

TIDE OF INJUSTICE

Exploitation and Illegal Fishing on Chinese Vessels in the Southwest Indian Ocean



A report by the Environmental Justice Foundation



Protecting People and Planet



Protecting People and Planet

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Our campaigns aim to secure peaceful, equitable and sustainable futures.

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Our work to secure environmental justice aims to protect our global climate, ocean, forests and wildlife and defend basic human rights.

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Abbreviations

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| ADNAP: | Mozambican National Fisheries Administration | IOTC: | Indian Ocean Tuna Commission |
| AIS: | Automatic Identification System | IUU: | Illegal, unreported and unregulated |
| BRI: | Belt and Road Initiative | MARA: | Chinese Ministry of Agriculture and Rural Affairs |
| CAP: | Mozambican Fisheries Administration Commission | MCS: | Monitoring, control and surveillance |
| CITES: | Convention on International Trade in Endangered Species of Wild Fauna and Flora | MIMAIP: | Mozambican Ministry of the Sea, Inland Waters and Fisheries |
| CNADC: | China National Agricultural Development Group | MPA: | Marine Protected Area |
| CPCs: | Contracting parties & cooperating non-contracting parties | NGO: | Non-governmental organization |
| DSFA: | Tanzanian Deep Sea Fishing Authority | PSMA: | Port State Measures Agreement to prevent, deter and eliminate IUU |
| DWF: | Distant-water fleet | RFMO: | Regional Fisheries Management Organization |
| EEZ: | Exclusive economic zone | SWIO: | Southwest Indian Ocean |
| FAO: | Food and Agriculture Organization of the United Nations | UN: | United Nations |
| IEZ: | Inshore Exclusion Zone | UVI: | Unique Vessel Identifiers |
| ILO: | International Labour Organization | VMS: | Vessel monitoring system |
| IMO: | International Maritime Organization | WIO: | Western Indian Ocean |
| | | ZOF: | Zhejiang Ocean Family |



Executive summary

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China's distant-water fleet (DWF) is by far the world's largest, both in terms of the number of fishing vessels it has and the volume of fish caught, operating across the world's major fishing grounds. Increasingly, this fleet has been associated with a range of illegal, unsustainable and abusive behaviours towards marine ecosystems and crew alike. These behaviours, when considered alongside the sheer size of its fleet, pose a serious threat to the sustainability of global fisheries and the wellbeing of fishers, and the millions of people who rely on the ocean for their livelihoods, while undermining good governance and the rule of national laws and international regulation in fisheries.

This report maps the presence and activities of the Chinese DWF in the Southwest Indian Ocean (SWIO), a region notable for its biodiversity-rich seascape, which is a lifeline to coastal communities across its shores. China has long-standing and intensifying economic and political ties with the region, and has highlighted the SWIO's blue economy as a key area of investment and partnership. In light of the now better known risks associated with the presence of China's DWF, such investments should be scrutinised so as to ensure the SWIO's blue economy is legal, sustainable and equitable.

This report draws upon primary and secondary data sources. Primary data includes interviews with Indonesian, Filipino and Mozambican fishers who have worked on board the Chinese DWF in the SWIO. To supplement this, a wide range of secondary sources were consulted in order to develop a detailed picture of both the presence and behaviours of the fleet within the region, placed within a broader context of onshore Chinese investments and political influence.

The findings of the report show that while couched in terms of win-win, sustainable development and collective benefits from the blue economy, the realities on board many vessels in China's DWF are in direct contradiction of these stated aims. Illegal fishing and human rights abuses were found to be commonplace on Chinese vessels in the SWIO, including routine shark finning, the deliberate capture and/or injury of vulnerable marine megafauna, and crews suffering from physical violence, abusive working and living conditions, intimidation and threats.

Key findings:

- This report builds on EJF's extensive analysis of the Chinese DWF, which has found illegality and abuses rife at regional and global scales. It makes a series of recommendations to competent authorities, including the Indian Ocean Tuna Commission (IOTC), key market states to whom seafood at high risk of being caught illegally or using forced labour has been linked, and coastal states in the SWIO. Key to these recommendations is the need for transparency measures to be enshrined throughout fisheries management structures and regulations, so as to better reveal the practices of illegal operators and to mitigate the impacts of their harmful activities on both people and planet.
- China has invested heavily in the SWIO's blue economy, including a range of ports and fisheries infrastructure, as well as highlighting it as a key area of growth and partnership with coastal nations in the region. The terms of these investments are often opaque, and more broadly concerns have been raised about their environmental sustainability and impacts on coastal communities.
- China has portrayed such investments as a win-win for both partners, often using local media outlets to frame their involvement in the region as contributing to sustainable development. However, the findings of this report suggest that the benefits of Chinese investment are enjoyed rarely, if at all, by coastal communities, whose livelihoods are often undermined directly and indirectly as a result of the illegal and unsustainable nature of the Chinese DWF's operations.
- A total of 138 Chinese DWF vessels are believed to have been authorised to operate in the SWIO in 2023. 95 of these are longliners targeting tuna and tuna-like species, 4 are refrigerated cargo vessels supporting the longline fleet, and 39 are non-tuna vessels, predominantly trawlers, targeting a range of species in coastal waters.
- Chinese vessels were linked to 86 unique cases (relating to 177 suspected or confirmed offences) of IUU fishing or human rights abuses within the SWIO region between 2017 and 2023. Half of these cases involved vessels owned or controlled by state-owned enterprises or enterprises in which the Chinese government has partial interest.
- Of the 95 longliners currently believed to be authorised to target tuna in the SWIO, 47% are linked to cases of IUU fishing and/or human rights abuses. For the 39 non-tuna fishing vessels currently believed to be authorised in the SWIO, the figure is 26%.
- EJF conducted interviews with 44 fishers who had worked on board China's tuna fleet in the SWIO, all of whom had reportedly experienced or witnessed some form of IUU fishing and/or human rights abuses. Of those interviewed, 80% had reported shark finning, 59% reported the deliberate capture and/or injury of vulnerable marine megafauna, 100% reported abusive working and living conditions, 96% excessive overtime and 55% physical violence.
- Between 2017 and 2023, four deaths were reported by interviewees on board Chinese tuna longliners, including one suspected suicide of a crew member said to have thrown himself overboard.
- EJF also conducted interviews with 16 fishers who have worked on Chinese-owned trawlers in Mozambique. Of those interviewed, 56% reported illegal fishing in prohibited areas, 50% reported the deliberate capture and/or injury of vulnerable marine megafauna, 25% reported the use of illegal fishing gear, 88% reported intimidation and threats, 81% reported physical abuse and 69% reported abusive working and living conditions.
- Seafood linked to Chinese vessels suspected of illegality in the SWIO is potentially entering key international markets, including Europe, Japan, South Korea and the US. For instance, 73% of vessels suspected of IUU fishing and/or human rights abuses that are currently operating in the SWIO appear on a list of authorised exporters to the European Union (EU).

1. Introduction

Illegal, unreported and unregulated (IUU) fishing is a major threat to economies around the world, in particular coastal nations, occurring on huge scales and costing billions of dollars each year.¹ Beyond its financial ramifications, it also bears great socio-ecological costs - severely affecting fish populations, threatening food security and livelihoods in coastal countries and exacerbating the harms to delicate ecosystems caused by overfishing.² Illegal fishing often goes hand-in-hand with grave human rights abuses and other labour violations, which are now widespread on many fishing vessels.³ Vulnerable crew often find themselves at sea for months or even years at a time, subjected to conditions of modern slavery - including physical and psychological abuse, debt bondage, dilapidated living conditions, relentlessly long working hours and being deprived of clean food and water.

The often remote nature of fisheries, combined with an industry-wide lack of transparency, makes identifying and prosecuting IUU fishing and associated human rights abuses challenging. This is especially the case for those vessels operating outside of their home country waters, known as DWFs.⁴ These fleets frequently operate in regions where there is limited capacity or enforcement of monitoring, control and surveillance (MCS) systems; employ migrant or host country labour from poorer nations who are vulnerable to abuses; and operate under flags of convenience, enabling them to circumvent fisheries management measures that apply to the flag of their true beneficial ownership.

Furthermore, there is a dearth of research and data collected on the behaviour of DWFs and their impacts, both of which are vital for effective policy making and risk mitigation.⁵

China's is the largest of the world's DWFs, capturing millions of tonnes of fish per year.⁶ While the latest available figures from the Chinese Ministry of Agriculture and Rural Affairs (MARA) state that there are 2,551 vessels in its DWF,⁷ this is likely an underestimate - with the fleet's true extent unknown.⁸ China is also the world's largest producer of marine capture fisheries - accounting for 14.9% of the world's total, followed by Indonesia with 8.2%.⁹ Of the 11.8 million tonnes reportedly produced, 2.3 million tonnes is said to be derived from its DWF,¹⁰ with vessels recorded as active in all of the world's major oceans and in a wide range of coastal waters.¹¹ It is noted that China's DWF appears to disproportionately target the waters of countries in the Global South - especially countries in Africa¹² - where limited resources can often hinder the ability of coastal states to prevent illegalities and abuses.

China's fleet is well known for systemic illegal fishing and egregious human rights and labour abuses both in its offshore and onshore operations.¹³ For example, China remains the worst performing of 152 ranked nations according to the 'IUU Risk Index',¹⁴ and has been linked to 554 known cases of confirmed or suspected IUU fishing between the years 2015-2019.¹⁵

Artisanal fish landing site in Beira, Mozambique



The breadth and severity of abuses on board the fleet have also grabbed headlines, including the death of four crew members linked to a Chinese longliner in the Pacific amid inhumane conditions, some of whose bodies were disposed of overboard;¹⁶ a fisher drowning while trying to escape abuses on board a Chinese vessel in Somalia;¹⁷ and a message in a bottle which came ashore in Uruguay from desperate fishers who had been on board a Chinese vessel for two years without coming to land.¹⁸

This report contributes to the growing body of work that maps the on and offshore presence of the Chinese DWF globally, as well as the extent of IUU fishing and abuses associated with it. Importantly, it will also consider how the material and discursive manifestations of China's foreign investment through its Belt and Road Initiative (BRI) enable and interact with the presence and behaviour of the fleet. It juxtaposes narratives that promise mutual benefits and sustainable development with the often unsustainable and illegal extraction of marine resources, coming at great cost to coastal communities, vulnerable crew members and vital marine ecosystems.

The geographical focus of the report is the SWIO, focussing on the coastal states of Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles and Tanzania, as well as the waters beyond national jurisdiction. The waters of the SWIO are almost unparalleled in terms of marine biodiversity, providing livelihoods for millions of people.¹⁹ Small-scale fishers and industrial vessels alike target a range of species including many deemed of high economic value on international markets, such as tuna, crabs, prawns and octopuses. However, it is becoming clear that the impacts of illegal fishing, overfishing and climate breakdown threaten the wellbeing of this fragile ecosystem and all those who rely on it.²⁰ As the region seeks to further capitalise on the prosperity that the oceans offer, there is a clear need to better understand the extent to which the Chinese DWF and its propensity for illegal practices pose a threat to an equitable, legal and sustainable blue economy.

The report is structured as follows: **Section 2** outlines the methodology of the research. **Section 3** provides a summary of the regional fisheries dynamic in the SWIO, including the main target species and their status. **Section 4** maps the current presence of China's DWF in the region, outlining how many Chinese-owned vessels are operating in the region for both tuna and non-tuna fleets. **Section 5** provides an overview of onshore investments in fisheries infrastructure within the context of broader Chinese investment in the SWIO's blue economy, and the associated discourses. **Section 6**

discusses IUU fishing and human rights abuses linked to the fleet, as well as the corporate structures of those fleets associated with the highest number of IUU fishing/human rights cases. It includes two case studies based on interviews with crew members, detailing their experiences on board China's tuna fleet and non-tuna fleet respectively. **Section 7** analyses the potential supply chains of fleets associated with IUU fishing and human rights abuses, linking them to major seafood markets globally. **Section 8** concludes the report, making a series of recommendations to coastal states, flag states, market states, port states, the Chinese government and the Indian Ocean Tuna Commission (IOTC).

2. Methodology

This report details both the presence of the Chinese DWF in the SWIO (focussing on vessels believed to be authorised to operate in the region in 2023), as well as the suspected and/or confirmed cases of IUU fishing and human rights abuses associated with Chinese vessels in recent years (between 2017 and 2023). For this report, a case refers to an event or series of events involving a particular vessel, and within that 'case' there may be multiple offences. For example, if a vessel was apprehended by fisheries enforcement and accused of and/or sanctioned for shark finning, fishing without a valid licence, and use of prohibited gear, this would be marked as one case, and as three distinct offences.

This section of the report provides information on the geographical scope of the study and a brief overview of the data collection methods, with a detailed methodology found in **Appendix 1**.

2.1 Geographical scope of study

The study area for this report is the waters that fall within FAO subareas 51.6 to 51.8 and the southern part of subarea 51.5 (up to the Equator),²¹ including the exclusive economic zones (EEZs) of seven coastal states: Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles and Tanzania (**Image 1**). Despite being coastal states, France, Somalia and South Africa were not considered states of interest for the purposes of this report, as their EEZs are located mostly outside the SWIO. However, vessel activity was investigated across the entire study area, including within the portions of the South African, French, and Somali EEZs that are included in it. A vector layer was generated with GIS software (QGIS v. 3.34) to allow for spatial analyses of the area.

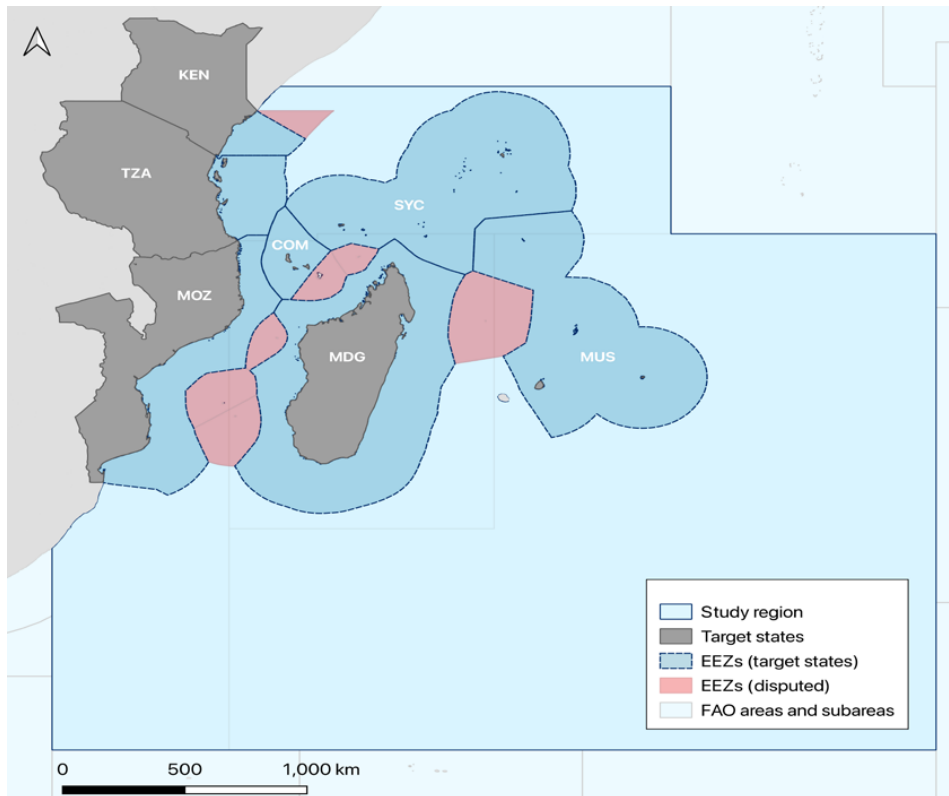


Image 1 - Study area of project. The maritime zones and maritime delimitations depicted in the image are purely illustrative.

2.2 Data collection methods

Both primary and secondary data was collected and analysed in order to better understand the presence and behaviours of the Chinese DWF in SWIO. Primary data involved semi-structured interviews with Indonesian ($n = 28$) and Filipino ($n = 16$) fishers who had worked on board Chinese tuna longliners in the SWIO ocean, as well as Mozambican ($n = 16$) fishers who had worked on board Chinese non-tuna vessels, predominantly trawlers, in Mozambique. These interviews were used to gather detailed information on illegal fishing, human rights abuses, recruitment processes, working and living conditions, vessel information and areas of operation. Semi-structured interviews were also conducted with small-scale fishers ($n = 7$) and fish processors ($n = 5$) in two Mozambican fishing communities. Topics for community interviews included interactions between small-scale fishers and industrial vessels, changes in fishing and fish processing practices (including access to fish), and the impacts of industrial fishing on coastal communities and livelihoods.

Secondary data was obtained from a range of sources across five languages (English, French, Mandarin, Portuguese and Swahili). This included media and NGO reports, datasets published by the Chinese Ministry of Agriculture and Rural Affairs (MARA), coastal licence lists of SWIO countries, the IOTC 'Register of Authorized Vessels', and databases such as the Chinese Loans to Africa Database,²² the Chinese Global Power Database,²³ data collated by the SAIS China Africa Research Initiative (SAIS-CARI)²⁴, China's Overseas Development Finance Database²⁵ and the AidData²⁶ website. Satellite data was also analysed via the Global Fishing Watch (GFW) and Starboard online vessel tracking platforms, based on Automatic Identification System (AIS) data analysis.²⁷ This enables the tracking of vessels' location, speed and behaviours, as well as the identification of suspected trans-shipments at sea and port visits.

3. Regional fisheries dynamics of the SWIO and their importance to the blue economy

The inception of the concept of blue economy, as per its usage in this report, is attributed to the Rio +20 meetings held in 2012 - largely used at the time by small-island states in reference to the role of the ocean in sustainable growth.²⁸ The World Bank states that the blue economy “seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while at the same time ensuring environmental sustainability of the oceans and coastal areas”,²⁹ which reflects a broader normative aim that blue economy initiatives contribute to, or at a minimum do not denigrate, socio-economic and ecological wellbeing. Divergent and sometimes competing uses of the term exist however, some of which for example focus on capitalisation and accumulation, and others on livelihoods and equity.³⁰ This has resulted in a sometimes blurred understanding of the concept, with a wide-range of activities and policies now falling under the umbrella of the blue economy, in some instances relating to extractive industries that pose a serious threat to healthy oceans and coastal livelihoods.

In the SWIO region, the fishing industry is an integral pillar of the blue economy, and more broadly of deep importance to coastal communities who have relied on the ocean for generations. The SWIO region is a globally recognised hotspot of endemism - species found nowhere else - and overall biodiversity, while also supporting high levels of coral reef diversity.³¹ It is estimated that in the broader Western Indian Ocean (WIO) region, the total number of marine species is potentially upwards of 20,000.³² However, the stability

of this exceptional richness of life is being threatened by overexploitation (especially by overfishing and IUU fishing), habitat degradation, and global heating.³³

Since the 1980s, marine capture production in the waters of the WIO has steadily increased, accounting for 7% of the world's captures in 2020.³⁴ The broader Indian Ocean region is the location of the world's second largest tuna fishery - responsible for 22% of commercial capture.³⁵ While landings are declining or steady in most regions globally, they are increasing in the Indian Ocean - although significant amounts of this catch is deemed to be at biologically unsustainable levels.³⁶ In the WIO, average production in 2016 was 13.9% greater than the average production across 2005-2014.³⁷ With a capacity of 120,000 tons/year, Port Louis (Mauritius) is reportedly the most important tuna landing port and processing hub in the region, followed by Victoria (Seychelles) with 100,000 tons/year, and Antsiranana (Madagascar) with 36,000 tons/year.³⁸

The region is host to a number of fleets, including industrial and semi-industrial vessels (both of which are often owned by foreign interests) and a significant small-scale fleet. Unlike other marine regions, the small-scale fleet contributes significantly to the overall fishing effort, accounting for 56% of catches.³⁹ The small-scale fleet are responsible for the greater proportion of average annual tuna catches (56%), including 93% of the neritic tuna catch, and 27% of the catch of tropical tuna (yellowfin, skipjack, bigeye).^{40,41} The main catch, however, of subsistence and artisanal fishers is reported to predominantly be molluscs and small pelagic fish.^{42,43} Of the small-scale catch in the seven target countries, 42% is for personal consumption, and the sale of fish accounts for about 32% of fishing households' income in the region.⁴⁴ Catches of tuna and tuna-like species in the Indian Ocean have been steady at about 1.6 to 1.8 million tonnes since 2012.⁴⁵

A pod of dolphins in the waters of Mozambique.

There are a number of tuna species present throughout the region that are targeted by industrial fishers as they migrate between the high seas and different EEZs, mainly albacore (*Thunnus alalunga*), bigeye (*T. obesus*), skipjack (*Katsuwonus pelamis*) and yellowfin (*T. albacares*).⁴⁶ Yellowfin tuna have been considered overfished by the IOTC since 2008, experiencing population collapse in 2010, and again in 2015. Between 2015 and 2019, 37% of the yellowfin catch was composed of juveniles and 53.7% were below the optimum length.⁴⁷ In 2020, the yellowfin tuna catch in the Indian Ocean exceeded sustainable levels by 32%, driving continued declines in population.⁴⁸ In 2018 and 2019, Indian Ocean skipjack catch was also above the limit set by the stock's harvest control rule.⁴⁹

The main fish populations in the region have shown signs of being at best fished to the maximum sustainable level, with the 2019 FAO assessment estimating that 37.5% of assessed fish populations in the WIO were fished at biologically unsustainable levels.⁵⁰

Demersal fish and crustaceans (such as shrimp) constitute the most important coastal and continental shelf fisheries group for the artisanal, semi-industrial and industrial sub-sectors. Penaeidae shrimp is the primary source of export revenue in the WIO and stocks show clear signs of overfishing.⁵¹ Stocks of sea cucumber are also considered overexploited, linked in part to demand from China.

The collapse of sea cucumber fisheries in Madagascar

Sea cucumbers, a class of marine invertebrates related to sea urchins and sea stars, fulfil an essential nutrient-cycling function in tropical marine ecosystems.⁵² They are also a delicacy of East Asian cuisine, and rising consumer demand has led to the rapid development of export-driven sea cucumber fisheries across the Indo-Pacific.⁵³ China is by far the largest consumer and importer (via Hong Kong) of sea cucumbers. Between 2018 and 2022, China and Hong Kong reported importing an average of 12,185 tonnes of sea cucumbers per year, valued at US\$297 million.⁵⁴ Madagascar is China/Hong Kong's top supplier of sea cucumbers from the SWIO, with a total of 268 tonnes, valued at US\$9.4 million, reportedly imported from the country during the same period.⁵⁵

Demand for sea cucumbers has led to unsustainable levels of exploitation across the region, with most sea cucumbers fisheries now considered overexploited or depleted.⁵⁶ Several species found in the SWIO are threatened by commercial exploitation⁵⁷ and subject to trade restrictions under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).⁵⁸

In Madagascar, the collapse of sea cucumbers fisheries is driving local fishers to venture in deeper waters and use SCUBA equipment to harvest sea cucumbers illegally, often exceeding safety limits and risking their lives for a modest income.⁵⁹ In some areas, deaths related to unsafe diving practices among sea cucumber fishers are frequent.⁶⁰ Illegal sea cucumber harvesting operations involving well-organised fleets of artisanal and semi-industrial vessels, reportedly funded by Chinese sponsors, are occurring beyond Malagasy waters in the EEZ of neighbouring states.⁶¹ In February 2024, five Chinese nationals were arrested by Malagasy authorities in relation to an illegal operation in Seychellois waters.⁶²

Poor transparency, weak regulation and law enforcement, and complicity by corrupt local officials are further enabling the plundering of Madagascar's dwindling sea cucumber populations.⁶³ While Malagasy authorities enacted regulations temporarily prohibiting sea cucumber harvesting and trade to protect threatened populations,⁶⁴ according to local sources 'foreigners, notably Asian [actors]' of the sea cucumber industry are protected by high-level officials and have continued to operate in violation of the regulations.⁶⁵

While sea cucumber mariculture projects have been encouraged in recent years as an alternative to capture fisheries, the development of privately-owned aquaculture farms has also restricted access to coastal marine resources for local communities, increasing tensions. Locals accused of poaching in sea cucumber pens have been subjected to acts of violence, including killings by security guards.⁶⁶

The collapse of Madagascar's sea cucumber fisheries, driven mainly by demand from foreign consumers with seemingly little concern for environmental sustainability⁶⁷ and supported by foreign actors in the country, exemplifies patterns of resource extraction and IUU fishing observed across the region.

The current system of ocean exploitation, particularly in tuna and shrimp fisheries, in the region greatly privileges large-scale industrial fishing, often DWFs, and is plagued with IUU fishing. A 2023 WWF report finds that IUU fishing of shrimp and tuna species in the SWIO resulted in as much as US\$142.8 million of potential income lost from the region each year between 2015 and 2021.⁶⁸ Between 2016 and 2021, around 36% of all fishing effort was potentially IUU fishing. For the tuna fishing effort, this figure is at 48.7%.⁶⁹



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Small-scale fishing vessels in Mozambique.

4. Mapping China's DWF in the SWIO

In total, EJF identified 138 Chinese DWF vessels believed to have been authorised to operate in the SWIO in 2023. For the purpose of this report, they will be analysed in two categories: the tuna fleet (which includes fishing vessels targeting tuna, and tuna-like species, and refrigerated cargo vessels, or 'reefers') and the non-tuna fleet (which includes near-shore fishing vessels such as trawlers and vessels using gillnets), operating in coastal state EEZs. The fleets will be analysed separately on account of the distinct geographies and institutional frameworks they operate in, with tuna vessels subject to oversight from an RFMO as well as the coastal states they operate in, often fishing in considerably deeper waters compared to non-tuna vessels who predominantly operate in near shore areas and remaining at sea for far longer periods of time. As such, it is observed that the nature of IUU fishing and human rights abuses can vary depending on gear type.

4.1 The dynamics of China's tuna fleet in the SWIO

EJF identified a total of 95 Chinese vessels targeting tuna and tuna-like species in the SWIO, all of which fly the flag of China and use longline gear. In addition to this, there are four Chinese-owned reefers operating in the region, presumably collecting fish and supporting the longline fleet. All four reefers operate under the flag of Panama, a known open registry and a country that was issued its second 'yellow card' in 2019 as part of the EU's carding scheme.⁷⁰ Panama's most recent engagement in the carding scheme, which risks them being identified as a non-cooperating country in the fight against IUU fishing by the EU, was in part due to "serious deficiencies in terms of control, notably over the activities of the fishing and fishing related activities of vessels flying the flag of Panama"⁷¹.



Chinese longliner in the SWIO.

In 2022, China's reported catch of tuna in the Indian Ocean was 7,491 tonnes of yellowfin and bigeye tuna, and 5,930 tonnes of albacore. This is a relatively modest catch compared to other key DWFs in the region. For example, EU purse-seine fleets reportedly caught 107,742 tonnes of yellowfin and bigeye tuna alone in the Indian Ocean that year.^{72,73} China was allocated a quota of 10,557 tonnes of yellowfin tuna for 2024,⁷⁴ although this quota includes that held by Taiwan, which has historically been entitled to a larger portion.

The most recent publicly available data (2019) suggests that China's observer coverage of its longline fleet is 6.88%,⁷⁵ slightly above the 5% required by the IOTC.⁷⁶ In a more recent implementation report submitted to the IOTC in 2023, China reported four observers across the fleet in 2021, with no percentage coverage provided.⁷⁷ The required observer coverage has been criticised by NGOs for being too low, who

have recommended that the IOTC incrementally increase coverage to 20% by 2025 and improve the programmatic and technical standards of electronic monitoring for vessels within their jurisdiction.⁷⁸

Chinese tuna vessels predominantly fish in the high seas of the SWIO, with the Tanzanian EEZ seemingly the only exception. Based on AIS analysis of recent years, Chinese vessels are present in Tanzania roughly between early November and late January. According to documents available on the IOTC website, the Government of Tanzania reported the licensing of 30 Chinese-flagged vessels between September 2022 and August 2023, in an agreement with the China Overseas Fisheries Association (COFA).⁷⁹ Tanzanian media sources suggest that these 30 licences, along with 15 granted to a Spanish fishing operation, are collectively worth US \$2.13 million.⁸⁰

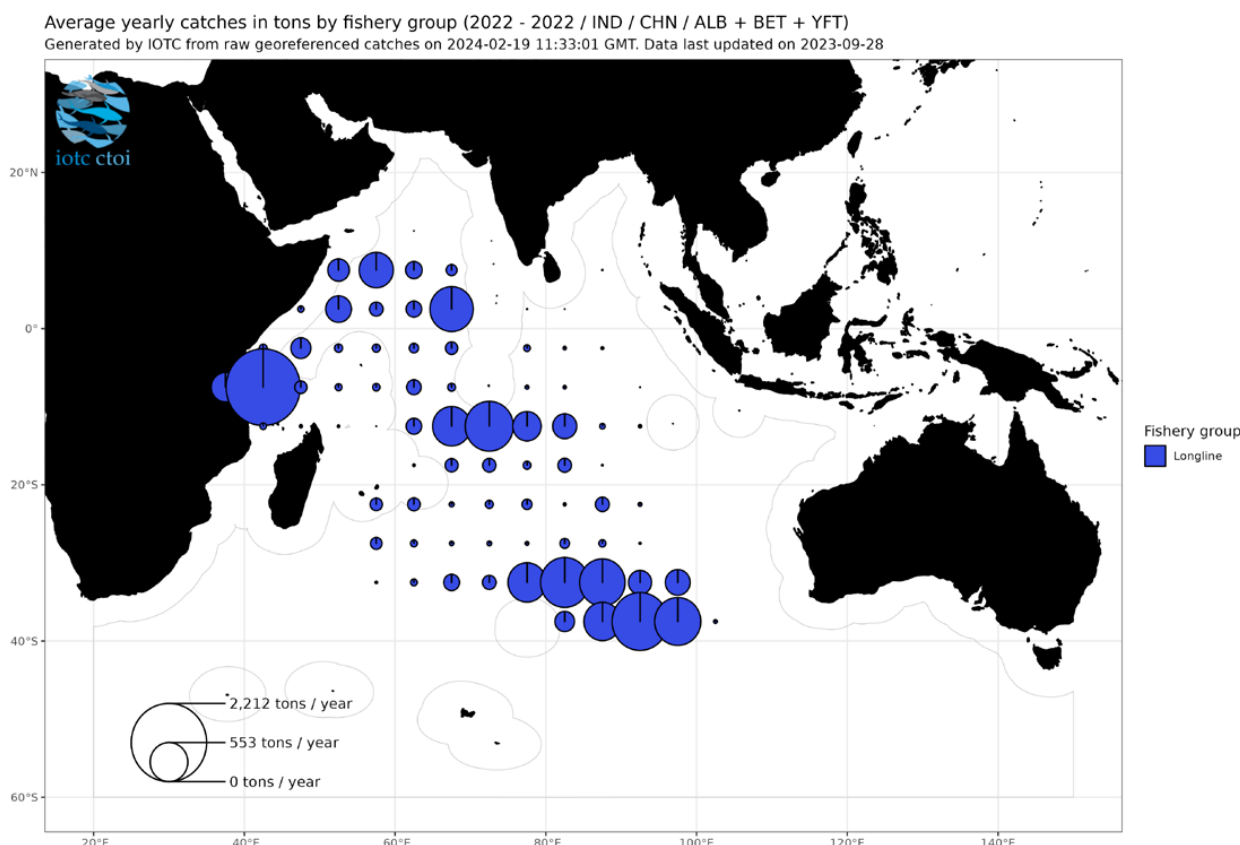


Image 2 - Georeferenced catches of albacore, bigeye and yellowfin tuna as reported by China to the IOTC for 2022.⁸¹

Port Louis in Mauritius is the main port visited by the Chinese longline fleet, and more broadly a popular landing destination for longline fleets in the region, with over 900 visits a year by foreign fishing vessels.^{82,83} It is of note that Mauritius is a party to the Port State Measures Agreement to prevent, deter and eliminate IUU (PSMA), a first of its kind legally binding treaty aimed at stopping IUU-caught fish entering markets through increased port controls and scrutiny of foreign fishing vessels.⁸⁴

The Chinese longline fleet is heavily reliant on trans-shipment at sea, with 12,079 tonnes of albacore, bigeye and yellowfin tuna collectively transferred to reefers in 2022⁸⁵ - constituting 90% of its reported catch of these species. This operational model has become increasingly popular in the IOTC, with 1,677 trans-shipments recorded in 2022 - the highest number to date, and more than double the number for 2015.⁸⁶ China accounted for 20% of these trans-shipments, with Taiwan by far representing the most (64%). At-sea trans-shipment allows vessels to avoid port controls, launder illegally caught fish amongst legal catch, and in some instances trap crew at sea for months, or even years, in conditions akin to modern slavery.⁸⁷

4.2 The dynamics of China's non-tuna fleet in the SWIO

EJF identified a total of 39 Chinese fishing vessels targeting species other than tuna in the SWIO: 37 trawlers and 2 vessels reportedly fishing with gillnets. Of these vessels, 20 are believed to have been licensed to fish in Mozambique, and 19 in Madagascar.

Madagascar is the fourth largest island in the world, home to a coastline stretching 5,600 km and an EEZ extending over 1,000,000 km².⁸⁸ While its significant marine resources are an asset, the sheer size of the country's waters create a range of complex management challenges for addressing issues of overfishing and illegal fishing, a problem compounded by poor fisheries governance decisions and corruption.⁸⁹

A total of 19 Chinese non-tuna vessels were identified as operating in Madagascar, all of which have reportedly adopted the host country's flag. Every vessel is listed as a trawler targeting coastal shrimp. These shrimp are intensively targeted and dwindling in number, with industrial fishing predominantly concentrated on the country's western coast. Shrimp is prized by the country's small-scale and industrial sectors alike, leading to tensions between the two, with local fishers decrying the impacts that industrial over-extraction has had on the marine environment.⁹⁰ In a move to alleviate these pressures, the Government of Madagascar implemented a total ban on industrial trawling activities within the 2 NM nearshore area in 2021,^{91,92} which has been tentatively linked to improvements in the state of the fishery and associated ecosystem.⁹³

To operate under the Malagasy flag, a fishing vessel must be owned by a Malagasy national or a company headquartered in Madagascar.⁹⁴ Foreign vessels may only be authorised to fish in Malagasy waters in the

framework of an access agreement or of a chartering arrangement with a Malagasy national, subject to the authorisation of the fisheries minister.⁹⁵ They do not have access to the country's shrimp fisheries, which are reserved for Malagasy-flagged vessels.⁹⁶ Fishing licences must be denied to foreign vessels with a history of IUU fishing, and to vessels flying the flag of a state that is unable to effectively exercise its obligations as a flag state.⁹⁷ However, laws restricting access for foreign vessels are routinely bypassed by foreign-controlled fishing companies headquartered in Madagascar, allowing foreign vessels to be reflagged to the Malagasy flag, to operate under a more permissive regime, and to gain access to resources reserved for Malagasy-flagged vessels.

15 of the Chinese trawlers identified as operating in Madagascar are reportedly owned by Société malgache de pêche SA (aka 'Somapêche'), a Chinese-owned company based in Madagascar. Somapêche has a reported 1,200 employees in the country, exporting shrimp to high-value markets including the EU.⁹⁸ A 2021 investigation raised concerns of suspected IUU fishing by vessels belonging to the company as well as troubling labour conditions, with employees reporting long working hours for poor pay.⁹⁹

The majority stakeholders of Somapêche are Zhongyu Global Seafood, who currently manages the fleet within the country. Zhongyu Global Seafood are owned by the Chinese state-owned companies 'China National Fisheries Company (CNFC)' and the 'CNFC Overseas Fishery Co. Ltd (COFC)', both of which fall under the umbrella group of the 'China Agricultural Development Group Co., Ltd'. CNFC was China's first ever state-owned DWF and has a significant global presence across a number of different fisheries. As an organisation, they are a key IUU fishing offender,¹⁰⁰ including a range of offences in various West African countries.¹⁰¹

Less is known about 'Mada Fishery' who are listed as the owner of the remaining four trawlers in Madagascar. Vessels previously associated with the company (but seemingly no longer licensed in Madagascar) were reportedly owned by Qingdao Kaihang Fisheries Co Ltd. (QKF) based in China's Shandong province.¹⁰² According to their corporate website, QKF was established in 2013 and undertakes "international cooperation [...] in Senegal, Gambia and other African countries".¹⁰³ The four Mada Fishery trawlers are believed to have previously been known as the 'GORDE' fleet,¹⁰⁴ who have a history of IUU fishing in West Africa - although ownership is said to have changed since these offences occurred.¹⁰⁵

The number of Chinese trawlers operating in the country could have potentially been much higher. It has been reported that a proposed, but ultimately not completed, secretive deal was agreed in 2018 worth US\$2.7 billion, which would have allowed 330 Chinese trawlers access to Madagascar waters for 10 years, apparently signed without consulting the fisheries minister.¹⁰⁶

Table 1 - Vessel ownership information in Madagascar

| Local company name | Number of identifiable vessels | Chinese controlling entity | State/private |
|--------------------|--------------------------------|----------------------------|---------------|
| Somapêche | 15 | CNFC/COFC | State |
| Mada Fishery | 4 | Unknown | Unknown |

The GORDE fleet and Mada Fishery

Three vessels belonging to the Chinese-owned GORDE fleet (GORDE 105/106/107) were identified by Gambian law enforcement agents and NGO Sea Shepherd as conducting IUU fishing in The Gambia, with all three spotted fishing within the country's Inshore Exclusion Zone (IEZ) - an area reserved for artisanal canoe fishers. Two of the vessels (GORDE 105 & 107) were also found to be 'double bagging' their fishing nets - in which one net is placed within another to reduce the selectivity of hauls and yield a larger catch.¹⁰⁷

Likely as a result of increased scrutiny, the GORDE vessels eventually departed West Africa with a view to obtaining trawling licences in Madagascar - a journey that was in part facilitated by the Chinese Navy.¹⁰⁸ On their way to the East African country in May 2021, the vessels, alongside another GORDE vessel (108) and four other trawlers (LU QING XIN YUAN YU 005/006/007/008), anchored without permission in the Seychelles, eventually being brought in for inspection.¹⁰⁹

At the time, the captains produced documents to claim that they had legitimate business in the region; however, EJF found that the documents were forged, raising questions about the vessels' true identity and intentions. Further doubts were raised when EJF found a number of other red flags indicative of fleet-wide fraudulent behaviours - these include a number of codes ascribed to fishing vessels by the Chinese government that were either invalid or did not correspond to existing companies, and the fact that all of the vessels bore identical call sign numbers when spotted in The Gambia.¹¹⁰

The GORDE vessels were believed to have obtained licences to fish in Malagasy waters operated by Mada Fishery, with a view to begin fishing in 2022 - despite laws preventing vessels with IUU history being granted licences. Following pressure for civil society groups, including EJF, the vessels were seemingly refused licences to fish,¹¹¹ although Madagascar's Minister of Fisheries and Blue Economy implied in an interview with media outlet *Mongabay* that should the vessels have changed name and owners, they could be issued licences as long as they comply with the law.¹¹² It is now believed that the four vessels have held a licence in the country as recently as 2023, still operated by Mada Fishery under the names BAOBAB 105/106/107/108 - albeit allegedly under new ownership.¹¹³

This fleet effectively demonstrates the dynamic and deliberately evasive behaviour of illegal operators travelling, where necessary, across huge swathes of ocean in the hunt for financial gain. They similarly show the benefits of, and need for, transboundary and inter-agency communications as well as a broader drive for transparency around vessel ownership and history. By supplementing state-gathered intelligence and enforcement capacity, NGOs were able to assist in the detection and prevention of IUU fishing, gradually closing the net on what is a fleet clearly determined to operate outside of the law.

In **Mozambique**, industrial fishing is largely concentrated in the Sofala Bank region, which is considered the country's most productive fishing grounds alongside Maputo Bay.¹¹⁴ The waters of the bank boast a range of conditions that make it appealing to artisanal and industrial fishers alike, including weaker ocean currents, a wide continental shelf and a number of estuaries and deltas that serve as fertile breeding grounds for a range of fish and crustaceans.¹¹⁵ Chinese vessels predominantly operate out of Quelimane and Mozambique's second largest city, Beira, which sits in the middle of Mozambique's vast 2,700 km coast - the third largest in the Indian Ocean.¹¹⁶

Fishing licences in Mozambican waters are granted under the requirements set out in Decree No. 74/2017 'approving the Regulation for the Concession of Fishing Rights and Fishing Licensing (amended 2018)'.¹¹⁷ Four levels of licence fee exist: Mozambican vessel with Mozambican base port, Mozambican vessel with foreign base port, foreign vessel with Mozambican base port, and foreign vessel with foreign base port, with fees tending to be updated annually, by ministerial decree.¹¹⁸ Under Article 120(4) of Decree No. 89/2020 approving the Marine Fisheries' Regulation (REPMAR), fishing vessels that have been listed on national or RFMO IUU vessel lists are prohibited from flying the Mozambican flag.¹¹⁹ The Mozambican government significantly increased the costs of foreign licence fees in 2018 (by almost 100 times) so as to encourage foreigners to enter joint

ventures with Mozambican entities. As a result, the vast majority of foreign vessels now seek to fish in Mozambique as part of joint ventures that are majority Mozambican-owned, in order to benefit from cheaper licence fees.¹²⁰

A total of at least 20 Chinese non-tuna vessels were identified as operating in Mozambique, 10 of which are believed to be flying the flag of China, while the other 10 vessels have reportedly adopted the flag of Mozambique. These vessels target a range of species, including small pelagics, deep sea shrimps and shallow water shrimps. Vessels targeting shallow water shrimp, the country's main export fishery, operate in the near shores between 3 and 12 NM, whereas those targeting deep sea shrimp as well as other species such as lobsters and crayfish operate beyond the country's 12 NM territorial waters.¹²¹

17 Chinese-owned industrial vessels appeared on the National Fisheries Administration's (ADNAP) fishing licence lists in 2023,¹²² a sharp fall from the 65 Chinese boats that held industrial licences in 2019.¹²³ Interviews with former crew members conducted by EJF investigators in Beira in January 2024 revealed a variety of reasons for this reduction in number. This included company bankruptcy, such as in the case of Chinese-owned company Min Yu Pescas, as well as fleets reportedly being moved to other nations' waters, such as in the case of vessels owned by Ocean Rich Pelagic Moçambique, which departed to Ivory

Chinese industrial vessels in Beira, Mozambique.



Coast in 2021. Both types of departure appear to suggest falling profitability of fishing operations in Mozambican waters, as fish populations have declined after years of overfishing and habitat destruction by industrial vessels.¹²⁴

While the number of Chinese-owned vessels appearing on Mozambican licence lists has ostensibly fallen, it is believed that other Chinese vessels are operating in Mozambican waters either without licences, or without such licences being publicly declared on official lists. In a 2023 report on the declining condition of Mozambican fisheries, the Centro de Integridade Pública (CIP) declared that Chinese fishing companies had been carrying out “an assault on Mozambican waters” with the complicity of the Mozambican political elite, and that “the majority of Chinese companies do not appear on official [licence] lists”.¹²⁵ CIP estimates that approximately 60 Chinese vessels without publicly declared licences arrived in Mozambican waters between 2017 and 2018, as Chinese interest reportedly switched from the illegal export of Mozambican wood to fisheries.¹²⁶ These underhand licences were typically awarded to Chinese companies “without delay”,¹²⁷ and without the knowledge of the country’s Fisheries Administration Commission (CAP), an advisory body to ADNAP comprised of government and industry operators which is responsible for fisheries management and resource preservation.¹²⁸

Chinese fishing companies also appear to have been transferred fishing licences from shell companies with links to the highest echelons of the Mozambican government. Motil Moçambique Lda., a company registered in May 2017 and belonging to Florindo Nyusi, son of incumbent Mozambican President Filipe Nyusi, was awarded fishing licences allowing for the capture of prawns (120 tonnes), langoustine (30 tonnes), crab (30 tonnes), fish (30 tonnes), cephalopods (24 tonnes), and lobster (24 tonnes), despite appearing not to own any fishing vessels.¹²⁹ These licences were transferred to Nanjing Runyang Fishing Corporation, a Chinese-owned business, in June 2017 – just one month after Motil Moçambique was registered.¹³⁰ Although the conditions in which this transfer was made remain unclear, EJF notes that Article 44 of Mozambique’s fishery law sets as a clear principle that fishing licences may not be transferred.¹³¹

As of 2023, there are currently believed to be four distinct Chinese-owned fishing companies operating vessels in the Mozambican EEZ, of which three – Fu Yue Pescas, Guangdong Xiesheng, and Krustamoz – have publicly declared licences. The other active company – Shenzhen Shuiwan Pelagic Fisheries – was identified through Chinese government data, AIS data, and testimony from former crew members gathered by EJF’s investigators in the city of Beira.

In total, these four companies operated at least 20 fishing vessels in Mozambican waters, of which 10 are ultimately owned by CNFC, a Chinese state-owned company.

By number of vessels, Krustamoz was the largest Chinese-owned fishing company in Mozambique in 2023, with a total of 10 boats. All these boats are trawlers targeting either deep sea or shallow water shrimps, and are listed as having Quelimane, in the province of Zambezia, as their base port. Krustamoz is a subsidiary of state-owned CNFC, and was purchased from the Spanish fishing company Grupo Amasua in 2012 in order to expand CNFC’s presence in the region, given their similar existing operation in Madagascar (Somapêche).¹³²

According to official lists, Guangdong Xiesheng (GX) was the second-largest company operating industrial vessels in Mozambican waters in 2023, with five boats – all of which are trawlers – holding licences. Only four of these vessels are believed to be active, though all five are based in Beira. GX is privately owned by four Chinese citizens, one of whom is also the President of the Guangdong Fisheries Chamber of Commerce. The company has historically operated in Thailand and Malaysia, and received its first licence to fish in Mozambican waters in April 2020, according to MARA data, with a fleet of its vessels arriving in August of the same year.

ADNAP’s 2023 fishing campaign document shows the company ‘Fu Yue Pescas’ (FYP) holding fishing licences in the country for two trawlers from its ZHONG TAI fleet: ZHONG TAI 8 and 9. FYP has held Mozambican licences since at least 2021, and is reportedly majority owned by Guangdong Zhongtai Senda Fisheries, Co., Ltd, (in turn wholly owned by Guoyue Group¹³³) which holds a 60% stake in the business.¹³⁴ Guodi Yan, a Chinese citizen who owns the remaining 40%, was also the founder of Min Yu Pescas,¹³⁵ which according to crew testimony is now believed to be bankrupt. Images taken by EJF near the port of Beira in January 2024 show evidence that a further four trawlers that are likely owned by FYP are currently present in Mozambican waters, despite not appearing on ADNAP’s list. However, these images show that they were at anchor and as such it is unclear if they are actively fishing. Social media posts by Indonesian crew members locate one of these additional vessels - ZHONG TAI 10 - in the Port of Beira in 2019.

The impacts of China's DWF on coastal communities in Mozambique

Two thirds of the Mozambican population reside along the country's coastline, which stretches over 2,500 km.¹³⁶ The fourth longest in Africa, this coast gives rise to a maritime area of around 587,000 km², including both Mozambique's territorial waters and its EEZ.¹³⁷ Mozambique's fisheries are of great national importance, providing both an important food source as well as acting as a key generator of rural jobs.¹³⁸ Around 20% of the coastal population relies on Mozambique's fisheries for income generation and food security.¹³⁹

Mozambique's fisheries are overseen by the Ministry of the Sea, Inland Waters and Fisheries (MIMAIP), and represented approximately 10.3% of national GDP in 2017.¹⁴⁰ Artisanal fishing accounts for the vast majority of the national catch; total annual fish production in 2022, as reported by MIMAIP, reached 455,544 tonnes, of which 95.6% was artisanal and just 4.4% industrial or semi-industrial.¹⁴¹ However, industrial catch is almost certainly underreported.¹⁴²

These fisheries are under threat: Mozambique's fish stocks have been in decline in recent decades.¹⁴³ Overall artisanal catch in the country is estimated to have fallen by nearly 30% over the last 25 years,¹⁴⁴ leaving local small-scale fishers struggling to earn a living. Key drivers of this decrease have included the excessive capacity of industrial fleets¹⁴⁵ and widespread IUU fishing in Mozambican waters.¹⁴⁶ The latter continues to be a critical issue for the country, which is estimated to lose up to US\$70 million each year to this practice.¹⁴⁷ Chinese-owned vessels have been reported as being key perpetrators of IUU abuses in the country.¹⁴⁸

Existing research and investigative work carried out by EJF have both found evidence of Chinese-owned vessels engaging in a variety of IUU fishing practices in Mozambican waters. Amongst other offences, these boats have been found to routinely trawl for fish within 12 nautical miles of shore,¹⁴⁹ which is prohibited under Mozambican law (see **Section 6.3**).¹⁵⁰ Such vessels have even been found to trawl for fish and shrimp within three nautical miles of the coast, in zones reserved for artisanal fishers,¹⁵¹ as well as within Marine Protected Areas (MPAs). Additionally, a report by the Centro de Integridade Pública (CIP), a Mozambican NGO, found evidence of Chinese trawlers destroying coral reefs off the coast of Inhambane.¹⁵²

“We have a problem with illegal fishing. It has been so frequent [...] the government cannot control it.”

Interviews conducted by EJF with artisanal fishers in and around the major port city of Beira in January 2024 revealed that these incursions into the Mozambican IEZ are having direct impacts on coastal fishing communities. One fisherman, who is also a leader of his local Community Fishing Council (CCP), stated that he had witnessed a Chinese industrial vessel enter the IEZ and throw a large amount of dead bycatch overboard. Another fisherman in this same community described such an event happening on multiple occasions, reporting that on each occasion the dead, rotting fish made live fish leave the area, severely reducing their catch.

“The whole beach was filled with dead fish. [...] The Chinese way of working leaves our land with nothing.”

Interviewees also reported coming into direct conflict with Chinese boats. One fisher reported that a Chinese vessel had ripped his net while anchoring within waters reserved for artisanal fishers:

“They ripped my net while they were fishing and throwing away smaller fish. They would catch many small fish and throw away the small Mapape fish. They would only take the fish they want. They ripped my 300 metre net and didn't even pay me for the damage. I couldn't do anything, only go back home and look for some money so I could buy some material to fix my net.”

Another small-scale fisher claimed that artisanal fishers have been routinely hounded by Chinese vessels within the IEZ:

“Normally we avoid those boats [Chinese industrial trawlers] because whenever we are at sea they come near us [...] when they see us we are the ones who run away from them, not them from us, because we know they can damage our gear.”

These claims of conflict with Chinese industrial vessels are corroborated by evidence gathered during interviews with former crew members. Nine interviewees reported IEZ incursions, with five of these individuals describing interactions between their vessel and artisanal boats. Four crew members alleged that they had witnessed their vessels destroy artisanal fishers’ nets.

Interviews with crew also revealed the use of additional, illegal extra-fine nets by Chinese industrial vessels which led to the capture of very small fish and non-permitted species (see **Section 6.3**). Many of the artisanal fishers interviewed by EJF also referred to Chinese vessels disrupting the reproductive cycle of fish populations by catching juvenile fish below minimum permissible size limits, and fishing for species outside of those permitted under the terms of their licences:

“One of the reasons for the decline in production [...] is the Chinese fishermen. [They] obtain a licence to fish for just one particular type [of fish], but when they get there, they fish for different types. [...] They catch Malola, Mapula, Mapape [...] it’s all in their freezers. Our own community goes and buys from them. But Malola shouldn’t be caught by industrial fishing, we never heard of this, but it is happening right now, today.”

Fishers underscored the negative impacts on their communities from this type of IUU fishing by Chinese vessels, highlighting the negative impact on fish populations in their region, particularly of those species such as Mapape and Malola that are frequently targeted by artisanal boats. Several interviewees mentioned that it has become increasingly difficult to catch enough fish to sustain their livelihoods, and worried for the ability of future generations to meet their needs:

“Before they [the Chinese vessels] came here we would catch enough fish here by throwing our net even just 3 times. But now for you to catch enough fish you need to spend the day at sea. We feel hurt because that fish was supposed to be not just for us but for our children. [...] They are destroying future production.”

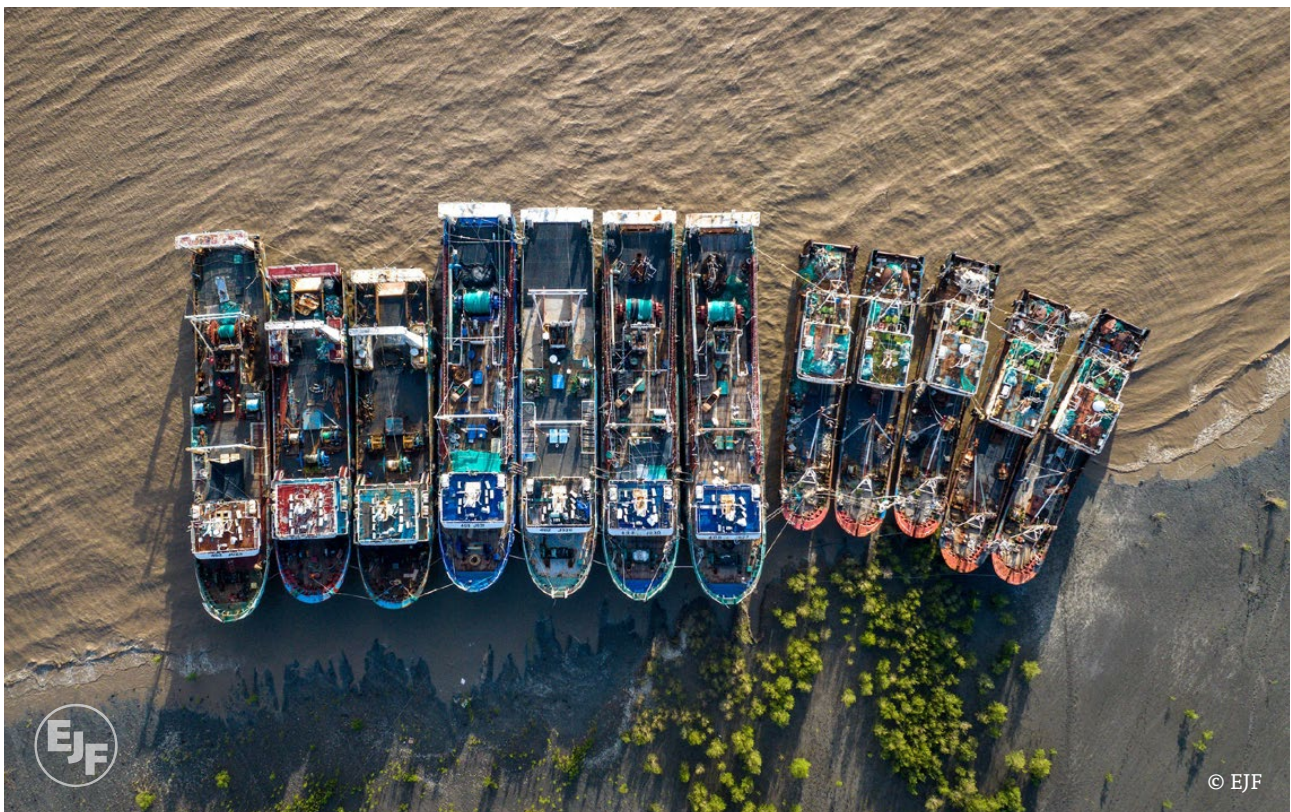


Despite not appearing on ADNAP's industrial licence lists, Shenzhen Shuiwan Pelagic Fisheries (SSPF) is also believed to have held a licence to fish in the Mozambican EEZ in 2023. SSPF is wholly owned by Guangdong Shunxin Sea Fishery Group Co. Ltd., which also has operations in Malaysia and Iran.¹⁵³ A number of vessels from SSPF's ZHONG YANG fleet are understood to have been present in Mozambique since at least 2018, according to testimony gathered from former crew members. At least three vessels believed to be associated with the company were

active in Mozambican waters during 2023, according to AIS data. Data from MARA and GFW suggests that one of these vessels is a trawler, while the remaining two vessels are gillnetters. Additionally, photographic evidence gathered by EJF's investigators in January 2024 appears to show a total of five gillnetting vessels belonging to SSPF stationed in the Port of Beira. However, all vessels were at anchor, leaving it unclear as to whether they are actively fishing in the country's waters.

Table 2 - Vessel ownership information in Mozambique (2023)

| Company name | Number of identifiable vessels | Chinese controlling entity | State/private |
|--|--------------------------------|--|---------------|
| Krustamoz, Lda. | 10 | China National Fisheries Company (CNFC) | State |
| Guangdong Xiesheng Overseas Fisheries Co, Lda. | 5 | Guangdong Xiesheng | Private |
| Shenzhen Shuiwan Pelagic Fisheries Co. Ltd. | 3 | Guangdong Shunxin Sea Fishery Group Co. Ltd. | Private |
| Fu Yue Pescas, Lda. | 2 | Guangdong Zhongtai Senda Fisheries | Private |



Chinese fishing vessels in Mozambique.

5. Onshore Chinese presence in the SWIO

The presence and behaviours of Chinese DWF vessels in the waters of the SWIO can be better understood when considered within the broader political economy of the region and China's involvement in it. Financial flows, power (im)balance, material investment and the discourses that accompany them are all vital considerations when analysing the sustainability of resource extraction, both terrestrial and marine. This section of the report will first provide a brief overview of the scale, nature and impacts of the Belt and Road Initiative (BRI), before focussing on the SWIO - paying particular attention to the investments and discourses that accompany a growing regional and international interest in the blue economy.

This section draws predominantly on secondary sources, including international and regional news media, civil society groups and official government sources. It is acknowledged that outlets from all nations may be biased in their reporting of Chinese involvement and activities in the region. The variety of discourses about China's role in the region, reflected in this report, highlights the controversial nature of such activities and the need for objective scrutiny.

5.1 China's Belt and Road Initiative

Over the past decade, China has undertaken a significant expansion of foreign direct investment through the BRI, developed in 2013 as a means of increasing overseas cooperation and presence through infrastructure projects in over 150 countries.¹⁵⁴ Estimates of the cumulative expenditures of the scheme suggest that it may be over US\$1 trillion, with US\$43 billion worth of agreements signed in the first half of 2023, linked to over 100 projects.¹⁵⁵

Beyond material investments, the discursive elements of BRI projects are an important pillar in gaining local and international legitimacy while simultaneously helping to achieve their economic aims. China often promotes a 'win-win' narrative that focuses on 'sustainable' growth,¹⁵⁶ promising a range of socio-economic and ecological benefits for China and the host country alike. In reality however, local communities often only derive limited, if any, direct benefits from projects, and there are many instances of displacement of local communities, social unrest and environmental degradation associated with BRI projects.¹⁵⁷ These are likely contributing factors to a declining approval rating of Beijing in the Global South - dropping from 56% in 2019 to 40% in 2021.¹⁵⁸

Chinese loans associated with the BRI have received criticism for their opacity and relatively high interest rates.¹⁵⁹ Furthermore, they are largely targeted at nations with which China has trade relations under the BRI, with one study finding that the People's Bank of China has extended US\$170 billion in liquidity support to countries in acute states of debt, almost exclusively targeting debtors engaged in the BRI.¹⁶⁰ This dynamic poses clear issues when considering that heavily indebted countries may feel obligated to allow Chinese business ventures to access resources even when their extraction may severely affect communities and/or the environment.

The opacity that characterises many BRI investments can serve as an enabling environment for corruption. This is one of the key governance issues associated with a number of Chinese investments, or trade deals in the Global South - with one study finding that 35% of Chinese infrastructure projects can be linked to corruption and other scandals, such as environmental degradation and labour abuses.¹⁶¹ This has been seen for example in Ghana's trawl fishery, in which crew from industrial vessels reported that port, navy and other officials associated with identifying and preventing IUU fishing were routinely bribed by Chinese captains - seemingly to enable IUU fishing.¹⁶²

Of relevance to this report, huge sums of money have been spent by China in maritime and fisheries infrastructure including ports, fishing fleets and fish processing plants as part of the '21st Century Maritime Silk Road', a central component of the BRI. Estimates suggest that there have been almost US\$30 billion worth of seaport projects funded by China between 2000-2021, resulting in 78 ports built or expanded in low and middle-income countries.¹⁶³

This reflects the broader importance placed by China upon maritime power, with President Xi Jinping stating "an economic power must be a maritime power and a shipping power".¹⁶⁴ China's 14th Five-Year Plan, adopted in 2020, outlines key objectives in the realm of the maritime economy, including "develop[ing] blue partnerships with other countries", "promot[ing] the building of a just and equitable international maritime order and a maritime community with a shared future", and "ensuring a sustainable marine ecological environment."¹⁶⁵

Investments in the maritime and fisheries realm serve a multitude of purposes, including improving China's food security, greater logistical access to resources and increased power and influence in geopolitically important areas.¹⁶⁶ Furthermore, infrastructure expenditure can enable the acquisition of licences and permits to access resources, which is an active strategy of the Chinese government. For example, a 2017 Chinese strategy paper on its DWF industry encouraged Chinese distant-water companies to use investment and harbour/base construction to gain fishing access in foreign countries.¹⁶⁷

While such investments may be considered opportunities for countries to better reap the benefits of the blue economy, the extent to which those benefits are felt more broadly by communities varies. For example, Chinese investment in fisheries infrastructure is likely to be associated with an influx of fishing vessels - in many instances creating burdens upon locally important resources with negative impacts on coastal livelihoods.¹⁶⁸ Likewise, it has also been associated with an increase in IUU fishing practices, as Chinese fishing bases create “closed-loop seafood supply chains that shield marine resource outflows from the state’s gaze”,¹⁶⁹ in some instances creating ‘free-trade zones’ that essentially allow them to operate outside of the coastal state’s control.¹⁷⁰

5.2 China’s investment in the SWIO’s blue economy and associated narratives

Diplomatic relations between China and countries in the SWIO are long-standing, with deep political ties continuing to be strengthened to this day. For example, China was the first country to recognise Comoros as an independent nation,¹⁷¹ and was seen as a key influence in Tanzania’s signing of the Arusha Declaration in 1967, which saw the African country embrace socialist politics.¹⁷² Particularly in recent years, the region has relied heavily on Chinese financial support to fund infrastructure projects including railways, roads, hospital buildings and stadiums - to the extent that the BRI has been described as “reorganising the geographical and political space” in the region.¹⁷³ Kenya, for example, reportedly owes in excess of US\$6 billion to China as of March 2023, constituting around 64% of its current stock of bilateral debt.¹⁷⁴ This is in large part linked to a US\$3.2 billion loan from the Chinese to fund the Standard Gauge Railway (SGR),¹⁷⁵ a project that has been subject to much controversy, including alleged racial discrimination against Kenyans by Chinese workers,¹⁷⁶ bribery charges brought against Chinese nationals,¹⁷⁷ and concerns raised over potential impacts upon a “wide range of ecologically fragile and important ecosystems in the country”.^{178,179}

Through schemes such as the BRI, economic trade between SWIO nations and China is now of great mutual importance - exemplified by Mauritius signing the first Free Trade Agreement (FTA) between an African country and China in January 2021, said by a senior member of the Mauritian Ministry of Foreign Affairs to have taken the two countries’ “special bonds to new heights”.¹⁸⁰ Initiatives such as China’s ‘green channel’ programme, the ‘China-Africa Economic and Trade Expo’ and improved cooperation on quarantine and inspection, are all expected to see agricultural and other exports from the region, and the African continent more broadly, increase.¹⁸¹

The SWIO’s blue economy is clearly of paramount importance to China. The second China-Indian Ocean Region Forum on Development Cooperation in December 2023 was themed “Boosting Sustainable Blue Economy to Build Together a Maritime Community with a Shared Future”. Speaking on the importance of the event, a spokesperson from the China International Development Cooperation Agency stated: “China is ready to share its development experience with partners in the region, deepen practical cooperation [...] on the blue economy, and continue to make positive contributions to global cooperation on sustainable development, including the blue economy”.¹⁸²

This indicates a very clear framing for China’s blue economy activities in the region - couched in terms of environmental sustainability, economic development and mutual gains. These key tenets of China’s official maritime policy are systematically affirmed in SWIO countries by Chinese diplomats to disseminate positive imagery of bilateral relations with China, often via local media outlets. For example, a Malagasy newspaper reproduced in full a statement in which the Chinese ambassador lays out China’s vision for a “maritime community with a shared future”:

One of the most distinctive characteristics of Chinese modernisation is a harmonious coexistence between human beings and nature. We are pursuing sustainable development and protecting nature and ecosystems as the apple of our eye – an ideal which will be justly fulfilled in the fishing sector. [...] Chinese companies have invested in [Madagascar], acting for the promotion of the sustainable development of the Malagasy marine economy. They have also committed to take on their social responsibility to bring positive contributions to the local community through their devotion to public well-being.¹⁸³

In an article published in two major newspapers in Tanzania, China’s ambassador stated that China-Africa cooperation had “[broken] the bottleneck of Africa’s sustainable development, and has become a model of South-South cooperation” and that “China is willing to work with African countries including Tanzania to implement the concept of a community with a shared future for mankind”.¹⁸⁴ In Mozambique, where China’s influence upon media outlets is believed to be notable,¹⁸⁵ political leaders including President Nyusi “have closely aligned themselves with Beijing’s preferred talking points”, something which is “reflected in the friendly coverage of China by pro-government media”.¹⁸⁶

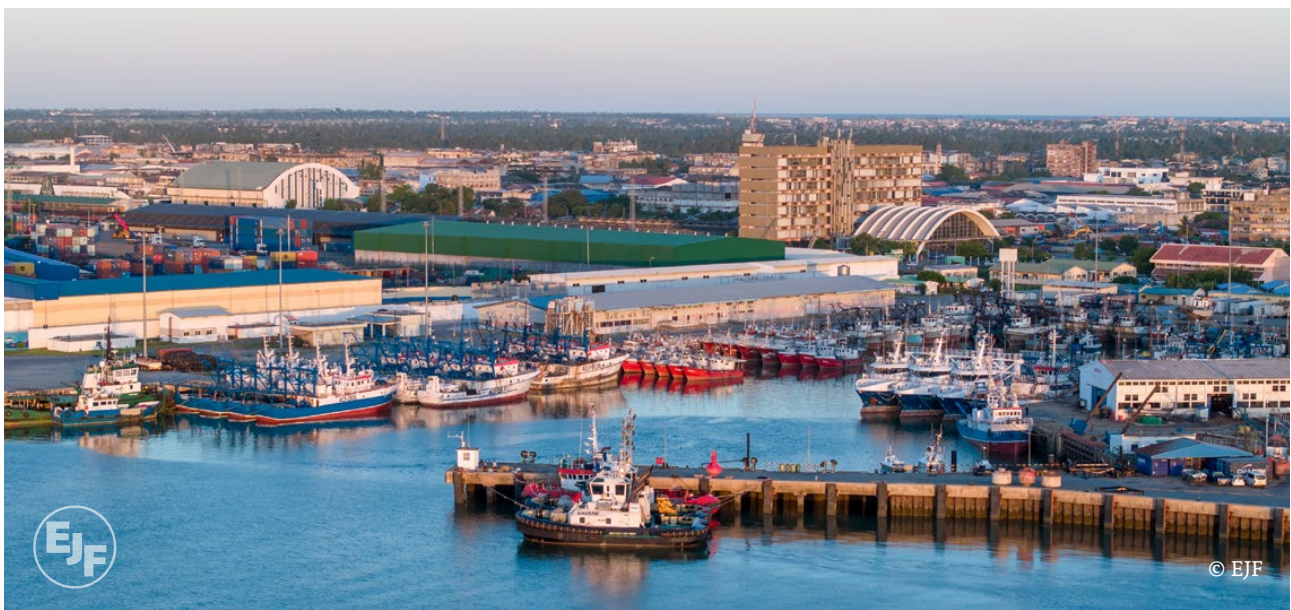
Embracing the blue economy is clearly of paramount significance to governments in the SWIO, with ministries for blue economy set up in Madagascar, Mauritius, Seychelles and Tanzania (Zanzibar). The importance of Chinese partnership in the blue economy for SWIO states is also highlighted by local

authorities, with all seven of the focus countries citing it as a key realm of cooperation. For example, reflecting on the China-Indian Ocean Region Forum on Development Cooperation, Kenyan President William Ruto reportedly stated “we are here, therefore, as an emerging community of nations [...] bound together by explicit common values and a shared aspiration to open up the seas of plenty through investment in the blue economy”.¹⁸⁷ Likewise, at the “Seminar on Blue Economy for Zanzibar” in December 2022, Aboud Jumbe of Tanzania’s Ministry of Blue Economy and Fisheries based in Zanzibar reportedly promised to “further cooperate with China to address the challenges and opportunities of the blue economy”.¹⁸⁸ Furthermore, a post on a social media account seemingly run by or on behalf of Dr Jumbe in January 2024 suggests that his department has signed an MoU on blue partnership cooperation with China’s Vice Minister of Natural Resources, Sun Shuxien - claiming that it will further strengthen the two countries’ blue economy cooperation mechanism.¹⁸⁹ In Mauritius, the Director of Trade Policy highlighted that cooperation on the blue economy, a priority area of the Mauritius-China FTA, would help create “the right economic system” and “unlock the potential for development”.¹⁹⁰

While seemingly set to grow, there has already been substantive Chinese involvement in marine and fisheries infrastructure in the region, starting with ports. For example, the China Communication Construction Company led the construction of Kenya’s Lamu Port, as part of the wider Lamu Port South Sudan - Ethiopia Transport Corridor. Currently, the port is operational with the construction of 3 of the 23 envisaged berths completed at a reported cost of US\$367 million.¹⁹¹ There are serious

environmental concerns around the project, both linked to its construction and the associated impacts of urbanisation.¹⁹² WWF have estimated that “over 150,000 ha of intact habitats (mainly mangroves, forests, coral reefs and seagrass beds) could be lost” in the vicinity of the port as a result of its construction.¹⁹³ Fishers in the Lamu area have already complained of a reduction in catch, which they believe is directly linked to the construction and presence of the port.¹⁹⁴

In Mozambique, Chinese-led or funded construction and restoration projects are either completed or underway in the ports of Beira,¹⁹⁵ Nacala,¹⁹⁶ Maputo,¹⁹⁷ and Chongoene.¹⁹⁸ Alongside these, there have also been discussions and a funding pledge for a deep-water port in Techobanine, as part of a wider railway system between Botswana and Zimbabwe.¹⁹⁹ After Beira’s fishing port, one of the most important in the country, was severely damaged by a cyclone in the early 2000s, an agreement worth US\$120 million was reached in 2014 with China for its rebuilding and expansion.²⁰⁰ The renovation, which was carried out by China Harbour Engineering Company Ltd, was completed in 2019.²⁰¹ In October 2023, a group of Chinese investors expressed their interest in further expanding its capacity, including the construction of two new terminals.²⁰² This news was released alongside the Mozambican government’s intention to invest US\$290 million in the port over the next 15 years, leaving it unclear whether or not this plan would be financed by Chinese funds.²⁰³ Locals have been concerned that Chinese loans for major projects come at a wider cost, including the granting of underhand fishing licences to Chinese vessels that are not declared on published licence lists.^{204,205} Chinese vessels have also reportedly fished in closed seasons and used illegal fishing equipment with the complicity of local political elites.²⁰⁶



Port of Beira, Mozambique.



Fish landing site in Zanzibar.

Not all of the proposed port investments in the region have been seen through to completion. In Mauritius, a fishing port project near Port Louis, granted in 2015 to a Chinese developer and funded by the China Development Bank, was abandoned.²⁰⁷ Likewise, a 2013 agreement for the Chinese company 'Chinese Merchants Holdings International' to construct a port in Bagamoyo, Tanzania, has thus far failed to materialise. The ambitious project has been valued at US\$10 billion and sought to transform the country into a major hub of maritime transport and logistics through the construction of the port and associated special economic zone.²⁰⁸ The postponement of the project was because of perceived exploitative contract terms, including the request that no other port would be built in Tanzania, from Tanga in the north to Mtwara in the south.²⁰⁹ However, President Suluhu Hassan has announced plans to revive the project,²¹⁰ although the extent to which this has or will occur remains somewhat unclear.

China has also invested in fisheries infrastructure across a number of SWIO countries. In Madagascar, for example, there are reportedly at least two cold stores linked to the Chinese-owned company Somapêche.²¹¹ In Mozambique, local media suggests that Chinese company 'Stonechen Commercial', operating under the name 'Produtos de Pesca de Moma' were set to complete the construction of a processing facility in Mozambique's Nampula province. The facility is said to predominantly process species for export including shrimp, lobster and crab, receiving produce

from industrial and semi-industrial vessels alike.²¹² Another reportedly Chinese-owned factory 'Yinuo, Lda' is based in the city of Angoche, processing between 10 and 20 tonnes of fish per week at its peak.²¹³ It has been suggested that Yinuo is associated with IUU fishing, including fishing above and outside allocated quotas.²¹⁴ In Kenya, the 'Jinzai Food Group Company Ltd' in 2023 set up a fish processing plant in the coastal town of Shimoni, operating under a local name of Huawen Food (Kenya) Limited and focussing on the processing of anchovies.²¹⁵ The processed fish will reportedly be shipped to China and used for fish-flavoured snacks, using anchovies that will be provided by local fishers in the region.^{216,217}

Finally, Chinese nationals and companies established in SWIO countries play a significant part in developing and controlling bilateral trade with China. For example, in Madagascar where 70% of the country's crab exports are destined to China,²¹⁸ the crab export industry is mostly controlled by a small number of Chinese actors, who succeeded in securing exclusive access to export licences under opaque conditions (with government authorities receiving an offer for a US\$4 million payment in exchange for granting export licences to named operators and excluding competitors²¹⁹),²²⁰ and who take advantage of their monopoly by imposing low purchase prices on fishers.²²¹ Far from the narrative of a 'shared future' promoted by China, these dynamics of resource extraction exclude local communities from the benefits of the blue economy.

6. IUU fishing and human rights abuses by China's DWF in the SWIO

The previous section has outlined both the material and discursive elements of the BRI, and how it pertains to, and enables, the presence of the Chinese DWF in the SWIO. While couched in terms of win-win, sustainable development and collective benefits from the blue economy, the realities on board many vessels in China's DWF are in direct contradiction of these stated aims, as well as China's apparent 'zero-tolerance' approach to IUU fishing.²²² Numerous studies have associated the fleet with widespread and systematic illegalities on a global scale, undermining marine ecosystems and the communities that rely on them as well as severely abusing fishers on board.

In this study, 86 unique cases (relating to 177 offences) of IUU fishing or human rights abuses were identified as having occurred within the SWIO region between 2017 and 2023. Among the vessels for which gear types could be ascertained, 53 cases (65.4%) happened on board of longliners, 18 cases (22.5%) trawlers and 10 cases (12.3%) purse seiners. Half of the cases involved vessels owned or controlled by Chinese state-owned enterprises or enterprises in which the Chinese government has partial interest.

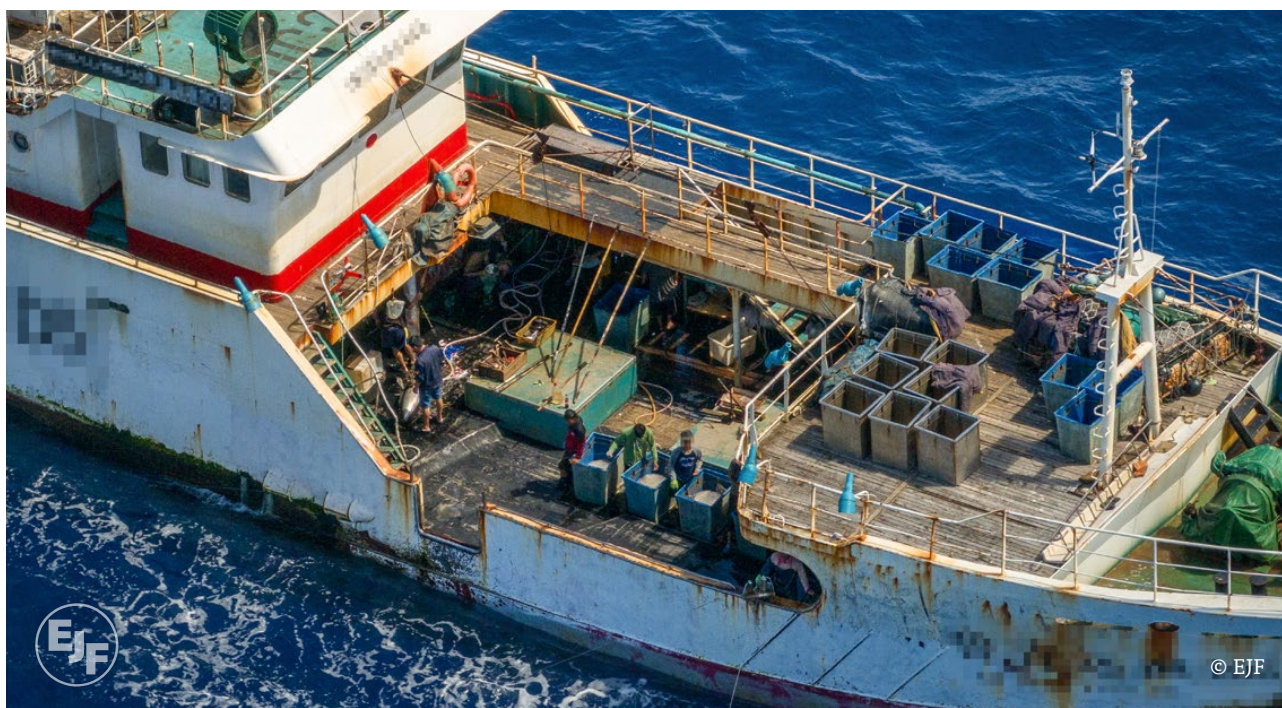
The following section provides an overview of the findings related to IUU fishing and human rights

abuses, both through case studies based on crew interviews and a summary of the number and nature of offences found that were associated with both the tuna and non-tuna fleets. The case studies focus on tuna vessels that operate predominantly in the high seas of the SWIO and Tanzania, and non-tuna vessels operating in the coastal waters of Mozambique, a country that has seen significant investment both on and offshore by China in recent years.

6.1 Case Study: The experience of crew on board the Chinese-owned tuna fleet in the SWIO

Semi-structured interviews were conducted with 44 fishers, who had worked on 27 Chinese tuna longliners, 24 of which are believed to have been in the SWIO as of 2023, according to AIS signals. The crew members were from both Indonesia (28 interviewees) and the Philippines (16 interviewees) and had collectively worked on the vessels between July 2017 to August 2023 for varying lengths of time. All 27 vessels were reportedly operating in and around the SWIO target area when the interviewed crew member reported being on board.

Each of the 44 interviewees reportedly witnessed or experienced some form of either IUU fishing and/or human or labour rights abuse on board. Table 3 summarises the findings of these interviews, with detailed information based on the crews' experiences outlined below, categorised by the specific alleged offence.



Crew on board a Chinese longliner, in the SWIO.

Table 3 - Summary of alleged IUU fishing offences witnessed by crew on board Chinese tuna vessels in the SWIO between 2017 and 2023

| IUU fishing / human rights | Alleged IUU fishing offence/ human rights abuse | Number of crew | Percentage of total crew interviewed (n=44) |
|----------------------------|---|----------------|---|
| IUU | Shark finning | 35 | 79.5% |
| | Deliberate capture and/or injury of vulnerable marine megafauna | 26 | 59.1% |
| Human rights abuses | Physical violence | 24 | 54.5% |
| | Intimidation and threats | 31 | 70.5% |
| | Retention of identity documents | 33 | 75.0% |
| | Deception | 41 | 93.2% |
| | Abusive working and living conditions | 44 | 100.0% |
| | Excessive overtime | 42 | 95.5% |

IUU fishing offences

Shark finning

Shark finning is a particularly cruel practice, in which sharks are deliberately or inadvertently caught, have their fins removed and are then often thrown overboard while still alive, condemned to a protracted death. The lucrative global market for shark fins, which are particularly popular in East and Southeast Asian cuisine but sourced by fishing vessels globally, is recognised as a direct driver of overfishing and sharks whose fins are traded internationally are “disproportionately threatened with extinction”.²²³

The finning of sharks is explicitly prohibited in the areas of activity of Chinese longliners in the SWIO. Provision 6 of Tanzania’s Deep Seas Fisheries Management and Development Regulations 2021 states that “any fishing vessel in the EEZ [...] shall not (a) engage in commercial fishing of sharks; (b) engage in shark finning in the course of fishing”, stating that operators “shall release or cause to be released any species of shark which is caught as soon as possible after the shark is brought alongside the vessel, and to do so in a manner that results in as little harm to the shark as possible”.²²⁴ IOTC Resolution 17/05 similarly outlaws shark finning stating that contracting parties and cooperating non-contracting parties (CPCs) “shall take the necessary measures to require that their fishermen fully utilise their entire catches of sharks, with the exception of species prohibited by the IOTC. Full utilisation is defined as retention by the fishing vessel of all parts of the shark excepting head, guts and skins, to the point of first landing”.²²⁵



Crew member poses with a hammerhead shark on board a Chinese longliner authorised in the SWIO.



Whale shark in the waters of Tanzania.

Shark finning was reported by 35 of the 44 (79.5%) crew interviewed. Across the vessels, sharks were finned systematically, with their fins removed and their bodies thrown back into the ocean. They would be caught regularly: “it was frequently raised”; “very often”; “hundreds”; “in one night was thirty at a minimum”.



A shark having its fins removed on board a Chinese longliner authorised in the SWIO.

One crew member described the process as “sadistic”, cutting the fins off before throwing the shark back to the ocean to die. Fins would be hidden on board the boats, often in special compartments or freezers of the senior crew: “it [the fin] was put in a separate freezer in the captain’s [room]”; “it was obvious that we hid it, we had to keep it hidden. Because when we were heading to Mauritius, there was an inspection so we had to hide it very well [...] because shark are protected animals”. A summary of the species of sharks reported by crew to have been caught can be found in **Table 4**.

It was mentioned by two interviewees (who had worked on the same vessel) that when operating in the Tanzanian EEZ, law enforcement officers boarded the vessel for an inspection. As the captain saw authorities were approaching on his satellite, he ordered the crew to discreetly dispose of the fins on board: “it was thrown away slowly, little by little, before the police approach the vessel”; “the bosun, the captain ordered us to do it”. Around 40 kilos of fins were described to have been thrown. The same interviewees also described hiding and disposing of artificial lights which are used to attract tuna: “after that [throwing the shark fins], they hid the line lights [...] they said it was prohibited and not allowed”, “the light was illegal [...] some were thrown away, some were covered”. Three to four baskets of the artificial lights were reported on this vessel. This is despite their use seemingly being illegal in Tanzanian law, according to Regulation 14.1 of the Deep Sea Fisheries Management and Development Regulations (2021) (DSFMDR)²²⁶, as well as prohibited by IOTC Resolution 16/07 which states that vessels are “prohibited from using, installing or operating surface or submerged artificial lights for the purpose of aggregating tuna and tuna-like species beyond territorial waters”.²²⁷

Table 4 - Summary of shark species identified by crew to have been finned on board the vessels

| Species name | IUCN Red List Classification ²²⁸ | CITES ²²⁹ | IOTC prohibitions |
|---|---|----------------------|---------------------------------------|
| Blacktip Shark (<i>Carcharhinus limbatus</i>) | Vulnerable | | |
| Oceanic Whitetip Shark (<i>Carcharhinus longimanus</i>) | Critically Endangered | Appendix II | Yes - Resolution 13/06 ²³⁰ |
| Shortfin Mako Shark (<i>Isurus oxyrinchus</i>) | Endangered | Appendix II | |
| Silky Shark (<i>Carcharhinus falciformis</i>) | Vulnerable | Appendix II | |
| Tiger Shark (<i>Galeocerdo cuvier</i>) | Near Threatened | | |
| Blue Shark (<i>Prionace glauca</i>) | Near Threatened | | |
| Great Hammerhead Shark (<i>Sphyrna mokarran</i>) | Critically Endangered | Appendix II | |
| Scalloped Hammerhead Shark (<i>Sphyrna lewini</i>) | Critically Endangered | Appendix II | |
| Pelagic Thresher (<i>Alopias pelagicus</i>) | Endangered | Appendix II | Yes - Resolution 12/09 ²³¹ |

Deliberate capture and/or injury of vulnerable marine megafauna

The inadvertent capture of non-target species is an inevitable externality of the fishing industry, varying depending on the location and the gear types used by vessels. In many cases, fishing vessels will ensnare large-bodied, long-lived marine organisms like cetaceans, sea turtles, dolphins and sharks which are generally characterised by low growth and fertility rates and a late maturity, all of which hinders their recovery potential and makes them acutely vulnerable to human-induced population reductions, especially when population size is limited and already declining.²³² The effects of catch mortality on population recovery potential varies with the age of killed individuals: while the killing of adults with high reproductive value is generally considered most damaging,²³³ if too many juveniles are caught, the probability of reaching reproductive age decreases and the species' ability to recover may be severely compromised.²³⁴

While catch is often accidental, many such species are killed and/or processed deliberately. As discussed above, trade in shark fins and shark meat more broadly can be lucrative; however, it has been documented as part of this research and elsewhere that often animals, or their body parts, are kept as souvenirs, used as bait, consumed on board or simply killed for sport.²³⁵

The capture of a range of species, including false killer whales (FKWs), dolphins, turtles and manta rays was reported by 26 of the 44 (59.1%) crew. Multiple vessels reported capturing and killing manta rays: "we slaughter it, remove the intestines, and place it in the freezer", "the manta ray [...] it was cut. It was released [thrown back into the sea] again [...] it likely dies and is in pain" as well as turtles; "we frequently get it. We would cook and process it because the captain and the bosun like it". The capture and deliberate processing on board of rays are in direct contravention of IOTC regulations, which "prohibit all vessels retaining onboard, transshipping, landing, storing, any part or whole carcass of mobulid rays caught in the IOTC Area of Competence" and that all commercial fishing vessels "promptly release alive and unharmed, to the extent practicable, mobulid rays as soon as they are seen



Crew member poses with a ray on board a Chinese longliner authorised in the SWIO.

in the net, on the hook, or on the deck, and do it in a manner that will result in the least possible harm to the individuals captured”.²³⁶ Likewise with turtles, IOTC Resolution 12/04 states “CPCs shall require fishermen [...] to bring aboard, if practicable, any captured marine turtle that is comatose or inactive as soon as possible and foster its recovery, including aiding in its resuscitation, before safely returning it to the water”.²³⁷

IOTC regulations regarding the capture and release of cetaceans by longliners are limited, simply requiring that any interactions are recorded by the captain. However, the UN Stock Agreement, to which China is a signatory, states under Article 5 (f) that States must “minimize [...] catch of non-target species, both fish and non-fish species [...] in particular endangered species”.²³⁸ In recent years, China has introduced new regulations on the conservation of marine megafauna. In general, DWF vessels are expected to release marine mammal bycatch in an appropriate manner, and a detailed record of the bycatch and release should be kept. Moreover, the retention, trans-shipment and consumption of the animals on board is prohibited.²³⁹

The capture and killing of cetaceans, specifically FKWs and dolphins, was said to be ordered by captains, often in order to take the animal’s teeth: “for the FKW, only the teeth were taken - the head would be cut”; “we got false killer whale. Its brain and heart were taken, the body was thrown away. The teeth were taken for the captain”; “the teeth were for the captain and all the Chinese”; “we took the teeth because it looked beautiful. We had many jaws of different fish including dolphins and sharks, we made toys out of it”.

One crew member described his remorse of killing dolphins on board: “instead of killing them instantly, they were tortured. They were cut [...] then were let go”, “at first they wanted to take the teeth for necklaces, for earrings.

But they did not die. So they were just thrown away like that, despite their injury. I felt sorry”. The same crew member described catching around ten dolphins a month, five FKWs and ten turtles during their time on board. Another interviewee describes the captain getting “annoyed” at the dolphins and using a gun belonging to a Pakistani guard, “he shot all”. The captain would reportedly sell the dolphin and FKW teeth to partner vessels, or exchange them for alcohol: “the captain exchanged false killer whale teeth for alcohol from other vessels [...] he prioritised drinks. Drinks like whiskey”.



Crew member poses with the head of a dolphin on board a Chinese longliner authorised in the SWIO.

Human rights abuses

The human rights abuses described in the following section correspond to the relevant International Labour Organization (ILO) Indicators of Forced Labour (see Table 5).²⁴⁰ The indicators are based on the definition of forced labour specified in the ILO Forced Labour Convention, 1930 (No. 29) as: “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily”. The presence of a single indicator may in certain circumstances imply the existence of forced labour. The ILO has highlighted fishers as a particularly vulnerable group to forced labour, given the shift to relatively low-cost migrant workers, a lack of training and language skills, and enforcement of safety and labour standards, as well as the remote nature of fishing vessels.²⁴¹

Table 5 - Relevant ILO indicators of forced labour

| Indicator | Definition |
|---------------------------------------|---|
| Deception | The failure to deliver what has been promised to the worker, either verbally or in writing. |
| Physical and sexual violence | Violence can include forcing workers to take drugs or alcohol so as to have greater control over them. Violence can also be used to force a worker to undertake tasks that were not part of the initial agreement. Violence is not acceptable as a disciplinary measure under any circumstances. |
| Intimidation and threats | Common threats used against workers include denunciation to the immigration authorities, loss of wages or access to housing or land, sacking of family members, further worsening of working conditions or withdrawal of “privileges” such as the right to leave the workplace. |
| Retention of identity documents | The retention by the employer of identity documents or other valuable personal possessions is an element of forced labour if workers are unable to access these items on demand and if they feel that they cannot leave the job without risking their loss. |
| Withholding of wages | When wages are systematically and deliberately withheld as a means to compel the worker to remain and deny him or her of the opportunity to change employer, this points to forced labour. |
| Debt bondage | Forced labourers are often working in an attempt to pay off an incurred or sometimes even inherited debt. The debt can arise from wage advances or loans to cover recruitment or transport costs or from daily living or emergency expenses, such as medical costs. |
| Abusive working and living conditions | Work may be performed under conditions that are degrading (humiliating or dirty) or hazardous (difficult or dangerous without adequate protective gear), and in severe breach of labour law. Forced labourers may also be subjected to substandard living conditions, made to live in overcrowded and unhealthy conditions without any privacy. |
| Excessive working hours | Forced labourers may be obliged to work excessive hours or days beyond the limits prescribed by national law or collective agreement. They can be denied breaks and days off, having to take over the shifts and working hours of colleagues who are absent, or by being on call 24 hours a day, seven days a week. |



An Indonesian crew member provides testimony of his experience on board a Chinese tuna vessel.

Physical violence

The regulatory frameworks that guide fishing activities often make limited, or no, reference to the human rights and labour abuses that blight the industry. Benchmarks of appropriate workplace treatment however can be found through the relevant ILO conventions, such as the Work in Fishing Convention (C188)²⁴² and the Violence and Harassment Convention (C190)²⁴³ - both of which are notably not ratified by China.

ILO C190 recognises that “violence and harassment in the world of work can constitute a human rights violation or abuse” and is “incompatible with decent work”. The Convention defines violence and harassment as “a range of unacceptable behaviours and practices, or threats thereof, whether a single occurrence or repeated, that aim at, result in, or are likely to result in physical, psychological, sexual or economic harm”.

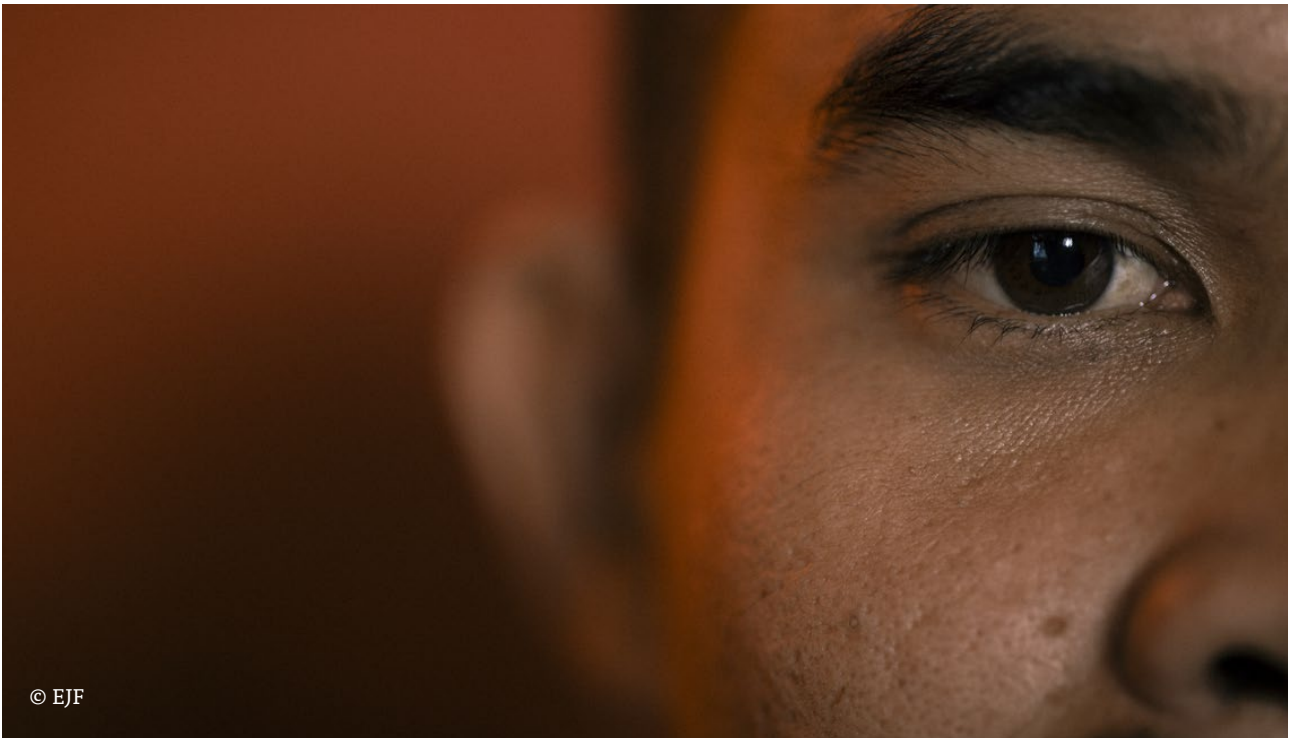
Physical violence was rife across the vessels, with 24 of the 44 (54.5%) crew members interviewed attesting to the practice taking place on board. Reported physical abuse included hitting, kicking, punching, as well as the use of knives and metal work tools. Abuse was often said to be severe: “he hit me with power”, “it was really hard and hurt”, “of course it was hard”, as well as often: “he frequently hit us”, “four times in a week”, “he hit us whenever we made mistakes”. Certain testimonies told of particularly stark abuses, “he [the bosun] punched and kicked his nephew, and the bosun

threw away his belongings because he fell asleep due to tiredness [...] his nephew came home with nothing, so we just gave him our clothes”; “the deputy of the foreman took a knife [...] he hacked the Indonesia crew who was taking a shower” and; “the foreman woke us up by hitting us, not using alarms. It hurt. They did not give us breakfast, but told us to start to work immediately”.

Intimidation and threats

Intimidation and threats, often in the form of verbal abuse, were reported by 31 of the 44 (70.5%) interviewees, and often compounded the physical violence, “he shouted at me while hitting me”. Testimonies across the fleet depict senior crew members frequently getting angry, threatening and verbally abusing crew members. The “captain often shouted”, “the captain is always shouting, angry, nagging and using bad words”, and frequently “snapped”, “cursed” and was “cruel”. Chinese crew members would shout or curse, particularly at new, inexperienced fishers, as well as when small mistakes were made, or when someone was injured or fatigued. Under the ILO Indicators “constantly insulting and undermining workers also constitutes a form of psychological coercion, designed to increase their sense of vulnerability”.²⁴⁴

Threats by the captain and senior crew across the fleets were also often reported. Threats of physical violence, as well as loss of wages, food and shelter were described, often pertaining to the loss of guarantee money, as discussed below.



Retention of identity documents

Identity documents were retained by the captain, senior crew or recruitment agencies from 33 of the 44 (75%) interviewees. Documents retained were not only passports, but also birth certificates, basic safety training certificates, family books and seaman's books. Some crew stated they were retained to stop them running away: *"they kept it because some of the sometimes reluctant crew planned to jump off the vessel"*. In the majority of cases, documents had to be the original copies. A number of interviewees did not receive their documents back in full until months after they returned home.

Deception

41 of the 44 (93.2%) crew interviewed reported that they were deceived, specifically regarding the wages and payments they received compared to those outlined in their contracts. The vast majority of those interviewed reported wages being delayed, deducted or, in the worst cases, never paid at all. Many crew members described how their salaries were different from the wages stated in the contract, changing from US\$450 a month down to US\$350 for example.²⁴⁵ One interviewee said that the *"agency cheated us"* because they were forced to sign a new contract with a lower wage once they had already boarded: *"we signed since we had no choice"*. Another, when asked if the agency paid them the right amount, replied *"No, they did not. The agency just gave me fake promises"*.

Salary deductions were also reported due to the owing of hundreds if not thousands of dollars on account of guarantee money. Crew members were recruited in exchange for a loan, and had to pay back transport and daily living expenses, including medical expenses. Fishers have their salaries heavily deducted each month, sometimes for years, to repay this debt. Because of this, the majority of fishers received salaries lower than those stated in their contract. If crew members did not finish their contract, even if this was involuntary, they were not paid back their guarantee money. One interviewee had their guarantee money taken, as well as seven months of salary deductions, leaving him with the equivalent of US\$38.27 for nine months work. Several interviewees described feeling humiliated about their salary deductions: *"I felt like a beggar when I returned home because I didn't hold money at all"*.

Onboard allowances were also reportedly not paid in many instances, and money due to be paid to families was withheld for months or years. Multiple interviewees were told that they could not receive their US\$50 monthly onboard allowance until the boat docked which, especially under COVID-19 lockdowns, rarely or never happened: *"if we dock, they will give it to us, but we did not use it since we never docked"*. Wages that were meant to be paid to family members every two months were delayed or withheld for many further months or even years. One interviewee describes how, after the salary was not sent to his wife at home, and she was unable to borrow money, she had to move from her hometown and leave their five year old child in order to find work.

In the worst cases, several interviewees reported never getting paid, sometimes on account of the fact that debt deductions allegedly exceeded their salary, as well as not finding out about salary discrepancies for months or years, until they could contact loved ones. One crew member told of how, after being unable to contact his family for 10 months, when the vessel finally docked, he and his friends heard that the salary had not been paid at all: “they worked hard, they were exhausted, but did not get paid”. Another recounted how “it was supposed to be transferred to my parents account but they never received anything, US\$50 on board salary also has never been paid”. Another interviewee stated that US\$3,253.21 has still not been paid because “the company had many debts [...] my and other salaries were used to pay the debts”.

Five interviewees also claimed that they worked on a vessel different from the one stated in their contract, a clear indicator of deception. One was told, in Chinese, that he was to work on a different vessel, ‘at first’ but continued there for the two years he was contracted for. Another believed he was to work on a Taiwanese vessel, which is why he signed the contract, but he ended up working on a Chinese-flagged one: “I regret working at this vessel [...] I regret joining the company”.

Abusive working and living conditions & excessive working hours

Poor working and living conditions were experienced on board all vessels, with interviewees from every vessel stating at least one infraction. Tough conditions were described across the fleets; “it was inhumane”; “it is categorised as slavery”; “I felt that I was treated like a slave [...] it wasn’t in line with the promise”.

Excessive working hours were reported across the interviews. ILO C188 describes minimum hours of rest for fishing vessels as 10 hours in any 24-hour period, with 42 of the 44 (95.5%) interviewees reporting working in excess of this. As with wage discrepancies, elements of deceptive recruitment can be seen in the working conditions experienced on board vessels. Working hours and conditions often differed from those described in the contract, with one interviewee stating a contracted workday of eight hours, but having to work between 18 and 22 on average, with three hours to sleep, eat and wash.

Crew members frequently detailed the extreme working hours: “it [the work] took about 20-22 hours a day”, “our work took 23 hours. We had no sleep and were tired. After we ate, we got to work right away”; “in the peak season we could work for 30 hours”. They also reported limited time to rest: “we only slept for one hour”; “we would only have one or two hours of rest”;

“one time, the captain cursed me because of work; I worked 24 hours, and then he just cursed me”. Several crew members discussed the constant lack of quality rest, and the psychological control exerted by senior crew members on board: “even if we seem to rest, they will give us something to do, like fixing the nets, because they don’t want you to rest”; “the work didn’t give us any break at all! During my time on board for 22 months, I could only have normal rest - without doing any work - twice [...] because the weather was stormy”. Places for rest and sleep were also deemed inadequate. One interviewee stated “I didn’t get a place to sleep. I slept on the way where people walked back and forth”.

Crew members claimed that people were often kept on board despite pleas to return home, and would sometimes go years without docking, entirely restricting crew members’ movement and exacerbating their isolation. In one case, the captain’s refusal to dock the vessel was, in part, said to be responsible for a crew member’s suicide. One individual was on a vessel that did not dock for two years, despite multiple requests to return home, and others were said to have been threatened with penalties: “they were threatened. If they returned home, they were threatened with a fine of US\$5,000”. North Korean workers were also reported to be working on four of the vessels, and they appeared to be working on the boats indefinitely: “six [North] Koreans were not allowed to go home, even though they completed their four year contract. They were just moving from one ship to another ship”. Vessels did not have Wi-Fi, or senior crew would not allow crew members access to it, so they could not contact loved ones throughout their time on board. One interviewee said that, if they were allowed to call home, they would be charged US\$5 a minute. Personal documents were retained from 33 interviewees, which served to further isolate the crew and limit their ability to move when on shore. Isolation and restriction of movement are both recognised by the ILO as forced labour indicators.

ILO C188 states that “food and potable water shall be sufficient, having regard to the number of fishers, and the duration and nature of the voyage. In addition, they shall be suitable in respect of nutritional value, quality, quantity and variety”. This appears not to be the case on board the majority of the vessels upon which crew were interviewed. Food and water were said to be inadequate, and there was usually a notable difference between what the Chinese crew would eat and drink compared to the other crew. Water would, in the majority of cases, be distilled seawater of poor quality, that was often discoloured, with a yellow appearance and rusty taste, while the captain and senior crew would have access to bottled mineral water. Food was poor and often expired, and one interviewee described eating a whole chicken for a week that was infested with cockroaches. Another

said that the senior crew “made us eat like pigs”. Basic consumption needs that should have been covered were left to be expensed by the crew. Wages would be docked for basic food and drink on board, including water, coffee and dried noodles (ILO C188 highlights that food and drink should be provided by the fishing vessel owner at no cost to the fishers). One interviewee described having his salary deducted US\$5 each time they ate for more than 15 minutes.

Other conditions on board were also reported to be extremely harsh. Crew members often had to share one toilet with all those working on board, while the captain would have his own. One interviewee stated that “we had to give [numbered] tickets to defecate”, and another said that the toilet was broken for their whole trip, and crew therefore had to defecate off the side of the boat. This again seems to fall short of the standards outlined in ILO C188, in which it is stated that vessels over 24 m shall provide “at least one toilet for every eight persons or fewer, where the competent authority is satisfied that this is reasonable and will not result in discomfort to the fishers”. Another fisher stated that there was no shower room on board, and they had to bathe in seawater throughout their two year contract.

Many interviewees also discussed hazardous work conditions on board the vessels, which the ILO Indicators suggest can fall under abusive working conditions. Gloves, boots, and protective gear were often old and torn, if given, and replacements were not available. Many suffered from skin peeling from the lack of safety equipment, with one interviewee stating that he was forbidden to use protective clothes for the first four months of employment.

Medicine was also greatly insufficient, mostly expired, and labelled in Chinese, a language crew members often did not understand. A few interviewees describe instances when they were injured or ill: “they just use alcohol for cleaning and sewing your wound like anaesthesia [...] every sting of the needle, I felt it. I was given medicine that I don’t understand because it was written in Chinese”; “we have no choice [but to take expired medicine] because we have no medicine. If you have a wound, it will only be cleaned; you will not be given medicine, and then the next day it will not be cleaned”.

Severe sickness was reported across a number of vessels. Crew apparently suffered from a range of ailments including haemorrhoids, abscesses, and skin peeling, as well as injuries from falling on board, or being hit by equipment. This was often met with anger or humiliation rather than care or medicine: “instead of getting treatment, he was scolded by the captain”; “the bosun and the captain laughed at me, even if there is a lot of blood coming out. They said, when I die I will

get a lot of money”. One of the interviewees described when his colleague (who had previously broken his hip) complained of heavy lifting, he was met with physical abuse: “his fractured hip got triggered again, and when he complained, the bosun punched and kicked him with a shoe. My colleague was crying while working”. It was reported across a number of vessels that crew were forced to work even when ill: “even if you are sick, you have no option; you still work”; “they forced us to work even though we were sick [...] they don’t care if we are sick because what they really care about is money”; “one of our colleagues got sick for almost a month, but the captain did not dock or transfer him for him to be checked, instead he was still forced to work”. Crew members were threatened with not being fed or not being paid if they did not work.

There were deaths on board four of the vessels, and severe illness or injury was reported across a number of vessels. Three of the reported deaths were of crew members, and one was of a Pakistani guard on board the vessel to protect crew from the threat of piracy and armed robbery at sea.

On the first vessel, a crew member was believed by his colleagues to have committed suicide. He was reported to be hallucinating and acting strangely in the weeks up to the incident: “before he was sick, he told me that he saw a beautiful woman in the engine room [...] at the time, I said that maybe he hallucinated because of tiredness”. Within the three week period leading up to his death “he talked by himself, he laughed by himself, he never slept”. He was said to have become increasingly isolated, but would keep working even on no sleep. He requested to go home, “but it wasn’t allowed by the captain [...] it wasn’t allowed to dock”. The rest of the crew went on strike to protest the decision of the captain not to dock, in support of their colleague. As far as the interviewee could remember, the crew member jumped off the vessel when they had been at sea for 17 or 18 months: “it was intentional. As if someone invited him”.

The other two crew members who reportedly passed away were believed to have died due to sickness on board their respective vessels. One individual was assigned to work on the freezer, but he was said not to be physically strong enough: “His body was swollen [...] he was dead. His head became so big”. He died after he was transferred to another vessel on the same fleet. The other individual who died was apparently working despite his ill health, which gradually deteriorated: “he was sick but he kept working [...] one day he passed out and he was brought to his room. The next day his feet were already swollen. A friend of mine who knew Chinese talked to the captain. The captain then headed to the port in Seychelles. The vessel was three days away from reaching the port, but he did not make it”.

The fourth reported death was of a Pakistani guard. It was said that “he became weak within three days [...] after a week, he passed away”, “he got sick because of the food, maybe his body was shocked, so he stopped eating”. The Muslim crew on board took care of the corpse and prayed. The vessel reportedly did not dock for another five months after he died.

6.2 IUU fishing and human rights abuses by the Chinese tuna fleet in the SWIO 2017 - 2023

The previous section has provided a detailed case study of the extent and nature of IUU fishing and abuses on board China’s tuna fleet in the SWIO. To augment these findings, a systematic review of IUU fishing and human rights offences by the fleet was also conducted. In total, 63 cases (corresponding to 132 suspected or confirmed offences) were identified in the SWIO region. The majority of them were aboard longliners (53 cases, 84%), followed by purse seiners (10 cases, 15.9%). 52.4% of the cases occurred within the EEZ of Tanzania, while 20.6% of those were found on the Indian Ocean high seas. The top offences by

the tuna fleet are human rights abuses (40 offences, 30.3%), failure to report/declare catch (22 offences, 16.7%) and 21 offences (15.9%) of absconding from inspections and non-cooperative behaviours such as not allowing observers to access the bridge, allegedly to prevent the discovery of excessive shark fins on board (shark finning: 21 offences, 15.9%).

Currently, amongst the 95 tuna-targeting vessels authorised to operate in the SWIO region, 45 vessels (47.3%) are linked to cases of IUU fishing and/or human rights abuses (62 cases, 125 offences), predominantly to offences of shark finning, human rights abuses, and absconding from inspections. Moreover, 24% of these vessels have two or more IUU fishing or human rights abuse cases on record, highlighting the limited capacity of flag, coastal and port states and RFMOs to identify IUU fishing and prevent its purveyors from operating in the region.

Table 6 shows the statistics of IUU fishing or human rights abuse cases by the top offenders of the Chinese tuna fishing fleets that are still active in SWIO in 2023, with Shandong Zhonglu and their subsidiaries the worst offenders with 19 cases amounting to 43 IUU fishing/human rights cases.

Table 6 - Top 3 offenders (tuna fleet) of IUU fishing and human rights abuses in the SWIO region that are still active as of 2023.

| | Enterprise group | Fishing company | No. of IUU fishing/ human rights abuse cases | No. of IUU fishing/ human rights abuse offences |
|---|---|---|--|---|
| 1 | Shandong Zhonglu | Shandong Zhonglu Haiyan Oceanic Fisheries Co., Ltd. | 13 | 29 |
| | | Shandong Zhonglu Oceanic Fisheries Co., Ltd. | 6 | 14 |
| 2 | Zhejiang Ocean Family | Zhejiang Ocean Family Co., Ltd. | 14 | 30 |
| 3 | China National Agricultural Development Group | CNFC Overseas Fisheries Co. Ltd. | 3 | 5 |

6.3 Case Study: The experience of crew on board Chinese-owned trawlers in Mozambique

In January 2024, EJF investigators carried out semi-structured interviews with 16 Mozambican nationals who had worked on Chinese-owned industrial fishing vessels operating within the Mozambican EEZ since 2018. All the conducted interviews took place in the city of Beira, home to the second largest port in the country and a historic hotbed for Chinese fishing activity and infrastructure investment. The 16 individuals reported working on at least 16 distinct vessels for a total of seven separate Chinese-owned fishing companies: Dalian Yangming Overseas Fishery (DYOF), Fu Yue Pescas (FYP), Guangdong Shunxin Sea Fishery Group Co (GSSF), Guangdong Xiasheng (GX), Min Yu Pescas (MYP), Ocean Rich Pelagic Mozambique (ORPM), and Sotrabel.

As of February 2024, only the full Mozambican industrial vessel fishing licence lists for 2019, 2020 and 2023 are publicly available online through the

ADNAP website.²⁴⁶ Six of the seven Chinese-owned fishing companies that employed the interviewed individuals have appeared on at least one of these lists, with two – FYP and GX – continuing to hold active licences in 2023. GSSF does not appear on any online licence lists, which may be further evidence of the presence of Chinese fishing vessels in Mozambican territorial waters without publicly declared licences. Alongside the information gathered through interviews, the company’s presence in Mozambican waters is corroborated by Chinese government data showing authorisation from MARA for the business to fish in Mozambican waters in 2019 and 2020.

The 16 interviews conducted by EJF staff bring to light widespread evidence of IUU fishing in the Mozambican EEZ, as well as human rights abuses – including physical violence – that have reportedly taken place on board these vessels. The nature and frequency of the offences reported by the interviewed crew is summarised in **Table 7** below. The human rights abuses described correspond to the relevant ILO Indicators of Forced Labour.²⁴⁷ All reported offences allegedly took place within the Mozambican EEZ.



Chinese industrial vessels in Beira, Mozambique.

Table 7 - Summary of alleged IUU fishing offences and human rights abuses witnessed by crew on board Chinese-owned fishing vessels operating in Mozambique between 2017 and 2023

| IUU fishing/human rights | Alleged IUU fishing offence/human rights abuse | Number of crew | Percentage of total crew interviewed (n = 16) |
|--------------------------|---|----------------|---|
| IUU fishing | Fishing in prohibited areas | 9 | 56% |
| | Deliberate capture and/or injury of vulnerable marine megafauna | 8 | 50% |
| | Shark finning | 6 | 38% |
| | Use of illegal fishing gear | 4 | 25% |
| Human rights abuse | Intimidation and threats | 14 | 88% |
| | Physical abuse | 13 | 81% |
| | Abusive working and living conditions | 11 | 69% |
| | Excessive overtime | 10 | 63% |

IUU fishing offences

Fishing in prohibited areas

Several interviewees gave evidence of Chinese vessels fishing in prohibited areas, including marine protected areas (MPAs) and areas within three nautical miles of shore that are reserved for artisanal fishers under Mozambican law.²⁴⁸ Seven employees of GX stated that they believed the vessel(s) on which they worked had fished in such areas, particularly within the 3 NM zone reserved for artisanal fishers; one crew member claimed that they fished as close as 200 m to shore (approx. 0.11 NM), while another reported that they were so close to the coastline that they could clearly see people on the beach. Interviewees alleged that Chinese captains are fully aware of the legislation but actively choose to breach it to increase their catch. Three interviewed GX workers highlighted that even though the crew have occasionally reported this illegal fishing to the port authority, there have typically been no ramifications for the Chinese crew and vessel owners.

Employees of ORPM and DYOF also gave evidence of fishing in restricted areas, stating that illegal fishing in these zones was often carried out at night, with all lights on the vessel switched off. One former ORPM worker reported that the company regularly fished in prohibited areas, including trawling in the Ponta do Ouro MPA, an area of high biodiversity including more than 900 species of fish, around 300 species of hard corals and more than 50 of soft corals.²⁴⁹ Chinese trawlers have been documented destroying coral in other literature, including a 2023 report by the Centro de Integridade Pública (CIP) which found evidence near Inhambane.²⁵⁰

Deliberate capture and/or injury of vulnerable marine megafauna (including shark finning)

Article 146 and Annex XIII of the Marine Fisheries' Regulation (REPMAR) outline a list of marine species for which capture is prohibited in Mozambican waters.²⁵¹ Five interviewed crew members who worked on vessels belonging to GX reported catching prohibited species during their time on board, including turtles, manta rays, dolphins, a variety of shark species, and even dugongs. These allegations were corroborated by photographic evidence; EJF's investigators were shown images of turtles and dolphins on board one of GX's trawlers. Four workers stated that they had witnessed Chinese members of crew on these vessels removing the fins from dead sharks. Three of these individuals said that the Chinese crew then used these fins to make shark fin soup, while the other worker alleged that the fins were dried on board before being packaged up for export.

The catching of prohibited species was not confined to GX; three DYOF workers also reported catching prohibited species during their time at sea, including whale sharks. All three of these individuals gave evidence of shark finning taking place on board, in all cases for consumption by Chinese crew on board.

Reported offences involving bycatch were not limited to the capture of prohibited species, but also included the processing and export of species that were not included in vessel fishing licences. On GX's 2023 fishing licence, as published in ADNAP's 2023 campaign document,²⁵² shrimp is not listed either as the target catch or as permitted bycatch.

However, despite this restriction, one GX worker reported that their boat would frequently capture and process shrimp. This catch would be packed in boxes that were identical to those used for permitted species and given the same markings in order to avoid detection at port, before being exported.

Use of illegal fishing gear

Articles 37–39 of REPMAR establish the rules for minimum net size in Mozambican territorial waters.²⁵³ One interviewee who worked for five different Chinese fishing companies alleged that it was common for these vessels to use illegal nets with extremely fine mesh to increase the volume of their catch. This fine net was inserted into their main trawl net while at sea, before being removed and hidden when heading back to port to avoid detection by inspectors. This worker stated that despite their size, no fish caught in this smaller net were returned to sea; large fish were exported, and smaller fish were sold locally.

Two crew members who worked on GX vessels also reported the use of this extra net on their boats, with one describing the situation as a “massacre”, as the mesh used was so fine that even fish eggs would be caught. Another worker who was employed by DYOF also gave evidence of the use of this type of illegal net, noting that they were troubled to see such a large number of undersized fish being captured.

Human rights abuses

Intimidation and threats

“The Chinese have no respect. Aggression, hitting us while we work – the Chinese do that . . . I don’t know if that’s something that they see as normal, but for us Mozambicans it is not normal. [They] hit and insult the workers”.

14 of the 16 interviewees gave evidence of witnessing intimidation and threats on board Chinese-owned vessels, including those belonging to DYOF, FPY, GX and ORPM. Interviewees generally reported extremely poor relationships with the Chinese crew present on their vessels, a situation compounded by communication issues as most Chinese individuals were not able to speak Portuguese. Verbal abuse of Mozambican crew was prevalent; crew members reported that they were frequently shouted at to work harder, particularly when fatigued after long periods without suitable rest, or when they were not able to

understand orders. One individual characterised the abuse they were subjected to on board vessels owned by GX as neo-colonial:

“What we go through on these vessels is basically colonialism, but we have no choice [...] that’s slavery, not work”.

Physical abuse

“They will hit you with anything: their hands, kick you with their feet, or even anything that is nearby. They will use a random object and hit you in the head with it.”

In many cases, interviewees reported an escalation from verbal abuse to physical violence, with 13 of the 16 interviewed crew members stating that they had witnessed physical abuse on board the vessels. Not only were these individuals attacked by senior Chinese crew members themselves, but many also witnessed fellow crew members being subjected to similar acts of violence. As well as punching, kicking and spitting on the Mozambican crew, Chinese crew are alleged to have used whatever tools were at their disposal to beat them; one Mozambican crew member stated that he saw Chinese crew using hammers to beat Mozambican crew, while another saw colleagues attacked with ropes. Workers stated they were reluctant to report such violence to authorities for fear of losing their jobs – one colleague of a crew member allegedly had his maritime qualification invalidated after reporting an attack by a Chinese crew member, and was unable to work at sea again.

Abusive working and living conditions

Poor working and living conditions on board were reported by 11 of the 16 crew members interviewed. GX workers frequently noted issues with the provision of food and water on board; Chinese crew on board these vessels typically had their own chef and a greater volume of food, as well as access to clean, potable water. By contrast, too little food was available for Mozambican workers. Several crew members reported that their limited food supply would run out quickly, after which they were forced to resort to a diet of ‘bycatch’ fish from their catch. One worker highlighted that in contrast to the Chinese staff members, the Mozambican crew had to drink water from the boat’s tanks instead of proper drinking water. Consumption of dangerous water from rusty tanks was also reported by an individual who worked on board a DYOF vessel.

Cramped sleeping quarters on board for Mozambican workers were also frequently reported. An interviewee who worked for GX explained that they were forced to sleep in a small bunk bed, with eight individuals crammed into the two beds. Another GX worker – who directly compared conditions on board to slavery – stated that there were no sleeping quarters at all on their vessel, with the Mozambican workers instead having to sleep on the floor, huddling together for warmth. Additionally, a crew member on a DYOF boat reported that only bunk beds with limited space were available on their vessel, forcing those who could not fit in to use a designated overflow space outside on the deck under a tarpaulin, exposed to the elements.

Excessive overtime

10 of the 16 crew members that were interviewed described exhausting working hours on board Chinese-owned vessels, with extremely limited time for rest. One crew member who worked on vessels belonging to FYP and ORPM reported regularly sleeping for as little as 30 minutes a day during peak fishing times. Several workers present on GX vessels reported similar conditions, in which little to no time was allocated for rest for Mozambican workers by senior Chinese crew when production levels were high; workers would spend almost the entire day either attending to the net or processing the catch, with as little as 2 or 3 hours a day of sleep.

6.4 IUU fishing and human rights abuses by the Chinese non-tuna fleet in the SWIO 2017 - 2023

In total, 18 cases corresponding to 40 offences of IUU fishing or human rights abuses associated with non-tuna vessels in the SWIO region were documented, all of which are trawlers. 12 cases (66.7%) occurred in the Mozambican EEZ, and 6 cases (33.3%) in the Madagascar EEZ. The top three offences are human rights abuses (11 cases, 27.5%), fishing in IEZ/prohibited areas (10 cases, 25%) and shark finning (6 cases, 15%). 72% of these allegations were derived from interviews conducted by EJF.

Currently, among the 39 active Chinese trawlers in SWIO, 10 vessels (26%) are linked to cases of IUU fishing and/or human rights abuses (12 cases and 25 offences regardless of the location of the offences). The percentage of vessels with IUU fishing history is lower than that of the longliners; however, it should be noted that a number of vessels linked to IUU fishing and human rights cases have recently left Mozambique, reflecting a pattern of trawlers moving fishing grounds more frequently than longliners. For instance, seven Dalian Yangming Overseas Fishery vessels licensed to catch small pelagic fish within the Mozambique EEZ between 2018 and 2020 were associated with 15 offences during that period - but are now believed to be in West Africa.

Table 8 - Top 3 offenders (non-tuna fleet) of IUU fishing and human rights abuses in the SWIO region that are still active as of 2023.

| | Enterprise group | Fishing company | No. of IUU fishing/ human rights abuse cases | No. of IUU fishing/ human rights abuse offences |
|---|---|--|--|---|
| 1 | Guangdong Xiasheng Ocean Fishery | Guangdong Xiasheng Overseas Fisheries Co, Lda. | 5 | 12 |
| 2 | China National Agricultural Development Group | Zhongyu Global Seafood Corp. | 4 | 4 |
| 3 | Guoyue Group | Guangdong Zhongtai Senda Fishery Co., Ltd. | 2 | 6 |

6.5 Ownership profiles of vessels associated with IUU fishing and human rights abuses in the SWIO

By number of cases, the three highest offenders currently operating in the SWIO are: Shandong Zhonglu, Zhejiang Ocean Family Co., Ltd. and China National Agricultural Development Group Co., Ltd. This section will provide an overview of the corporate structures of these companies, placing operations within the SWIO in their broader corporate and international contexts.

Shandong Zhonglu (山东省中鲁远洋渔业股份有限公司)

In total, Shandong Zhonglu has 19 reported cases (43 offences) of IUU fishing or human rights abuses in the SWIO. The top offences are failure to report/declare catch (13 offences), absconding from inspections (12 offences), human rights abuses (7 offences) and shark finning (7 offences). In 2018, during Operation Jodari, a joint operation between the Tanzanian government and Sea Shepherd, 20 vessels, of which 13 were from Shandong Zhonglu, absconded from the inspections by fleeing Tanzanian waters.²⁵⁴ Tanzanian law requires licensed vessels fishing in Tanzania’s EEZ to be inspected prior to leaving Tanzanian waters to ensure that the vessels abide by their licensing terms. This behaviour is suspected to be because the number of shark fins the vessels were carrying significantly exceeded the number of carcasses, on the basis of the preliminary findings when the patrol team inspected one of the vessels. Moreover, the inspection found that the living conditions aboard were appalling:

12 fishermen shared two beds in a small and unventilated space, and their food and water were sometimes withheld.²⁵⁵ Interviews conducted by EJJ with former fishers working in the company’s fleet further support these findings.

As a result, each vessel was fined one billion Tanzanian shillings (US\$386,500) by the Ministry of Livestock and Fisheries of Tanzania. However, it is unknown to date whether Shandong Zhonglu has paid the fine. According to Shandong Zhonglu’s website, 2022 was the “first year of regaining fishing access to Tanzania after a 4-year break”.²⁵⁶ Despite the fact that all Shandong Zhonglu’s vessels currently operating in Tanzanian waters have a history of IUU fishing and/or human rights abuses, they were able to return to Tanzania’s fishing grounds in 2022, facilitated by MARA negotiating access with the Tanzanian government.²⁵⁷

Shandong Zhonglu is a major Chinese DWF company, with an operating revenue of US\$147 million as of 2022,²⁵⁸ derived predominantly from distant water fishing (40.4%) and seafood processing (53.8%), with trans-shipment services (10.6%) also a significant contributor to its income.²⁵⁹ Foreign markets are important for Shandong Zhonglu, with approximately 43% of its fishery products being exported.²⁶⁰ The company is listed on the Shenzhen stock exchange, with 51.87% of the shares on the exchange traded in foreign currencies.²⁶¹ In addition, the state owns 70% of Shandong State-owned Assets Investment Holdings Co.,Ltd, who in turn owns 47.25% of the shares in Shandong Zhonglu, and is the controlling shareholder - making Shandong Zhonglu a listed state-owned enterprise (**Image 3**)²⁶².

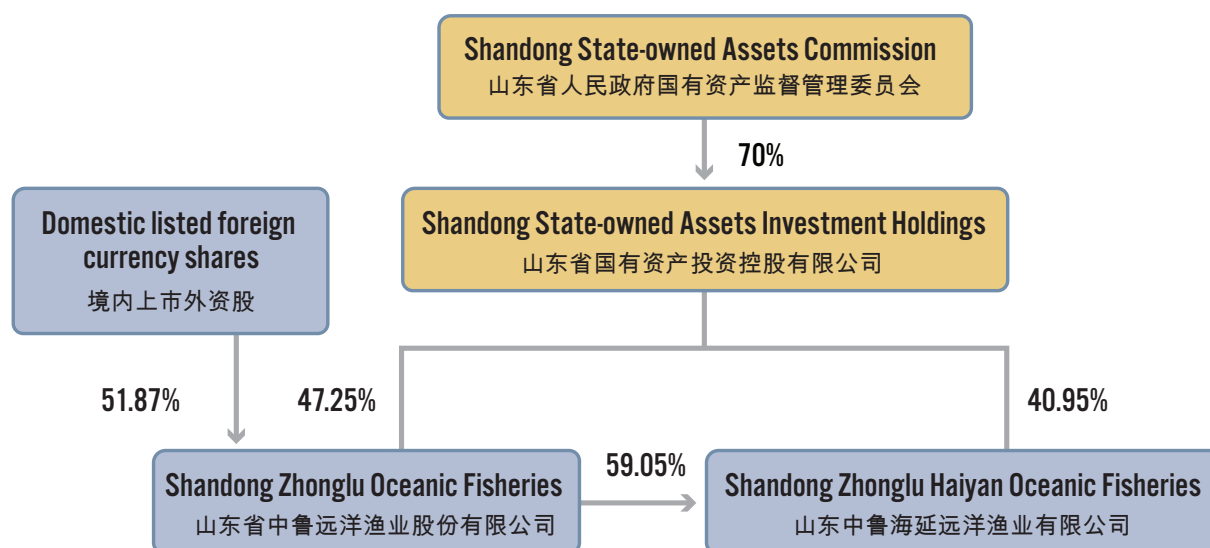


Image 3. The shareholding structure of Shandong Zhonglu.

Shandong Zhonglu claim that their company's distant water fishery activities are “an integral part of China's “Going Out” strategy, China's “Sea Power Nation” policy and Shandong Province's strategy to strengthen its status as a “sea power province.””²⁶³ The company's vessels are primarily tuna longliners, owning a total of 14 either directly or indirectly through subsidiaries. The major fishing ground for these vessels is the Indian Ocean, specifically, the waters of Tanzania and Somalia.²⁶⁴ Shandong Zhonglu, through Shandong Zhonglu Fishery Shipping Co., Ltd., also manages a fleet of seven refrigerated transport vessels mainly operating in the Pacific Ocean and engaging in trans-shipment.²⁶⁵ Moreover, Shandong Zhonglu has a subsidiary based in Jinan, Shandong Overseas Fisheries Development Co. Ltd.²⁶⁶

The learning, integration and dissemination of the Chinese Communist Party (CCP)'s ideology (“党建工作”) are seen as an integral part of company culture for large state-owned enterprises like Shandong Zhonglu. For instance, President Xi Jinping's strategies for a new China, such as “building a sea power nation”, have been applied in every aspect of Shandong Zhonglu's operations. They have been realised through aggressively acquiring fishery resources overseas and disseminating the CCP's ideology along the way. For instance, Shandong Zhonglu organised ‘red education’ programmes for their Ghanaian workers to learn about the ideology of the CCP through viewing propaganda films.²⁶⁷ In return, state-owned enterprises who

actively support the CCP receive monetary support and their day-to-day operations, such as landing tuna at ports, are often prioritised and facilitated to a great extent by the provincial or municipal governments. This is with the objective of “building a strong sea power province.”²⁶⁸

Shandong Zhonglu maintains a close relationship with Tanzania's Deep Sea Fishing Authority (DSFA), and both have been keen on enhancing fisheries collaboration in recent years.²⁶⁹ On their website, the company claims that they “will adhere to the principles of doing business, constructing livelihoods and sharing profits. [Shandong Zhonglu's] main concept will be openness, “greenness” and boosting development, with a goal of high standards, sustainability and keeping locals' livelihoods in mind, and continuing to strengthen mutually beneficial cooperation in the field of fisheries”.²⁷⁰ The findings of this report, however, suggest that the company has failed to uphold these standards, given the litany of offences associated with its operations.

Shandong Zhonglu receives a number of direct and indirect subsidies from the Chinese government (**Tables 9 and 10**). In recent years, the company has apparently been highly dependent on government subsidies to offset significant fluctuations in revenue, with the company appearing to be profitable only because of the financial support of the Chinese government in 2021.²⁷¹

Table 9 - Annual subsidies as a percentage of the total annual profit for Shandong Zhonglu

| Year | Annual subsidies received (million US\$) | Annual profit (million US\$) | Annual subsidies received compared to annual profit (%) |
|------|--|------------------------------|---|
| 2021 | 6.34 | 6.33 | 100.2 |
| 2020 | 3.33 | 5.91 | 56.3 |
| 2019 | 3.25 | 14.8 | 22.1 |

Table 10 - Deducted income tax as a percentage of the total annual profit for Shandong Zhonglu

| Year | Deducted income tax (million US\$) | Annual profit (million US\$) | Deducted income tax compared to annual profit (%) |
|------|------------------------------------|------------------------------|---|
| 2021 | 6.06 | 6.33 | 95.7 |
| 2020 | 6.42 | 5.91 | 108.6 |
| 2019 | 9.99 | 14.8 | 67.8 |

Overview of subsidies to the Chinese DWF

Many of the world's fishing fleets are reliant on harmful subsidies to ensure the profitability of their operations, with a total of US\$22.2 billion spent in 2018.²⁷² China is the largest spender on harmful subsidies, totalling US\$5.9 billion in the same year.²⁷³ As this report depicts, some of these subsidies contribute to fleets that are committing IUU fishing and human rights abuses.

Chinese DWF companies receive direct and indirect subsidies from the central, provincial and municipal governments for various fishing related activities - which constitute a significant portion of many companies' annual revenue. This is especially the case for DWF companies involved in tuna fishing, which requires a substantial amount of capital, meaning government subsidies are crucial for the success of the business.

Since 2015, the Chinese government no longer issues separate fuel subsidies, which were a 'lifeline' for most DWF companies. These subsidies were integrated into the Fisheries Development Fund, which supplies a larger array of operational needs, including:

- International Compliance Subsidy for the DWF: The previous fuel subsidy is now provided under the programme of "Surveying and Conservation of Fisheries Resources and International Compliance Capacity Enhancement".²⁷⁴ Payments under this programme take into account the annual DWF company compliance score, vessel type, valid fishing days as transmitted via vessel monitoring system (VMS), and whether the vessel has undergone reflagging, rewarding those companies who achieve a good compliance score and a full year of strict observance of applicable rules relating to VMS.
- Fisheries Public Infrastructure Facilities (building overseas fisheries bases): the Chinese central government subsidises 30% of the total investment made by a Chinese DWF company.²⁷⁵ The provincial government will then subsidise an additional 10-50% of what the central government has provided.^{276,277}

In addition to the Fisheries Development Fund, since 2012, the Chinese government has started to subsidise and encourage vessel replacement. Under the subsidy policy "DWF Vessel Decommissioning and Replacement", the DWF companies were allowed to keep their vessel quota and replace their old vessels to new and more efficient models with the same engine power, in collaboration with shipyards in China. As of the most recent announcement,²⁷⁸ a tuna seiner can apply for a maximum subsidy of US\$2.8 million; a tuna longliner US\$266,000-700,000; and a trawler US\$504,000-728,000, depending on the vessel length.

Moreover, since 2021, provincial or municipal governments provide subsidies to compensate for the cost of shipping catch back to China. This has been strongly supported by the provincial governments, as the entire supply chain (which consists of tens of thousands of primary and secondary fish processing plants across the country) relies on the availability of raw fish. For Shandong, the province specialising in tuna fishing, 70% of fisheries products were shipped back to China and the remainder was sold elsewhere.²⁷⁹ For example, shipping ultra-low-temperature tuna to China is subsidised US\$28-210 per tonne, with US\$4.2-84 per tonne for squid and US\$7-70 per tonne for other fish.^{280,281,282}

Zhejiang Ocean Family Co., Ltd.
(大洋世家(浙江)股份公司)

The Zhejiang Ocean Family Co., Ltd. (ZOF) has 14 cases (30 offences) of IUU fishing or human rights abuses in the SWIO. Its top offences are human rights abuses (7 offences), absconding from inspection (7 offences) and failure to report/declare catch (6 offences). ZOF's tuna fishing grounds in the Indian Ocean overlap with those of Shandong Zhonglu, and the fleets were jointly sanctioned in 2018 for IUU fishing in Tanzanian waters.

While ZOF claims it “values environmental protection greatly and strictly enforces the requirements of domestic industry regulators and the environmental protection agreement of United Nations Convention on the Law of the Sea²⁸³”, this is clearly refuted by testimonies, photos and videos shared or uploaded to social media platforms by former fishers, which suggest that violations of applicable fishing laws and regulations are commonplace on board the company's vessels. In addition to offences in the SWIO region, video footage from former fishers on two ZOF vessels documented shark finning and killing of false killer whales, dolphins and turtles in Somalian waters. In one of the videos, one crew member on a ZOF vessel appears to use a rifle to shoot dolphins as they were swimming beside the vessel.

ZOF is one of the major fishing companies in China and globally, with a reported operating revenue of US\$344 million.²⁸⁴ The vast majority of this comes from distant water operations (34%), seafood processing (35%) and the trade of seafood goods (30.7%).²⁸⁵ ZOF claimed to account for 14.6% of total Chinese tuna production in 2020, serving both domestic (57% of sales income) and export markets (43%).²⁸⁶

ZOF is privately owned by a Chinese conglomerate, Wanxiang Sannong Group (万向三农集团有限公司), whose listed beneficial owner is Lu Weiding (鲁伟鼎),²⁸⁷ a member of the 14th National People's Congress of the People's Republic of China,²⁸⁸ vice chairman of the China Enterprise Confederation / China Enterprise Directors Association²⁸⁹ and vice chairman of the All-China Federation of Industry and Commerce.²⁹⁰

According to a company prospectus provided for a failed IPO bid in 2023, ZOF was first established as a state-owned company in 2009. At the time, Zhejiang Ocean Fisheries Group, a fishing enterprise established by several Zhejiang governmental entities, controlled 70% of ZOF's shares, while privately-owned Wanxiang Sannong Group controlled 30%.²⁹¹ Over the years, however, Wanxiang Sannong Group increased its shares until ZOF became entirely controlled by Wanxiang Sannong Group and Lu Weiding.²⁹² Yet 20% of the shares of Wanxiang Sannong Group are still ultimately controlled by state-owned companies such as the Zhejiang Tobacco Investment Management Co., Ltd.,²⁹³ meaning the Chinese government maintains a partial and indirect interest in ZOF (Image 4).

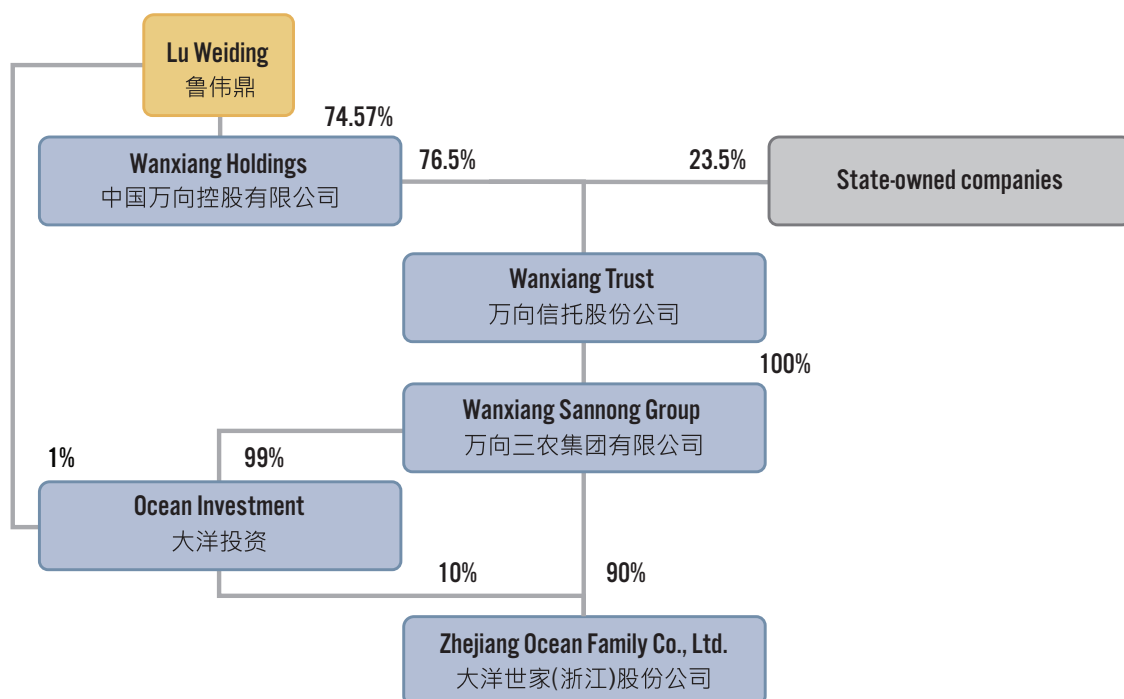


Image 4. The shareholding structure of ZOF.

Similar to Shandong Zhonglu, ZOF also emphasises that its business strategies are aligned with China's national strategies: "[ZOF has] integrated China's important strategy of 'joining hands to build a common destiny for the oceans and promoting the construction of the Belt and Road Initiative' (into the vision of our company)".²⁹⁴

In 2021, ZOF received 22 different types of subsidies from the Chinese government. **Tables 11 and 12** show annual subsidies as a percentage of the annual revenue for Shandong Zhonglu and Zhejiang Ocean Family.²⁹⁵

Table 11 - Annual subsidies as a percentage of the total annual profit for ZOF

| Year | Annual subsidies received (million US\$) | Annual profit (million US\$) | Annual subsidies received compared to annual profit (%) |
|------|--|------------------------------|---|
| 2021 | 12.56 | 62.79 | 20 |
| 2020 | 12.63 | 35.46 | 35.61 |
| 2019 | 11.33 | 39.03 | 29.02 |

Table 12 - Deducted income tax as a percentage of the total annual profit for ZOF

| Year | Deducted income tax (million US\$) | Annual profit (million US\$) | Deducted income tax compared to annual profit (%) |
|------|------------------------------------|------------------------------|---|
| 2021 | 28.83 | 62.79 | 45.91 |
| 2020 | 18.37 | 35.46 | 51.8 |
| 2019 | 18.8 | 39.03 | 48.17 |

China National Agricultural Development Group Co., Ltd. (中国农业发展集团有限公司)

The DWF sector of state-owned China National Agricultural Development Group (CNADC) is the largest in China in terms of number of vessels and the geographic scope of its operations. IUU fishing and human rights offences linked to the company are associated with two subsidiaries, CNFC Overseas Fisheries Co., Ltd. (COFC) and Zhongyu Global Seafood Corp. In total, they have 8 reported cases (12 offences) of IUU fishing or human rights abuses in the SWIO. The top offences are fishing in an IEZ or prohibited areas (4 offences), human rights abuses (3 offences) and non-cooperative behaviours such as absconding from inspections (2 offences).

COFC is a Shenzhen stock exchange-listed fishery company in the CNADC group.²⁹⁶ Before the acquisition of Zhongyu Global Seafood Corp. in June 2023, COFC focused solely on the tuna longline fishery. One of its vessels was involved in the aforementioned Operation Jodari where 20 Chinese vessels absconded

from Tanzania's inspection in 2018. Moreover, another COFC vessel reportedly displayed similar non-cooperative behaviour by not allowing observers to access the bridge, and as a consequence was fined US\$50,000 by the DSFA of Tanzania.²⁹⁷

Zhongyu Global Seafood Corp. has managed CNADC's fishery operations in Africa and the sales toward the EU market through several country offices, trading companies and fishery joint ventures such as Somapêche in Madagascar. According to a recent financial estimation, Zhongyu Global Seafood Corp.'s revenue in 2022 was approximately US\$121.8 million.²⁹⁸ The majority of the company's revenue comes from sales linked to its fishing sector (34.8%), at-sea refuelling services (55.8%), and trans-shipment services (7.5%).²⁹⁹ Zhongyu Global Seafood Corp. reportedly paid US\$3 million for accessing coastal state fishing grounds in 2022, equivalent to about 2.5% of its annual revenue.³⁰⁰

Shrimp from Madagascar and Mozambique is the most profitable fishery product for Zhongyu Global Seafood Corp., making up about 34.5% of the company's sales, with a further 28.8% for tuna and 18.8% for cuttlefish and octopuses.³⁰¹ However, several of the company's shrimp trawlers in Madagascar have a record of IUU fishing. According to one former Malagasy fisherman who had been employed by Somapêche for 7 years, his vessel regularly used undersized mesh and was caught at least three times by authorities during his spell on board. Somapêche is only licensed to fish shrimp, but if the production is poor, the fisherman claimed that the vessel would start to catch a range of species, including undersized fish, to fill the freezers. He mentioned that their fishing area often overlapped with that of the local fishers, and his testimony confirmed the observations made previously by investigative journalists that some vessels frequently fished within the 2 NM from the coast that is reserved for local artisanal fishers.³⁰²

Human rights violations are also reportedly common in the CNADC fleet. According to a former fisher, physical and verbal violence was common on board the longliner he had worked on. The bosun would punch the crew members in the face and shout foul language when the work was not done correctly.

The Malagasy fisherman who was employed by Somapêche also stated that the work environment had deteriorated significantly after Somapêche was bought by Zhongyu Global Seafood Corp. from the Japanese firm Maruha Nichiro.³⁰³ The Malagasy crew alleged excessive working hours, as well as violent and discriminatory treatment by the Chinese on board. For instance, one time he stated that he had been punched because he threw a pregnant shrimp back into the ocean.

Since June 2023, the majority (51%) of Zhongyu Global Seafood Corp.'s shares have been acquired by COFC, with China National Fisheries Corporation (CNFC) owning the remainder (49%)³⁰⁴ (**Image 5**). This strategic acquisition allowed CNADC to reorganise its DWF sector, reduce competition between its subsidiaries, and to maximise the profit and assets of the listed company (COFC). Following this acquisition, COFC's stock price increased on the back of China's banning of imported Japanese seafood,³⁰⁵ following supposed concerns about the effects of released treated radioactive water from the damaged Fukushima power plant into the Pacific Ocean.³⁰⁶ In fact, the company explicitly marketed its Madagascan and Mozambican crustaceans as 'pure' and 'free of nuclear contamination'.³⁰⁷

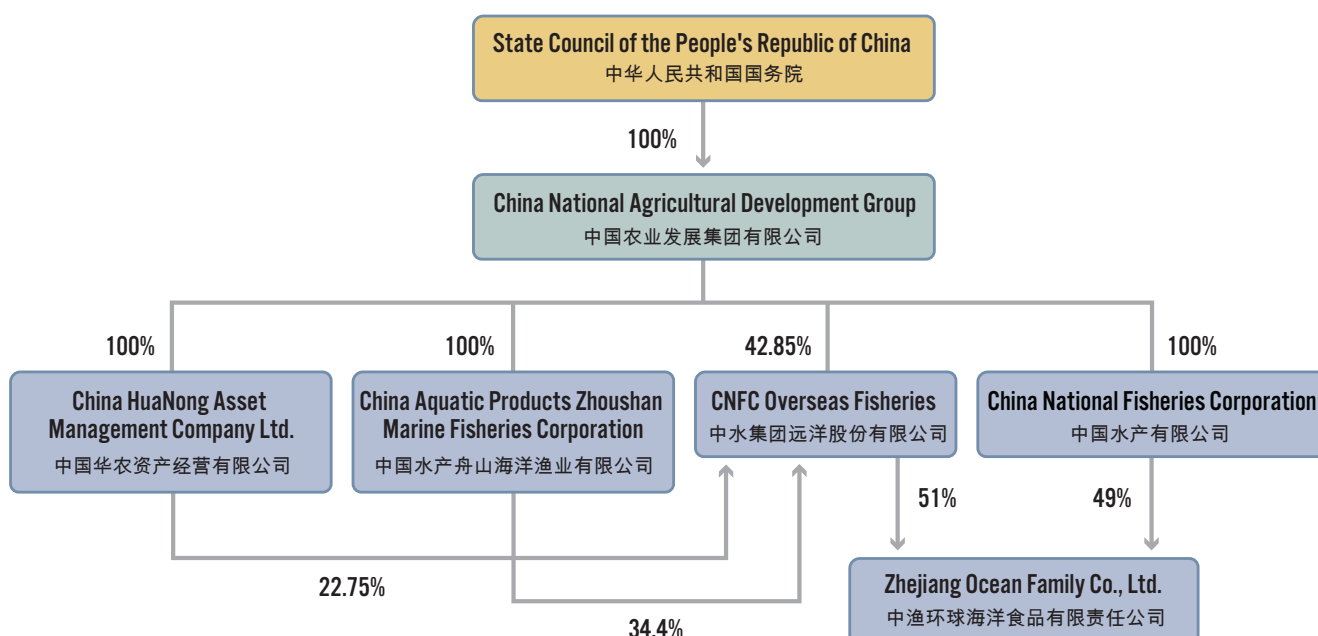


Image 5. The shareholding structure of CNADC.

Similar to the previous two Chinese companies, Zhongyu Global Seafood Corp. depends heavily on governmental subsidies. The company received US\$14.94 million governmental subsidy in 2022, equivalent to 78.8% of its profit of that year.³⁰⁸ However, the company would have seemingly recorded a loss if they had not received subsidies in 2021 due to underperforming sales (Table 11).

Table 13 - Annual subsidies as a percentage of the total annual profit for Zhongyu Global Seafood Corp.

| Year | Annual subsidies received (million US\$) | Annual profit (million US\$) | Annual subsidies received compared to annual profit (%) |
|------|--|------------------------------|---|
| 2022 | 14.94 | 18.94 | 78.8 |
| 2021 | 14.95 | 1.01 | 1480.2 |

7. Supply chain analysis of IUU/HR caught fish from the SWIO

Strict market and port state controls can effectively reduce the financial incentives for IUU fishing and associated abuses, with measures like the EU IUU Regulation and the PSMA helping to ensure that illegally caught products cannot enter global supply chains. However, an industry-wide lack of transparency makes this a challenging task, further muddied by at-sea trans-shipment, which allows IUU caught fish to be laundered amongst legal catch making it near impossible to discern its origins.³⁰⁹

The following section highlights instances in which products linked to Chinese vessels and companies suspected of illegality in the SWIO, including Shandong Zhonglu, ZOF and CNADC, is potentially entering key seafood markets globally, including Europe, Korea, Japan, the US and Taiwan.

7.1 Supply chains links to Europe

Under the auspices of DG SANTE (the European Commission’s Directorate-General for Health and Food Safety), the EU publishes a list of non-EU establishments that are authorised to export to the EU, which includes the names of fishing vessels that seafood is sourced from. While this list pertains to food hygiene, and a vessel’s presence on the list does not suggest an active supply chain, it can serve as a useful proxy to indicate that seafood from a given vessel may be entering the EU market.

Of the 55 vessels EIJ identified as being linked to IUU fishing and human rights abuses and currently authorised to operate in the SWIO, 40 (73%) are currently on the DG SANTE list of authorised exporters.³¹⁰ Of these vessels, 36 are Chinese-flagged longliners targeting tuna and tuna-like species within the jurisdiction of the IOTC and 4 are trawlers operating in Madagascar under the Malagasy flag. Two Madagascar-based cold stores linked to Chinese vessels accused of illegal fishing are also listed as certified exporters.

With regards to specific companies linked with IUU fishing and human rights abuses exporting to the EU, ZOF’s tuna is believed to have been sold in EU markets in recent years, via traders such as Singaporean-based Kibu Pte. Ltd., who bought approximately US\$26.1 million worth of frozen pre-cooked tuna loins for canning from ZOF in 2020 and 2021.³¹¹ Kibu is part of the Spanish-headquartered Grupo Frinsa,³¹² which describes itself as “one of the largest European manufacturers of canned tuna and shellfish”.³¹³ Kibu is the group’s foothold close to the Asian tuna processing hubs and fishing grounds. The group has its own brands of canned tuna including Frinsa la Conservera, Frinsa Proteína Natural, Ribeira, Seaside and The Nice Fisherman, all of which have appeared on UK supermarket shelves, including Iceland³¹⁴ and Marks and Spencer.³¹⁵ Moreover, it also manufactures ‘private label products’ of canned fish and seafood for major European retailers like Carrefour, Alcampo, Lidl and El Corte Inglés.³¹⁶ In 2020, the major market states of Frinsa’s products were Spain and Portugal, where 38.9% of the company’s revenue was generated, while the rest of the countries of the EU accounted for 58.4%.³¹⁷

Links have been identified between ZOF and other Spanish buyers. For example, in 2019, Jealsa Rianxeira S.A.U., a Spanish fishing and cannery company, purchased approximately US\$4.6 million of frozen precooked tuna loins from ZOF.³¹⁸ The company owns brands selling across the Eurasian and South American continents: Rianxeira and Escurís in Spain,³¹⁹ Mare Aperto in Italy,³²⁰ and Soluco la Mer and Chancerelle Frères in France.³²¹ Another Spanish cannery, Hijos de Carlos Albo S.L.U, bought approximately US\$12.1 million worth of whole and frozen precooked tuna from ZOF between 2018 and 2021.³²² Hijos de Carlos Albo S.L.U has been wholly owned by Shanghai Kaichuang Deep Sea Fisheries Co., Ltd. since June 2016,³²³ and ultimately by the Chinese state-owned enterprise Bright Food (Group) Co., Ltd.³²⁴ The company owns the brand Albo,³²⁵ which supplies its products to large retailers including Spanish supermarket Eroski³²⁶ and Carrefour Spain.³²⁷

Zhongyu Global Seafood Corp., another corporation linked to illegalities, acquired 51% of the shares of a Portuguese seafood distributor Mar Fresco in 2016 - this purchase was believed to be the first time a Chinese state-owned enterprise stepped into the seafood sector in the EU market.³²⁸ Since then, Zhongyu Global Seafood Corp. has been selling its crustacean products via Mar Fresco.³²⁹ The company sells frozen shrimps under the brand name “Mar Fresco,” but most importantly, it supplies seafood for private brands. Mar Fresco-branded crustaceans from Madagascar and Mozambique can be found on Portuguese online supermarkets like 360hyper³³⁰ and Minipreço.³³¹

7.2 Supply chains links to the US

Both ZOF and Shandong Zhonglu’s tuna has reportedly entered the US market via FCF Co., Ltd.,^{332,333} a Taiwanese seafood conglomerate and one of the largest tuna traders in the world, which also owns the US-registered tuna cannery Bumble Bee Foods - a major supplier of canned tuna to large retailers such as Walmart.³³⁴ Between 2018 and 2021, ZOF sold approximately US\$327.5 million worth of precooked tuna loins, frozen whole tuna and processed ultra-low temperature tuna to FCF Co., Ltd, accounting for 5% of FCF’s annual purchases in these four years.³³⁵ Similarly, FCF Co., Ltd. is also Shandong Zhonglu’s biggest downstream distributor, buying US\$21.7 million worth of tuna in 2021, which comprised 15% of Shandong Zhonglu’s annual sales. Between January 2017 and May 2019, ZOF shipped an estimated 6,287 tonnes of frozen precooked skipjack and albacore tuna to Bumble Bee Foods LLC, according to US customs data.³³⁶

ZOF also sold approximately US\$46.6 million worth of tuna in total in 2018, 2020 and 2021 to Tri Marine International (PTE) Ltd.,³³⁷ a firm based in Singapore and part of the Tri Marine Group - a US company that is one of the world’s largest tuna suppliers.³³⁸ Tri Marine Group is in turn owned by a global conglomerate, the Bolton Group, headquartered in Italy.³³⁹ Bolton Group owns several popular brands of tuna cans and products, including Rio Mare. These products can be purchased through major retailers in the US including Walmart³⁴⁰ and Amazon.³⁴¹

ZOF’s tuna may also be linked to the US pet food market. ZOF is believed to have traded with a Mexican food processing company, Pescados Industrializados SA Cv, in recent years - supplying it with over 6,227 tonnes of tuna between June 2020 and May 2023.³⁴² In that period, Pescados Industrializados supplied Nestlé Purina Petcare, an American pet food subsidiary of the multinational Swiss food giant Nestlé,³⁴³ with ‘tuna waste’ (*desperdicios de atún*).³⁴⁴

As well as ZOF, Shandong Zhonglu’s yellowfin tuna is also potentially linked to the North American market via Vietnamese processors. For instance, Shandong Zhonglu’s subsidiary Shandong Zhonglu Oceanic (Yantai) Foods Co., Ltd. shipped US\$1.7 million worth of frozen yellowfin tuna loins to Think Hung Co., Ltd. between 2022 and 2023.³⁴⁵ This Vietnamese processor takes orders from a seafood importer and distributor based in Florida, USA called Sea Delight, whose website mentioned ‘Think Hung Co., Ltd. is a key supplier of frozen yellowfin tuna products to Sea Delight.’³⁴⁶

Think Hung shipped US\$35.6 million worth of yellowfin tuna between 2022 and 2024, with different processing methods, to Sea Delight, who then distributed the tuna products mainly to US and Canadian clients.³⁴⁷ Moreover, Shandong Zhonglu supplied another Vietnamese processor, Ba Hai Jsc, with US\$1.2 million worth of yellowfin tuna and swordfish between 2020 and 2023. The biggest client for Ba Hai’s processed fish is a Canadian seafood distributor Toppits Foods Ltd., which imported US\$3.5 million of tuna from Ba Hai between 2020 and 2023. Toppits Foods also does value-added processing and its products, branded with the company name, can be found at major wholesalers or retailers in North America like Costco.³⁴⁸

7.3 Supply chains links to Japan and South Korea

In their IPO prospectus, ZOF disclosed that on average, it sold US\$51.3 million worth of tuna every year to the Japanese market between 2019 and 2021, a number that corresponds to about 10.2% of its revenue, making Japan the most important export market for ZOF. Similarly, three out of the five top clients of Shandong Zhonglu are Japanese companies, namely Notos & Company Limited,³⁴⁹ WEC Foods Corporation³⁵⁰ and Dohsui Co., Ltd.³⁵¹, who together bought US\$34 million worth of tuna from the company - equivalent to around 23.5% of Shandong Zhonglu's 2021 revenue.³⁵² The tuna that ZOF and Shandong Zhonglu sell to Japan is primarily sashimi grade, consisting mainly of bigeye and yellowfin tuna caught on longliners.

The Japanese multinational conglomerate the Mitsubishi Corporation is also one of ZOF's clients in Japan. It purchased approximately US\$192.5 million worth of tuna from the Chinese company between 2018 and 2021, mostly preliminarily processed ultra-low temperature tuna and frozen whole fish.³⁵³

ZOF's other Japanese clients include three leading Japanese fishing, processing and seafood trading companies, Maruha Nichiro Corporation, Uoichi Co., Ltd. and Hiroichi Co.

Maruha Nichiro Corporation, the world's largest seafood company by revenue,³⁵⁴ purchased approximately US\$2.1 million worth of squid, frozen precooked tuna and processed ultra-low temperature tuna from ZOF between 2018 and 2021.³⁵⁵ Maruha Nichiro has a huge presence in the Japanese market,³⁵⁶ with its products sold on major Japanese channels including Rakuten³⁵⁷ and Amazon.³⁵⁸ Uoichi Co., Ltd. is a Japanese seafood wholesaler which bought US\$1.35 million worth of processed ultra-low temperature tuna from 2020 to 2021. Hiroichi Co., Ltd., a Japanese tuna importer and trader located in Shimizu,³⁵⁹ purchased approximately US\$3.4 million worth of frozen tuna from ZOF from 2019 to 2021.³⁶⁰ The company is owned by the Taiwanese fishery company Ocean Treasure Co., Ltd.³⁶¹

ZOF also has supply chain linkage to the South Korean seafood market, albeit on a smaller scale. From 2018 to 2021, SNB International Co., Ltd., a Korean tuna processor, bought approximately US\$11 million worth of frozen tuna from ZOF.³⁶²



Fishing port in Tokyo, Japan.

Using satellite technology to trace the supply chains of high-risk seafood from the Chinese DWF potentially entering the Japanese, South Korean and Taiwanese markets

The use of tracking software that collates, analyses and displays AIS signals transmitted by fishing vessels has become an increasingly important tool in the fight against IUU fishing and associated crimes.³⁶³ The near-real time monitoring of vessel movements can help stakeholders detect possible instances of incursions into areas protected for small-scale fishers, MPAs and EEZs (in the case of the latter, particularly when coastal licence lists are published and kept up to date).

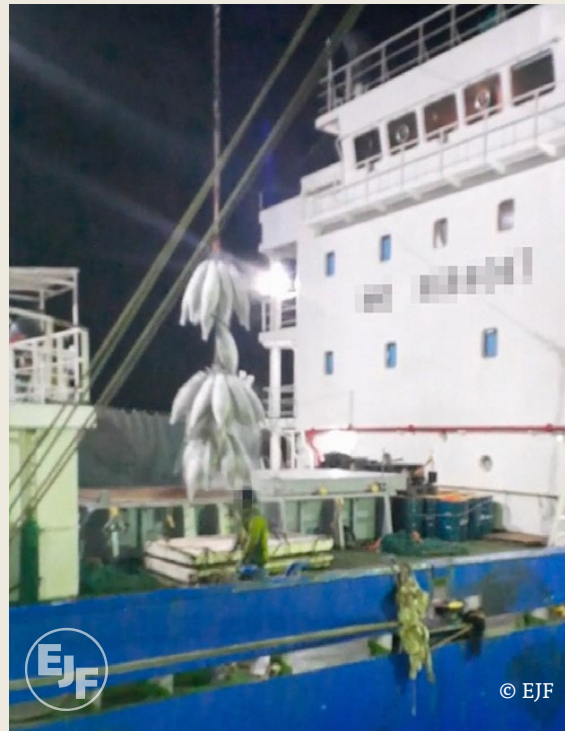
Beyond detecting illegal fishing, a number of these software now enable users to draw links between high-risk vessels and key market states through the identification and analysis of suspected trans-shipments at sea. Using the Starboard platform's 'likely trans-shipment'³⁶⁴ detection algorithm, EJF conducted an analysis to identify the ports (and probable unloading sites) visited in 2023 by reefers suspected to have trans-shipped with the Chinese DWF vessels linked to IUU fishing and human rights abuses in this report.

The analysis found that in total, 25 vessels associated with IUU fishing and/or human rights abuses in this report undertook 72 at-sea trans-shipments in the Indian Ocean during 2023. This is likely an undercounting, as the 'likely trans-shipment' algorithm will only detect instances where both vessels have their AIS transponders switched on at the time, whereas in a number of instances there were significant AIS gaps associated with the fishing vessels.

Following the 72 instances of trans-shipment, many of the reefers involved eventually went on to port at key non-Chinese market states, notably Japan, South Korea and Taiwan. In 2023, 22 vessels suspected of IUU fishing and/or human rights abuses are believed to have trans-shipped with reefers that eventually went to South Korea, 20 that went to Japan and 9 to Taiwan.

These include vessels accused of finning sharks on an industrial scale, and of forcing crew to work in conditions akin to modern slavery. There is a high potential risk of seafood caught illegally, or on the back of forced labour, entering these important markets.

A relatively small fleet of reefers engaged in the 72 trans-shipments, with 6 vessels constituting the meetings - all of whom are authorised under the IOTC. Four of the six were Chinese-owned but Panama flagged, and two were South Korean-owned and flagged.



Tuna being transferred from a Chinese longliner to a Korean reefer in the SWIO.



8. Conclusions and Recommendations

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The importance of a thriving blue economy to coastal states in the SWIO is clear, and the ocean is a lifeline for millions of people in the region, including some of its poorest. As increasing investment, infrastructure and political institutions are put into place to protect and enhance the benefits derived from the ocean, challenging questions arise about how these benefits are derived, who is benefiting and who is paying the associated economic, ecological and social costs.

Chinese investment has transformed both the land and seascapes of all of the countries in the SWIO to varying degrees, occurring within the context of deep, complex and at times opaque socio-economic and political ties. While these ties have brought some benefits for the region, they have also driven corruption, illegality and the accumulation of huge debts, creating unfavourable conditions for sustainable resource extraction, development and trade.

This report has sought to map the presence and behaviours of the Chinese DWF in the SWIO, placed in the broader context of Chinese onshore investment and involvement in the region. It has found that despite occurring within a wider discourse of 'win-win' for all parties and 'sustainable development' being pushed by both the Chinese and local governments, as well as Chinese 'zero-tolerance' approach to IUU fishing, Chinese DWF vessels in the SWIO have a high propensity for illegal fishing and human rights abuses, reflecting patterns seen across the fleet on a global scale. These practices come with huge costs

to the marine ecosystems that are so pivotal to a thriving blue economy, with knock on effects on coastal communities in the SWIO and further afield. Furthermore, the study has found that crew members, often rendered vulnerable by precarious employment and labour conditions, coupled with the physically remote nature of the work, are routinely worked to exhaustion, cheated and appallingly abused, all the while trapped at sea for months or even years at a time.

Any blue economy initiatives must, at their core, be legal, equitable and sustainable - without this foundation, governments and corporations risk undermining the long term economic viability of fishing and other marine activities in the pursuit of short term gain. While the Chinese DWF is certainly not the only culprit for unsustainable fishing activities in the SWIO, the high percentage of Chinese vessels that are linked with cruel and illegal activities, paired with China's onshore and often opaque financial and political presence in the region, indicates that closer attention to their activities is required by the IOTC, coastal states, market states, flag states and port states alike. This must involve, at a minimum, enshrining transparency measures throughout relevant fisheries regulations and frameworks to enable all stakeholders to better understand who is fishing, how, where and for what. The following recommendations can, if implemented, serve to mitigate IUU fishing and human rights abuses not only by the Chinese DWF, but by all industrial vessels operating in the SWIO.

Recommendations

To the Members of the IOTC:

- Enhance compliance of beneficial ownership requirements under Resolution 19/04 concerning the IOTC Record of Vessels Authorised to operate in the IOTC area of competence.
- Amend Resolution 07/01 to Promote Compliance by Nationals of CPCs with IOTC CMMs in order to prevent nationals from further deriving benefits from or supporting IUU fishing.
- Increase the required observer coverage on longliners to 20% by 2025 so as to better prevent, deter and detect IUU fishing and associated abuses, and also improve reporting on bycatch and other data deficiencies in the region's fisheries.
- Strengthen Resolution 23/05 on establishing a programme for transshipment by large-scale fishing vessels to further improve monitoring, control and surveillance and reduce opportunities for IUU fishing activities.
- In the longer-term, prohibit at-sea trans-shipment operations by, as intermediate steps, introducing progressively increasing mandatory minimum levels of catches being landed or trans-shipped in ports to reduce the reliance of certain large-scale tuna longline fleets, such as the Chinese DWF, on these operations.
- Adopt limits on the maximum number of days at sea without coming back to port for fishing vessels. All fishing vessels should be restricted from operating at sea for more than 12 months at a time.
- Amend Resolution 17/05 on the conservation of sharks caught in association with fisheries managed by IOTC to ensure the effective conservation and sustainable management of sharks, and enshrine a 'fins naturally attached' policy in the regional fisheries management framework.
- Adopt a new recommendation to improve traceability through an electronic catch documentation scheme, and establish a partially centralised vessel monitoring system and a high seas boarding and inspection scheme to strengthen monitoring, control and surveillance of tuna and tuna-like fisheries of the Indian Ocean.
- In line with Resolution 23/06 on the conservation of cetaceans, review all available information on the status of cetaceans in the IOTC area of competence, and, on that basis, adopt measures that effectively protect aquatic mammals from the negative effects of the interactions with all IOTC fisheries and from the behaviours described in this report.
- Follow in the footsteps of ICCAT and Western & Central Pacific Fisheries Commission and adopt a resolution on labour standards in IOTC fisheries or, as an intermediate step, a recommendation.

To states that act as local flags of the Chinese DWF:

- Require from all registered vessels, and as part of all applications for entering the fleet register, details on ownership arrangements, including the identity and nationality of beneficial owners, and records on the destination of profits from fishing activities. Unless there can be a clear assurance that a vessel's beneficial owner can be identified and held to account if needed, the state should remove the vessel from their registry or refuse registration.
- Carry out background checks on any person or company forming a new, or taking over an existing, fishing company and ensure that the competent authorities are immediately notified of any proposed change to existing ownership arrangements.
- Cooperate and exchange vessel information with fisheries authorities and ship registration authorities from the applicant flag state and other relevant states – including China – before a vessel is granted entrance into the fleet. Refrain from issuing deletion certificates to vessels which have failed to settle all fines and liabilities. Applicant flag states should refuse applications of such vessels.
- Scrutinise vessels with a history of flag-hopping to combat abusive reflagging.
- Publish online lists of vessels registered to their flag and make the relevant information available through the FAO Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels, mandating IMO numbers for all eligible vessels and national unique vessel identifiers for all other vessels.
- Ensure all suspected fisheries infringements by foreign-owned vessels, including those of the Chinese DWF flying the local flag, are subject to thorough investigation, and that deterrent sanctions are imposed where violations are confirmed, regardless of whether cases are settled in or out of court. Amend domestic laws where appropriate to provide for minimum fines proportionate to the severity of the offence and to the annual turnover of the offender, where the offender is a corporation.
- Ratify and implement all relevant international agreements that set standards for fishing vessels and working conditions for crew, including the Cape Town Agreement for the Safety of Fishing Vessels, the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), and the ILO fundamental conventions and other relevant conventions such as the Work in Fishing Convention (C188) and the Violence and Harassment Convention (C190).

To SWIO coastal states where the Chinese DWF operate:

- Ensure that all investment into blue economy infrastructure and activities are suitably transparent, with information on financing, the actors involved, timelines, environmental and socio-economic impacts, and mitigations made publicly available.
- Make sure that any impact assessments are conducted independently ensuring that projects are considered within the context of the multiple and interacting vulnerabilities that coastal communities are facing. Such assessments must be conducted in a truly participatory manner, making every effort to be inclusive of marginalised groups within communities, including women and the elderly.
- Ensure all suspected fisheries infringements by vessels of the Chinese DWF are subject to full investigation in accordance with law and established protocols, and that deterrent sanctions are imposed where violations are confirmed, regardless of whether cases are settled in or out of court. Amend domestic laws where appropriate to provide for minimum fines proportionate to the severity of the offence and to the annual turnover of the offender, where the offender is a corporation.
- Ensure that the number of fishing licences issued, including to the Chinese DWF, is sustainable in line with best available scientific advice and MCS capacity.
- Ensure through legislation, monitoring, and enforcement, that IEZs strictly prohibit any and all industrial activities, and, where necessary, expand the IEZ to accurately represent the fishing grounds of small-scale fishers, accounting for the fact that this will continue to evolve in the face of global heating and depleted fish populations.
- Phase out the use of industrial bottom trawling gear in inshore areas, given its widely acknowledged negative ecological impacts, so as to preserve vital ecosystems and the biodiversity that inhabits them.
- Adopt minimum transparency requirements for vessels operating within their EEZ, including the publication of complete, updated and accessible information on authorisations and beneficial ownership, and requiring all eligible vessels granted access to national waters to have an IMO number.
- Conduct thorough background checks on vessels requesting to fish in national waters, to ensure that vessels whose beneficial owners are linked to IUU fishing are refused authorisation.

To SWIO port states used by the Chinese DWF:

- Publish up-to-date information concerning fisheries offences by DWF vessels and associated sanctions, ensuring that the information published is comprehensive, accurate and accessible.
 - Where relevant, clarify the role and responsibilities of nationals acting as local representatives for foreign entities in order to allow them access to EEZs, if necessary, developing regulatory instruments.
 - Support progress in relation to regional cooperation and information-sharing on fishing activities through the relevant regional fishery bodies as well as with the pertinent national authorities and international bodies.
 - Leverage the potential of regional and international information-sharing platforms, such as the Regional Fisheries Monitoring Control and Surveillance Coordination Centre of the Southern African Development Community, RFMOs, and INTERPOL, to conduct due diligence checks and promptly alert on potential non-compliance events.
 - Develop mechanisms through which crew members and fisheries observers who are employed on DWF vessels can safely and anonymously provide information on IUU fishing and human rights abuses that occur on board vessels. This mechanism should include measures to tackle the incentives and drivers of corruption and failure to report such infractions, including bribery, physical and verbal abuse of crew and observers, and the withholding of wages.
- Effectively implement the FAO Agreement on Port State Measures, and, similarly and where relevant, effectively implement CMMs on port state measures adopted by RFMOs.
 - In particular, and in determining which vessels to inspect, increase scrutiny of companies identified as associated with IUU fishing activities and/or human rights abuses. In doing so, port states should further develop working relationships with other key port and coastal states, for verification purposes.
 - Where a port state has reasonable grounds to believe that a Chinese DWF vessel seeking entry into its port has engaged in IUU fishing or related offences, it should deny that vessel port entry or allow entry exclusively for the purpose of inspecting the vessel and taking other appropriate actions in preventing, deterring and eliminating IUU fishing and related offences.
 - Should such a vessel be found in a port, deny it the use of the port for landing, trans-shipping, packaging, and processing of fish and for other port services including, inter alia, refuelling and resupplying, maintenance and drydocking.
 - Notwithstanding the above, a port state should not deny a vessel the entry to port if there are suspicions or a likelihood of human rights abuses taking place on that vessel - for example where a vessel, or a fleet has previously had abuses documented, or other indicators of forced labour such as a vessel spending a prolonged period of time at sea (upwards of 12 months) are identified.
 - Leverage the potential of regional and international information-sharing platforms, such as the Regional Fisheries Monitoring Control and Surveillance Coordination Centre of the Southern African Development Community, RFMOs, and INTERPOL, to conduct due diligence checks and promptly alert on potential non-compliance events.



To market states supplied by the Chinese DWF operating in the SWIO:

- Adopt import control mechanisms or, where they exist, reinforce them and strive to align them to remove loopholes, provide clarity, and enable information exchange, legal trade facilitation and interoperability.
- Increase scrutiny over imports of fisheries products originating from vessels suspected of IUU fishing or human rights abuses through standardised checks, verifications and inspection procedures in accordance with risk criteria.
- In this context, verifications should prioritise fisheries products stemming from fleets and companies identified in this report as being potentially involved or associated with IUU fishing activities, human rights abuses, or both.
- Where there is documented evidence of noncompliance with applicable laws and management measures, close their markets to the products in question, and notify the flag state as well as, where appropriate, other relevant countries.
- Ensure routine and timely information sharing with other existing or potential market states, including on rejected consignments, which can allow authorities to prevent trade diversion and restrict market access to unscrupulous actors, with an emphasis on beneficial owners.
- Increase coordination of bilateral cooperation mechanisms, trade-based measures and on global fisheries transparency policies, including in RFMOs, so as to leverage market power to push China to achieve the necessary reforms of its fisheries governance framework through import requirements.
- In this context, align approaches to addressing IUU fishing and human rights abuses in the Chinese DWF including taking actions that pressure China to make public, inter alia, China's blacklist of IUU fishing offenders, and the list of authorised Chinese DWF vessels and of the country's fisheries agreements.
- Provide support to coastal states with a high presence of the Chinese DWF to increase their capacity to fight IUU fishing and bring about fundamental reforms of their fisheries policies.



To the Government of the People's Republic of China:

Alignment with best practises and cooperation with international partners

- Ensure the information on Chinese DWF vessels uploaded to the FAO Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels by China is comprehensive and up to date.
- Cooperate with the relevant foreign governments to clarify the nature and extent of Chinese ownership and interests in their fishing sectors so as to enforce the relevant legal instruments.
- Mandate IMO numbers as a prerequisite for approval of fishing vessels to operate overseas (or equivalent Unique Vessel Identifiers (UVI) where the vessel is not eligible under the IMO Ship Identification Number Scheme).
- Ratify and implement the ILO Work in Fishing Convention C188 and other relevant ILO Conventions to address issues around labour abuses, as well as the Cape Town Agreement for the Safety of Fishing Vessels and the STCW-F. Further protections for workers on board vessels could include the creation of a specific offence for the use of forced or bonded labour by operators and the requirement of mandatory crew lists for DWF vessels.

Sanctions

- Update the national law framework, if necessary, to ensure that Chinese nationals or any natural or legal persons subject to China's jurisdiction, who are responsible for, benefiting from, supporting or engaging in IUU fishing activities by fishing vessels flying the flag of foreign countries (e.g. as operators, effective beneficiaries, owners, logistics and service providers, including insurance providers and other financial service providers) can be prosecuted and subject to effective and deterrent sanctions.
- Ensure that government support in the form of subsidies, loans and other funds are not available to companies with a history of IUU fishing infringements and/or documented labour abuses, in the context of eliminating harmful subsidies.
- Continue to update and publish information about fisheries-related offences and sanctions by DWF vessels to ensure the information published is comprehensive, credible and accessible.

Sustainability and transparency

- Establish clear guiding principles and requirements for fishing agreements (both those involving the Chinese state and private companies) to ensure DWF operations are transparent, legal and sustainable.
- Reform the system for reviewing and approving offshore fishery projects to include specific criteria to effectively address abusive reflagging by the Chinese DWF, including a requirement for operators to provide information on vessel activities conducted under the flags of third countries (data on catches, fishing effort, IUU fishing infringements) and for MARA to conduct detailed verifications of vessel activities conducted under flags with known compliance issues.
- Mandate the publication of information on approved DWF projects, including the period of projects and vessel details (e.g. name, beneficial owner, flag, UVI, gear type, tonnage, allocated fishing opportunities). Information should be available in an up-to-date, publicly accessible and searchable database.

To all coastal, flag and market states:

- Adopt the measures recommended in the Coalition for Fisheries Transparency's 'Global Charter for Fisheries Transparency' (**Appendix 2**)³⁶⁵, as the most cost-effective and immediately impactful means to combat the illegal, unsustainable and unethical activities cited in this and other EJF reports.

APPENDICES

Appendix 1 - Detailed Methodology

Methods for identifying Chinese DWF vessels currently operating in the SWIO

In order to map Chinese DWF vessels operating in the SWIO, the study has focussed on those reportedly active, or authorised to fish, in the region in 2023. The first stage involved downloading the list of all fishing vessels considered to have fished within the study area during the above time period from the GFW and Starboard online vessel tracking platforms, based on AIS data analysis.³⁶⁶

Vessels were considered part of the Chinese DWF if they were flying the flag of China, or if they were flying another flag but were found to have been owned or otherwise controlled, either directly or indirectly, by Chinese entities. Information on vessel ownership, including beneficial ownership, was ascertained through a variety of sources including the S&P Maritime Portal³⁶⁷ (widely considered to be the most up to date database of vessel information), data published by MARA³⁶⁸ and the IOTC Record of Authorised Vessels, which contains identity and ownership information for all vessels over 24m, or fishing outside of their national jurisdictions, that are licensed to target tuna and tuna-like species within the Indian Ocean.³⁶⁹

In addition to the above, information was obtained from coastal states' vessels licence and authorisation lists where available - specifically those of Madagascar (2023), Mozambique (2023) and Seychelles (2023) - as well as from the IOTC Record of Authorised Vessels and other IOTC documents. In all instances, ownership checks were conducted as above. It should be noted that the IOTC register lists all vessels targeting tuna and tuna-like species across the entirety of the Indian Ocean, and based on the IOTC records alone it is not possible to discern those specifically operating in the SWIO as delineated in this report. However, the migratory nature of these species, coupled with an analysis of available vessel tracks and catch data provided by the IOTC³⁷⁰ indicates that across a 12-month period they will likely enter the SWIO while following fish migration paths.

It should also be noted that even if a vessel is listed in the IOTC register or a coastal licence list, this does not necessarily mean that it will fish in the region. However, few vessels are expected to be listed but not fishing, and it was still deemed relevant to include all vessels authorised to fish in the region in the analysis, given the potential for them to operate there in the future.

Potential undercounting of the Chinese DWF in the SWIO

The above methods may underestimate the presence of Chinese fishing vessels in the SWIO region. While AIS data can serve as a useful indicator of vessel activity, there are very few instances globally where its use is mandated in the fishing industry. This means that vessels can operate for long periods while only partially transmitting AIS, or not at all. For example, a 2024 study in the academic journal *Nature* estimates that approximately three quarters of global industrial fishing activity did not appear in public monitoring systems that display AIS transmissions.³⁷¹ There is a possibility that Chinese vessels operating in the SWIO region without transmitting AIS did not appear in available data sources and were therefore not included in our AIS dataset.

It is also possible that the Chinese DWF in the region has been undercounted due to difficulties proving that the ownership or control of a vessel lies in China. This often arises due to the use of flags of convenience and opaque corporate structures including front companies and joint ventures, which can make identifying the entities actually in control of fishing operations complex.³⁷² There were a number of instances during the data collection and analysis process where Chinese-owned vessels were operating under coastal state flags, or known flags of convenience - with ownership information only able to be obtained via paid-for services, or Chinese language data sources.

Methods for identifying onshore Chinese investment in the SWIO region

Beyond mapping the at sea activities of the Chinese DWF, this report will also detail the available information on Chinese investment in the SWIO region with a specific focus on investment in maritime and fishing infrastructure - for example ports, processing facilities and landing sites. In order to do so, a standardised set of internet searches in five languages (English, French, Mandarin, Portuguese and Swahili) were conducted so as to identify Chinese investments in the region, e.g. ["China" "port" "target country"], ["China" "investment" "target country"], ["China" "aid" "target country"].

In addition, relevant data on Chinese investment was extracted from a number of databases designed to map the country's financial involvements with international partners - particularly those that occur as loans, aid or development funds. The following databases were used: the Chinese Loans to Africa Database³⁷³, the Chinese Global Power Database³⁷⁴, data collated by the SAIS China Africa Research Initiative (SAIS-CARI)³⁷⁵, China's Overseas Development Finance Database³⁷⁶ and the AidData³⁷⁷ website.

Methods for recording instances of suspected or confirmed IUU fishing and human rights abuses

The reports of IUU fishing documented in this study are derived from a combination of both primary and secondary sources. Primary research involved interviewing Indonesian ($n = 28$), Filipino ($n = 16$) and Mozambican ($n = 16$) crew who have worked in the SWIO region on Chinese DWF vessels, or worked outside the SWIO on vessels that are now believed to be operating in the region. Semi-structured interviews were conducted by EJV investigators in each country to gather detailed information on illegal fishing, human rights abuses, recruitment processes, working and living conditions, vessel information and areas of operation. Semi-structured interviews were also conducted with small-scale fishers ($n = 7$) and fish processors ($n = 5$) in two Mozambican fishing communities during January 2024. Topics included interactions between small-scale fishers and industrial vessels, changes in fishing and fish processing practices (including access to fish), and the impacts of industrial fishing on coastal communities and livelihoods.

Secondary research involved conducting a standardised set of internet searches in five languages (as above) to identify instances of Chinese illegal fishing or human rights abuses in the region reported in the media, NGO reports and other literature. Searches were also conducted for each of the Chinese DWF vessels identified as operating in the region, e.g. ["vessel name" "IUU"], ["vessel name" "illegal fishing"], ["vessel name" "abuse"].

In addition to the above search terms, information was extracted from a number of publicly available datasets and sources. These include the Trygg Mat Tracking (TMT) IUU list,³⁷⁸ the Criminal Record of Fishing Vessels and associated platform 'Spyglass',³⁷⁹ the Outlaw Ocean 'Bait to Plate' interactive tool,³⁸⁰ Youtube, and IUU fishing notices released by MARA covering infringements that occurred during the period 2017-2019. The MARA notices included information such as vessel and company names, the sources of the information (e.g. coastal state, RFMO), details of the offence, whether further investigation was required and sanctioning decisions.

This report distinguishes between 'cases' and 'offences'. A case refers to an event or series of events involving a particular vessel, and within that 'case' there may be multiple offences. For example, if a vessel was apprehended by fisheries enforcement and accused of and/or sanctioned for shark finning, fishing without a valid licence, and use of prohibited gear, this would be marked as one case, and as three distinct offences.

Conduct was considered to be constitutive of an IUU fishing offence where there is reason to believe it was in breach of applicable fisheries laws and regulations, RFMO CMMs, or other norms of international law. Human rights abuses (including labour rights violations) refer to instances where there is reason to believe that the treatment and conditions of employment of crew fall short of relevant international instruments and best practices, in particular the ILO Forced Labour Indicators, the Work in Fishing Convention (C188),³⁸¹ and the Violence and Harassment Convention (C190).³⁸² The use of the term 'offence' refers indistinguishably to alleged, suspected and confirmed offences, and should therefore not be taken to imply that the activity in question was determined to be unlawful by the competent authorities.

Data limitations

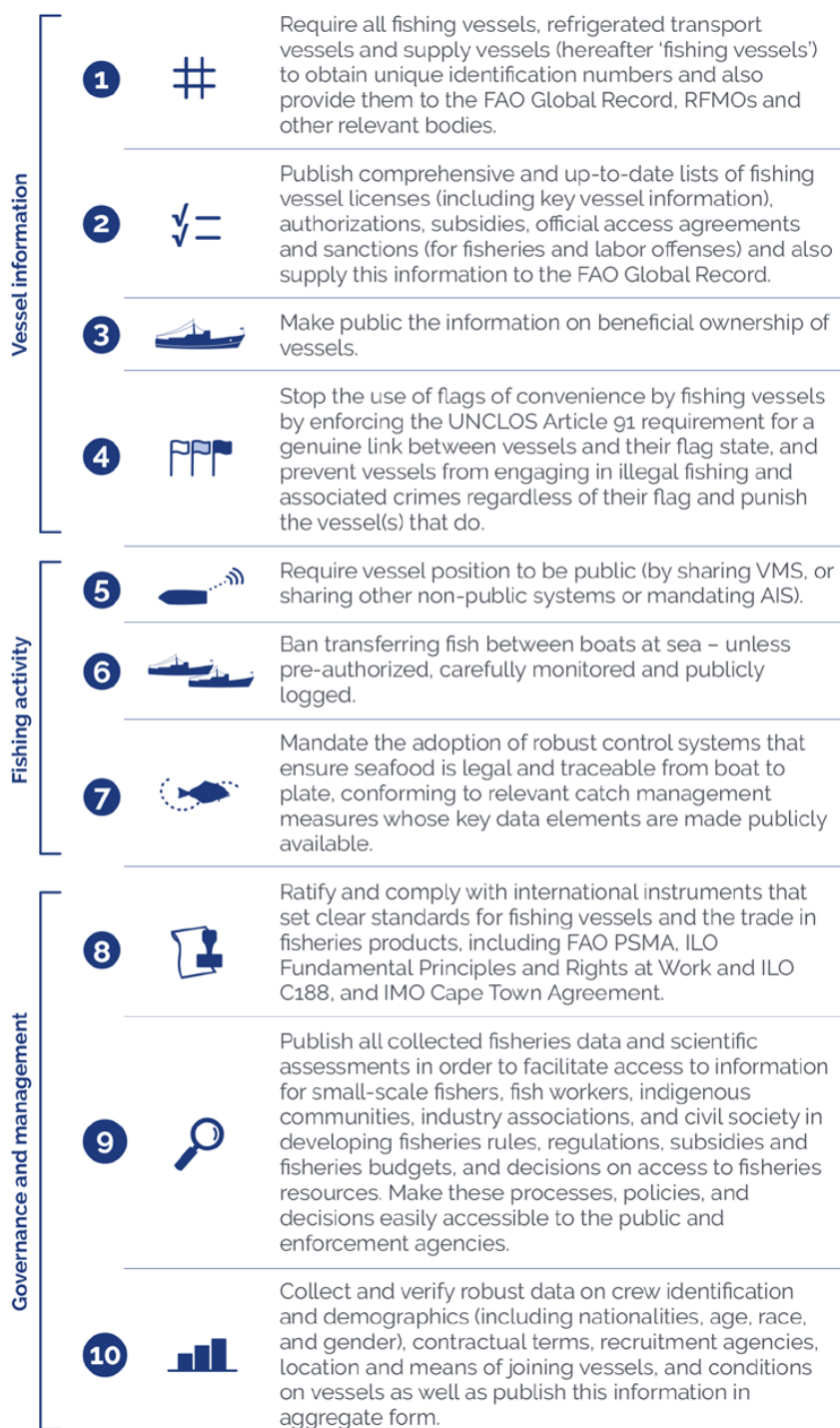
It is important to acknowledge the divergent sources of information on IUU fishing and human rights abuses, and the associated confidence in the quality of data. For the purposes of this report, offences reported by official government sources, and especially those that have resulted in sanctions, are associated with a higher degree of certainty compared to offences reported by NGOs or the media that have not been confirmed by the relevant coastal or flag state, or competent regional fisheries body.

Likewise, data obtained through interviews is at risk of including erroneous information on account of the fact that often some years had passed since the interviewees had worked on fishing vessels, or they had worked on a number of different vessels, often within the same fleet. These facts may make it difficult for crew to recall particular events with full accuracy, or associate a particular incident with the correct vessel. All efforts have been undertaken to mitigate the potential for these errors through corroboration of testimony against additional evidence - where available crew were asked to provide any photo or video evidence that would support their testimony, including photos of the vessel and of their contracts. This additional evidence was not available in all cases however, and as such there remains a risk of inaccurate testimony.

Table 14 - Source of information on IUU fishing and human rights offences considered for the study

| Source | Number of IUU fishing/ human rights cases | Percentage of total cases | Number of IUU fishing/ human rights offences |
|--|--|------------------------------|---|
| EJF crew interviews | 42 | 42.9% | 102 |
| Official sanction records from coastal state governments or MARA | 36 | 36.7% | 67 |
| Spyglass | 9 | 9.2% | 11 |
| Media | 6 | 6.1% | 6 |
| Youtube | 3 | 3.1% | 4 |
| NGO report | 2 | 2% | 3 |
| Total | 98 | 100% | 193 |

Appendix 2 - Coalition for Fisheries Transparency ‘Global Charter for Transparency’



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