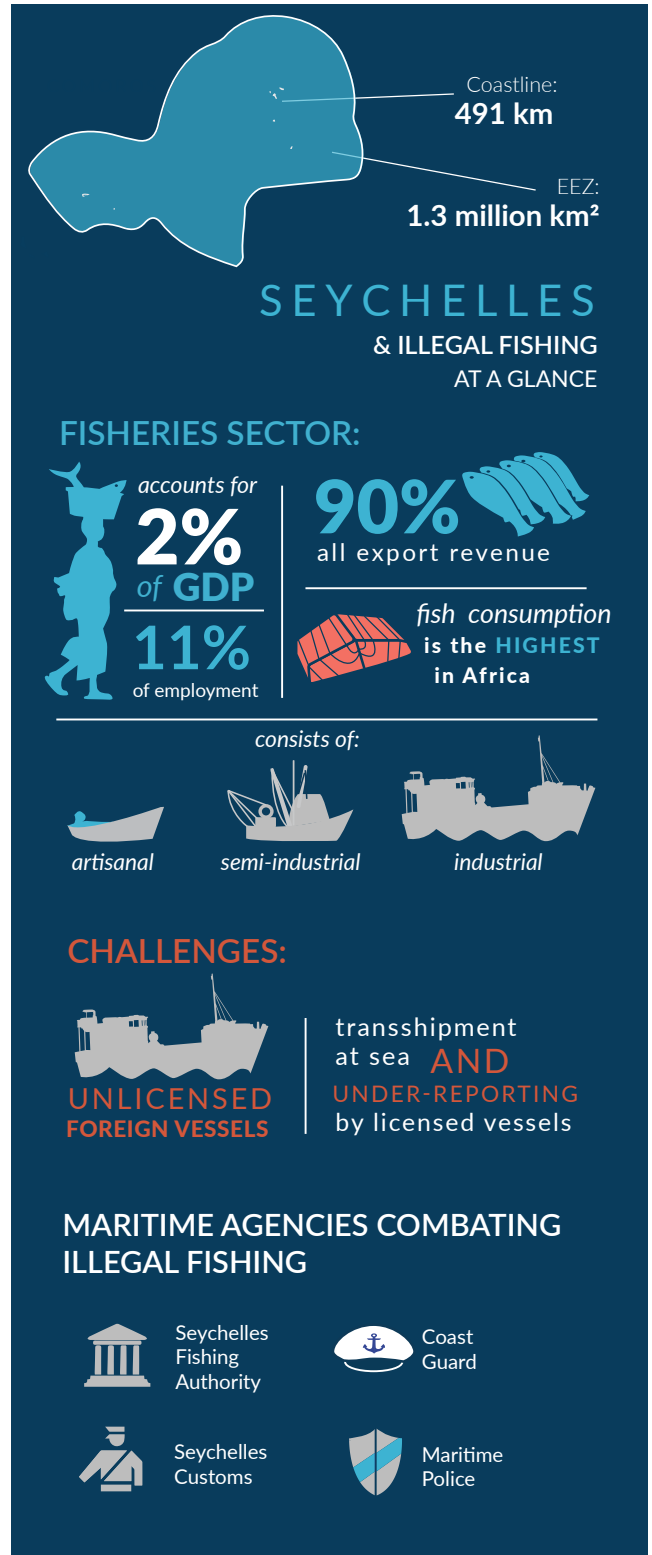
The fishery sector also accounts for about 8 percent of the GDP and an estimated 11 percent of the country's formal employment. Moreover, fish consumption is 64 kg/year, which is the highest in Africa and one of the highest in the world.¹⁰⁴

The Seychelles' fishery sector has three main components: artisanal fisheries, carried out by local fishers with small motorized boats targeting mainly demersal and semi-pelagic species; a semi-industrial fishery, consisting of locally owned long-liners targeting tuna and swordfish; and industrial fisheries, comprising foreign-owned purse seiners and large longliners.¹⁰⁵

Industrial fishing in the Seychelles' EEZ is conducted by both Seychelles-flagged tuna vessels and foreign tuna fleets, including European purse seiners and Taiwanese longliners.¹⁰⁶ In 2015, French and Spanish purse seiners dominated the total catch inside the Seychelles EEZ, while the longline fleet had 45 vessels flagged to Seychelles, 85 to Taiwan Province of China, 19 to China, and the rest split among Japan (2), Korea (2), Thailand (2), Indonesia (1), the Philippines (1), and Tanzania (1).¹⁰⁷

Scope of Illegal Fishing

Caught Red-Handed delegates mentioned a high level of illegal fishing occurring in the Seychelles EEZ despite increased patrols in recent years. But delegates also said that fishing regulations are well-enforced and compliance



is good with regard to the industrial tuna fisheries. However, there is illegal fishing by foreign unlicensed vessels, including transshipment at sea, under-reporting by licensed fishing vessels, and non-compliance by Seychelles-flagged foreign vessels.¹⁰⁸

In November 2018 the captain of a Sri Lankan-flagged vessel was arrested for allegedly fishing illegally in the waters of Seychelles, while a second captain is being investigated after two boats were intercepted by the Seychelles Coast Guard and evidence observed.¹⁰⁹ The Sri Lankan-flagged vessels were first spotted by local fishermen around 90 nautical miles southeast of Mahé, the main island.

In June of 2018 six Sri Lankan nationals were held by local law enforcement after their fishing boat was intercepted on suspicion of fishing illegally in the waters of Seychelles.¹¹⁰ The Sri Lankan-flagged vessel was spotted by Seychelles Coast Guard patrol ship *Andromache* northwest of the main island of Mahé during a routine patrol. A coast guard team was subsequently sent on board the suspicious vessel to conduct an inspection, during which evidence relating to illegal fishing was observed.



Yellowfin tuna is unloaded from an industrial fishing vessel at port in Seychelles. Photo: Jason Houston, the Nature Conservancy.

Maritime Human Resources and Interagency Coordination

The Seychelles Fishing Authority, Seychelles Coast Guard, Seychelles Customs, and Seychelles Maritime Police are all involved at varying levels in stopping illegal fishing in the country.

The Seychelles Fisheries Monitoring Centre conducts compliance monitoring of all fishing vessels' reporting requirements, VMS, and validation of statistical documents for the International Commission for the Conservation of Atlantic Tunas, the IOTC, and EU and non-EU catch certificates.¹¹¹ The Seychelles Enforcement Unit carries out all inspections with regards to port state inspection, land inspection, and sea and air surveillance duties pertaining to national and regional requirements.

Moreover, the Seychelles is host to the Regional Coordination Operations Centre¹¹² (RCOC) for the Western Indian Ocean. The RCOC works with member states to pool resources in a cost-efficient manner to respond to maritime crimes. The center uses IORIS, a new secure information-sharing and incident-management tool developed under a European Union-funded program called CRIMARIO. IORIS enables countries in the region to coordinate operations when maritime security threats are identified, including incidents of illegal fishing.

Workshop Recommendations

The Caught Red-Handed workshop in Seychelles took place on November 14, 2018, in Victoria and was attended by representatives from the Seychelles Fishing Authority, Seychelles Coast Guard, Seychelles Customs, and Seychelles Maritime Police.

Much of the discussion focused on the best ways to increase maritime resources and inspections of suspected illegal fishing vessels. The meeting resulted in a recommendation for increased sharing of interagency information on vessels suspected of fishing illegally.

SOMALIA

Overview of Fisheries Sector

Somalia is situated in the Horn of Africa at the junction of the Gulf of Aden and the Indian Ocean, and is bordered by Djibouti, Ethiopia, and Kenya. It has a surface area of about 637,700 km² and a coastline of approximately 3,300 km, which is the longest in continental Africa. Somalia also claims an EEZ of some 830,389 km².¹¹³

Somalia has undergone a prolonged period of conflict and insecurity over the last 30 years, with intense fighting, population displacement, and food insecurity creating a humanitarian crisis. Despite this, the country has maintained a relatively healthy informal economy^{114, 115, 116} largely based on livestock, telecommunications, and remittance and money transfers.

Agriculture is the most important sector in the Somali economy with livestock accounting for about 40 percent of GDP and more than 50 percent of export earnings. Nomads and semi-pastoralists, who are dependent upon livestock for their livelihood, make up a large portion of the population. The agriculture sector (including both livestock and fisheries) accounts for about 65 percent of the GDP.

The fishery sector is considered a marginal sector in terms of aggregated economic output, but it is gaining importance. Though fisheries only contribute between 1 and 2 percent to the national GDP, they are critical to coastal communities, providing employment, income, and food. In 2005, it was estimated that there were about 30,000 full-time and 60,000 part-time jobs directly involved in fishing.

According to FAO estimates, per capita fish consumption was 3.1 kg for 2009, which places the country on the lower end of fish consumers among African countries (where the average is 9.4 kg). However, much of this fish protein is consumed in coastal villages, making fish vital to food security in those locations.

Somalia also has a developing offshore fisheries sector dominated by foreign vessels. In 2018 Somalia granted fishing licenses to 31 Chinese vessels to exploit tuna and tuna-like species off its coast in a bid to tap the sector for economic growth. The vessels are associated with the China Overseas Fisheries Association created in 2012. Ships will be allowed to operate for a one-year period in





Lido beach, Mogadishu, where fishers land and sell their catch. Fisheries are vitally important to coastal communities in Somalia. Photo: Jamal Hassan.

Somali waters, with the agreement stipulating an automatic renewal for an additional year. Licensed foreign vessels will not be permitted to operate within 24 nautical miles of shore in order to protect small-scale fishing operations. Upon entering or leaving Somalia's EEZ, the vessels will also have to declare their positions, along with weight of catch by species.

Scope of Illegal Fishing

According to the FAO's High Seas Task Force (HSTF), an estimated 700 distant-water fishing nation vessels were engaged in unlicensed fishing in Somali waters in 2005. Four years later, according to the HSTF, more than 800 distant-water fishing nation vessels from over 17 nations were carrying out IUU fishing annually in Somali waters. Distant-water fishing nation vessels appear to catch fish from Somali waters with an estimated value of more than \$450 million per year.

2017 UN Security Resolution 2383 expressed "serious concern over reports of [IUU] fishing in Somalia's EEZ," and noted "the complex relationship between IUU fishing and piracy, recognizing that IUU fishing accounts for millions of dollars in lost revenue for Somalia each year, and can contribute to destabilization among coastal communities."¹¹⁷

According to a report in 2018 by the IOTC,¹¹⁸ there has been no MCS of the marine resources or centralized data collection system on marine products for either inshore or offshore fisheries. Thus, strengthening capacity for development and implementation of a central maritime database for fisheries is a key priority.

Several trawlers have been active along the coast of Somalia and operate illegally.^{119, 120, 121} These vessels have been fishing on the narrow continental shelf in Somalia, in particular in Puntland (north and east coast) and all along the Indian Ocean coast of Somalia. They are targeting demersal fish including groupers and snappers along with lobsters, and unloading their catch in Salalah (Oman), Ajman (UAE), or Mombasa (Kenya). One trawler was arrested in 2018 near Socotra by the INS Sunayna, a patrol vessel of the Southern Naval Command based in Kochi.¹²² Upon further investigation, investigators also uncovered four AK-47s and a machine gun.

Maritime Human Resources and Interagency Coordination

On the federal level, Somalia utilizes the Ministry of Fisheries, maritime police, and the Ministry of Ports to fight illegal fishing. The Caught Red-Handed workshop in Mogadishu was considered the first meeting of a new interagency IUU Fishing Task Force, which will be charged with coordinating actions to fight fisheries-related crimes. This task force will be chaired jointly by the Minister of Fisheries and the Minister of Ports.

Workshop Recommendations

The workshop in Somalia, co-hosted by EUCAP Somalia on November 18, 2018, was attended by Federal Minister for Fisheries H.E. Abdilahi Bidham Warsame and Federal Minister for Ports and Maritime Transportation H.E. Marian Aweys, along with senior staff from the Ministry of Fisheries, Maritime Police Unit, Ministry of Ports, and the Attorney General's Office. The workshop produced several recommendations, including:

1. **CREATING AN INTERAGENCY IUU FISHING TASK FORCE** and/or information-sharing mechanism jointly chaired by the Ministry of Fisheries and the Ministry of Ports and Marine Transport.
2. **CREATING AN INTERAGENCY MECHANISM FOR ENFORCEMENT** of IUU fishing laws.
3. **STRENGTHENING PROCEDURES FOR THE COLLECTION, DISSEMINATION, AND SHARING OF FISHING VESSEL INFORMATION**, and using the fishing activity sightings checklist (see Appendix I).
4. **CONDUCTING INTERAGENCY STAKEHOLDER MAPPING** of all national maritime agency personnel and identifying the expertise of staff members, especially those who have expertise in fisheries enforcement.
5. **CREATING AN AWARENESS CAMPAIGN** focused on communicating the current and future effects of IUU fishing in Somalia to all maritime agency personnel, including the potential for fisheries-related conflict.
6. **IDENTIFYING INDIVIDUALS WITHIN THE JUDICIARY AND PROSECUTOR'S OFFICE WITH EXPERTISE IN MARITIME ISSUES** and creating trainings around prosecuting IUU fishing cases.
7. **WORKING TO PASS THE NEW MARITIME CODE.**
8. **WORKING WITH EUNAVFOR ON STRENGTHENING INFORMATION SHARING** around suspected illegal fishing vessels.
9. **STRENGTHENING CAPACITY-BUILDING** around acquiring stronger maritime domain awareness technologies while training staff in their use.

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FISHING ACTIVITY SIGHTING REPORT

1 General Information

1. Date (Month/Day/Year):
2. Time (GMT):
3. Estimated position of observed vessel (lat/log): xx-xx.x N/S xxx-xx.x E/W
4. Observed activity (Fishing, Transit, Transshipping, Refueling/Bunkering):

2 Primary Vessel Information

1. Vessel name:
2. Vessel flag:
3. IMO number (if observed, 7 digits):
4. Hull Number:
5. Evidence of Altered or Removed numbers/name:
6. IRCS (International Radio Call Sign):
7. MMSI (nine digit number):
8. Other identification marking:
9. Vessel type (Fishing Vessel, Refrigerated Cargo Ship, Refueler/Bunker):

3 Vessel Description

1. Length:
2. Beam:
3. Gross Tonnage:
4. Paint Scheme:

4 Vessel Contact Information

1. Phone Number:
2. Fax Number:
3. Email Address:

5 Additional Observations

6 Photographs/Video Attached

1. Yes/No

ADDITIONAL INFORMATION IN CASES OF BOARDING

7 Owner

1. Name:
2. Address:
3. Phone Number:

8 Master

1. Name:
2. Nationality:
3. Date of Birth:
4. Identification Numbers (i.e. passport, merchant marine's license, etc.):

9 Crew

1. Name:
2. Identification Numbers:
3. Date of Birth:
4. Job title:

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Advancing Sustainable Fisheries

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