UNSEEN AND UNACCOUNTABLE

The growing threat of China's squid fleet in the South Pacific

CONTENT WARNING

This report contains graphic images.

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The Environmental Justice Foundation (EJF) exists to protect the natural world and defend our basic human right to a secure environment.

EJF works internationally to inform policy and drive systemic, durable reforms to protect our environment and defend human rights. We investigate and expose abuses and support environmental defenders, Indigenous peoples, communities and independent journalists on the frontlines of environmental injustice. Our campaigns aim to secure peaceful, equitable and sustainable futures.

EJF is committed to combating illegal, unreported, and unregulated (IUU) fishing as well as associated human rights abuses in the fishing sector.

Our investigators, researchers, filmmakers and campaigners work with grassroots partners and environmental defenders across the globe.

Our work to secure environmental justice aims to protect our global climate, ocean, forests, wetlands, wildlife and defend the fundamental human right to a secure natural environment, recognising that all other rights are contingent on this.

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Contents

Acronyms and abbreviations

AIS - Automatic Identification System
BBNJ - Agreement on Marine Biological Diversity of Areas beyond National Jurisdiction
BST - Basic Safety Training
CALAMASUR - Committee for the Sustainable Management of the Southern Pacific Jumbo Flying Squid
CNFC - China National Fisheries Corporation
CMM - Conservation and management measure
C188 - ILO Work in Fishing Convention No. 188
CPUE - Catch Per Unit Effort (Measured in kilograms of seafood caught per hour)
CTA - Cape Town Agreement
DWF - Distant water fishing
EEZ - Exclusive Economic Zone
EJF - Environmental Justice Foundation
EU - European Union
FAO - Food and Agriculture Organisation of the United Nations
FIP - Fishery Improvement Project
GFW - Global Fishing Watch
ILO - International Labour Organization
IMO - International Maritime Organization
IUU fishing - Illegal, unreported and unregulated (fishing)
MMSI - Maritime Mobile Service Identity
MPA - Marine Protected Area
NPFC - North Pacific Fisheries Commission
NWIO - Northwest Indian Ocean
PSMA - Port State Measures Agreement
RFMO - Regional Fisheries Management Organisation
SEP - Southeast Pacific Ocean
SPRFMO - South Pacific Regional Fisheries Management Organisation
SWA - Southwest Atlantic Ocean
UK - United Kingdom
UN - United Nations
US - United States
VMS - Vessel Monitoring System
WCPFC - Western Central Pacific Fisheries Commission
WTO - World Trade Organization

Executive summary

The transfer of goods at sea between two squid jiggers in the SEP.

Squid are an increasingly important and sought-after seafood commodity in countries around the world. The global squid market is expected to grow by almost 4% a year and could be worth US$18.4 billion by 2035.[1] As consumers and seafood buyers continue to drive demand for species such as Argentine shortfin squid from the Southwest Atlantic Ocean (SWA), jumbo flying squid from the Southeast Pacific Ocean (SEP) and Japanese flying squid from the North Pacific Ocean, fishing fleets are responding by increasing fishing effort.

Several of the most important squid fishing grounds straddle both coastal waters as well as high seas areas, creating a challenging environment for conservation measures, enforcement and equitable and sustainable access. As fishing effort in these regions has increased, concerns have grown about the threat of unregulated fishing and overfishing on squid populations. A recent EJF report looked at how distant water fleet pressures in the SWA were putting the Argentine shortfin squid population at risk.[2]

This latest report now expands these investigations to the SEP, showing how extensive fishing effort by a largely Chinese-flagged squid fleet is threatening the world's most important squid fishery - that of the jumbo flying squid.[3] The region has also suffered from illegal Chinese vessel intrusions into Latin American coastal states, leading to numerous diplomatic incidents, protests by artisanal fishers and widespread condemnation by environmental groups.[4/5]

EJF investigations into the activities of China's distant water squid fleet reveal how these vessels are engaging in unsustainable and destructive fishing practices across the SEP - facilitated in part by a chronic lack of transparency across the fleet. Identified abuses include the catching and finning of sharks, the catching of protected species (including false killer whales and seals), and the tampering or covering of vessel names and other identifiers.

At the same time, EJF has received reports of serious human rights abuses on board fishing vessels including physical abuse, verbal abuse through threats and intimidation, debt bondage, and abusive working and living conditions. Fishers also described the prevalence of deaths at sea due to accidents, illness or serious injuries. Vessels have been known to operate at sea for one to two years at a time, cut off from the outside world, making it all but impossible for victims of abuse to raise the alarm or contact their loved ones.

China's squid fleet uses at-sea trans-shipment to transport catches back from the SEP to Zhoushan - a major squid processing hub in China. This opaque practice makes it difficult to establish accurate supply chain traceability. Much of China's squid trade is consolidated into large conglomerate operations or so-called squid cooperatives, further degrading transparency and increasing the risks of tainted squid entering global supply chains.

China has attempted to appease its critics in the SEP by arguing that its vast fleet is governed by appropriate flag state controls and that the fishery is operating under the regulation of the South Pacific Regional Fisheries Management Organisation (SPRFMO). This is despite many of the fisheries abuses documented by EJF not being addressed by Chinese regulations or by the SPRFMO. Quotas or catch limits, reference points, temporal restrictions or bycatch restrictions have not been adopted meaning there is effectively no management of the jumbo squid population.[6]

Squid population assessments in recent years are already showing the first worrying signs of population decline. Two assessments by Chile and China submitted to SPRFMO in 2025 both came to the same conclusion - that catch per unit effort (CPUE - a measure of how abundant a fishery is, based on how much seafood is caught per unit of fishing effort) is falling.

It is vital that all flag, coastal, port and market States collaborate to support progressive and near-term proposals for change in the SPRFMO area, drawing upon the 10 low or no-cost principles of the Global Charter for Fisheries Transparency[7], to make squid fishing operations sustainable, transparent, and ethical. China, as the dominant flag state, must take substantive responsibility in this, reining in uncontrolled fishing effort and cooperating with SPRFMO Member States to formulate substantive new conservation and management measures (CMMs) that can facilitate the improved monitoring and regulation of this crucial squid fishery.

EJF calls upon all states to endorse and implement the Global Charter for Fisheries Transparency as a means of further addressing the enabling factors of IUU fishing and associated labour abuses in global fisheries.

Key findings

- EJF investigations involving interviews with 77 Indonesian and four Filipino fishers who had worked on 60 Chinese-flagged DWF squid fishing vessels between 2020 and 2025 operating in the SEP reveal shocking levels of destructive fishing practices and human rights violations.
- 60% of vessels allegedly engaged in the finning of sharks and disposal of bodies, and 33% of vessels in the intentional capture of marine mammals such as seals, false killer whales and dolphins.
- Neither China nor the SPRFMO have suitable regulations to deter these extremely destructive practices, demonstrating that the SEP jumbo squid fishing ground (FAO Fishing Area 87) is severely under-regulated in terms of its wider ecosystem impacts.
- According to estimated fishing effort calculations for all DWF vessels, the combined fishing hours in the SEP are about 3.25 times higher than those of the SWA fishing ground. The number of Chinese vessels increased by 100% between 2014 and 2024.
- Investigation findings reinforce growing concerns that the SEP is facing escalating pressure from destructive fishing practices with recent population assessments of jumbo squid indicating early signs of population decline.
- Fishers also reported frequent human rights abuses onboard, including physical abuse, abusive working and living conditions, debt bondage, and withholding of wages. Almost half of the fishers EJF spoke to reported either experiencing or witnessing physical abuse while they were on board.
- A worrying prevalence for the unloading of dead crew from DWF vessels into Latin American ports warrants action by port states. At least 41 deceased crew were unloaded from Chinese vessels between 2013 and 2023, painting a grim picture of negligence, lack of accountability and the dangers of working onboard Chinese-flagged squid vessels.[8]
- EJF's analysis of Global Fishing Watch port entries for 163 Chinese-flagged squid vessels utilising Chilean ports in 2025 found nine vessels that were linked to its investigations into fisheries and/or human rights abuses.

- 80% of vessels suspected of being involved in fisheries or human rights abuses analysed in this study trans-shipped their catches at-sea to reefers destined for Zhoushan port, China, which has consolidated its status as the global squid hub. At-sea trans-shipment can facilitate the laundering of illegally caught squid with legal catches.

- Vessels linked to China National Fisheries Corporation (CNFC) were implicated in some of the worst fisheries and labour abuses. This major state-run enterprise operates the largest fleet in the jumbo squid fishery along with one of the largest squid processing plants in Zhoushan.[9]

- Trade data shows that CNFC exported 23,384 tonnes of squid to the global market between 2020 and 2025. At least 29% of these exports went to the US, 24.6% to the EU and 15% to the UK.

- Data deficiencies in global catch and trade reporting systems prevent truly substantive market state trade analysis. It is not possible to disaggregate jumbo squid trade links from China to other markets meaning it is difficult to truly calculate the risk of EU or US exposure to IUU fishing and/or human rights abuses in the SEP jumbo squid fishery.

- At least nine proposals were submitted to SPRFMO ahead of their annual meeting in February/March 2026.[10] These included measures intended to improve the management of the jumbo squid fishery as well as monitoring, control and surveillance mechanisms. Their comprehensive enactment by SPRFMO Member States would mark a significant step forward for the regulation of the jumbo squid.

Fishers pose with a blue shark caught by a squid jigger.

Crew told EJF how they captured a range of vulnerable marine megafauna, from dolphins and whales to seabirds.

Introduction

Jumbo flying squid (*Dosidicus gigas*, also known as Humboldt squid and hereafter referred to as jumbo squid) are the largest and most abundant squid species found in the SEP.[11] They can grow up to 2.5 metres in length and can weigh around 50kg.[12] The species population has been estimated to weigh approximately 9.6-10.7 million tonnes.[13] This is significantly more than the 100,000 - 400,000 tonne weight of the valuable Argentine shortfin squid population in the SWA.[14]

A fisher stands with a jumbo squid, illustrating its size. Note the distinctive red colouring of the squid which has earned them the nickname of "red devils".[15]

As with many other squid species, jumbo squid play a crucial mid-trophic role in their ecosystem meaning that they serve both as prey and predator.[16] Jumbo squid consume vast quantities of shrimps, small fish, and other squid or cuttlefish (cephalopods).[17] They are also prey for a number of animals including sperm whales, dolphins, sharks (including great white and hammerhead sharks[18]), sea lions and swordfish, making them crucial keystone species of the SEP.[19/20/21] Researchers have noted that these predators will congregate in areas where jumbo squid are plentiful.

The bulk of the diets of sperm whale populations in the SEP consists of jumbo squid.[22/23]

The jumbo squid fishery is also the most significant squid fishery on the planet, accounting for 42% of global squid landings.[24] 99.8% of the 1,225,798 tonnes of jumbo squid landed in 2023 were caught within the SEP fishing area. The fishery first emerged in the late 1980s and early 1990s with exploratory fishing activity off Mexico and then Peru.[25/26] Annual catches increased dramatically from 19,000 tonnes in the 1980s to 847,000 tonnes in 2013, to 1,225,798 tonnes in 2023. This translates to an increase in landings of 45% in just the last decade.[27]

Total jumbo squid landings increased by 45% between 2013 and 2023.[28]

Global interest in squid by seafood buyers and consumers is driving demand for jumbo squid products. This is evidenced by both Chilean and Peruvian exports (worth approximately US$178 million[29] and US$831 million[30] respectively per year) of jumbo squid increasing steadily in recent years, despite fluctuations in landings in 2024 due to dramatic environmental changes affecting the fishery.[31/32]

An explosion of fishing effort of 115% between 2017 and 2020[33] by predominantly Chinese DWF vessels has resulted in several initial population assessments showing the first warning signs of overfishing.

Ominously, part of the reason for this spike in effort was the collapse of the neon flying squid fishery in the Northwest Pacific in 2016.[34] This led the Chinese fleet to set its sights on the jumbo squid fishery further south.[35] Reports of illegal fishing intrusions by Chinese vessels into coastal States soon followed, as well as largely uncontrolled fishing due to a lack of substantive flag or regional regulations. EJF's own investigations now reveal a shocking level of non-compliance on Chinese vessels, both in failing to combat harmful fishing practices and also perpetrating extensive human rights abuses at sea.

The international community must now take substantive action to ensure that the SPRFMO and its member states can adequately monitor and regulate squid fishing activities in the SEP, enhance transparency mechanisms to deter both IUU fishing and human rights abuses, and protect the lives of fishers working onboard these vessels.

This report will explore the origins and ecological significance of the jumbo squid fishery, the main flag states responsible for the majority of fishing effort, and the rise of DWF fleets operating on the high seas. It draws on EJF's investigative findings from speaking to former crew of Chinese squid vessels, as well as sets out recommendations for relevant stakeholders to support the development of a sustainable, ethical and legal squid fishery in the SEP.

Two fishers (one of them was EJF's interviewee) posing with a jumbo squid.

Methodology summary

EJF conducted interviews with 77 Indonesian and four Filipino fishers. These fishers had worked on 60 Chinese-flagged DWF squid fishing vessels operating in the SEP between 2020 and 2025. Available Automatic Identification System (AIS) tracks for each vessel were scrutinised alongside the latest SPRFMO Record of Vessels to verify if the vessels had indeed operated within the SEP and were authorised to do so.[36] Various secondary datasets were then combined to give us a consolidated list of 346 "vessels of interest" either suspected of or verified to have conducted either fisheries or labour abuses in the SEP (full list available in the Appendix).

Photos and videos from onboard the vessels were obtained from interviewees with their informed consent. Additional social media investigations in the form of searches for photos, videos, or other materials connected to the vessels were also undertaken.

Our fishing effort and trans-shipment analysis focused on analysing vessel activities contained within Food and Agriculture Organisation (FAO) fishing subareas 87.1.4 and 87.2.6 of the SEP - areas where the jumbo squid fishery is most active. We excluded subarea 87 3.3 as it is not a key aggregation zone for jumbo squid and is instead frequented by tuna longliners. We also excluded coastal state EEZs as Chinese DWF vessels do not operate in these zones.[37]

In total, our analysis returned 777 vessel 'identities' which corresponded to 676 unique vessels. This discrepancy is caused by Global Fishing Watch's (GFW) unique identifier for each vessel changing each time there is a name and/or ownership change despite the IMO and/or MMSI number staying the same.

Data on vessel encounter events (likely at-sea trans-shipments) was extracted from GFW's platform.[38] Encounter events that took place outside the study regions were excluded. The data was filtered again to retain encounter events between refrigerated cargo vessels (reefers) of interest and fishing vessels of interest (see page 14 for definitions). Port visit events were aggregated by reefers and trips.

Company-based trade data was retrieved from subscription platform, TradeData Pro.[39] Fishing companies and their processors or clients were identified via open source intelligence (OSINT) methods, for instance, publicly available company annual reports, as well as the Outlaw Ocean Project Bait-to-Plate database.

For more detailed information about EJF's methodologies, please refer to the Appendix.

Data limitations

Interview data may be subject to inaccuracies, as some interviewees had worked on multiple vessels—often within the same fleet. Interviewees are also often recalling events that occurred several years prior. These factors can affect the precision of their recollections, particularly when attributing specific incidents to individual vessels. To mitigate this risk, EJF attempts to corroborate testimonies with supporting evidence where possible, including photos, videos, contracts, passport stamps and other documents. However, such materials were not always obtainable, and some risk of inaccuracy in the testimony remains.

For most key market states, it is not possible to disaggregate squid export data by species. The Harmonized System (HS) coding system for global trade of commodities currently only allows for the differentiation between fresh, frozen or preserved "molluscs; cuttle fish and squid".[40/41] This makes detailed analysis difficult, especially when vast fisheries like that of the jumbo squid are so important in terms of global squid trade. This can create major blind spots for market states, enforcement agencies and civil society to screen for high-risk squid imports.

This is compared to detailed trade data down to the species level for other molluscs such as abalone and conchs as well as many finfish (tuna and salmon) which all have specific species product codes. The disaggregation of jumbo squid (amongst other squid species) into its own HS code would immediately improve trade monitoring, improve supply chain transparency, and make it easier for market states to identify flows of high-risk jumbo squid into their markets.

Fleet dynamics in the jumbo squid fishery

1,225,798 tonnes of jumbo squid were landed in 2023 with Peru, China and Chile representing the three most significant countries in the fishery for at least the last 25 years. These three countries represented over 99% of all declared landings in 2023.[42] Peruvian and Chilean fleets operate exclusively within their Exclusive Economic Zones (EEZs) whilst China's fleet fishes on the high seas.

Flag State	2023 (Tonnes)	% of total (2023)	Composition of fleet
Peru	621,925	50.7%	Domestic fishing operation within own EEZ with some high seas fishing too
China	494,000	40.3%	Distant water fishing operation on the high seas
Chile	105,197	8.6%	Domestic fishing operation within own EEZ
Ecuador	3,028	0.2%	Domestic fishing operation within own EEZ
Mexico	1,641	0.1%	Domestic fishing operation within own EEZ
Other countries	6.76	0.0%	Mixed
TOTAL	1,225,798	-	-

Latin American fleets:

A line of Peruvian artisanal squid fishing vessels. Credit: National Society of Artisanal Fishing of Peru (SONAPESCAL)

PERU:

Peru's '*pota*' (jumbo squid) fishery represents a crucial pillar of the country's economy, bringing in 621,925 tonnes worth US$831 million in 2023 alone.[43/44/45] Approximately 2,500-4,500 artisanal vessels, most of which are under 15m in length, fish for jumbo squid in Peru.[46/47] Peru has also registered 668 small-scale vessels with the SPRFMO in recent years.

Exemplifying the economic importance of jumbo squid to Peru, consistent efforts have been made to ensure the survivability and sustainability of the squid population. These include the dedicated 'Regulations for the management of giant squid (*Dosidicus gigas*)' enacted in 2011[48] and updated in 2025[49] to freeze current fishing effort, limit participation in the fishery to national small-scale vessels, and introduce new fishing control measures.[50] The successful creation of the jumbo squid Fishery Improvement Project (FIP) in 2023[51], and the acceptance of the national fishery into the Marine Stewardship Council's Improvement Program in December 2025 also demonstrate the international recognition of these efforts.[52]

Upon landing, 92% of Peru's squid is sent for processing into frozen products with the bulk of this destined for export.[53] The most sought-after squid forms include raw tentacles, raw fillets, precooked fillets and raw squid fins.

According to UN Comtrade (which does not disaggregate by squid or cuttlefish or indeed specific squid species), China was the recipient of 34% of total Peruvian squid & cuttlefish exports in 2023 followed by S. Korea (17%), Spain (15%), Thailand (8%) and Japan (4%).[54]

Jumbo squid cover the deck of this artisanal fishing vessel in Peru. Credit: National Society of Artisanal Fishing of Peru (SONAPESCAL)

CHILE:

Chile's artisanal squid fleet (mainly using handline jig gear) comprises approximately 1,800 vessels, with 98% of these equal or less than 12 meters in length.[55] The fleet landed over 105,000 tonnes of jumbo squid (known as *jibia* locally) in 2023. Exports of jumbo squid from Chile were valued at US$178 million in 2024, representing a 56.2% increase compared to 2023.[56] Since 2019, export tonnage has also increased by 211% with 74,975 tonnes exported in 2024. According to UN Comtrade, Spain represented 36% of total Chilean squid & cuttlefish exports by value in 2023 followed by S. Korea (22%), Japan (14%), Taiwan (9%) and Mexico (4%).[57] China represented 2%.

Chile's most relevant and recent regulation on the jumbo squid was the enactment of a so-called "Giant Squid Law" in 2019.[58] This banned the use of trawl nets and went as far as to amend Chile's General Fisheries Act to specify squid jigging as the only authorised gear to catch jumbo squid.[59] Although the law proved controversial at first, rebounds in fishery productivity since 2024 have helped to placate some critics.

"Chile and Peru have made significant progress, but without a stronger regional response within SPRFMO, the risk remains."

Alfonso Miranda Eyzaguirre, speaking at the Conxemar exhibition in Vigo, Spain, October 2025.[60]

ECUADOR:

Ecuador reported 3,028 tonnes of jumbo squid landings in 2023.[61] Ecuador has faced a large number of intrusions from the Chinese DWF fleet in recent years, especially around the ecologically significant Galapagos Islands.[62] Aside from squid, Ecuador catches 45% of the Eastern Pacific's tuna landings and the country's tuna exports average US$1.3 billion per year in value.[63/64] Given that tunas are known to consume juvenile jumbo squid[65] it is possible that fluctuations in squid populations due to either environmental shifts or overfishing could have ripple effects for the region's top tuna producer.

Jumbo squid are sorted by size on this artisanal fishing vessel in Peru. Credit: National Society of Artisanal Fishing of Peru (SONAPESCAL)

Distant water fleets:

China's squid jiggers are considerably larger, longer and more sophisticated than the artisanal vessels of Latin American countries.

Outside of Latin American EEZs, China's DWF fleet dominates, conducting 98.7% of all squid jigging activity on the high seas of the SEP.[67] This effort increased by 40% between 2017 and 2025, exemplifying the speed and intensity of the fishery's growth.[68] China operated a fleet of 528 squid jigging vessels in the SPRFMO area in 2024 - a 100% increase in the number of Chinese vessels since 2014.[69] According to SPRFMO's own records, there were only three other squid jigging vessels active in 2024; one from South Korea and two from Peru. China's fleet follows the seasonal movements of the squid across vast swathes of ocean, often operating across the South Pacific for several months of the year.[70]

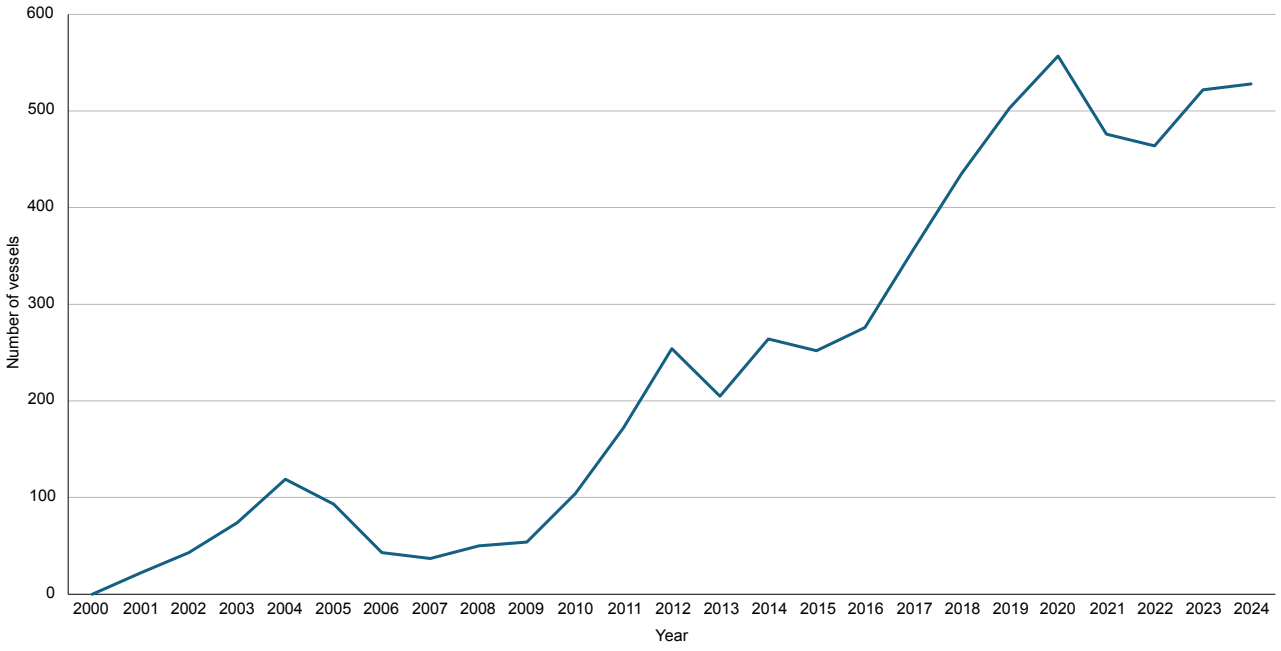


Figure 1: The number of Chinese vessels operating in the SPRFMO area has risen dramatically over the years with a 100% increase between 2014 and 2024.

Despite S. Korea and Taiwan having squid vessels registered to SPRFMO, both AIS analysis and FAO FishstatJ declarations from the SEP squid fishery show negligible activity by either fleet in the region since at least 2019.[71] This could be a result of economic calculations and strategic choices towards the placement of Taiwanese and S. Korean squid fleets or a consequence of being squeezed out of the SEP by China's sheer scale of operations. There are also 15 Vanuatu-flagged vessels on the list, with five of these being fuel bunker vessels and 10 of them being refrigerated cargo vessels (Four with ownership ties to China National Fisheries Corporation, two linked to other Chinese companies, two linked to Hong Kong-based companies, and one scheduled to be scrapped).[72]

At-sea trans-shipments facilitate China's fleet operations

A reefer vessel's superstructure is photographed from a Chinese squid jigger.

A common theme across EJF's interviews involved Chinese squid vessels transferring their catches to refrigerated cargo ships (reefers) whilst at sea. This was done so that the fishing vessel would not have to return to port and could continue fishing after the holds were emptied. This is known as at-sea trans-shipment - the transfer of fish from one vessel (often a fishing vessel) to another (often a reefer).[73] It can occur hundreds of kilometres from shore and may occur on the high seas, making it difficult and costly to effectively monitor these activities without either human observers or electronic monitoring systems (cameras) onboard both donor and receiving vessel(s).[74] Trans-shipments can be used to replenish fishing vessels, allowing them to extend their operational capacity[75/76] but also to facilitate the trafficking of wildlife products (shark fins), trafficked or abused crew, and illegal contraband (weapons and narcotics).[77]

At-sea trans-shipment can facilitate both IUU fishing and human rights abuses by reducing the risk of these crimes being discovered or detected by the authorities. The remote nature of at-sea trans-shipments can prevent witnesses of illegal fishing or victims of abuse from alerting the authorities because fishing vessels have restricted or no connectivity and can stay out at sea for extended periods of time - sometimes as much as two years at a time.

At-sea trans-shipments also provide illegal fishing operators the perfect conduit to secure seafood market access.[78] This is because once illicit catches are loaded onto reefers they can be laundered amongst legitimately caught seafood products from legal fishing vessels.[79]

The 346 consolidated fishing vessels of interest in this study (See methodology) trans-shipped with 146 unique reefer vessels between 2020 and 2025. 48.6% of these reefers were flagged to China, 32.2% to Panama, 6.8% to Vanuatu and 5.5% to Liberia.

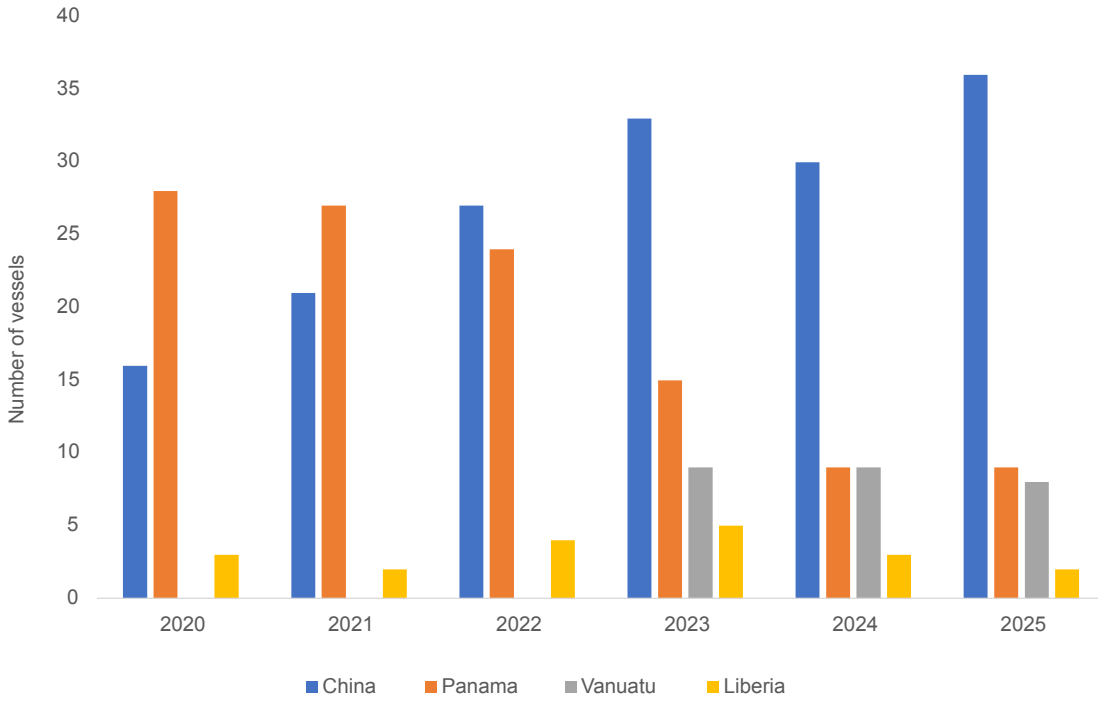


Figure 2: Number of reefer vessels by flag state actively operating in our SEP study area between 2020 and 2025.

From 2020 to 2025, Chinese and Vanuatu-flagged reefer vessels gradually replaced Panama-flagged vessels as the most common recipient for Chinese-caught jumbo squid (Figure 2). This rapid expansion of Chinese-flagged trans-shipment capacity alongside the rise of Vanuatu-flagged vessels can be explained by reviewing recent Chinese policy shifts. For example, the Zhoushan municipal government's 14th Five-Year Plan published in 2021 sought to implement the "expansion of the trans-shipment fleet for distant-water fisheries, and either constructing new super-sized refrigerated reefer vessels or acquiring flag-of-convenience reefer vessels".[80] Between 2024 and 2025, 22 newly built reefer vessels departed from Zhoushan, China's most important squid landing and processing city.[81]

Squid are loaded into baskets before being frozen.

Zhoushan - Squid capital of the world

The increase in Chinese-flagged reefers is just part of an industry and state-backed effort to increase efficiency and capacity in the Chinese squid industry, with Zhoushan (Zhoushan National Pelagic Fishery Base - ZNPFB) operating as the undisputed focal point. Zhoushan is a prefecture-level city with a population of 1.56 million people.[82] situated on an archipelago located in the East China Sea off the coast of Zhejiang Province, Eastern China. The ZNPFB provides dedicated harbours designed for DWF vessels and reefers, 520,000 tonnes of cold storage capacity, a streamlined border control and inspection process, digitised trading platforms, and numerous seafood processing plants.[83]

The Zhoushan 14th Five-Year Plan also announced the establishment of a holistic network of trans-shipment, cold storage, and trading from the world's major fishing grounds to Zhoushan. State media has since taken to describing reefers as "delivery drivers"[84], collecting cargo from the high seas and shipping this back to "squid banks" in Zhoushan.[85]

In 2020, just under 40% of the reefers which encountered our vessels of interest docked in Zhoushan after doing so. This percentage doubled to about 78% between 2021 and 2025, with more than half of these reefers making ZNPFB their first port of delivery, highlighting Zhoushan port's dominance in unloading squid.

78% of reefers receiving catch from 346 Chinese squid vessels of interest - alleged or confirmed to have conducted either fisheries or human rights abuses - unloaded into Zhoushan.

This highly efficient "delivery" network is designed to facilitate a near continuous flow of squid to buyers and processing plants via Zhoushan. For instance, after the newly built reefer, Hui Ze Leng Yun 15 arrived on the SEP fishing grounds in August 2024, GFW recorded 44 encounters, of which 28 encounters (64%) were with our vessels of interest. The vessel sailed back to Zhoushan in February 2025. According to a news article, this vessel unloaded an astonishing 110,000 tonnes of frozen squid from this single trip.[86]

To make investing in the city an even more attractive proposition, the Zhoushan municipal government also provides several lucrative subsidies to operators including a one-off reward of RMB 500,000-3M (US$72,000-432,000) for qualified DWF companies relocating to Zhoushan, compensating vessel operators 120 RMB (US$17.3) for every tonne of squid shipped back to Zhoushan, and a one-off reward of RMB 300,000 (US$43,000) for processors whose year-on-year squid processing capacity increases by at least 30%.[87]

Moreover, fishing companies are also provided with attractive subsidies - Up to RMB 12M (US$1.7M) - if they support high seas fishing operations through the provision of floating infrastructure such as resupply, support, or fuel bunker vessels.[88] Zhoushan Putuo Rural Commercial Bank also provides fishing companies a special 'squid inventory loan' - taking frozen squid inventory as collateral and financing the companies' fishing activity. Between 2020 and 2021, the bank issued a total of RMB 463M (US$66.5M) through such loans to squid producers.[89]

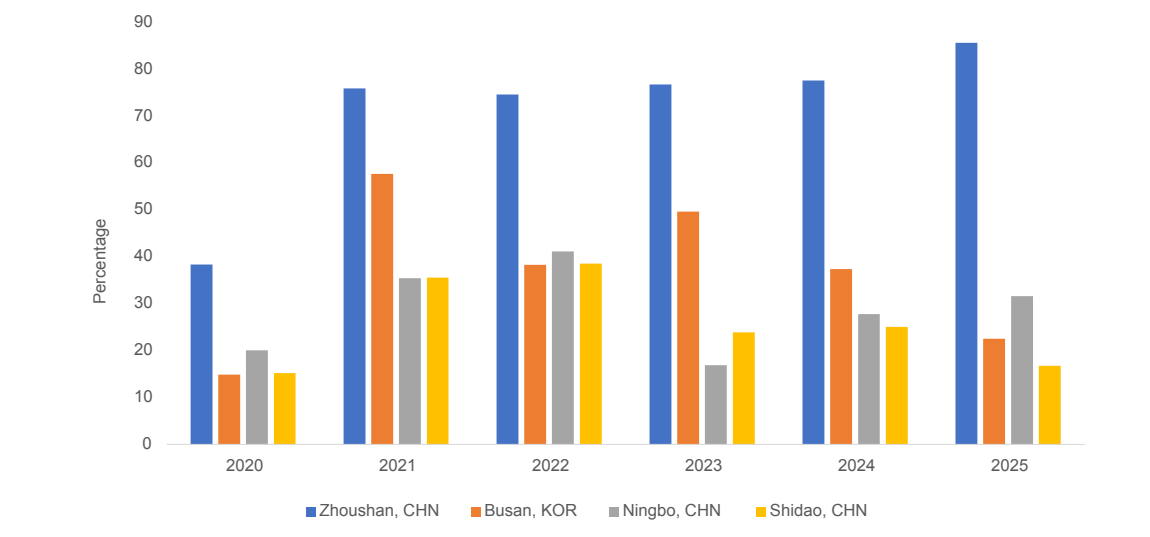


Figure 3: Percentage of port visits of reefers after potential trans-shipment events with vessels of interest between 2020 and 2025.

EJF has identified a secondary trans-shipment route between Zhoushan, China and Busan, South Korea. About 19% of the reefers (identified through encounters with our vessels of interest) continued their journey to Busan, South Korea, after first stopping in Zhoushan. Busan serves as a critical entry port for Chinese-caught squid. In 2024 alone, China accounted for 52% of Korea's total squid imports in value with the top exporters predominantly based in Shandong, Zhejiang and Zhoushan —the primary hubs for China's DWF fleet.[90]

Zhoushan-based squid exporters represented 13% of all squid consignments going to South Korea in 2024 and 2025.[91]

Zhoushan-based exporters, including Zhoushan Youtian Import and Export Co., Ltd. and Zhoushan Jingyuan Food Co., Ltd., collectively represented 13% of all squid consignments to South Korea in 2024 and 2025.[92] This Zhoushan-Busan corridor effectively extends China's squid supply chain infrastructure across borders, creating an integrated regional network that obscures the origin of catches and further complicates traceability and transparency efforts.

A Korean-flagged squid jigger in Busan port. EJF investigations identified almost 20% of reefers involved in trans-shipments with vessels of interest travelling to Busan port to unload squid. Photo for illustrative purposes only.

Ports of convenience enable opaque and destructive fishing practices

A beheaded seal lies on the deck of a Chinese-flagged squid jigger.

China's South Pacific operations are partially facilitated by the ability to utilise Latin American ports to resupply, refuel, conduct repairs, rotate crew, and even unload deceased crew (see page 30). For years, vessels commonly used Peruvian ports but this has recently changed to Chile due to increased oversight by Peruvian authorities.[93] In September 2024, the country enacted Supreme Decree Nº 014-2014-PRODUCE that established that any foreign squid vessel seeking to use Peruvian port facilities must install the Peruvian VMS system six months before entry, in strict alignment with the PSMA.[94] While entries from Chinese vessels to Peru were zero in 2025, Visits to Chile increased from less than ten Chinese vessels in 2024 to around 180 in 2025. Chile has in effect become the "port of least resistance" for these vessels.[95]/[96] Both the Chilean and Chinese authorities, however, claim that these vessel inspections are proving sufficient to identify any potential infractions.[97/98] The fact that the Chinese fleet decided to shift operations to Chile rather than accommodate new technologies is emblematic of the unwillingness of Chinese vessel operators to cooperate with efforts to boost transparency or expand monitoring and control of their fleet operations in alignment with the internationally promoted PSMA standards.

Protests in Chile in 2025 by artisanal fishers show that the arrival of these Chinese vessels into Chilean ports may not be entirely welcome. Local fishers are concerned about the impact of so many industrial-sized fishing vessels operating on the fringes or indeed even illegally inside their EEZ.[99]

"They [the Chinese crew] slapped on the head. Sometimes, they pulled [our] hair[...] For me, it was like [the Indonesian crew] did not have any rights. We had to oblige the senior crew."

Interview with an Indonesian fisher working on a Chinese squid vessel, May 2025. EJF has identified this vessel as having docked into Chilean ports in 2025.

EJF's own analysis of Global Fishing Watch port entries for 163 Chinese-flagged squid vessels switching to Chilean ports in 2025 found nine vessels that were linked to its investigations into fisheries and/or human rights abuses.[100] A further 67 sister vessels (linked by ownership and available fleet records) were also implicated by extension. According to the Outlaw Ocean Project, 38 of the 163 vessels (68%) arriving into Chilean ports had AIS transmission gaps or suspected spoofing during operations, and eight of them (14.3%) had allegedly conducted illegal fishing. Moreover, eight of them (14.3%) had dropped off sick crew at ports, while five vessels (9%) had discharged dead crew at ports.[101]

These recent operational shifts provide a perfect example of why regulation of DWF fleet activities can only be truly effective with regional and international cooperation to prevent so-called ports of convenience from opening. It also serves as a useful case study for the effectiveness of transparency mechanisms in monitoring for non-compliance, such as mandatory VMS and reporting, in the fight against illegal fishing.

"We caught a seal once. We took only the teeth and dumped the body afterwards. We used a fish gaff to take it and a rope to lift it."

Interview with an Indonesian fisher working on a second Chinese squid vessel docking into Chilean ports in 2025 (Interview conducted in December 2024).

A shark is tangled in one of the lines on a third Chinese squid jigging vessel that EJF has identified as having docked into Chilean ports in 2025.

Gaps in port controls can allow wildlife abuses like the catching of seals to go undetected.

Interwoven fleet dynamics between the Southwest Atlantic and Southeast Pacific squid fisheries

"I knew it from the weather. In Argentina, the weather was cold. While in Peru, it was hot. And then, I saw the flag flown too. When the vessel sailed, the flag was changed."

Interview with an Indonesian fisher working on a Chinese squid vessel, May 2025.

Adapted. *Source:* https://law.lclark.edu/live/news/51304-unregulated-fishing-explodes-spells-doom-for-jumbo

China's South Pacific DWF squid fleet is highly mobile, spending the first half of the year in the SWA and then transiting to the SEP in what is often referred to as "the squid route".[102] Out of the 777 vessels analysed in this study (see methodology in Appendix), 356 (45.8%) of them also fished in the SWA high seas, utilising both fishing grounds over the annual cycle. This is done to maximise the financial returns from fishing in these remote South American waters, thousands of kilometres away from their home ports in China.[103] Only five Taiwanese and 13 South Korean vessels followed this route in 2020, with the majority of vessels being Chinese-flagged (97.7%). EJF's investigations found 126 vessels (35.4% of the vessels using the squid route) known to have fished in the SWA with reported infractions (IUU fishing and/or labour abuses) were also present in the SEP and registered with the SPRFMO.[104]

Three squid jiggers photographed in Montevideo port in 2021 - EJF interviews have linked the middle vessel to shark finning, catching of seals, covering the vessel name during fishing operations in the SEP.

Transiting between the SEP and SWA fishing grounds significantly extends vessel time at sea and often negatively impacts the mental health of crew.

> ***"He [a colleague onboard] had finished his contract - he had been working for 2 years. Previously, the vessel had an accident and was going to be repaired. He was going to be transferred to a different vessel which would be operating in Argentina. That means he had to extend his contract. He did not want to extend his contract, so he jumped into the water. There were actually 4 people who jumped into the water. It happened in the Peruvian waters. They were rescued by the Peruvian police - it was near the shore[...] The crew members were arrested by the police, interrogated, and then were taken by the Indonesian embassy in Peru. Then they were able to go home."***
>
> Interview with an Indonesian fisher working on a Chinese squid vessel, September 2021.

This fluid movement of vessels between major fishing grounds makes the spatial and temporal tying/labelling of individual IUU fishing and/or labour infractions difficult. However, given that the ultimate responsibility for the operations of a fishing vessel rests with the flag state, a crime committed in one fishery (for example, the SWA) would still constitute grounds for enforcement action wherever the vessel decided to continue fishing (i.e. the SEP or SPRFMO area of jurisdiction) or dock into port (i.e. Chile).[105]

A Chinese-flagged squid jigger photographed in the SWA in Spring 2025. SPRFMO records indicate that this vessel is authorised to fish in the South Pacific.

Impacts of overfishing and poorly regulated squid fishing in the Southeast Pacific

A 2025 report by Chile stated that total squid catches in 2024 had dropped by 52% from the previous year.[106]

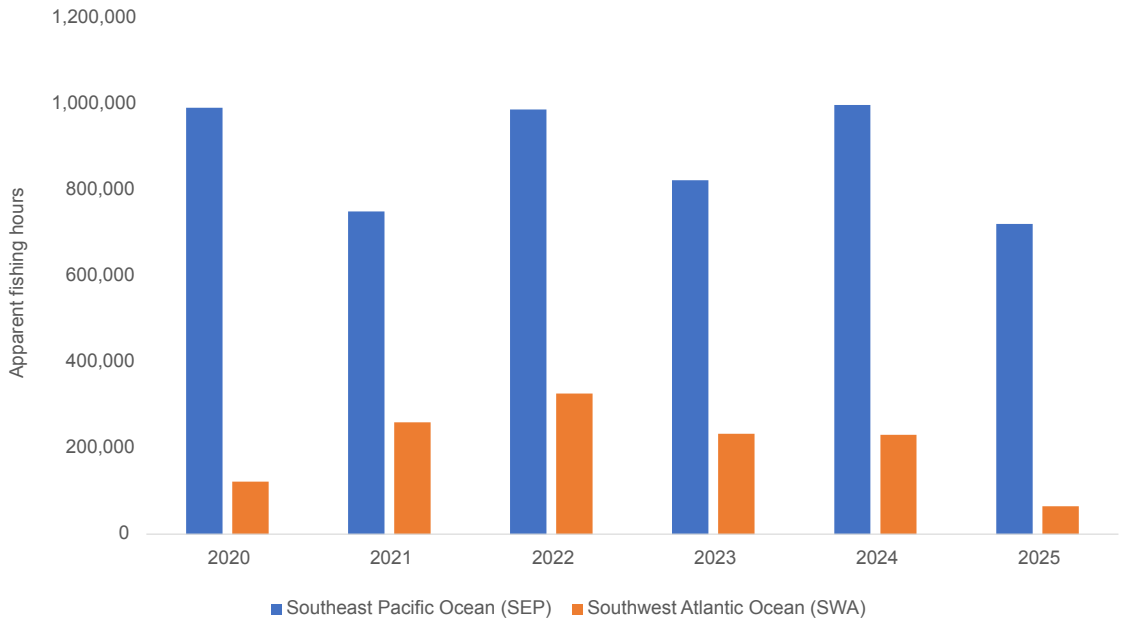


Figure 4: Comparison of apparent fishing hours between the SEP and SWA squid fishing ground in 2020-2024 as per EJF's AIS analysis (see methodology in the Appendix).

According to fishing effort data analysis, a total of 5.3 million hours' worth of fishing activity were recorded in the SEP between 2020 and 2025. This corresponds to an annual average of 883,000 hours. This number is about 3.25x higher than that of the SWA fishing ground.

Since 2015, there have already been indications that the jumbo squid population in the SEP was suffering from overfishing.[107] A 2025 report by Chile presented at the SPRFMO meeting in September 2025 indicated substantial drops in jumbo squid yields, with total squid catches in 2024 dropping by 52%. The report also stated that the overall biomass likely peaked in 2010 and has had a general downward trend since then.[108] China's own stock assessment submitted to SPRFMO in the same year showed CPUE dropping from a peak of 8 tonnes per vessel day in 2015 to a record low of 2.4 tonnes per vessel day in 2024, despite fishing effort actually increasing by 13% from 2023.[109/110]

Screenshot from a video show the decks of a squid jigger overflowing with jumbo squid.

As with other squid species, jumbo squid populations can go through 'boom and bust' cycles, meaning that their populations can vary dramatically from year to year. Individuals may only live for one or two years and their reproductive cycles are highly sensitive to changing environmental conditions including ocean temperatures, currents, and El Niño/La Niña cycles.[111/112] Jumbo squid have been referred to as "a rapid-response sentinel of environmental change"[113] or a "biological barometer of ecosystem structure and function".[114] One study found that future ocean acidification as a result of global heating could lower the jumbo squid's metabolic rate by 31% and activity levels by 45% by the end of the 21st century.[115]

Jumbo squid are already a highly migratory species having been found off the coast of Alaska and the southern tip of Chile - a distribution of over 10,000km.[116] Populations may scatter and leave an area entirely if conditions do not meet their specific needs. A 2019 study identified shifting weather patterns and ocean conditions as one of the factors for the disappearance of Mexico's jumbo squid fishery.[117] Peru's own jumbo squid fishery has been impacted by such sweeping climatic variations - abnormal weather patterns in 2024 (during an El Niño event) saw Peruvian squid catches drop by 69.7%, a downturn that was completely reversed in 2025 when environmental conditions returned to normal.[118/119]

This high environmental sensitivity makes species like the jumbo squid acutely affected by overfishing pressures.[120] For example, if a region's squid population were to experience a particularly bad 'bust' cycle due to climatic variations or ocean current fluctuations, the added pressures of overfishing could result in a population collapse. Experts predict that with a warming world, and the added stresses this will bring, such tipping points could become a lot more common.[121]

Jumbo squid hold a highly influential mid-trophic role in the SEP ecosystem, which if disrupted, could lead to a cascade of ecosystem effects for the predators of jumbo squid.[122] This could result in predators such as sharks, whales, and dolphins facing starvation, population decline or being forced to migrate to new foraging grounds. For example, when jumbo squid populations off the coast of California declined between 2016 and 2018 this resulted in the regional sperm whale population (a 'super population' totalling 354 whales) leaving the area entirely.[123] The converse could also be true, with population declines of jumbo squid theoretically resulting in an explosion of prey species since predation pressure would be lifted.[124] In either case, the consequence would be an imbalance to the ecosystem, impacting both marine life and regional fisheries.[125]

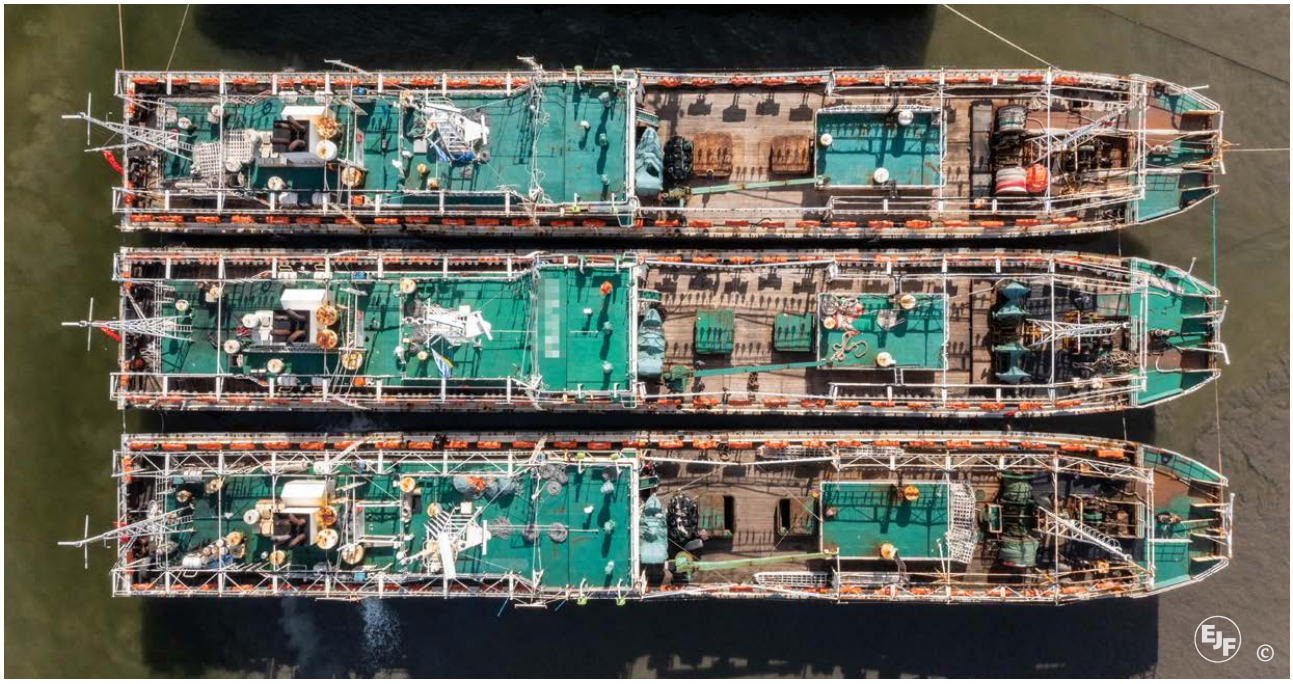
China's moratorium on squid fishing

China introduced a moratorium on squid fishing in the SEP in 2020 in response to concerns from Latin American countries.[126] The area covers approximately 541,000 nautical miles^2 starting from the EEZ border with the Galapagos Islands and extending westwards. Chinese squid vessels are not permitted to fish in this zone between the 1st September and 30th November.[127]

Investigations by Oceana and Global Fishing Watch have revealed that the area designated to be protected had rarely been fished by Chinese squid jiggers before the moratorium was established, with only 38 total fishing hours recorded on GFW's platform in 2019.[128] This implies that the moratorium has had and will have almost no effect on curbing the recent growth in fishing effort by China's squid fleet.[129]

Critics of the moratorium have also stated how the decisions on how, where, and when to introduce the moratorium were made unilaterally by China without input from other flag or coastal state scientists or experts.[130] The measure is also not officially recognised by the SPRFMO, nor has it been formally assessed by the SPRFMO's scientific committee. The current CMM for the regulation of jumbo squid under the SPRFMO does not acknowledge this moratorium further reducing its effectiveness.[131]

Latin American concerns about China's fleet



Three squid jiggers photographed in Montevideo port in 2021 - EJF interviews have linked the middle vessel to shark finning, catching of seals, covering the vessel name during fishing operations in the SEP.

The sheer magnitude of the Chinese fleet and its proximity to Latin American EEZ boundaries is already a concern for countries across the region. This is because the intense lights of China's squid vessels can lure squid from inside national waters out into the high seas and prevent squid from migrating back and forth, affecting domestic fishery catches.[132] It also exerts huge pressure on coastal state enforcement agencies as they have to try and monitor hundreds of fishing vessels across vast stretches of ocean.

"They are real termites that destroy everything and devastate the entire ecosystem[...] They have been denounced for crossing [the exclusive economic zones of] other countries, and we can't be sure that they are not doing it here."

Alberto Olivares, President of the Federation of Fishermen of Iquique, Chile, speaking to Radio Bio Bio, October 2025.[133]

Latin American countries also worry about the risks of incursions by Chinese vessels into their squid-rich national waters. Ecuador[134], Peru[135] and Chile[136] have all reported incursions - sometimes by multiple vessels at a time - into their waters, raising serious concerns for the legality of Chinese squid operations in the region.

The SEP jumbo squid fishery provides a useful case study for the juxtaposition of nationally regulated squid fisheries of coastal states vs. poorly regulated high seas squid fishing activities by DWF vessels. Whilst the strongest social and economic dependencies lie with the coastal states (e.g. Peru and Chile), governance issues across the region are aggravated by the significant share of fishing pressure that is exerted just outside their jurisdictions. This warrants a strong, unified Latin American regulatory approach.

"The Chinese fleet demonstrates that it does not accept transparency in its operations".

Alfonso Miranda Eyzaguirre, President of the Committee for the Sustainable Management of the Southern Jumbo Flying Squid (CALAMASUR), February 2025.[137]

Longstanding diplomatic relationships and economic investments between China and Latin American countries have often resulted in an overly cautious or accepting attitude towards Chinese fishing activities and requests to utilise ports across the region.[138/139/140]

For example, Peru and China signed an updated free-trade agreement and inaugurated a new US$3.6 billion Chinese-funded *and* Chinese-built mega port during President Xi Jinping's visit to the country in 2024.[141] Chile, likewise, has strong trade links to China with 40% of its exports being sent across the Pacific Ocean.[142] Such entrenched economic and diplomatic interests could prove to be increasingly problematic given the growing concerns of their own national fishing industries to the looming threats offshore.[143/144]

Encouragingly though, Peru has already taken measurable steps to improve the transparency of foreign vessel activities in its waters. It is hoped that the improvements to environmental security and sovereignty that Peruvian VMS measures have brought since their enactment can persuade neighbouring countries to follow suit.[145]

Building a suitable regulatory environment for the jumbo squid fishery

The SPRFMO is the primary RFMO covering the high seas of the South Pacific for non-tuna species, including jumbo squid. It was formed in 2012 and has 17 Commission Members, including Chile, China, the EU, Peru and the U.S.[146] It is the second youngest RFMO after the North Pacific Fisheries Commission (NPFC, covering the waters of the North Pacific for non-tuna species) which was established in 2015.[147] RFMOs are governed by consensus-based decision-making systems meaning that they are often slow to respond to harmful environmental threats such as overfishing, shark finning, or the catching of charismatic or vulnerable marine megafauna (cetaceans, turtles, seabirds, etc).[148] This also means that progress can be stifled or delayed for years if just one country disagrees with proposals.[149] This results in management policies that are not effective with regard to broader concerns for ecosystem and biodiversity protection.

A dedicated Conservation and Management Measure (CMM) for jumbo squid (CMM 18-2020) entered into force in January 2021 with an emphasis on data collection, reporting and calls for VMS implementation.[150] It also established minimum observer coverage requirements of either five full-time at-sea observers or 5% of fishing days for participating fleets.[151] It was later superseded by CMM 18-2023, which introduced a vessel limit number for fleets (671 squid-targeting vessels for China), entry and fleet expansion controls, and updated monitoring and reporting requirements.[152] However, this latest CMM still does not impose catch limits on squid or bycatch restrictions for squid vessels.

In recent years, proposals to introduce additional regulatory measures, such as more robust regulation of at-sea trans-shipments, the facilitation of at-sea patrols and vessel boardings by foreign enforcement agencies, and the establishment of fishing buffer zones, have been repeatedly debated. While China initially vetoed several of these proposals[153], subsequent negotiations resulted in limited consensus on some measures.[154] However, the continued prevalence of unsustainable and destructive fishing practices, alongside serious human rights abuses on board fishing vessels, demonstrates that the rules ultimately adopted have been insufficient to prevent or effectively address these harms, pointing to a broader systemic failure of the regulatory framework.

> ***"China has not taken any initiative to adopt a conservation and management measure for jumbo squid on the high seas in the nearly 15 years of this RFMO's existence[...] [China's] lack of initiative in the SPRFMO is a concrete fact."***
>
> Alfonso Miranda Eyzaguirre,
> President of CALAMASUR, October 2025.[155]

Summary of fisheries abuses identified through EJF investigations

Investigation findings

EJF investigations reveal that at least 60 Chinese-flagged squid jiggers in the SEP have engaged in unsustainable and destructive fishing practices. Reported abuses include the intentional catching and finning of sharks and disposal of bodies, intentional catching of vulnerable marine megafauna such as seals and various species of cetacean, fishing without a license, and tampering with vessel identifiers.

Almost 60% of vessels were allegedly involved in the extremely harmful and cruel practice of catching and finning sharks while they were still alive. Crews reported that they would then dump the bodies back into the sea.

"For sharks, sometimes their fins were taken. I heard that their fins are expensive, so they were taken[...] They [the bodies] weren't taken[...] Everything was thrown away. Only the shark fins were taken."

Interview with an Indonesian fisher working on a Chinese squid vessel, August 2025.

30% of vessels were allegedly involved in the intentional capture of seals. Fishers described how they would often use a harpoon to impale the seals and then either use a fish gaff (large hook) or tie a noose around their necks to bring them up on deck. Seals would then be clubbed to death and their teeth taken as souvenirs. False killer whales and dolphins were also reportedly captured with fishers describing similar methods of capturing the animals. These marine mammals would then be decapitated, and their teeth pulled either for souvenirs or to be sold on the black market.

A photo taken by a crewmember shows four teeth allegedly taken from a seal (likely a South American fur seal).

"We also caught seals twice[...] The seals were harpooned first because seals would immediately die after they were harpooned. So, we used a fish gaff (hook) to lift the seal up. Then we tied it and then lifted it up."

Interview with an Indonesian fisher working on a Chinese squid vessel, May 2021.

"They [the sharks] got stuck on the fishing lines, and then we took them."

Interview with an Indonesian fisher working on a Chinese squid vessel, June 2024.

"We caught them [seals and other animals] intentionally. When we didn't catch any squid, we needed to catch anything we could. We caught anything that passed our vessel, including stingrays."

Interview with an Indonesian fisher working on a Chinese squid vessel, September 2022.

Illegal fishing indicator(s)	Number of vessels (n=60)	Percentage (n=60)
Finning of sharks and throwing away the bodies	35	58.3%
Intentional capture of seals	18	30%
Intentional capture of false killer whales	1	1.6%
Intentional capture of dolphins	1	1.6%
Tampering with the vessel name, number or any vessel identifier [i]	9	15%
Suspected fishing without a licence	13	21.7%

Table 1: Statistical summary of alleged illegal fishing infractions on vessels covered in this report.

[i] See page 28 for further details.

Exemplifying the lack of regulation in the SEP is the fact that neither Chinese flag-state regulations nor SPRFMO CMMs outlaw either the finning of sharks and throwing away of the bodies, or the intentional capture of marine mammals. For example, in 2019 and later updated in 2024, the Chinese government published a regulation on controlling shark finning and bycatch of cetaceans specifically for the SEP fishing ground.[156/157] However, these regulations do not apply to squid vessels. Moreover, the most common seal species recorded in our interviews – the South American fur seal – is not included in China's list of protected wildlife.

"After they harpooned the seals, some would receive the small fangs, and some would receive the big fangs[...] The rest of their bodies were thrown away."

Interview with an Indonesian fisher working on a Chinese squid vessel, June 2025.

A crewmember removes a seal's teeth by hand.

At the regional level, the SPRFMO does not have a CMM on the catching of sharks or the practice of finning sharks at sea. A number of RFMOs[158] already have a "fins naturally attached" policy for sharks with the Inter-American Tropical Tuna Commission, for example, requiring sharks to be kept intact until the point of first landing.[159] There is also no CMM on the prohibition of catching and retaining vulnerable marine megafauna such as seals, false killer whales or dolphins. This is in stark contrast to a CMM from the Western Central Pacific Fisheries Commission, which sets out clear prohibitions on the catching of cetaceans.[160] SPRFMO members are currently only required to record data for any incidental captures of seabirds, mammals, reptiles and other species of concern, but there is no regulation to prohibit their capture or require their release if incidentally captured.[161/ii]

"We caught a dolphin, but we did not manage to take it onboard. We caught a turtle too. We also caught Marlins twice for our personal consumption. We also caught seals twice."

Interview with an Indonesian fisher working on a Chinese squid vessel, May 2021.

"We intentionally caught them. When the sharks were around, we would throw baits to attract them[...]They were harpooned."

Interview with an Indonesian fisher working on a Chinese squid vessel, March 2021.

One reason to explain this is that the original mandate of the SPRFMO was to apply "the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources[...]" with the definition of "fishery resources" explicitly excluding sharks, cetaceans and a number of other species of concern.[162] EJF would argue that despite this definition, any application of an ecosystem approach should expand the Convention's mandate to cover non-target species such as sharks and marine mammals.

[ii] SPRFMO's CMM on "Standards for the Collection, Reporting, Verification and Exchange of Data" lists seven species of concern in its Annex 14; Oceanic whitetip shark, great white shark, basking shark, porbeagle shark, manta rays, mobula nei, and whale shark.

EJF would also argue that the SPRFMO does have the ability to regulate the impacts of shark finning and cetacean capture. For example, Article 3(1)(ii) of the Convention speaks to "taking into account the impacts [of fishing] on non-target and associated or dependent species" and Article 20 (1)(c) speaks to "maintaining or restoring populations of non-target and associated or dependent species[...]".[163] This should provide credible grounds for SPRFMO delegates to advocate for substantive CMMs that robustly regulate shark finning and vulnerable marine megafauna capture within the SPRFMO area.

"We operated in the Chilean waters. It was out of the permitted zone. The foreman covered the name of the vessel using cardboard. There were plenty of squids there. However, we could not be there for too long. Once we got the squids, we pulled up the parachute and moved to a safe location."

Interview with an Indonesian fisher working on a Chinese squid vessel, September 2021.

Nine vessels were reported to have tampered with either the vessel name, number or other vessel identifier. Fishers described how common practice was to cover the vessel's name and/or number with a tarpaulin or cardboard sheet. According to the Outlaw Ocean database, 28 of the 777 vessels (4%) covered in this study also had a history of suspected AIS spoofing.[iii] The 'unauthorised alteration of vessel names, identification signals, fishing vessel markings or vessel configurations' is a punishable offence set out in the current Regulations on the Management of Distant Water Fisheries of the People's Republic of China.[164] The SPRFMO does have a CMM for "the Marking and Identification of Fishing Vessels" and it could be argued that the "obscuring in part or full [of vessel markings] by the fishing gear" could be classed as an IUU fishing activity as set out in CMM 04-2025.[165/166]

[iii] Spoofing is the intentional manipulation of a vessel's AIS to broadcast false location, identity or voyage data.

Summary of human rights violations identified through EJF investigations

A fisher sleeps on the bare deck of a Chinese squid jigger.

EJF investigations have uncovered a range of serious violations onboard Chinese-flagged squid jiggers operating in the SEP. EJF categorises these violations under the broader umbrella of human rights abuses, as this enables us to capture the full spectrum of harm endured by crew at sea—from denial of medical care and unsafe working conditions to violence, deception and coercion.

Within this, we distinguish forced labour as a specific categorisation of abuses, drawing on the ILO's established indicators such as restriction of movement, debt bondage, and abusive working hours.[167] This distinction is critical for accurately reflecting the severity of violations while enabling accountability through legal and regulatory frameworks that explicitly prohibit forced labour.

Investigation findings

A fisher shows the injuries sustained by having to work for long hours in the vessel's freezer, resulting in severe frostbite and the loss of several fingers.

EJF interviews with 81 fishers working onboard these 60 vessels reveal a shocking prevalence of reported forced labour indicators including physical abuse, abusive working and living conditions, debt bondage, and withholding of wages. These alleged abuses contradict the SPRFMO's decision on "Labour Standards on Fishing Vessels in the SPRFMO Convention Area", enacted in February 2024.[168] This decision "encourages" Members to ensure fair living conditions on board including the absence of forced labour, trafficking in persons, or any other form of involuntary or compulsory labour.

Forced labour indicator(s)	Number of fishers (n=81)	Percentage (n=81)
Document retention	74	91.4%
Excessive overtime	75	92.6%
Intimidation and threats	20	24.7%
Withholding of wages or other promised benefits	76	93.8%
Work with substandard or no wages	75	92.6%
Debt bondage or manipulation of debt	72	88.9%
Isolation	77	95.1%
Restriction of movement	76	93.8%
Physical abuse	41	50.6%
Abusive working and living conditions	64	79%
Deception	63	77.8%
Abuse of vulnerability	56	69.1%

Table 2: Statistical summary of alleged labour abuses on vessels covered in this report.

Deaths at sea and body bags at port

At least 41 deceased crew were unloaded from Chinese fishing vessels registered to the SPRFMO between 2013 and 2023.[169]

One standout reason for DWF vessels visiting Latin American ports has been the unloading of deceased crew.[170] A 2025 ITF report found that 66 deceased crew had been unloaded from 59 SPRFMO-registered vessels between 2013 and 2023.[171] 41 of these crew (62%) had worked on Chinese-flagged vessels, 14 (21%) from Taiwanese, 8 (12%) from S. Korean, and 3 (4%) from other flagged vessels. A number of reasons were given for these deaths, including illness (24 cases out of 66), workplace accidents (18 cases, of which 9 were going missing at sea), unknown causes (20 cases), knife wounds (2 cases) and hanging (2 cases).[172] The high number of deaths attributed to 'unknown causes' - alongside several involving violent and unexplained circumstances - underscores the lack of oversight surrounding these fishing operations and highlights the extreme risks faced by crews working at sea.

*"**EJF:** Can you tell me how the two crew members passed away?*

***Fisher:** At the time, Fisher X was suffering from appendicitis. He requested to go home, but he was not allowed to do so. When he was sick, he was only given basic medicine. A week after [Fisher X died], a Filipino [Fisher Y] also passed away.*

***EJF:** How long was Fisher X sick on board the vessel before passing away?*

***Fisher:** Around three weeks.*

***EJF:** Can you tell me why Fisher Y passed away on board the vessel?*

***Fisher:** His legs were swollen, perhaps because he was too exhausted or because of beriberi, I am not sure[...] Both of his legs were swollen, extending from the thighs upward."*

Interview with an Indonesian fisher working on a Chinese squid vessel, October 2020.

Vessel case studies

This section provides detailed case studies for three of the most notable vessels identified through EJF investigations. These vessels have been highlighted to illustrate a variety of non-compliance issues, IUU fishing infractions and human rights violations on board vessels operating within the jurisdiction of the SPRFMO. Each case study also seeks to demonstrate how these abuses can go undetected due to a lack of transparency across the fishery, often facilitated by the practice of at-sea trans-shipment and a shortage of both human observers and electronic monitoring systems onboard vessels.

"[My last trip was] 22 months[...] The vessel didn't dock at all[...] Never. Never at all[...] Always in the middle of the sea."

Interview with an Indonesian fisher working on a Chinese squid vessel, August 2025.

Vessel names and identifiers are not included in the public version of this report due to legal risks. All case study vessels flew the Chinese flag and were authorised to fish in the SPRFMO jurisdiction as of the time of writing. All vessels were reported to be squid jiggers.

Two fishers pose with a jumbo squid on board a Chinese squid vessel.

VESSEL 1

Interviewees reported dates on board the vessel

Fisher A – October 2023 – June 2025 | **Fisher B** – October 2023 – June 2025

Suspected fisheries abuses

In 2025, EJF interviewed two Indonesian crew members from Vessel 1. They reportedly witnessed - and at times participated in - IUU fishing practices during their time on board, including:

Fishing in unauthorised grounds

According to both fishers, the vessel principally operated in the SEP high seas off the coasts of Chile, Ecuador and Peru. This broadly aligns with the vessel's AIS transmissions.

Both fishers alleged that the vessel operated in the Chilean EEZ without a permit. Fisher A described that "there was actually a border on where we could operate in Chile," but that on one day the vessel entered that area and "*caught lots of squid*". Then, at around 5 a.m., while squid were still actively being caught, the captain ordered the crew to stop fishing. He wondered, "*why would we move far away, even though there are lots of squid*?" A more experienced crew member explained to him that the vessel had been operating in a "prohibited area."

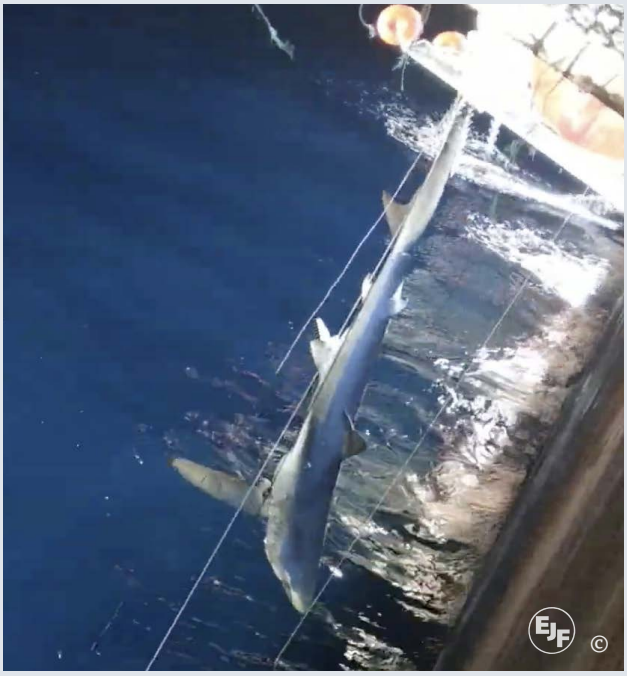
Fisher B's account suggests that such practices were systematic across the fishing grounds:

> ***"[The vessel] entered country borders. For example, our permit to be in Chile was for June, we fished illegally in July. Our permit in Chile was valid from October to November, but we were already in Ecuador in November. We were there before we fished in Peru in May. So, in November, December, January, February, to May, we fished illegally."***

Interview with Fisher B, June 2025.

Fisher B also noted suspicious behaviour when the vessel operated in areas without a permit; (a) the vessel "isolating" itself from other vessels in the vicinity and turning off its lights, (b) the captain acting restlessly, while working, and (c) the vessel quickly rolling back its gear when the authorities allegedly passed by. Fisher B further suspected that the vessel's VMS or AIS was often turned off while the vessel was fishing illegally. EJF's analysis of the vessels' AIS transmissions from the period indicates that the vessel frequently operated near the boundaries of the Chilean, Ecuadorian, and Peruvian EEZs, with repeated AIS gaps in the early morning hours.

Shark finning



Screenshots from a video showing a possible blue shark being lifted aboard the vessel.

According to interviewees, sharks were frequently caught onboard the vessel - with Fisher B further alleging that this was done "intentionally." Both fishers similarly described that once sharks were caught:

"Their fins were cut off[...] the rest of their bodies were thrown away."

Interview with Fisher A, June 2025.

The fishers described how fins were dried on board so they could be kept as "souvenirs" (Fisher B) and "turned into accessories" (Fisher A).

Fisher B estimated that 40 sharks - each weighing between 25 and 50 kilograms - were caught and finned during his time on board, with both fishers identifying blue sharks as the most commonly processed species.

The two fishers reported that shark finning was carried out in CCTV blind spots, with Fisher A reporting:

"When we caught a shark, sometimes the CCTV spotted it, the captain would know and tell us to throw it away. But if the CCTV did not spot it and the captain was not aware of it, sometimes it was taken."

Interview with Fisher A, June 2025.

Deliberate capture and injury of vulnerable marine megafauna

Fishers A and B reported that seals were hunted and killed onboard the vessel, with senior Chinese crew members responsible for harpooning them:

"We used squid bait. We tied it with rope and threw it. When a seal was approaching, we would harpoon it[...], it would be harpooned until it died[...] Chinese crew could definitely do that [harpoon]. Indonesian crew would get scolded merely for holding the harpoon."

Interview with Fisher B, June 2025.

"The ones who usually harpooned the seals were the head engineer or the Chinese [crew] who fished on the back of the vessel."

Interview with Fisher A, June 2025.

The fishers estimated that between 50 and 60 seals were killed on board the vessel, with senior Chinese crew keeping their fangs. According to Fisher B, the Chinese crew warned the Indonesian crew not to keep the fangs, as they would be arrested upon returning to Indonesia, but said this was not an issue in China.

Fisher B further reported that two sting rays were caught, processed and consumed onboard the vessel, an account supported by video footage showing a ray being caught and hauled on board.

Screenshots from a video show a bleeding seal being harpooned. The harpoon is visible in the left-hand screenshot.

Details of human rights/labour abuse allegations

The conditions reported by Fishers A and B - detailed below - are indicative of forced labour risk on board Vessel 1.

Physical violence was reported by Fisher B, who stated that "when crew were deep in the work, they (the captain and bosun) would hit, and scold." He further described a specific incident in which a crew member reportedly asked to return home and, after his request was denied, a fight broke out. The 13 Chinese and nine Indonesian crew members involved in the confrontation - which was ultimately broken up by the captain before it escalated further - were reportedly holding weapons such as iron bars and knives.

Abusive living and working conditions onboard were illustrated in both fishers' statements regarding the provision of food, water, medicine, safety gear, and personal protective equipment.

The distilled water provided was "yellow from rust" (Fisher B), but even though it "wasn't good" (Fisher A), the crew's only alternative was to buy bottled water - so Fisher A explained that, rather than paying for it, he "boiled distilled water instead. I did that for 20 months." Food was often expired, and Fisher B recalled a time it had maggots in it.

Fisher A also reported that medicine was not freely available; for instance, "[when] the vessel didn't catch a lot of squid, the captain wouldn't give it to us. He said that he didn't have it, even though he had it". Safety equipment on board the vessel was also inadequate, with Fisher B sharing a video showing the vessel's life rafts were out of date. He explained that safety checks in port were avoided because the vessel did not dock:

> ***"When the vessel docked, it had to be checked by the port officer. They would check whether the vessel, life jacket, lifeboat were in good condition or not [...] Our lifeboat was already expired at that time. Hence, we did not dock in any country."***
>
> Interview with Fisher B, June 2025.

Chronic lack of rest was reported by Fisher B, who stated that during the high season, work could reach 16 hours a day, and the crew sometimes got as little as two hours of sleep.

Restriction of movement and isolation: Fishers working onboard the vessel were kept at sea for almost two years. During the 20 months they were onboard, the vessel docked only once - in Peru - according to Fisher A, a claim that aligns with AIS data reviewed by EJF. Fisher A also reported that crew members were not allowed to disembark in Peru. The fishers further stated that while the vessel was equipped with Wi-Fi, crew members were prohibited from using it, with access reserved for senior Chinese crew: "*there was Wi-Fi, but it was specifically for higher-ups, such as the captain, engine crew, and* Ta Fu *[bosun] [...] Chinese crew members were granted access in secret*," said Fisher B.

Deception: Both fishers were contracted to work on a separate vessel, as verified in contracts reviewed by EJF. However, they were reportedly transferred at sea to Vessel 1. Fisher B also reported that a broker from the manning agency had promised him a monthly salary of US$350, but upon signing the contract, he discovered that his wage was US$20 lower.

Work with substandard wages and debt bondage: Before boarding the vessel, both fishers had already accrued substantial debt to their manning agency, which handled their document administration, medical check-ups, Basic Safety Training (BST), and departure, among other services. A document provided by the manning agency indicates that Fisher A's debt reached IDR 21,532,000 (US$1,280), while Fisher B similarly reported total debts of around IDR 20,500,000 (approximately US$1,220).

Fisher B shared that he felt deceived by the manning agency, saying: "there are a lot of unclear deductions." He further reported that a bank account was opened in his name to secure a loan without his knowledge or access, as he was not provided with bank records or an ATM card. Documentation detailing Fisher A's debt - including a bank loan administrative fee charged by the manning agency - further suggests that the agency also arranged a bank loan on his behalf. Fisher A also reported that he was not provided with a bank card and did not consent to the account being opened in his name.

Document retention: Both fishers reported that the captain of the vessel kept the crew's passports and seamen's books while they were onboard.

Vessel 2

Interviewees reported dates on board the vessel

Fisher C – August 2019 – November 2021 | **Fisher D** – August 2023 – August 2024

Suspected fisheries abuses

Between 2023 and 2024, EJF interviewed two Indonesian crew who worked on Vessel 2. Fisher C worked on the vessel for 27 months from August 2019 to November 2021, while Fisher D was onboard for 12 months from August 2023 to August 2024. Both fishers reported that the vessel mostly operated in the SEP, specifically on the high seas adjacent to Chile and Peru. The vessel also operated on the high seas adjacent to Japan and Argentina. Their accounts align with available AIS data reviewed by EJF.

During their time onboard, the fishers reported witnessing IUU fishing practices, including shark finning and the deliberate capture and killing of seals.

Shark finning

Fisher C reported that the vessel captured sharks - including blue and silky sharks - as bycatch. He stated that after the sharks were caught, they "usually [...] took the fins and the marrow."

Deliberate capture and injury of vulnerable marine megafauna

Both fishers reported that seals were caught and killed during their respective trips on board the vessel. According to Fisher C, this was rare, but when it did occur, the bodies were thrown overboard, with only their teeth kept.

Fisher D recalled that seven seals were deliberately captured and killed with harpoons by the Chinese crew during his trip:

> ***"It (seals) was intentionally harpooned by the Chinese crew. The fangs were taken for collection."***

Interview with Fisher D, August 2024.

A screenshot taken from a video shared with EJF shows a decapitated seal body being processed, with its teeth removed and its stomach cut open.

In addition to Fisher reports of shark finning and the deliberate capture and killing of seals, the vessel has been linked by The Outlaw Ocean Project to fishing and environmental concerns, particularly for the suspected use of multiple MMSI numbers and AIS spoofing. While operating in the Galapagos and the high seas adjacent to Peru's EEZ in 2020 - when Fisher C was working on board - the vessel transmitted two different MMSI numbers.

Details of human rights/labour abuse allegations

The following statements from Fishers' C and D highlight conditions consistent with a risk of forced labour on board the vessel.

Physical violence: In his testimony, Fisher C reported that the captain subjected him and other crew members to physical violence. He stated that once, while he was feeling ill and taking a rest, the captain hit him:

> ***"Yes, I was hit. When I first started working on the vessel, I felt nauseous, and I rested, sitting down in the back [of the vessel]. The captain approached me and hit me."***

Interview with Fisher C, March 2023.

In a separate incident, Fisher C described the captain kicking crew members while they slept because they were late for work.

Chronic lack of rest: Both fishers reported working excessive hours on board the vessel. Fisher C stated that he was allowed around five hours of rest per day, while Fisher D similarly reported that during periods of high catch, the longest he could sleep was four hours.

Restriction of movement: Both fishers reported excessively long fishing trips on board the vessel. Fisher C stated that the vessel did not dock at all during his 27 months onboard, which aligns with AIS data, while Fisher D reported that the vessel only docked once after approximately one year of fishing.

Abusive living conditions were experienced by Fisher C. He reported that "food supplies were short" onboard the vessel, and sanitary facilities were inadequate, with 34 people sharing a single toilet.

Deception: Fisher C reported that he was given insufficient time to read his contract before being required to sign it:

> ***"I did not get the chance to read it [my contract] [...] I was asked to hurry[...] I was asked to sign it quickly."***

Interview with Fisher C, March 2023.

Work with substandard wages and debt bondage:

Fisher D reported that although his salary was supposed to be sent home every three months, on several occasions it was delayed, taking as long as six months:

> ***"Based on the contract, my salary should have been transferred to my family every three months[...] but it took 5 months. The second transfer took six months to complete. The third transfer too."***

Interview with Fisher D, August 2024.

In addition, testimony and documents shared by Fishers C and D indicate that both incurred significant debts before boarding the vessel, a potential indicator of debt bondage. Fisher C paid a US$800 security deposit, while Fisher D paid US$1,000. Fisher D further reported large deductions, totalling US$1,200, which he was told by the manning agency were to cover passport and seaman's book renewal, medical check-ups and his BST certificate.

Document retention: While working on board the vessel, the vessel captain reportedly retained both fishers' passports and seaman books.

Vessel 3

Interviewees reported dates on board the vessel

Fisher G – August 2018 – July 2020

Suspected fisheries abuses

In 2021, EJF interviewed one Indonesian crew member who worked on Vessel 3 for 23 months.

Fisher G reported that the vessel operated in the SEP and the SWA, specifically in waters adjacent to Argentina and Peru. He stated that the vessel typically fished for around 10 months at a time before docking, but because of the COVID-19 pandemic, it operated for 24 months before returning to China. This account is consistent with EJF's analysis of available AIS data.

Shark finning

A beheaded shark onboard Vessel 3. One crewmember holds a harpoon while another holds the knife presumably used to behead the shark.

Fisher G reported that sharks were "often" caught onboard the vessel. Squid were used as bait, and once caught, the sharks were killed with a harpoon, their fins removed, and their bodies discarded:

> ***"We gave them squids as bait. Then after they ate the bait, it would be hard for us to pull them up because of the fishing line and the size, so we harpooned them[...] We only took the fins, the bodies were thrown away[...] The body was thrown back into the ocean."***

Interview with Fisher G, May 2021.

He stated that the process was the same for all species caught, including those most commonly captured by the vessel, namely, oceanic whitetip and blue shark. Fisher G explained that the fins were dried, placed in sacks, and stored in the vessel's freezer. He believed they were then sold by Chinese crew members - some taken back to China, but primarily sold to a collecting vessel during monthly squid trans-shipments.

Deliberate capture and injury of vulnerable marine megafauna

Fisher G also testified that dolphins and seals were captured. While dolphins were not taken aboard, seals were. Describing the process, he stated:

> ***"The seals were harpooned first because seals would immediately die after they were harpooned. So, we used a fish gaff to lift the seal up. Then we tied it, and lifted it."***

Interview with Fisher G, May 2021.

What appears to be a South American fur seal caught and killed on Vessel 3.

Fishing in unauthorised grounds

While working onboard the vessel, Fisher G reported witnessing the vessel enter what he described as an unauthorised area in Argentine waters. Explaining why he believed the vessel was operating outside an authorised area, Fisher G stated that on the afternoon before entering the area, the crew were ordered to paint the vessel's hull and cover its name. When the vessel entered the area, the captain allegedly turned off the vessel's GPS. Later that night, the vessel the was reportedly chased by an Argentine military vessel. During the pursuit, the captain scolded and rushed the crew, reportedly fearing that the vessel would be intercepted. Ultimately the vessel evaded capture:

> ***"The Argentinian military vessel almost got us, but at the time, there were plenty of vessels. So, they were chasing a lot of vessels. We managed to escape the chase."***

Interview with Fisher G, May 2021.

Details of human rights/labour abuse allegations

Physical abuse: Fisher G reported being physically abused by the vessel captain.

> ***"I was at the very top of the vessel. I dropped a piece of steel. Since no one came to pick it up, I tried to pick it up myself. It appears that the captain was behind me, and he saw it, so he slapped me from the back."***

Interview with Fisher G, May 2021.

Fisher G also witnessed the captain hit another crew member on several occasions.

Chronic lack of rest: Working hours on board were excessively long, particularly during periods of high squid catch:

> ***"Right from the beginning, when we were docking, I felt like we were forced to work. At sea, the working hours were excessive – sometimes we slept only for 1 or 2 hours."***

Interview with Fisher G, May 2021.

Document retention: Fisher G reported that the crew's passports and seaman books were retained by the captain.

Market state connections

The global squid market was valued at US$12.7 billion in 2025. It is expected to grow by 3.8% annually to be worth US$18.4 billion by 2035.[173] The EU represents the most significant market for squid and cuttlefish imports - representing 31% of global squid & cuttlefish imports in 2023.[174] Spain made up almost half of all imports (47.5%) coming to the EU followed by Italy (24.5%), France (7%), and Portugal (6%).

Desk-based research has discovered that out of the 60 vessels implicated in either fisheries or labour abuses through EJF interviews, 24 of these were approved to export to the EU and 21 of them were authorised to export to the UK. Given existing trade data limitations, it is not possible to disaggregate the true quantities of high risk jumbo squid being transported to these markets as well as the United States.

Although leading markets such as the EU and US do have traceability mechanisms and import regulations in place, these depend on reliable traceability information being transmitted by the relevant flag state. However, if vessels and their operating companies are not complying with due diligence requirements, are consolidating squid consignments into large bulk shipments with little traceability, and are actively flouting flag state and RFMO regulations (through conducting IUU fishing) then this can degrade supply chain of custody.

"EJF: When did the transfer to the Chinese-flagged vessel take place? Fisher: January 2020.
EJF: How long did it take to complete the transfer?
Fisher: In the beginning, it took 2 days to complete.
EJF: How many tons was the catch transferred?
Fisher: Some 200 tons, if I am not mistaken.
EJF: Where did it take place? Fisher: It has occurred in every country of Peru, Ecuador, Argentina, and Uruguay."

Interview with an Indonesian fisher working on a Chinese squid vessel, February 2023.

Zhoushan's squid cooperative degrades traceability and increases global supply chain risks

In 2021, around 85% of the squid fishing vessels registered in Zhoushan were estimated to operate under the "dependency model" of ownership.[175] This is because the Chinese government no longer issues approvals for individual persons to participate in offshore fisheries.[176] Under this model, the property rights for vessels must belong to registered fishing companies; however, the true beneficial owners may be individuals. The beneficial owners pay a "dependency fee" to their qualified parent company each year in order to apply for government-authorised fishery projects and subsidies, while the beneficial owners make all decisions on aspects of vessel operations including crew recruitment, sales of fishery products, mortgage financing, etc.

This has made the management of vessels a challenge for many companies as they can struggle to motivate individual beneficial owners to implement reforms to vessel operations designed to tackle IUU fishing and/or labour abuses at sea.[177] It has also led to intense competition and price-cutting between individual vessel beneficial owners, making the financial conditions unfavourable for many producers and investors.

An unknown mobula ray being lifted onboard a Chinese-flagged squid jigger.

Responding to the sharp fluctuations in the price of SEP jumbo squid, a squid cooperative called the Zhoushan Distant Water Squid Professional Cooperative (舟山同业远洋鱿鱼专业合作社, hereafter referred to as the Zhoushan Squid Co-op) was established in 2019.[178] Since then, 27 squid fishing companies with over 350 squid vessels have become involved in this scheme – unifying their storage, logistics and auctions through the China Distant Water Squid Trading Centre (中国远洋鱿鱼交易中心) in Zhoushan, Zhejiang.[179] Among our 346 vessels of interest, 140 vessels (40.5%) were owned by companies that are members of this cooperative.

The aim of the cooperative was to establish an orderly pricing system for squid, enhancing the operational resilience of squid-fishing companies against market risks, and to consolidate Zhoushan's leading position in squid fisheries nationally and globally. For instance, in 2021, the cooperative celebrated two bulk purchases from a seafood processor and a seafood broker with respective sums of 10,000 tonnes and 43,500 tonnes of frozen jumbo squid.[180] However, the practice of combining such vast quantities of squid significantly lowers supply chain traceability, as it is almost impossible to determine the true origins of individual squid shipments once they are mixed. This can facilitate the laundering of illegally caught squid much in the same way as at-sea trans-shipment does.

53% of fishers interviewed by EJF and working on vessels owned under the Zhoushan Squid Co-op had experienced physical violence during their time onboard.

According to EJF's interview data, nine fishers (52.9% of the total interviewed (n=17)) who worked on vessels owned under the Zhoushan Squid Co-op had experienced physical violence. Nine vessels out of the 14 vessels (64.3%) under the Zhoushan Squid Co-op were alleged to be implicated in shark finning, and three of them in the killings of seals (21.4%). Among the 12 vessels implicated in either fisheries or physical violence abuses, three vessels were authorised to export to the EU, and one vessel was authorised to export to the UK.

> ***"I was hit with a fishing gear. The fishing gear was used like this [making gesture] It ripped my hand. Here too[...] It was intentional."***

Interview with an Indonesian fisher working on a Chinese squid vessel, October 2024.

> ***" EJF: Did the other Indonesian crew members ever experience physical violence? Fisher: Yes. EJF: What was done to them? Fisher: They were punched and kicked. EJF: By whom? Fisher: The captain[...] At first, we hadn't gotten used to the bell, the one that signalled work time[...] Because they kept on sleeping, the captain hit them."***

Interview with an Indonesian fisher working on a Chinese squid vessel, September 2022.

> ***"EJF: Did your vessel ever catch sharks? Fisher: Often. EJF: What was done after catching those sharks? Fisher: They [the Chinese] lifted and killed them. And their fins and bone marrow were taken[...] When sharks got entangled, they were lifted, and the fins were cut off. And then, their bone marrow was taken. Most of them [the Chinese] swallowed the bone marrow right away, while the fins were sundried right away. After they were sundried, they were probably loaded inside something, I'm not sure.***
>
> ***EJF: So, your vessel caught tiger sharks and oceanic whitetip sharks, right? Fisher: Right. EJF: Did your vessel often catch those sharks? Fisher: Every day. So, we were catching squid, and when they got stuck on the fishing lines, they would be eaten right away [by the sharks].***
>
> ***EJF: What was done to the bodies? Fisher: The bodies were immediately thrown away. EJF: So, only the fins were taken? Fisher: Yes, the fins and the bone marrow."***

Interview with an Indonesian fisher working on a Chinese squid vessel, July 2022.

China National Agricultural Development Group (中国农业发展集团)

Eight CNFC linked-vessels were identified through EJF interviews as having allegedly engaged in shark finning, and six of them in the killing of seals.

The China National Agricultural Development Group (CNADC) owns the corporate cluster of the China National Fisheries Corporation (CNFC) – a state-owned conglomerate which plays the most influential role in the entire value chain of the Chinese squid industry.[181] CNFC Zhoushan Ocean Fisheries (中水集团舟山远洋渔业有限公司, previously known as CNADC Zhoushan Ocean Fisheries) is one of CNADC's fishing subsidiaries that specialises in squid jigging in South American waters. According to their most recent annual report, the company's revenue in 2024 was approximately RMB 5bn (US$710M) – with about RMB 655M (US$94M, 13% of total revenue) attributed to squid fishing.[182] Several squid vessels owned by the conglomerate were involved in high-profile infringements in South American waters over the last decade. For instance, in 2016, several squid vessels refused onboard inspections by Argentinian authorities in a disputed area. This eventually led to the sinking of the Lu Yan Yuan Yu 010.[183]

In 2023, the CNADC's Shenzhen Stock Exchange-listed subsidiary, CNFC Overseas Fisheries (中水集团远洋股份有限公司), became the majority shareholder (72.08%) of CNFC Zhoushan Ocean Fisheries.[184] This merger and acquisition allowed CNADC to funnel its most valuable assets of the corporate cluster to the listed company and improve financial stability for its subsidiaries. 29 out of the 346 (8.4%) vessels of interest are owned by this entity.

CNFC Zhoushan Ocean Fisheries also controls one of the largest and most profitable squid processing plants on the Zhoushan Archipelago through the processing subsidiary China Aquatic Products Zhoushan Marine Fisheries Corporation (中国水产舟山海洋渔业制品有限公司) – CNADC Mingzhu Industrial Zone (中国农发明珠工业园). About 80.8% of the fishing company's annual revenue comes from supplying this processor, representing more than 60% of the processor's raw material inputs.[185] Other suppliers also contribute, including the Zhoushan Squid Co-op.[186] For instance, in 2021 and 2022, the processing plant purchased a respective RMB 19.7M (US$2.8M) and RMB 18.7M (US$2.7M) worth of squid from the cooperative, corresponding to between 18-26% of the annual procurement of squid material for the plant.[187]

Six fishers (42.9% of the total interviewed, n=14) who worked onboard CNFC vessels shared their stories of being physically abused. There were also two deaths recorded on board two vessels (18%, n=11), where both crew members were sick and did not receive treatment for several months until their deaths. Eight CNFC vessels (72.7% of the total vessels with interviews, n=11) allegedly engaged in shark finning, and six of them (54.5%) in the killing of seals. Among the 10 vessels implicated in either fisheries or physical violence abuses, three vessels were authorised to export to the EU and two vessels were authorised to export to the UK.

> ***"There was one Indonesian crew on one vessel. He was transferred to another vessel when he was sick. He was alone. The Chinese crew told me that he would be treated in Peru if I am not mistaken. After he was treated in Peru, the crew told us he had returned home. In fact, he died and was kept in the freezer on the lower deck. He was covered with carpet. The Indonesian crew looked for him. They found the crew dead and was kept on the lower deck. He was lifted (from the lower deck) and buried [at sea][...] He was put in the coffin and floated to the sea."***

Interview with an Indonesian fisher working on a Chinese squid vessel, July 2022.

> ***"When the crew started coughing, he asked for medicine and the doctor said it was just a regular cough, maybe because of the weather. The crew was sick from September until April. He continued working. When he was not working, the captain would ask Ta Fu (the 1st bosun) to ask him whether he could work or not. Because he was planned to be sent home, he would be transferred to another vessel. But it was canceled. It happened twice. So, a sick person was thrown here and there until his death."***

Interview with an Indonesian fisher working on a Chinese squid vessel, July 2024.

Between 2020 and 2025, at least 1,179 shipments totalling 23,384 tonnes of squid were exported by CNFC to international markets, with 28.8% going to the US, 24.6% going to the EU, 14.8% to the UK, and 11% to Australia.

According to EJF's analysis, 12.4% of all identified encounters with carriers were made by vessels owned by CNFC. Trade data analysis further shows strong evidence linking CNFC's listed processor clients with international buyers.[188] Between 2020 and 2025, at least 1,179 shipments totalling 23,384 tonnes of squid were exported to international markets. Around 26.4% of these shipments were declared as "jumbo squid", while the rest did not specify the species. In terms of weight, 28.8% of these exports were sent to the US market, 15% to Spain, 14.8% to the UK and 11% to Australia. Combined exports to the EU totalled 24.6%, making it the second-most-important market for CNFC after the US. Despite the cargo weight not being disclosed (hence exports to South Korea could not be determined) 188 shipments were sent to South Korea (16% of all shipments), making this export significant.

188 shipments of squid were sent by CNFC to South Korea between 2020 and 2025. Photo for illustrative purposes only.

Conclusion

Jumbo squid are a keystone species in the SEP ecosystem, keeping prey species in check and serving as an invaluable food source for numerous marine megafauna across the Pacific Ocean. The species is also a key economic pillar for many Latin American countries, contributing to growing exports, regional food security and the livelihoods of thousands of artisanal fishers. They are also sentinels of environmental change meaning that their unique sensitivity to warming seas, acidification and other changes may already be warning us to the impending impacts of global heating.

Despite the precarious situation, fishing effort for jumbo squid has continued to grow at an alarming rate. Initial studies published at SPRFMO already show the first warning signs of population declines. Compounding the issue further, flag state and SPRFMO regulations are not keeping pace with the destructiveness of the fleet, nor the intensity of the activity. SPRFMO CMMs are also woefully outdated compared to other RFMOs in the Pacific, with clear precedents for essential regulations on catch limits, bycatch restrictions and labour standards already in place.

Consistent vetoes by China at the SPRFMO have stifled progress and instead perpetuated a lack of transparency, often facilitated through opaque fishing practices such as at-sea trans-shipment. It is in this absence of scrutiny that IUU fishing and human rights abuses can proliferate, unbeknownst to flag, coastal, port or market States. EJF interviews with former crew, however, demonstrate how Chinese squid vessels are not just harvesting vast quantities of jumbo squid, but also butchering the very charismatic megafauna (dolphins, whales, seals) that depend on the species for their food source.

Latin American countries must show a unified front when it comes to preserving the jumbo squid fishery and ending the enabling of China's relentless destruction in the SEP through port and fishing access. This is vital to protect the jumbo squid fishery which is crucial to their economic development. As a priority, Chile should follow Peru's example by enacting stricter monitoring controls for DWF vessels seeking to use Chilean ports. Chile must prevent itself from becoming "the port of least resistance" that facilitates the bad practices of the Chinese fleet.

Market states for jumbo squid (such as the EU and United States, which are also members of the SPRFMO) should demand stricter controls on vessels operating within the RFMO. This applies to states that source from China, but also those that source from Latin American fisheries too. Unregulated fishing of a significant part of the squid population could have dramatic consequences across the region. Positive actions by the US Fish and Wildlife Services to request greater traceability and accountability for squid species (including jumbo squid) are welcome, but must target the real culprits of illegal and unregulated fishing in the SEP - The Chinese DWF fleet.

The jumbo flying squid fishery stands at a pivotal juncture. Few fisheries so vividly illustrate the interconnectedness of ocean ecosystems and the geopolitical divides that hinder their protection. What makes this crisis particularly noteworthy is that it is also, in principle, one of the most solvable. Unlike the Argentine shortfin squid fishery in the SWA or the purpleback flying squid fishery in the Northwest Indian Ocean, which are both hindered by the absence of a governing regulatory body, the SEP already has the SPRFMO. The foundation exists and so do the solutions. Transparency mechanisms that end at-sea trans-shipment, implement science-based catch limits, and mandate real-time monitoring are entirely achievable—if RFMO Members, especially Latin American coastal and market states, act.

Time, however, is not on our side. Climate change is already disrupting squid distribution and recruitment patterns. The very features that make squid resilient—fast growth and high mobility—also make them uniquely sensitive to warming seas, acidification and other changes that global heating might bring. Inaction now not only risks squandering one of Latin America's most valuable fisheries, but also accelerating ecological instability throughout the region.

Two fishers posing with squid catches.

Recommendations

Jumbo squid lie across the deck of this Chinese-flagged squid jigger.

The jumbo squid fishery requires careful and multilateral attention to alleviate continued population declines and foster a truly sustainable, ethical and legal squid fishery that can span the vast SEP. Action at the regional level through SPRFMO negotiations is possible as long as like-minded coastal, port and market states act in the best interests of the fishery to enact progressive proposals for the protection of the species. It is vital that any such action is science-led, follows the precautionary principle, and is conducted in a truly participatory and transparent manner involving all concerned stakeholders.

To strengthen fisheries governance and help end human rights abuses at sea, EJF recommends that all governments fully support, adopt and implement the provisions of the Global Charter for Transparency[189] and advance each of its principles in a time-bound, proven manner.

Based on the findings of this report, EJF further urges stakeholders to implement the following actions, as a matter of priority:

To coastal and port states in Latin America:

- Improve transparency and accountability of squid fishing activities, including through endorsement and implementation of the Global Charter for Fisheries Transparency, with specific attention given to:
    - Mandating vessel monitoring systems for foreign-flagged vessels operating in their EEZs or requesting to use their port facilities;
    - Ensuring at-sea trans-shipments of squid by Chinese vessels do not take place within national waters given their role in facilitating IUU fishing and human rights abuses;
    - Mandating the disclosure of beneficially owned fishing vessels operating and/or utilising coastal ports.
- Work with regional allies and Members of SPRFMO to support progressive proposals and secure meaningful progress towards CMMs which promote the sustainable, ethical and legal extraction of jumbo squid in the SEP. Specifically, promote CMMs that lead to the establishment of catch limits in the high seas, where the Chinese fleet is presently the sole operator.
- Implement effective port-side inspection regimes (under the PSMA where applicable) which utilise a multi-disciplinary approach (covering both fisheries and labour concerns) to identify potential infractions onboard foreign-flagged fishing vessels requesting access into coastal ports and prevent “ports of convenience” from being established in Latin America.
- Leverage the potential of regional and international information-sharing platforms, including the Global Information Exchange System (GIES) established under the PSMA (given Chile and Peru are both already signatories), to conduct due diligence checks and issue prompt alerts regarding potential instances of non-compliance.
- Publish records of port visits to assist in tracking the movement of vessels, the destination of catches and supply chains. Publish a watchlist and a banned list of vessels so that countries across the region are notified of any issues onboard vessels before they arrive.

- Propose and implement robust and collective approaches to data collection, assessments of the health of squid populations and establishment of science-based harvest controls consistent with an adaptive, ecosystem-based approach to fisheries management and the precautionary principle, in line with international law.

- Ratify the ILO's Work in Fishing Convention No. 188 (C188) to facilitate expanded port-side inspections of fishing vessels and the monitoring of adequate living and working conditions on visiting vessels. Currently, no Latin American country has ratified this important labour convention.

- Ratify the IMO's Cape Town Agreement to boost safety standards for large-scale fishing vessels operating in and utilising ports across Latin America.

- Utilise tools such as environmental impact assessments and the introduction of area-based management tools (including marine protected areas)[190] under the Agreement on Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ - entered into force in January 2026) to call for improved transparency, monitoring and regulation in the SEP.

- Call for the disaggregation down to distinct squid species for globally significant species such as the jumbo squid (*Dosidicus gigas)* in FAO catch landing reporting and monitoring mechanisms. This will help reveal true catch levels.

To the Members of SPRFMO:

A Peruvian artisanal fisher poses with a jumbo squid - showing the sheer size of this impressive squid species. Credit: National Society of Artisanal Fishing of Peru (SONAPESCAL)

At least nine proposals were submitted to SPRFMO ahead of their annual meeting in February/March 2026.[191] These included measures intended to improve the management of the jumbo squid fishery as well as monitoring, control and surveillance mechanisms.

- Support the nine proposals put forward by SPRFMO Member states, ensuring that negotiations follow the precautionary principle and are science-led.

- Support the adoption of clear, science-based limits on fishing effort and/or total allowable catch (TAC) for jumbo squid in the SEP. In order to achieve this, the Scientific Committee of SPRFMO must accelerate the adoption of a functional stock assessment model for jumbo squid.

- Advocate for the strengthening of at-sea trans-shipment CMMs through the expansion of human observer coverage on both fishing and receiving vessels as well as encourage Member States to mandate electronic monitoring systems on all vessels targeting jumbo squid.

A fisher takes one last photo of the squid jigger he worked on before departing back to Indonesia.

- Develop a CMM modelled on WCPFC CMM 2024-04[192] which sets standards to protect crew welfare, including requirements for written contracts, repatriation support, medical care, and grievance mechanisms.

- Support the introduction of a comprehensive bycatch mitigation CMM covering the protection of vulnerable species (sharks, marine mammals, seabirds, etc) in the jumbo squid fishery.

To China as the principal DWF flag state in the SEP:

- Improve transparency and accountability of DWF squid fishing activities, including endorsing and implementing the Global Charter for Fisheries Transparency, with specific attention given to mandating at-sea monitoring and inspections of fishing vessels, eliminating at-sea trans-shipment of squid unless pre-authorised and closely monitored by human observers and/or remote electronic monitoring (REM).

- Strengthen at-sea trans-shipment regulations to expand human observer coverage on both fishing and receiving vessels alongside electronic monitoring systems.

- Engage in meaningful and substantive negotiations with Members of SPRFMO to support progressive proposals and secure meaningful progress towards CMMs which promote the sustainable, ethical and legal extraction of jumbo squid in the SEP.

- Ratify the ILO's Work in Fishing Convention No. 188 (C188), the 2014 Forced Labour Protocol (P29)[193], the Freedom of Association and Protection of the Rights to Organise Convention (C87)[194] and The Right to Organise and Collective Bargaining Convention (C98)[195] (amongst others), and the Cape Town Agreement on fishing vessel safety to combat human rights abuses and forced labour in the squid fishing industry.

- Require details of beneficial ownership, including records of the destination of profits from fishing activities, and compliance history upon registering a vessel to the national flag, and scrutinise vessels with a history of flag-hopping to combat abusive reflagging.

- 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.

- Implement a moratorium on squid fishing in the SEP, as well as other relevant management measures that applies to the squid fish in the high-seas (e.g., catch limits), through multilateral discussions with all concerned stakeholders including coastal states, port states, and market states. This process should be science-led and follow a strictly precautionary approach and occur exclusively within existing SPRFMO governance structures.

To market states sourcing product from the SEP jumbo squid fishery:

- Adopt or reinforce existing import control mechanisms, ensuring they include squid species such as the jumbo squid, which are at high risk of being associated with IUU fishing practices and human rights abuses.

- Enhance scrutiny of squid imports originating from the SEP jumbo squid fishery, undertaking additional, detailed verifications of consignments as well as audits, and investigating suspected cases of illegal fishing and forced labour. In the EU, the European Commission and Member States should exploit all possibilities offered by the digitised catch certification system and mutual assistance systems under the EU IUU Regulation and explore the legal feasibility of using the Community Alert System under the same regulation to more effectively target verifications and inspections towards establishing compliance of squid products originating from specific vessels or flag states with national or international laws/CMMs.

- Prohibit the import of squid products found to be associated with either IUU or forced labour abuses, including through the rejection of consignments under the EU IUU Regulation catch certification scheme, and application of U.S. Customs and Border Protection Withhold Release Orders on squid products obtained through the use of forced labour.

- Call for the creation of a dedicated Harmonized System (HS) code for globally significant squid species, such as the jumbo squid, to improve trade monitoring.

A beheaded shark lies on the deck of a Chinese squid jigger.

Appendix

Appendix 1: Full methodology

Vessels of interest:

EJF employs semi-structured audio-recorded interviews to gather crew testimonies. In total, 77 Indonesian and four Philippine fishers were interviewed. These fishers had worked on 60 Chinese-flagged DWF squid fishing vessels operating in the SEP between 2020 and 2025. All crew were asked for their informed consent before interviews took place. Wherever possible, EJF has attempted to corroborate testimonies with additional evidence, such as additional interviewees from the same vessel, photo or video evidence of IUU fishing infractions, their contracts, travel documents, and payslips.

EJF utilises both GFW and Starboard Maritime Intelligence[196] to verify vessel AIS transmissions. This is used to corroborate crew testimonies even further. EJF also uses these platforms to identify potential vessel encounters whilst at sea.

Social media investigations in the form of searches for photos, videos, or other materials connected to the vessels were also undertaken. For vessels where social media analysis has been conducted, raw videos and photos are available upon request. Links for videos have not been included in this report to protect the identity of the fishers who uploaded these materials.

EJF combined various secondary datasets to the analysis, including EJF's interview dataset (60 vessels), the list of approved Chinese flagged high seas fishing vessels in 2024,[197] the Outlaw Ocean Project Bait-to-Plate database (280 vessels with alleged IUU fishing or human rights abuses),[198] the current registry list of SPRFMO,[199] the dataset behind C4ADS's Pier Pressure report (66 vessels),[200] information on force majeure arrivals into Peruvian ports (15 vessels)[201] and Park et al. (2023) which provides information on vessel identity and ownership. This consolidation yielded a total number of 346 "vessels of interest" either suspected of or verified to have conducted either fisheries or labour abuses in the SEP.

Fishing effort calculations:

Our analysis focused on vessel fishing activities contained within Food and Agriculture Organisation (FAO) fishing areas 87.1.4 and 87.2.6 of the SEP (excluding coastal state EEZs).[202] We excluded subarea 87 3.3 as it is not a key aggregation zone for jumbo squid. In order to reduce AIS data contamination by other non-target fishing gear types, our study area was further cut at 15°S to include only the concentrated clusters of DWF squid vessels. We also excluded coastal state EEZs as Chinese DWF vessels do not operate in these zones.[203]

A vector layer generated with GIS software (QGIS v.3.34) was used to produce a polygon. Annual fishing effort data within this polygon was then retrieved by conducting a zonal analysis on the GFW map for activity between 2020 and 2025. The identity of each vessel was then cleaned and streamlined using an in-house produced R package (R 4.5.2, R Studio 2025.12.0-daily+325). Vessels which were suspected to have a history of name-changing then had their details and current ownership verified manually on IHS Sea-web.[204] In total, 777 vessel identities were retrieved, corresponding to 676 unique physical vessels. The reason behind this discrepancy was mainly due to name and/or ownership changes and the vessels' GFW IDs changing while IMO and/or MMSI numbers stayed the same.

Tableau Public (2023.3.1) was used for data mapping and analysis.

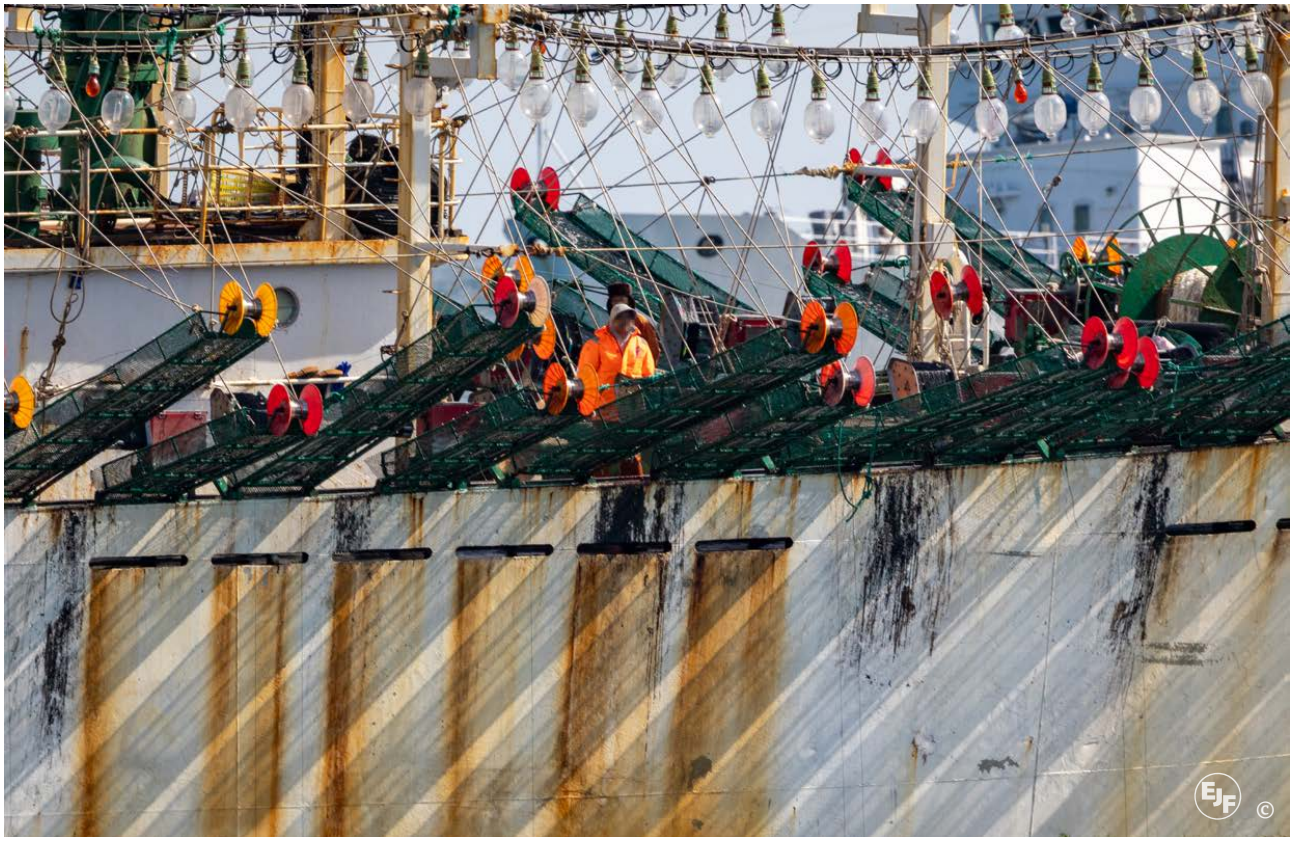
Vessel encounter analysis:

Data about encounter events and port visits was extracted from GFW using GFW's API via the R package "gfwr" (v. 2.0.4), the aforementioned polygon for fishing effort was used. Encounter events that took place outside the study regions were excluded. The data was filtered again to retain encounter events between reefers of interest and fishing vessels of interest (see page 14 for definition). Port visit events were aggregated by reefer and trip. A trip was defined as the period of time beginning with the first encounter event after a reefer leaves port, including all subsequent encounter events and port visits, and ending with the last port visited before a new encounter event.

Appendix 2: Ratification status of various relevant multilateral agreements across the SEP Latin American region and China (given its importance as the principal DWF flag state in the region)

Relevant multilateral agreements include the FAO's Port State Measures Agreement (PSMA), ILO's Work in Fishing Convention (C188), the International Maritime Organization's (IMO) Cape Town Agreement (CTA), the Agreement on Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ) and the World Trade Organization's Agreement on Fisheries Subsidies.

Country	BBNJ[205]	C188[206]	CTA[207]	PSMA[208]	Fisheries subsidies[209]
Chile	Yes	No	No	Yes	Yes
China	Yes	No	No	Yes	Yes
Colombia	Yes	No	No	No	Yes
Ecuador	Yes	No	No	Yes	Yes
Peru	Yes	No	Yes	Yes	Yes



Workers are seen on the deck of a Chinese-flagged squid jigger operating in the SWA in Spring 2025. SPRFMO records indicate that this vessel is authorised to fish in the South Pacific.

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Interview with an Indonesian fisher working on a Chinese squid vessel, September 2022

"EJF: Who cut the fins? Fisher: The Chinese. EJF: The crew members? Fisher: The crew members, the bosun[...] Everyone."

Interview with an Indonesian fisher working on a Chinese squid vessel, July 2022

"It depended on who harpooned them [seals]. We usually moved to a new location after fishing for three days, you know. Sometimes, on the back of the vessel, there were seals. Usually, it was the Chinese who caught them, probably five or six people. When they caught one, it was a bit heavy to lift it, right? Sometimes they would tell the Indonesians to pull it so it could get on board."

Interview with an Indonesian fisher working on a Chinese squid vessel, June 2025

"It [physical abuse] often happens. The bosun was in control of the crew members. So when there were some crew who were not disciplined during work or made a mistake, they would be hit."

Interview with an Indonesian fisher working on a Chinese squid vessel, May 2024

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