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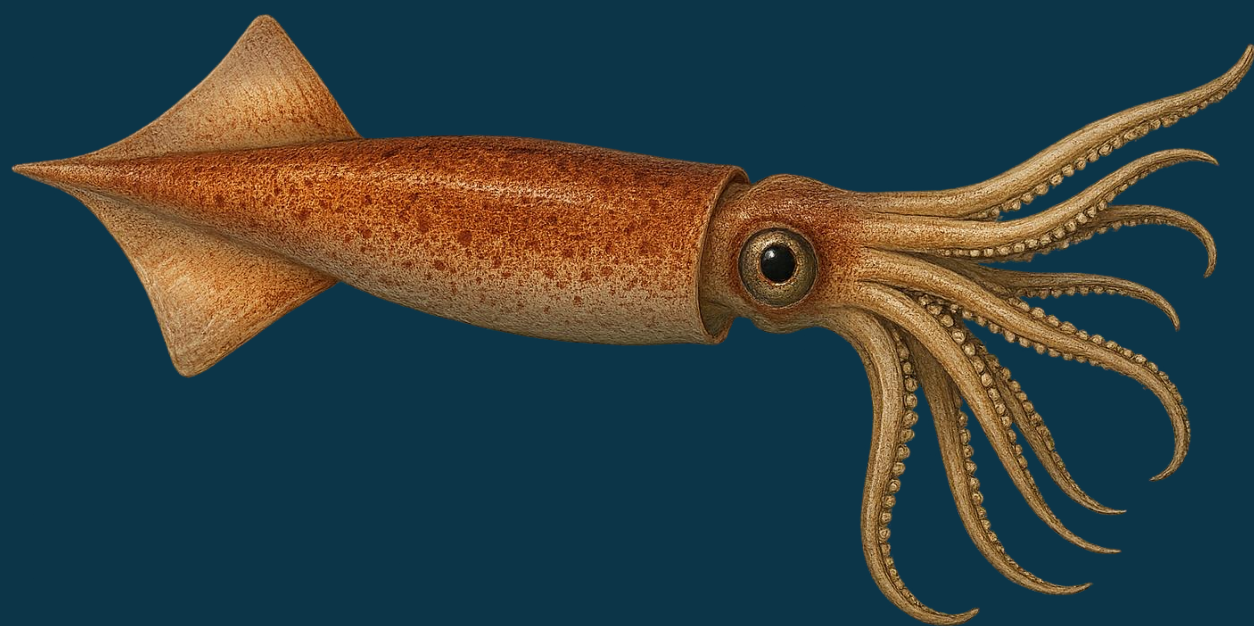
2025 LATIN AMERICA SQUID SECTOR

An overview of production, management, and trade/market challenges



February 2026

2025 LATIN AMERICA SQUID SECTOR:

An overview of production, management, and trade/market challenges

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Analysis and Report

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DISCLAIMER

This report is based on publicly available information compiled between June and December 2025. While it provides up-to-date insights into global squid production, trade, and fisheries sustainability, it is not a comprehensive review. Some data – particularly from sources in national languages or not publicly accessible – may be missing, potentially affecting certain interpretations, especially regarding sustainability and key Asian flag States (e.g., Taiwan, China, India). Although efforts were made to ensure accuracy, the completeness and reliability of all data cannot be guaranteed; thus, the information should be interpreted with caution. References to specific organizations, data providers, or countries do not imply endorsement.

ABBREVIATIONS

CALAMASUR	Committee for the Sustainable Management of the Jumbo Flying Squid
DWF / DWFN	Distant-Water Fleet / Distant-Water Fishing Nation
EEZ	Exclusive Economic Zone
ETP	Endangered, Threatened, and Protected species
EU	European Union
EUMOFA	European Market Observatory for Fisheries and Aquaculture Products
FAO	Food and Agriculture Organization
GFW	Global Fishing Watch
HS 2017	Harmonized System (HS) codes - 2017 version
IFOP	Instituto de Fomento Pesquero (*Chilean Fisheries Development Institute*)
IMARPE	Instituto del Mar del Peru (*Marine Institute of Peru*)
INIDEP	Instituto Nacional de Investigación y Desarrollo Pesquero (*Argentinean National Fisheries Research and Development Institute*)
IUU	Illegal, Unreported, and Unregulated fishing
MCS	Monitoring, Control, and Surveillance
NWAO	Northwest Atlantic Ocean
SEPO	Southeast Pacific Ocean
SFP	Sustainable Fisheries Partnership Foundation
SPRFMO	South Pacific Regional Fisheries Management Organisation
SUBPESCA	Subsecretaría de Pesca y Acuicultura (*Chilean Undersecretariat for Fisheries and Aquaculture*)
TAC	Total Allowable Catches
WCPO	Western Central Pacific Ocean

EXECUTIVE SUMMARY

Global declines in traditional finfish stocks are reshaping seafood production, and squid has become an important commodity in the global seafood landscape. Global squid catches experienced a rapid growth over the last 30 years and are now estimated at around 3 million tonnes annually, valued at nearly USD 10 billion in exports. Squids are also key species in their respective ecosystems, linking energy flows across trophic levels and supporting key predators such as large pelagic fish, seabirds, and whales.

However, the rapid expansion of the squid fishing industry has led to significant sustainability challenges in the sector. Much of the fishing takes place in Areas Beyond National Jurisdiction (ABNJs) or poorly regulated regions, leading to potential widespread illegal, unreported, and unregulated (IUU) activity. The rapid growth of distant-water fleets, particularly from China, further aggravates control of fishing pressure and has also been associated with labor and human rights abuses. Other issues such as low transparency in squid trade, including mislabeling and species reporting aggregation, pose additional challenges to traceability and sustainable sourcing. Together, these factors make squid fisheries among the most difficult to manage and verify for sustainability and ethical supply.

This study examined these issues across the main South American squid fisheries, namely jumbo flying squid, Argentine shortfin squid, and Patagonian squid, to identify the key governance gaps and sustainability risks, as well as existing efforts and future opportunities for improved management.

Information and data on these species and fisheries were collected between June and December 2025 through a desktop review of publicly available, online sources. The assessment drew on scientific publications, government and industry reports, and fisheries and trade databases (e.g., FAO FishstatJ, Sea Around Us, Panjiva, UN COMTRADE), identified via general and specialized search engines, and was complemented by informal consultations with regional experts on biology, management, and trade. The information collected was then organized into five main areas: ecological overview, production and fishing patterns, governance and management, trade flows and markets, and sustainability status.

Argentine shortfin squid (*Illex argentinus*) is one of the world's largest squid fisheries, with recent catches approaching 500,000 tonnes per year. Production is dominated by three major fleets: Argentina's (largely EEZ-based jiggers), several hundred Chinese jiggers concentrated in high seas areas bordering the Argentine EEZ, and additional distant-water vessels from Taiwan, South Korea, and Spain. In terms of trade, *Illex argentinus* also accounts for a significant share of global squid and cephalopod exports, with Argentina, China, Taiwan, and South Korea acting as major exporters and Asia and the European Union (Spain in particular) among key markets. Even though the species is widely distributed in the Southwestern Atlantic, with considerable catches in

international waters, there is no RFMO, and it is managed only through fragmented national measures of limited coverage and enforcement. The overall stock condition is unknown, given the absence of integrated and regular stock assessments and the uncertainty around catches in the high seas. There are also serious management issues in this transboundary stock, including evidence of widespread illegal fishing activity in the high seas and a lack of coordinated management. Other important issues include trade data gaps and limitations (e.g., species aggregation in reporting, mislabeling) and weak traceability, as well as the rapid expansion of distant-water fleets, and the increasing risk of overfishing and human and labor rights violations in international waters.

Patagonian squid (*Doryteuthis gahi*) is the second most important squid fishery in the Southwest Atlantic, with recent annual catches typically ranging between 50,000 and 100,000 tonnes. The fishery mostly takes place in the Falkland Islands EEZ, which accounts for more than 90% of global landings and is dominated by a small number of licensed trawl vessels operating under a closely managed system with regular stock assessments, seasonal openings, escapement thresholds, and strong monitoring and enforcement. Typical of this group, it is a short-lived species, highly sensitive to environmental variability, and exhibits strong interannual fluctuations in abundance. The Falkland Islands stock has been, however, generally considered to be in good condition and is listed as Least Concern by the IUCN. In contrast to the other South American main squid fisheries, governance and traceability for Patagonian squid are relatively robust, likely due to the vertical integration in trade and strong links to European markets, particularly Spain. Key sustainability concerns remain related to environmental variability, uncertainty around the magnitude of potential overfishing in adjacent high seas areas where no RFMO exists, potential impacts on rock cod (*Patagonotothen ramsayi*) through bycatch and discards, and limited information on the impacts of the trawl fleet in the benthic habitats and in the ecosystem as a whole.

Jumbo flying squid (*Dosidicus gigas*) is the world's largest squid fishery, with annual catches in recent years exceeding 1.2 million tonnes and accounting for roughly one-third of global squid production. Despite the species' wide distribution, fishing activity is mostly concentrated in the Southeast Pacific and dominated by Peru, China, and Chile, with a mix of large domestic fleets operating in national EEZs (e.g., Peru and Chile) and extensive distant-water jigging fleets, mainly Chinese, operating in adjacent high seas areas. The species plays a critical ecological role as a mid-trophic predator in the Eastern Pacific, but the overall status of the main stock (SE Pacific) remains uncertain: while parts of the stock within Peru's and Chile's EEZs are actively managed and regularly assessed, there is still no comprehensive, agreed stock assessment at the regional level. Governance is fragmented across the coastal states and the SPRFMO, which has yet to adopt harvest control rules or quotas, particularly for the high seas, where fishing pressure, IUU risks, and potential human and labor rights concerns are higher. This species is also a highly traded commodity, likely representing 30–40% of global squid trade. However, species-level trade data is limited and traceability is weak. This is particularly relevant for high seas catches and for traded squid from countries such as China.

Another key finding of the current report was the persisting opacity and lack of transparency around the squid trade, which continues to be characterized by complex, fragmented, and deficiently regulated value chains. Squid caught in poorly regulated or unregulated areas such as the high seas generally passes through multiple countries and potential offshore transshipment events before processing and export, where it can be mixed with other squid (and even non-squid) products from better-managed fisheries and mislabeled or aggregated under generic categories such as “frozen squid,” “mixed squid,” or “squid rings.” The growing importance of distant-water fleets in this sector (and particularly in two of the fisheries within the scope of the current study), combined with persisting events of transshipment, offshore processing, inconsistent labeling or deliberate mislabeling practices, and unharmonized import control schemes, severely undermines traceability and creates significant risks of IUU fishing, seafood fraud, and unsustainable sourcing entering global markets, limiting the ability of buyers, regulators, and consumers to distinguish responsibly sourced squid from higher-risk products.

The report also highlights and explores a range of governance, market-based, and collaborative initiatives that have emerged to improve the environmental, social, and economic performance of the squid sector and deal with growing fishing pressure on squid stocks. These include strengthened government-specific and RFMO actions and conservation measures, industry-led tools such as fishery improvement projects (FIPs) and certifications, advances in traceability and monitoring technologies, and pre-competitive collaborations among supply chain actors, particularly in South America.

Based on our findings, the report includes some key procurement recommendations to help companies minimize potential exposure to critical issues such as IUU fishing, human rights abuses, and mislabeling in their squid supply chains. Some recommendations include prioritizing sourcing from fisheries with stronger management and surveillance systems, implementing verifiable vessel-level traceability and due-diligence systems, and actively participating in pre-competitive collaborations and policy advocacy to strengthen flag-state, port-state, and RFMO governance. Together, these recommended actions enable companies to make more informed sourcing decisions and contribute directly to greater transparency, accountability, and long-term sustainability in Latin American and global squid fisheries.

As a final note, while this report offers up-to-date and reliable insights on squid production, trade, and fisheries sustainability, it is not a comprehensive review of each species. Some key sources, particularly those available only in national languages, may be missing, which could impact the interpretation of certain findings. This may be particularly relevant for sustainability information from major Asian flag states (e.g., Taiwan, China, India).

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1 BACKGROUND AND STUDY OBJECTIVES

With many of the classic demersal fisheries globally continuing to face increasing challenges in terms of growth in production, particularly due to overfishing and declining stock condition in many finfish stocks, squid has become a highly relevant sector in the global seafood landscape, currently representing one of the main commodities of invertebrates traded worldwide.

The increasing demand for this commodity has led to a rapid expansion of the fisheries targeting squid, as well as of the respective fishing grounds. Today, squid fisheries are spread across the globe, in both coastal waters and the high seas. Around 3 million tonnes of squid are estimated to be captured annually, generating approximately 10 billion USD[1] in exports. More than half of the global production comes from just two species: jumbo flying squid (42%) and Argentine shortfin squid (14%), with about two-thirds of global catch coming from the Southeast Pacific Ocean (FAO 87; 1.22 MMT; 42% of total catches) and the Southwest Atlantic Ocean (FAO 41; 0.48 MMT; 14%) (FAO 2025) (**Figure 1-1**). These two FAO fishing areas are thus critical for overall squid production worldwide.

Squids also play a key ecological role in marine ecosystems: they consume large quantities of small fish and crustaceans, and as prey, they are essential food sources for predatory fish, seabirds, and marine mammals, thus occupying and dominating mid-trophic levels. Recent studies highlight that squid act as both ecosystem engineers and biological "pumps," linking energy flows between lower and upper trophic levels, and can exert a structuring influence even at moderate population sizes. Their fast growth and short life spans mean that squid populations can rapidly respond to environmental changes, which in turn affect community dynamics and the productivity of key marine predators (Arkhipkin et al., 2015; Coll et al., 2013; Olson & Young, 2006).

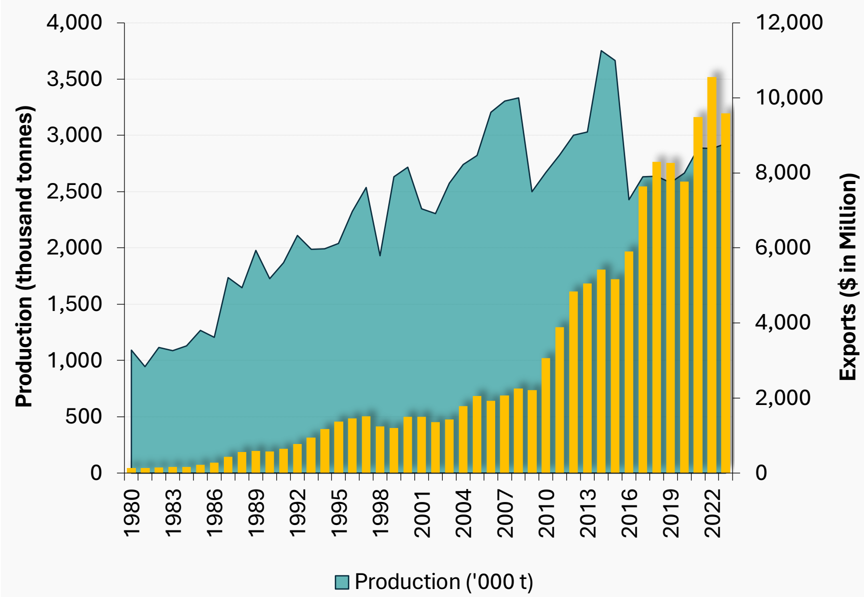


Figure 1-1 | Reported annual global squid production (000 t) and export value (million USD) from 1980 to 2023.
Source: FAO

[1] Note that this value is overestimated, as some countries report squid and cuttlefish combined to FAO.

However, the global expansion of the squid fishing industry has led to significant challenges in the sector. Much of the current fishing effort occurs in international waters or regions lacking adequate management frameworks, resulting in widespread issues of illegal, unregulated, and unreported (IUU) fishing activity. The growth of distant-water fleets (e.g., from China), particularly in the high seas, not only complicates the control of overfishing pressure and mortality but has been also associated with serious human rights and labor abuses in these fisheries (EJF, 2025). Additionally, issues such as low transparency in the squid trade (e.g., mislabeling, aggregation of different squid species under generic market labels, and the fact that a lot of squid products are destined toward food service, which requires even less transparency than retail) have also contributed to hindering traceability and undermining sustainable sourcing efforts. Combined, these factors make global squid fisheries some of the most challenging in terms of achieving and verifying sustainability and ethical supply.

This study aimed to provide a concise overview of common sustainability and trade challenges in fisheries targeting the three main squid species captured in South American waters: Argentine shortfin squid, Patagonian squid, and jumbo Flying squid, in the Southeast Pacific and Southwest Atlantic Oceans. Besides looking at the latest production trends, trade patterns, and sustainability status of these species, the study focuses on the main cross-cutting issues across these fisheries. These include ongoing management gaps in controlling excessive fishing pressure, risks to endangered, threatened, and protected (ETP) species, human rights challenges, and persistent transparency and mislabeling issues within seafood supply chains.


Small-scale fisher with a jumbo flying squid in Piura, Peru. © Erin Skoczylas

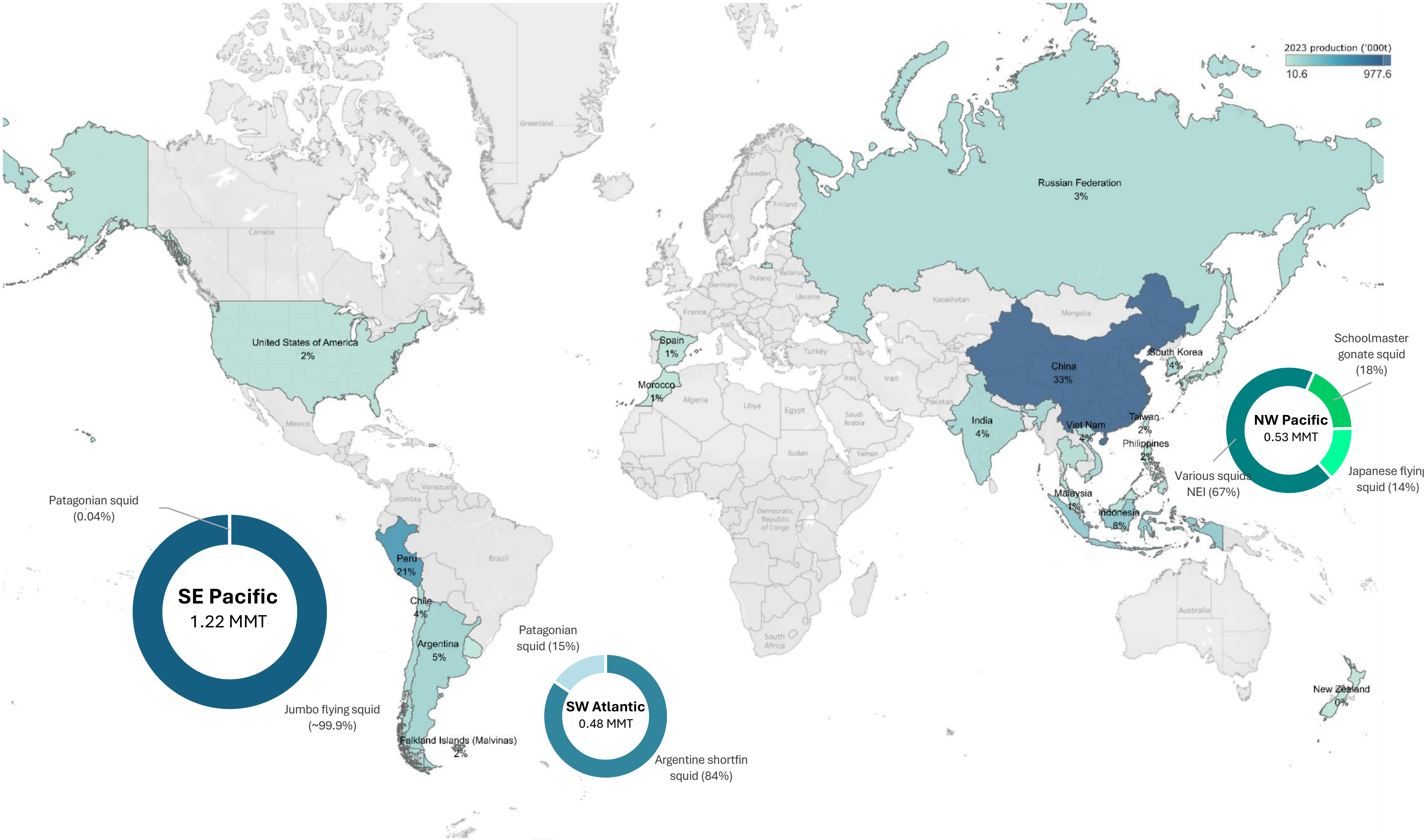


Figure 1-2 | Map showing the top 20 squid-fishing countries (by share of total catches), the three main fishing areas based on 2023 production, and the dominant squid species in each area. Source: FAO.

2 SCOPE OF THE ANALYSIS AND SOURCES USED

Unlike recent reports on squid fisheries, this study and report relied exclusively on information available in the public domain and accessible online. A desktop assessment was conducted between June and December 2025 to compile and analyze data on the three main squid species in Latin America: Argentine shortfin squid (*Illex argentinus*), Patagonian squid (*Doryteuthis gahi*), and jumbo flying squid (*Dosidicus gigas*) (**Figure 2-1**).

The analysis drew upon a wide range of information, including scientific publications, government and industry reports, and online databases, identified through Google, Google Scholar, Scopus, and other specialized sources. Key fisheries and trade datasets were accessed from platforms such as FAO FishstatJ, Sea Around Us, Panjiva, and UN COMTRADE.

To complement this desktop research, informal consultations were held with regional experts familiar with the biology, management, and trade of these species. Although most searches were conducted in English, Spanish-language keywords were also used to capture local and regional information and data.

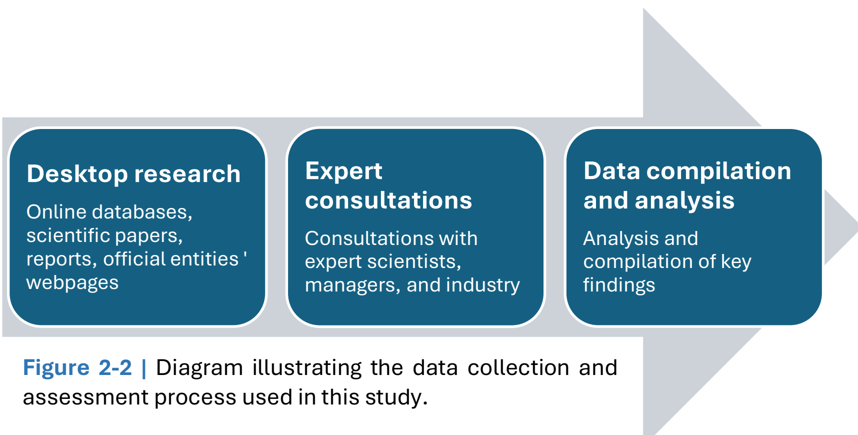


Figure 2-2 | Diagram illustrating the data collection and assessment process used in this study.

The information collected was explored and organized into five themes:

1. **Ecological overview and current status**
   Where the resource occurs and how it is doing
2. **Production trends and fishing patterns**
   Where it comes from, who captures it, and how
3. **Governance and management**
   Who manages it and controls catches/fishing effort
4. **Trade flows and markets**
   Where it is going to, and via which supply channels
5. **Sustainability status**
   How the fisheries are being assessed

While the key findings and respective visuals are presented throughout the report, additional relevant data is also provided in the Appendices section.

The study covers all relevant fishing nations and sectors, but greater emphasis was placed on countries and fleets with the highest production volumes or trade relevance. Finally, it is important to note that this report is not exhaustive but rather offers a strategic overview of the main aspects, challenges, and governance gaps shaping squid fisheries in the region, along with recommendations for addressing them. As such, some data sources or documents may not have been detected during the research process, and further in-depth analysis may be required for a more comprehensive understanding of the current situation of these species.

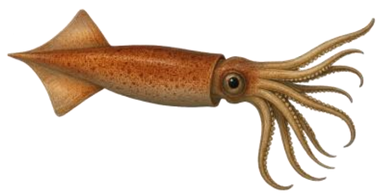
3 CASE STUDIES

Small-scale fisher landing jumbo flying squid in Peru. © Renato Gozzer

3.1 Argentine shortfin squid (*Illex argentinus*)

3.1.1 Ecological overview and status of the resource

The Argentine shortfin squid, *Illex argentinus*, is a neritic-oceanic species that can be found in the Southwest Atlantic off the coasts of Brazil, Uruguay, Argentina, and the Falkland Islands (FAO 41) (**Figure 3-1**).



This highly migratory pelagic species lives along the continental shelf and the upper slope, between the surface and 800 m deep. They reach sexual maturity at 23 centimeters and can measure up to 40 centimeters. Their lifespan is around one year, which makes their abundance difficult to assess (Rodhouse & Hatfield, 1990).

This is the most abundant species in the southwest Atlantic Ocean (Winter, 2019) and has critical economic and ecological importance in the region. It is a key prey species and forms the basis of one of the world's largest squid fisheries. As the second most captured species in the world, it yields an average of 400,000 (FAO, 2025a) to 600,000 tonnes (Froese and Pauly, 2025) annually (depending on the source), representing an average of more than USD 700 million of landed fish per year (Froese and Pauly, 2025).

Due to its short lifespan, the Argentine shortfin squid's abundance is highly influenced by climatic variability and anthropogenic pressures, resulting in significant interannual fluctuations in landings. Environmental factors such as sea-surface temperature, oceanographic currents, and interactions with other competing squid species like *Doryteuthis gahi* (Patagonian squid) play a key role in shaping the spatial and temporal distribution patterns of this species (Xiang et al., 2024; Narvarte et al., 2022).

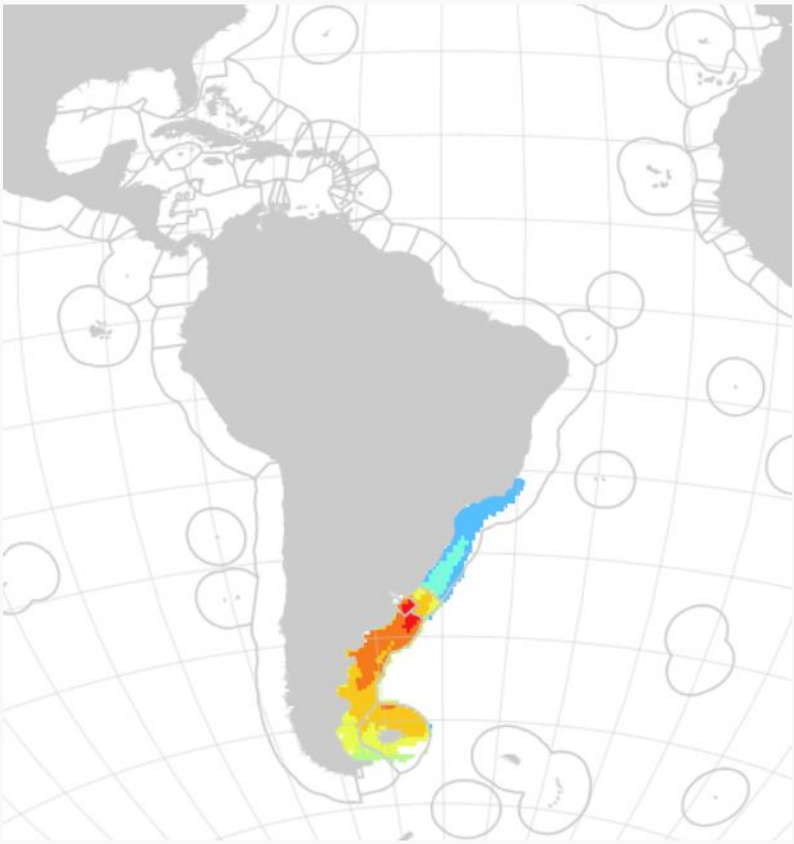


Figure 3-1 | Global biological distribution of Argentine shortfin squid (*Illex argentinus*). Colors refer to abundance, from blue (low) to red (high).

Source: Sea Around Us (Pauly et al., 2025)

Although the total number of stocks is uncertain, four stocks have been considered according to the existing research: the Summer Spawning stock (SSS), the South Patagonian stock (SPS), the

Bonaerensis-North Patagonian stock (BNS), and the Southern Brazil stock (SBS).

3.1.2 Governance and management

As mentioned above, the Argentine shortfin squid is a straddling stock whose distribution spans four Exclusive Economic Zones (Brazil, Uruguay, Argentina, and the Falkland Islands), as well as international waters. Even though some of the identified stocks might cross jurisdiction boundaries, there has been no joint or integrated management of the stocks since 2005, and the Argentine shortfin squid is not part of a Regional Fisheries Management Organization (RFMO). Management of this stock is thus conducted unilaterally by each of the flag states targeting *Illex a.* in different areas (EEZ and high seas; see summary of current regulations for each jurisdiction in **Table 3-1**).

In **Argentinean waters**, the Consejo Federal Pesquero (CFP) sets the national fisheries and fisheries research policy, as well as the fisheries development plans. The National Institute of Fisheries Research and Development (INIDEP) is the national institution in charge of assessing stocks and monitoring fishing effort, conducting pre-recruit surveys to assess the stocks. The stocks are monitored throughout the fishing season with weekly fishing data. There is no catch quota for this species, but the CFP has set a target escapement of 40% spawning stock biomass and has closed the fishery when this threshold was reached or the landings were too low. However, these measures haven't been systematically enforced, and the INIDEP estimated that the escapement target was exceeded by five to six times in recent years (Seafood Watch, 2021). Since 2016, the Argentine shortfin squid is part of the Argentinian Catch Control Certification System, which sets traceability and control measures for products destined to be moved or exported (Subsecretaría de Pesca y Acuicultura, 2016). Other than the escapement threshold, *Illex argentinus* fishing is restricted to jiggers and there is an observer program and a 20% squid bycatch limit for other vessels. Four different fishing seasons run between December and August, depending on the fishing areas.

In the **Falkland Islands**, the Fisheries Department (FIFD) oversees the stock assessments and management of national fisheries. Stock assessments have been conducted, but not on a regular basis (the latest was conducted in 2019 by Winter, 2019). The FIFD conducts pre-fishing season surveys (Ramos, 2025) and updates them with fishing data during the season from February to June. The scientific program of 2021-2023 aimed at an escapement threshold of 40,000 tonnes of spawning biomass and has not been updated as of 2025. The government has also set annual licensing and onboard observer systems for jigging and trawling and defined spatial restrictions. There are bilateral agreements for Argentine shortfin squid between the Falkland Islands and Taiwan (76 licenses), South Korea (28 licenses), Spain (10 licenses), and Vanuatu (2 licenses). In 2024, squid was not yet integrated into the Individual Transferable Quota national system (Falkland Islands Fisheries Department).

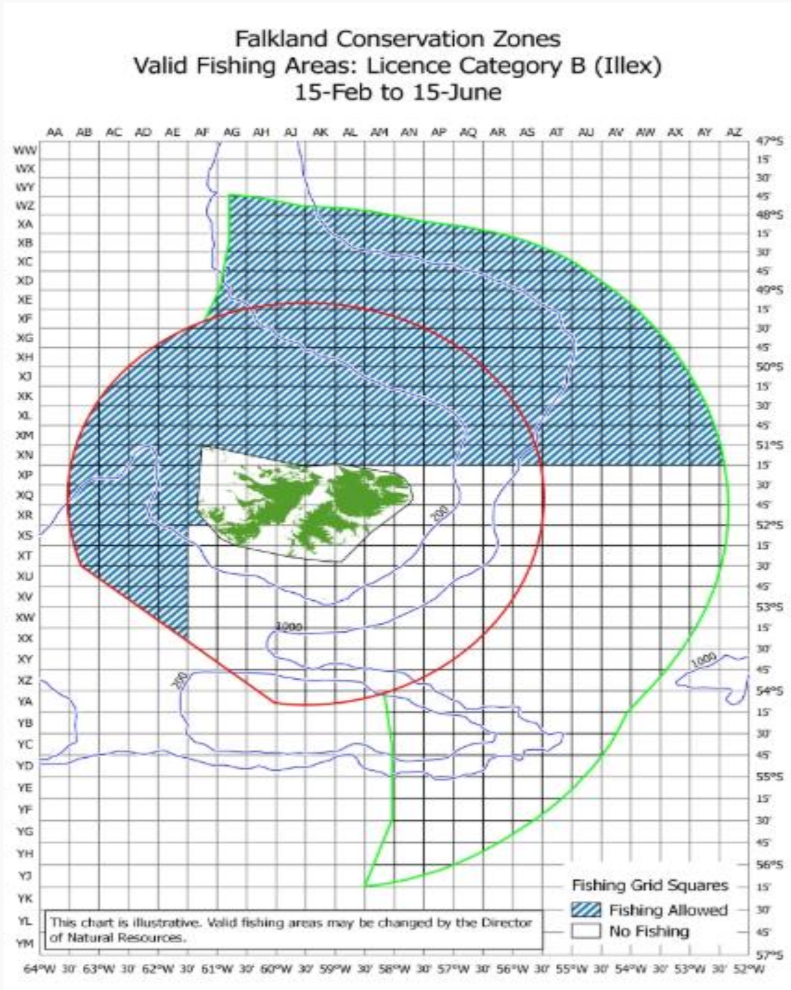


Figure 3-2 | Authorized Argentine shortfin squid (*Illex argentinus*) fishing zones of the Falkland Islands. The blue-shaded squares refer to the zones where fishing is allowed.

Source: Falkland Islands Fisheries Department

In the **high seas, where most of the fishing activity from the distant-water fleets (e.g., China) takes place, the fishery remains poorly monitored and essentially unregulated**. No effective regional fisheries management organization has existed for international waters since the dissolution of the South Atlantic Fisheries Commission (SAFC) in 2005. However, the INIDEP has been using satellite images to calculate catches, estimating that high seas catches reached 41.5% of all Argentine shortfin squid catches in 2021 (Ivanovic et al., 2022). Chinese researchers have also used environmentally dependent surplus production (EDSP) and Bayesian Schaefer models to assess the southern Patagonian stock (Wang et al., 2018) or the stock in all the Southwest Atlantic Ocean (Hua-Jie et al., 2013).

Spain, South Korea, China, and Taiwan implement general fishing management measures in the high seas, but there are no squid-specific measures in place. The EU has access to international waters through the EU regulation SMEFF (Regulation (EU) 2017/2403), and there is a squid fishing ban in the high seas that was declared by China in 2020 applied to an area where no Chinese vessels had been fishing in 2019 (Oceana, 2023). Overall, high seas regulations, which are set and enforced by each flag state, tend to be broadly similar among the major fishing countries. Yet the effectiveness of these regulations remains uncertain. due to limited enforcement and control in international waters. Several studies have noted growing concerns about excessive fishing pressure and IUU activities, particularly from large distant-water fleets, such as those operating under the Chinese flag, and the resulting impacts on straddling stocks like the Argentine shortfin squid (e.g., Arkhipkin et al., 2023; Pedrozo, 2022; Seto et al., 2023).

Uruguay plays a relatively minor role in fishing this species. Management measures for *Illex* are listed in **Table 3-1**.

Table 3-1 | Summary of key management frameworks across the jurisdictions where Argentine shortfin squid (*Illex argentinus*) is distributed in the Southwest Atlantic Ocean.

Measure	Argentina EEZ	Falkland Islands EEZ	Uruguay EEZ	Argentina – Uruguay Common Fishing Zone	High Seas
Organization in charge of managing the fishery	Consejo Federal Pesquero (CFP)	Fisheries Department (FIFD)	National Fisheries Institute (INAPE)	Technical Commission for Maritime Front (CTMFM)	Flag states management entities
Organization in charge of assessing the stock	National Institute of Fisheries Research and Development (INIDEP)			National Institute of Fisheries Research and Development (INIDEP)	None[1]
Bilateral agreements	No	Yes (Taiwan, South Korea, Spain, Vanuatu)	No	No	No
Stock assessment	No formal stock assessment	Discrete stock assessment (Winter, 2019)	No formal stock assessment	No formal stock assessment	No formal stock assessment1
Data collection	- Pre-season surveys - Weekly fishing data	- Pre-season surveys - Fishing data	No	No	- Nocturnal satellite imagery - AIS and VMS data - Landings data from distant-water fleets (DWF)
Input controls					
Authorized gears	Jiggers	All (with restrictions on mesh and net)	All	All	All
Spatial restrictions	Yes (depending on the season)	Yes (annual)	No		Yes[2]
Other measures	- Catch Control Certification System - Onboard observer Program	- Annual licensing system - Onboard observer program - Mandatory VMS and AIS tracking	-	- Annual licensing system	-
Output controls					
Quota or catch limits	None	None	None	None	None
Reference points	Escapement of 40% spawning stock biomass	Escapement threshold of 40,000 tonnes	-	Unknown	-
Temporal restrictions	Yes	Yes	Yes	Yes	Yes[2]
Other measures	- 20% of squid bycatch for other vessels	- 10% of squid bycatch for trawlers	-	- 10% of squid bycatch during off season	-

Notes: (1) Although no official organization has been designated to assess the fishery, the INIDEP estimates landings in the high seas using satellite data (Ivanovic et al., 2022), and Chinese researchers have estimated part or the whole stock (Hua-Jie et al., 2013) (Wang et al., 2018). (2) Only the decried Chinese ban mentioned below.

3.1.3 Production trends and fishing patterns

As previously mentioned, the Argentine shortfin squid *or Illex* (*Illex argentinus*) is the second most heavily fished squid species worldwide (FAO, 2025), with recent catches approaching 500.000 tonnes annually (FAO, 2025a). Typical of this species group, abundance is highly variable between years, driven by both climatic conditions and fishing pressure (Arkhipkin et al., 2022; Zhang et al., 2025), and catches have fluctuated substantially over time. Until the late 1970s, the fishery was almost negligible, with annual landings below 3,000 tonnes. From 1978 to the late 1990s, catches increased steadily, peaking at 1.15 million tonnes in 1999. Following a collapse in 2004, landings have varied sharply, with up to sevenfold differences in annual global production over the last decade (**Figure 3-3**) (FAO, 2025a).

Fishing for *Illex* takes place both within national waters (the Argentine EEZ and the Falkland Islands Interim and Outer Conservation Zones) and in adjacent high seas areas, particularly between 44°S and 49°S (Seafood Watch, 2020).

Three major fleets target this species. The Argentine fleet consists of 80–90 jiggers fishing mainly inside the EEZ. A second fleet, operating in the high seas and the northern Falkland Conservation Zone, includes 105 jiggers from Taiwan and South Korea, along with 10–15 trawlers from Spain and the Falkland Islands. The third and largest fleet consists of 300–400 Chinese jiggers and several trawlers, working almost entirely in the high seas (Arkhipkin et al., 2022).

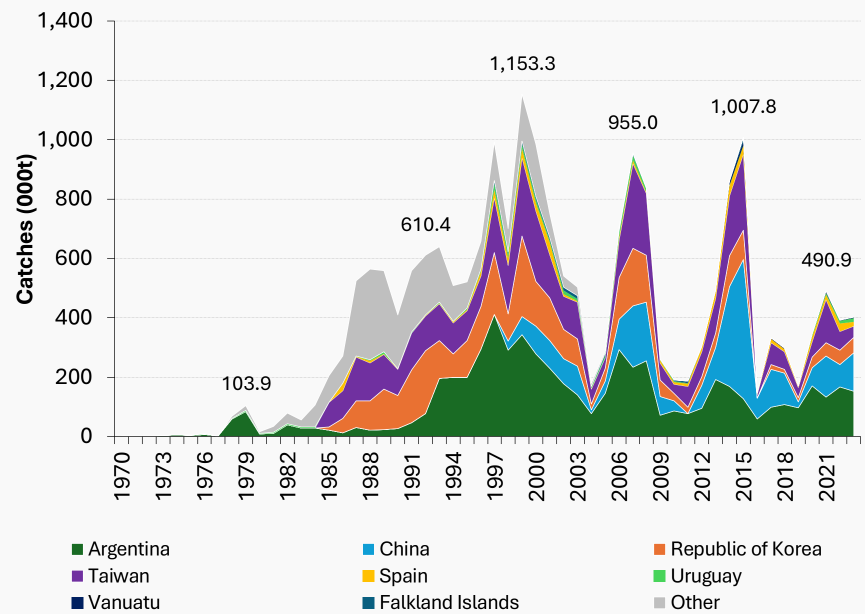


Figure 3-3 | Reported Argentine shortfin squid (*Illex argentinus*) annual catches ('000 t) per flag country, between 1970 and 2023. **Source**: FAO

In terms of catches by country, between 2019 and 2023, Argentina (43% of catches) and China (22%) dominated global landings, together accounting for about two-thirds of the total. Taiwan (18%), operating mainly in high seas and Falkland zones, South Korea (11%), active near the Argentine EEZ boundary, and Spain (4%) were also key fishing nations (FAO 2025a).

Argentina currently operates one of the largest fisheries for this species in terms of both effort and catch, with around 150,000 tonnes landed annually in 2023 and 2024. Fishing occurs almost exclusively within the Argentine EEZ, mainly between January and June, peaking from February to April (Figure App B- **3**).

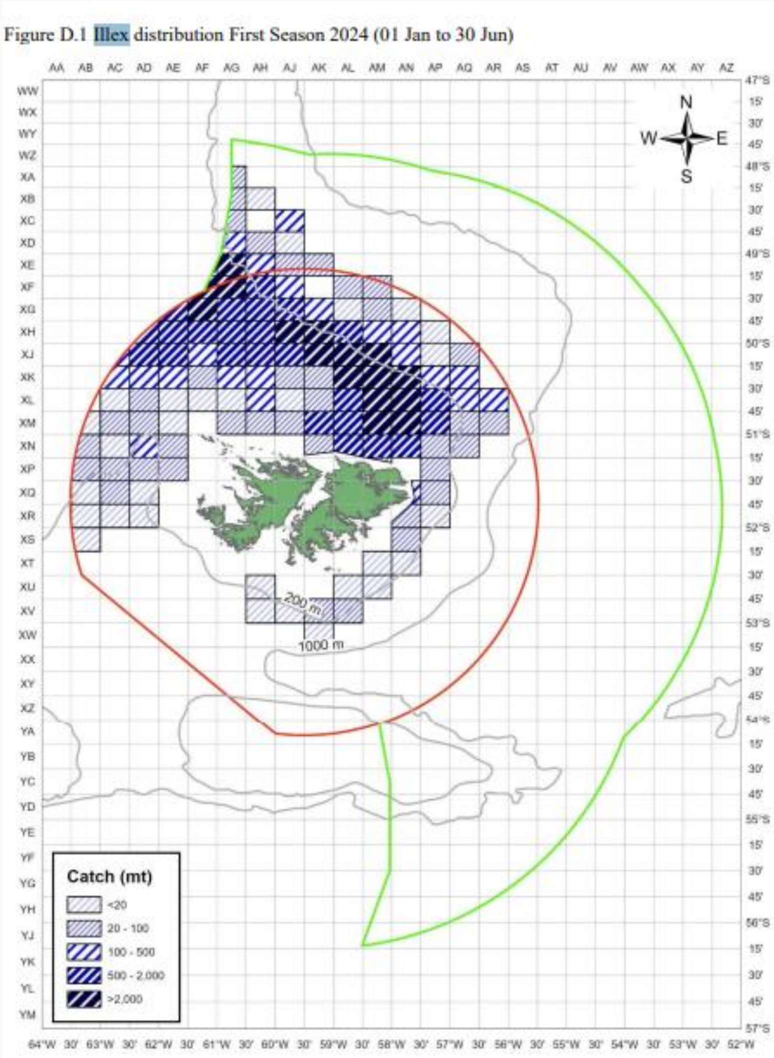


Figure 3-4 | Map showing estimated 2024 catches of Argentine shortfin squid (*Illex argentinus*) by all fleets within the Falkland Islands Exclusive Economic Zone (EEZ).

Source: Falkland Islands Fisheries Department

China is the second-largest contributor to *Illex* catches, averaging about 150,000 tonnes annually over the past decade, with roughly 130,000 tonnes reported in 2023. Its fleet of several hundred jiggers operates mainly in the high seas near the Argentine EEZ and south of 44°S (GFW 2025) (EJF, 2025). In 2024, at least 47 vessels logged approximately 56,000 hours of fishing activity, mostly between March and May (Figure App B- **4**) (GFW 2025).

Despite available data, considerable uncertainty persists regarding total exploitation and potential IUU fishing from the Chinese fleet, including underreporting and unauthorized incursions into Argentina's EEZ (e.g., Oceana, 2021; Pauly et al., 2014; Montecalvo et al., 2023).

South Korea and Taiwan are also relevant distant-water fishing nations for Argentine shortfin squid, jointly contributing about 14% of total catches between 2019 and 2023. Their fleets mainly operate south of 45°S, both outside Argentina's EEZ and within the Falkland Islands EEZ (Figure App B- **5**; Figure App B- **6**), though most catches likely come from the adjacent high seas. Fishing activity by these fleets peaks between February and May (GFW 2025). Other smaller fishing countries include Spain, Uruguay, Vanuatu, and the Falkland Islands, which together accounted for only 7% of total catches in 2023.

3.1.4 Trade and markets

Even though there are no exact estimates on the global Argentine shortfin squid trade, due to it being the second most captured squid species in the world, this is also one of the most traded species among cephalopods. If global squid trade follows the same pattern as production, this species would account for 10-20% of the squid that is traded globally. In terms of exports, and using FAO figures, this would result in more than 320,000 tonnes (product weight) of Argentine shortfin squid being exported in 2023 (**Table 3-2**), which would translate to about USD 830 million, assuming an average price of USD 2,553[2] per tonne. However, many important squid fishing countries (e.g., China, Taiwan, South Korea) report Argentine shortfin squid lumped with other squid and cuttlefish species (e.g., "Cuttlefish and squid, frozen, nei," "Cuttlefish and squid, prepared or preserved," "Squid nei, frozen") (FAO 2025b), which adds considerable uncertainty to the trade figures.

The limited granularity of reporting, particularly in Asia, makes it nearly impossible to determine global Argentine shortfin squid imports, or the exact volumes and values reaching specific end markets. Among the countries known to capture this species, total combined squid and cuttlefish exports (these two commodities are generally reported combined) in 2023 reached 805,000 tonnes, with Japan (13% of global imports by quantity), Spain (12%), Thailand (11%), South Korea (9%), China (7%), and Italy (7%) as the main markets (FAO 2025c; FAO 2025d).

Looking at squid trade per main fishing country of Argentine shortfin squid, South Korea (22% of total exports by value; 25% by quantity) was the main destination country for Argentina's squid exports in 2023. Other important trade partners were China (20% by value and quantity), Thailand (14% by value; 13% by quantity), Singapore (13% by value; 14% by quantity), and Spain (8% by value; 5% by quantity) (FAO, 2025c). For China, key destinations for products that may include Argentine shortfin squid are all from Asia, namely Thailand (21% by value; 13% by quantity), Japan (16% by value; 19% by quantity), Malaysia (11% value; 6% quantity), and South Korea (10% value; 12% quantity). Taiwan and South Korea show similar patterns in terms of their main squid importers, with China, the United States, Viet Nam, and Spain as the main destinations (**Table 3-3**; **Table 3-4**).

Table 3-2 | Estimated 2023 exports of Argentine shortfin squid in tonnes (product weight), calculated using the species' share of total squid and cuttlefish production (2021–2023 average) and FAO export data for total squid and cuttlefish. **Source**: FAO

Exporter country	% of *Illex a.* in the total squid and cuttlefish production (2021-23 average)	Total 2023 squid and cuttlefish exports (tonnes)	Estimated 2023 Argentine shortfin squid exports (tonnes)
Argentina	~100%	136,018	136,007
Spain	55%	154,333	84,697
China	10%	498,645	51,759
Taiwan	89%	35,013	31,035
Uruguay	100%	10,872	10,872
South Korea	44%	16,362	7,196
Vanuatu	100%	2,294	2,294
Falkland Islands	1%	79,354	860
Total		**932,892**	**324,721**

[2] This estimate is based on figures provided in the 2024 Tridge report on Argentina's seafood exports.

Table 3-3 | Total squid[1] exports by quantity (thousand tonnes) in 2023, main trade partners and their share of total exports, and importing countries reporting more than 100 tonnes, for each country that reported capturing one or more of the squid species in the current report. Source: FAO (2025b).

Exporter \ Importer	China	South Korea	Spain	Japan	Thailand	Italy	United States	Philippines	Malaysia	Morocco	Taiwan	Viet Nam	France	Singapore	Portugal	Other	Total exports (000t)	Total import countries
China	NA	12%	4%	19%	13%	1%	7%	7%	6%	1%	4%	3%	0%	1%	1%	21%	498.6	66
Peru	35%	14%	14%	4%	11%	3%	1%	0%	0%	1%	2%	1%	0%	0%	1%	12%	409.4	34
Spain	6%	1%	NA	0%	0%	32%	2%	0%	0%	8%	0%	0%	18%	0%	10%	24%	151.1	41
Argentina	20%	25%	5%	6%	13%	2%	1%	0%	0%	0%	1%	3%	0%	14%	0%	10%	136.0	23
Falkland Islands	0%	0%	79%	0%	1%	0%	0%	0%	0%	13%	0%	1%	0%	0%	0%	6%	79.4	12
Chile	13%	28%	25%	13%	2%	1%	1%	1%	0%	0%	6%	3%	0%	0%	1%	7%	67.7	24
Taiwan	27%	11%	9%	9%	1%	1%	20%	0%	1%	0%	NA	9%	0%	1%	0%	11%	35.0	16
South Korea	62%	NA	3%	3%	1%	0%	16%	0%	0%	0%	2%	6%	0%	0%	0%	8%	16.4	12
Uruguay	78%	6%	2%	3%	1%	0%	2%	0%	0%	0%	0%	4%	0%	0%	0%	4%	10.9	9
Ecuador	7%	1%	5%	0%	3%	0%	2%	0%	0%	0%	0%	0%	0%	0%	4%	77%	2.5	7

Table 3-4 | Total squid exports by quantity (million USD) in 2023, and main trade partners and their share of total exports, for each country that reported capturing one or more of the squid species in the current report. Source: FAO (2025c).

Exporter \ Importer	Thailand	Japan	South Korea	Spain	China	Malaysia	Italy	United States	Philippines	Taiwan	Viet Nam	Hong Kong	France	Morocco	Portugal	Other	Total exports (million USD)
China	21%	16%	10%	2%	NA	11%	1%	6%	7%	5%	3%	4%	0%	0%	0%	13%	3,441.1
Peru	8%	4%	17%	15%	34%	0%	4%	3%	0%	2%	1%	0%	1%	1%	1%	11%	843.2
Spain	0%	0%	0%	NA	4%	0%	40%	2%	0%	0%	0%	0%	14%	6%	9%	24%	733.1
Argentina	14%	6%	22%	8%	20%	0%	2%	1%	0%	1%	4%	0%	0%	0%	0%	22%	308.6
Falkland Islands	1%	1%	0%	79%	0%	0%	0%	0%	0%	0%	1%	0%	0%	12%	0%	6%	267.6
Taiwan	1%	8%	9%	9%	23%	1%	0%	21%	0%	NA	7%	6%	0%	0%	0%	13%	134.1
Chile	2%	12%	26%	28%	11%	0%	1%	1%	1%	6%	3%	0%	0%	0%	1%	9%	113.5
South Korea	1%	4%	NA	2%	49%	0%	0%	28%	0%	2%	5%	0%	0%	0%	0%	8%	75.0
Uruguay	1%	3%	6%	2%	77%	0%	0%	2%	0%	0%	5%	0%	0%	0%	0%	4%	33.1
Ecuador	4%	0%	1%	9%	8%	0%	0%	2%	0%	0%	0%	2%	0%	0%	7%	67%	3.4

Notes: (1) Given that most countries report multiple squid (or even cephalopod) species aggregated, it includes all commodities that may include one of the three species. Reported exports are thus overestimated regarding the three species in the current report.

Overall, except for exports into the European Union (where species-specific reporting is more detailed), most countries report squid trade under generic categories such as "Cuttlefish and squid, frozen, nei" or "*Illex* spp." **This lack of traceability creates critical challenges for distinguishing Argentine shortfin squid from other species and for fully depicting where the commodity comes from, to which countries it is first exported and processed**, and ultimately which portion stays in those countries versus what is re-exported.

The limited traceability challenge is particularly significant for major producing and trading nations like China, Taiwan, and South Korea, which also target Japanese flying squid, jumbo flying squid, and Patagonian squid, and work as processing hubs (Harte et al., 2019) and important re-exporters (e.g., China). As a result, the exact trade volumes and origins of Argentine shortfin squid remain unclear, raising significant traceability and sustainability concerns, as it has been flagged by multiple studies (e.g., Gleadall et al., 2023).

Spain reported about 15,000 tonnes of shortfin squid exports in 2023, mostly destined for EU markets (≈80%). However, Spanish statistics are aggregated under "Illex spp.," which also includes Broadtail shortfin squid (*Illex coindetii*) and Northern shortfin squid (*Illex illecebrosus*) from the North Atlantic.

Squid fishing jigger off the coast of Argentina during fishing operations.

3.1.5 Sustainability status

In terms of its overall conservation status, Argentine shortfin squid is listed as *Least Concern* on the IUCN red list (Barratt and Allcock, 2014), and existing research suggests the species is highly resilient to current fishing pressure (Arkhipkin et al., 2022).

Regarding current sustainability status, the stock condition is uncertain, and there are several serious management issues in this transboundary stock, including widespread illegal fishing activity in the high seas and a lack of coordinated management.

More details on the sustainability status of the various fisheries exploiting this species are available in **Table 6-1**.

Box 1

Key issues in the Argentine shortfin squid fishery

1 Lack of coordinated regional management

There is no regional fisheries management organization (RFMO) or multilateral fisheries agreement in the Southwest Atlantic. This absence results in unregulated fishing in international waters, undermining sustainability efforts within Argentina's and the Falklands Islands' Exclusive Economic Zones (EEZs).

2 Potential high levels of illegal, unreported, and unregulated (IUU) fishing

There is some evidence indicating **widespread illegal, unreported, and unregulated (IUU) fishing by distant-water fleets targeting squid**, particularly Chinese, Taiwanese, and South Korean vessels. Without a regional governance framework, monitoring and enforcement remain weak, and distant-water fleets operate largely without limits, often underreporting catches and engaging in activities such as "fishing in the dark" (AIS off) and illegally entering the national waters of Argentina.

3 Uncertainty in stock status and exploitation levels

Stock assessments are not conducted regularly and rely mainly on data within national waters (e.g., from the Argentina EEZ), likely underestimating removals from the high seas. The **absence of regional data sharing and coordinated monitoring contributes to substantial uncertainty about the status and exploitation levels of this resource**.

4 Rapid expansion of distant-water fleets and overfishing risk in international waters

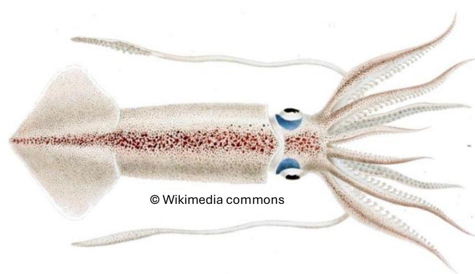
The rapid growth of foreign squid jigger fleets, particularly from China, has intensified unregulated fishing in high seas areas adjacent to Argentina. While *Illex argentinus* stocks appear stable within national waters, **excessive and uncontrolled fishing pressure in international waters, combined with the species' migratory nature, increases the risk of overexploitation beyond the reach of existing national management measures and enforcement**.

5 Human and labor rights violations

All distant water fleets are known to be at high risk for labor abuses. **In the *Illex argentinus* fishery, a recent report revealed evidence of human and labor rights violations by the Chinese and Korean fleets**, including crew deaths, physical violence, withholding of wages, or abusive working and living conditions (EJF, 2025).

3.2 Patagonian squid (*Doryteuthis gahi*)

3.2.1 Ecological overview and status of the resource



The Patagonian (longfin) squid (*Doryteuthis gahi*, or formerly *Loligo gahi*) mainly lives along the Patagonian shelf and the Falkland Islands region in the Southwest Atlantic Ocean but is also found along southern Argentine and Chilean waters (Arkhipkin et al., 2013; Palomares and Pauly, 2025). This neritic species shelf-edge loliginid cephalopod is mostly found between the surface and 350 meters deep and can reach up to 28 centimeters mantle length, although caught individuals usually measure between 13 and 17 centimeters long (Ropert et al., 1984; Roa-Ureta & Arkhipkin, 2006). This species lives in waters over the continental shelf, typically spawning and recruiting in shallower (<100 m) inshore/kelp-forest or shelf-inner habitats and migrating offshore to shelf-edge and break zones (150-300 m) for feeding and growth before returning to spawn (**Figure 3-5**) (Arkhipkin et al., 2008; Agnew et al., 2000). It usually dies shortly after spawning, and its lifespan is around a year (Villegas, 2001). This species has strong ecological importance in its distribution area. Around the Falkland Islands in particular, it is considered a "wasp-waist" species, being a major prey item for predatory fish, seabirds, and marine mammals, while also dominating mid-trophic levels (Büring et al., 2024).

In terms of commercial importance, it is among the most harvested squid species in the world, with catches varying between 51,000 and 106,000 tonnes in the last years (FAO, 2025a). It is mostly abundant in the Southwest Atlantic (FAO 41) in the EEZ of the Falkland Islands, where 93% of global landings occur and where it constitutes the most important fishery of the country. Several researchers found that a single interbreeding population lives along the coast of Chile and the Falkland Islands, although groups can exhibit phenotypic differences due to environmental conditions (Scherbich et al., 2004; McKeown et al., 2019). This population can be divided into two cohorts that spawn at different times of the year: the autumn-spawning cohort (ASC) and the spring-spawning cohort (SSC). Both cohorts are harvested during the first fishing season that starts at the end of February, and only the SSC is harvested during the second season that starts at the end of July (Arkhipkin et al., 2013). McKeown et al. (2019) suggest that the Peruvian group could be considered as a distinct evolutionary population from the Chilean-Falkland Islands group.

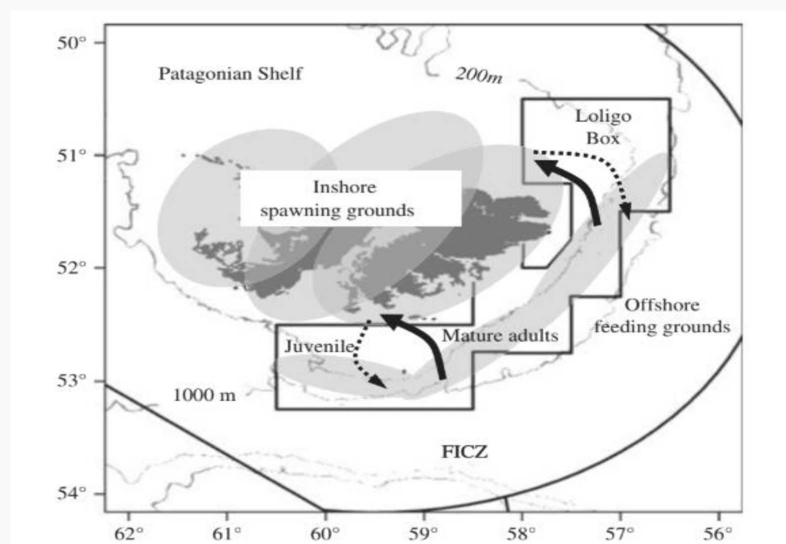


Figure 3-5 | Patagonian squid (*Doryteuthis gahi*) migration routes on the east shelf of the Falkland Islands. **Source**: Arkhipkin et al. (2013)

3.2.2 Governance and management

In the last years, between 90% and 99% of the reported landings of Patagonian squid came from the Falkland Islands EEZ, with residual landings in Peru and Argentina. Given the species distribution and catches, mostly in the EEZ of the Falklands islands, and to a smaller degree in the international waters of the Southwest Atlantic where there is no RFMO, the management framework of the Patagonian squid only covers the Falkland Islands EEZ.

As the second most important fishery of the **Falkland Islands**, it is closely managed and has been described as a good management example (Arkhipkin et al., 2013; Aguilera, 2018). The management framework and measures are very similar to the ones in place for *Illex argentinus*. The Falkland Islands Fisheries Department has been conducting two stocks assessments per year every year but one in the last decade.

Typically, there are two fishing seasons each year, reflecting two distinct squid cohorts. The first season generally takes place in austral spring to early summer, and the second in late summer to early autumn. Most catches occur during the first season, between March and April. In the second season, catches typically peak in August; however, in some recent years (e.g., 2024), the fishery remained closed due to biomass estimates falling below the 10,000-tonne conservation threshold (FIFD, 2024).

The escapement threshold is set at 10,000 tonnes at the end of the second season and is monitored by pre-season surveys and weekly fishing data. Except for two fishing seasons since 2014, the total escapement biomass stayed above the set threshold (Skeljo & Winter, 2025). The country used to have bilateral agreements for this fishery with South Korea and the United Kingdom but the only active agreement since 2021 is with Spain (FIFD, 2024). The fishery is managed through an Individual Transferable Quota (ITQ) system, with a total of 17 trawlers authorized to operate: 16 Falkland Islands-flagged vessels and one Spanish-flagged vessel (FIFD 2024).

In the **high seas**, the same regulations apply for both the Argentine shortfin squid and the Patagonian squid. Although reported catches suggest that South Korean and Spanish vessels fish Patagonian squid in the high seas, there is no comprehensive literature on this fishery (FAO, 2025; FIFD, 2024).

Squid fishing vessel off the coast of the Falkland Islands during fishing operations.

© Grupo Rampesca

Fishermen fixing trawl net in Falkland Islands squid fishery. © Grupo Rampesca

Table 3-5 | Summary of the management frameworks across the jurisdictions where Patagonian squid (*Dorytheuthis gahi*) is distributed in the Southwest Atlantic Ocean.

Measure	Falkland Islands EEZ[1]	High Seas [1]
Organization in charge of managing the fishery	Fisheries Department (FIFD)	Flag states management entities
Organization in charge of assessing the stock		None
Bilateral agreements	Yes (Spain)	No
Stock assessment	Biannual discrete stock assessment	No formal stock assessment
Data collection	- Pre-season surveys - Fishing data	
Authorized gears	Bottom trawlers only (with restrictions on mesh and net)	All
Spatial restrictions	Yes	No
Other measures	- Annual licensing system - Onboard observer program - Mandatory VMS and AIS tracking	-
Quota or catch limits	None	None
Reference points	Escapement threshold of 10,000 tonnes	-
Temporal restrictions	Yes	-
Other measures	- 10% of squid bycatch for trawlers	-

Notes: (1) Even though there is limited information on catches and data on catches of Patagonian squid in the high seas, there are reports and public evidence by industry of sourcing this species from Chinese flagged vessels, which only operate outside of both the Falkland Islands' and Argentina's Exclusive Economic Zones EEZs) (ODP, 2025a).

3.2.3 Production trends and fishing patterns

Patagonian squid is the second most captured species in the Southwest Atlantic, after Argentine shortfin squid, with average annual catches of around 80,000 tonnes. The fishery developed in the early 1980s, with annual catches peaking at around 120,000 tonnes by the end of that decade. Since then, catches have shown strong interannual fluctuations with no clear long-term trend (**Figure 3-6**) (FAO, 2025). This variability is mainly linked to shifts in abundance driven by environmental factors (e.g., sea surface temperature) and interspecific interactions with Argentine shortfin squid (*Illex argentinus*) (Arkhipkin and Middleton, 2000).

Almost all (>99%) of the current landings of this species come from the Southwest Atlantic Ocean. The Falkland Islands are by far the most important fishing country, accounting for more than 90% of catches in the last couple of years, all taken by trawlers. Other countries currently reporting small catches are Spain (4%) and South Korea (2%) (**Figure 3-6**). Peru was once a relevant fishing country, accounting for nearly one-third of global Patagonian squid catches in some years of the early 2000s (all from the Southeast Pacific), but its landings have become negligible in recent years.

Until 2020, Argentina and the United Kingdom were also relevant fishing countries, but catches from these two countries have been residual ever since. In the Southeast Pacific (FAO Area 87), where the species also occurs, Patagonian squid is mainly caught in Peruvian waters by the domestic fleet, with only negligible bycatch recorded in Chile. Landings from Peru have fluctuated significantly over the last two decades, from approximately 25,000 tonnes in 2000 to almost none in recent years.

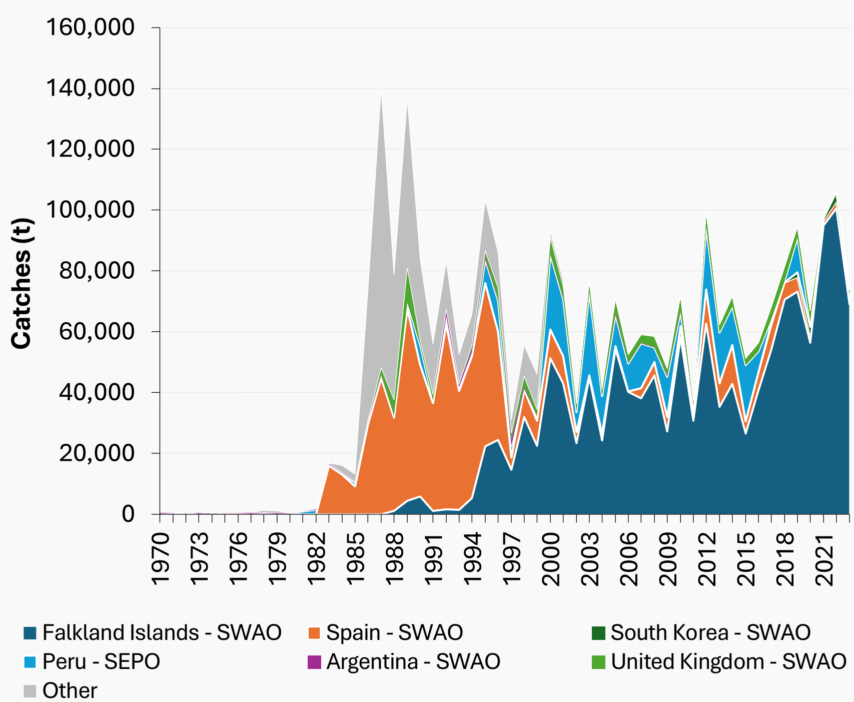


Figure 3-6 | Reported Patagonian squid (*Doryteuthis gahi*) annual catches (tonnes) per flag country and FAO major fishing area, between 1970 and 2023. Notes: SEPO, Southeast Pacific Ocean; SWAO, Southwest Atlantic Ocean.

Source: FAO

In terms of IUU, there is no evidence of misreporting or underreporting issues in this fishery, in particular for the Falkland Islands EEZ. This is likely due to the robust management measures in place (e.g., mandatory logbooks, good observer coverage, pre-season surveys, and area and seasonal closures) and enforcement, as well as the facdt that the fishery operates entirely within the Falklands EEZ, where all vessels are licensed and required to submit daily logbooks and electronic catch reports. However, some uncertainty remains regarding catches on the high seas. While industry sources report Patagonian squid being sourced from China (SFP, 2025f), there are no recent records of Chinese catches for this species reported to FAO.

3.2.4 Trade and markets

Like other squids, it is hard to get precise figures and comprehensive trade patterns for Patagonian squid (*Doryteuthis gahi*) due to limitations in global trade reporting and product aggregation. Nonetheless, this species can be considered among the most heavily traded squid worldwide, given its importance in global squid catches.

As previously noted, the Falkland Islands are by far the leading fishing country for this species, accounting for over 90% of global *D. gahi* landings. Patagonian squid also represents a substantial share of the Falkland Islands' total annual squid production (FIFD, 2024).

Over the past two decades, annual Patagonian squid[3] exports from the Falkland Islands have averaged around 51,000 tonnes, with an estimated export value of approximately USD 150 million. Export volumes have shown a generally increasing trend since 2014, except for recent years when catches declined due to seasonal closures (**Figure 3-7**) (FAO, 2025b).

[3] Here, it is assumed that all squid exports that do not specifically mention *Illex* (Argentine shortfin squid) refer to Patagonian squid. The more relevant squid categories with reported trade from this country were: "Squid (*Ommastrephes sagittatus*, *Loligo* spp.), frozen" and "Cuttlefish and squid, frozen, nei."

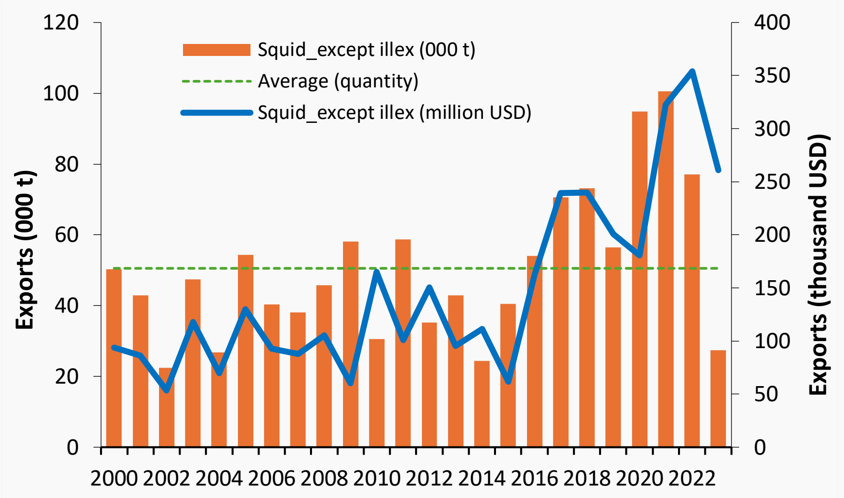


Figure 3-7 | Reported squid exports from the Falkland Islands (excluding products labelled as '...Illex...'), by quantity and value, between 2000 and 2023. **Source**: FAO (FAO 2025b)

Regarding bilateral trade, Spain remains the dominant end market, importing almost 80% of the Falkland Islands' total *D. gahi* exports by volume in 2023 (FAO, 2025b). Morocco (13%) and Namibia (3%) are the second and third largest importers, respectively.

Both Morocco and Namibia are also known to be important processing hubs for Spanish seafood companies, some of which also process cephalopods such as squid. Most of the cephalopod exports from the processing plants of these companies re-direct to Spain. It is therefore highly likely that most of the Patagonian squid imported by these countries is processed locally and subsequently re-exported to Spain (**Figure 3-8**) (FAO, 2025c).

A portion of Patagonian squid coming into Spain, whether directly landed by Spanish-flagged vessels or imported from other countries, is also further re-exported, mostly within the European Union. Between 2018 and 2024, an average of 34,000 tonnes (product weight) of Patagonian squid were exported annually from Spain to key EU countries such as Italy (39% of total Spanish *D. gahi* exports in 2024), Croatia (13%), Greece (6%), and Portugal (5%) (EUMOFA, 2025).

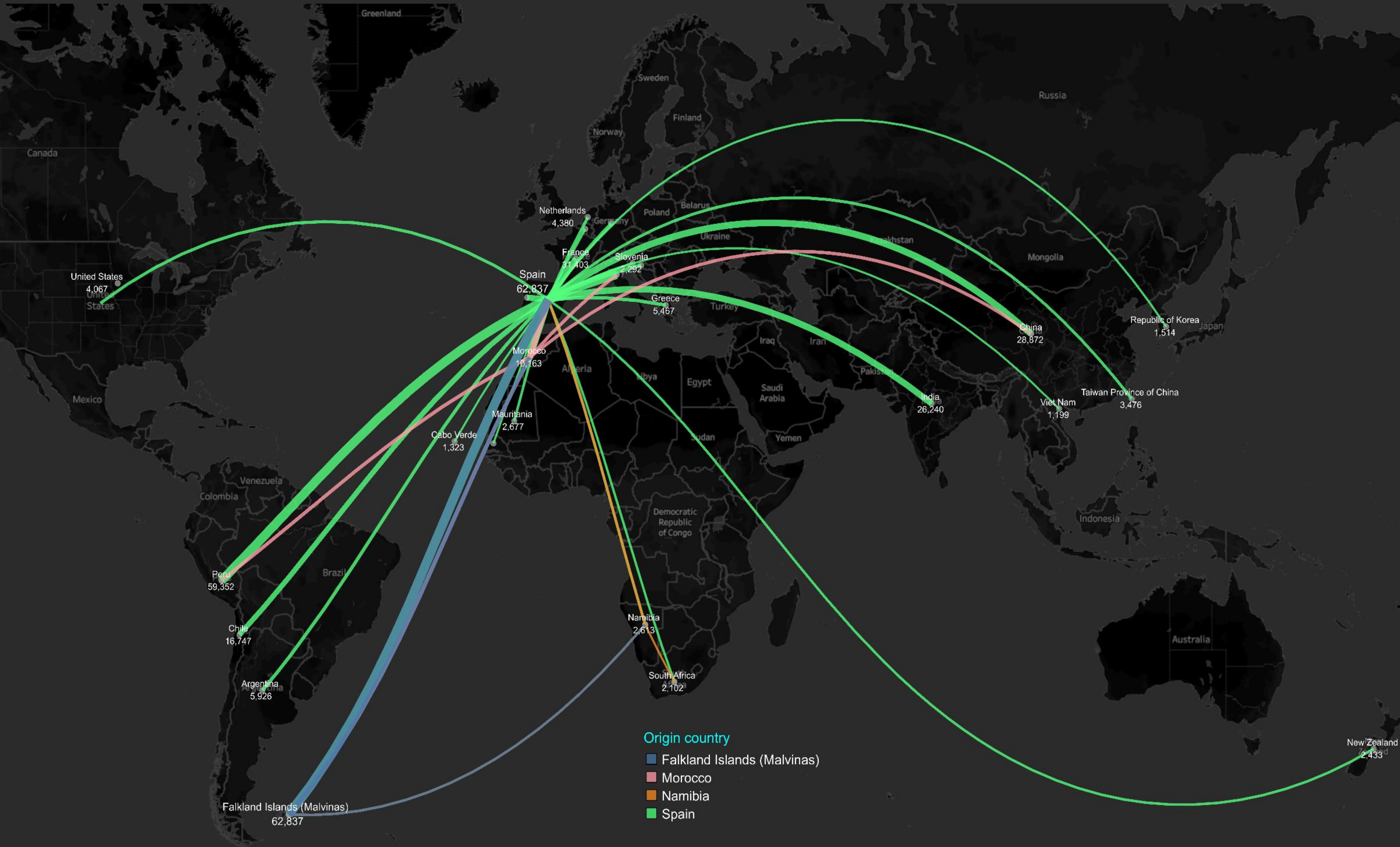
Despite the typical common challenges in cephalopod trade statistics, such as product aggregation, potential mislabeling, and inconsistent species identification, the Patagonian squid supply chain is relatively simple and vertically integrated. Most *D. gahi* is caught, processed, and traded by Spanish-owned vessels and companies, or joint ventures, ensuring continuity along the value chain. Owing to this vertical integration, together with the traceability requirements enforced under European Union seafood regulations, traceability for Patagonian squid is generally more robust and transparent than for other squid species such as Jumbo flying squid (*Dosidicus gigas*) or Argentine shortfin squid (*Illex argentinus*).

3.2.5 Sustainability status

In terms of overall conservation status, Patagonian squid is listed as *Least Concern* on the IUCN Red List (Allcock et al., 2019). For assessment purposes, two populations are generally recognized: one around the Falkland Islands and another in Peruvian waters.

- The Falkland Islands population is considered well-managed, and the stock is assumed to be in good condition.
- Information on the Peruvian population remains limited, and this fishery has not yet been evaluated by platforms such as FishSource or Seafood Watch.

More details in the sustainability status of the various fisheries exploiting this species are available in **Table 6-2**.



Notes:

1. Trade flows below 1,000 tonnes are not shown.
2. Some countries (e.g., Morocco and Namibia) report squid and cuttlefish together, and Spain reports all Loliginidae combined. Therefore, the specific volumes of Patagonian squid re-exported by these countries cannot be determined.

Box 2

Key issues in the Patagonian squid fishery

1 High environmental sensitivity and strong interannual variability

Abundance of this species is **strongly influenced by environmental conditions** (e.g., temperature, oceanographic variability) and interactions with Argentine shortfin squid (*Illex argentinus*), leading to highly variable catches and uncertainty for both management and industry.

2 Uncertainty around high seas fishing effort / catches

There is no RFMO in the Southwest Atlantic, so although the Falkland Islands EEZ fishery is generally considered well-managed, **fishing in adjacent areas and on the high seas is not covered by a shared regional regulatory framework**. This lack of coordinated management and data sharing may create significant uncertainty about overall stock abundance, distribution, fishing effort, and combined catches.

3 Potential significant impacts on the rock cod population through bycatch and discards

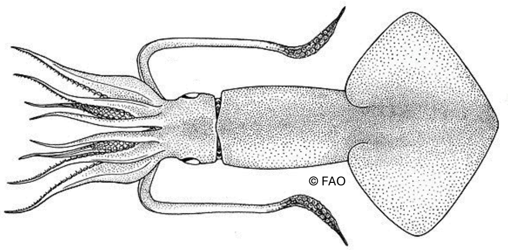
According to available information, **this fishery is potentially having important impacts on the sustainability of rock cod stock** (*Patagonotothen ramsayi*) through bycatch and discard. Recent estimates indicate that the Patagonian squid fishery contributes as much as 70% of the total rock cod catches (SFP, 2025).

4 Lack of information about the impacts on other protected species and seabed habitats

There is still little research on how the bottom-trawl fleet affects sharks, rays, benthic habitats, or ghost fishing, so these potential impacts remain poorly understood. In addition, an explicit ecosystem-based management approach that accounts for trophic links and environmental variability has not yet been implemented in this fishery.

3.3 Jumbo flying squid (*Dosidicus gigas*)

3.3.1 Ecological overview and status of the resource



The Jumbo flying squid (*Dosidicus gigas*), also known as the Humboldt squid, is the most fished squid species in the world, accounting for 42% of global squid landings in 2023 (FAO, 2025). It can measure up to 100–120 centimeters mantle length and weigh up to 50 kilograms (Nigmatullin et al., 2001). It is a pelagic species that lives along the American coast in the Eastern Pacific Ocean from California to Chile, with a westward extension around the equatorial area (see **Figure 3-10**). The denser parts of its distribution correspond to areas of high plankton concentration (Nigmatullin et al., 2001). It reproduces once in its lifetime between 25°N and 20–25°S, mainly over the continental slope and in adjacent oceanic waters. Reproduction can happen all year round, with a spawning peak between October and January in the southern hemisphere. Juveniles then migrate further offshore to find feeding grounds. Adults can be found between the surface and 1200 meters deep (Nigmatullin et al., 2001). In the Southeast Pacific, temperature conditions during the juvenile phase can affect the development and lifespan of the jumbo flying squid, leading to larger and longer-lived individuals from 1 year to 1.5-2 years lifespan (Arkhipkin et al., 2015).

Besides being the most important squid species commercially, with global catches worth close to USD 1 billion in 2019 (Pauly et al., 2025), the jumbo flying squid is a key mid-trophic predator in the Eastern Pacific Ocean, feeding mostly on mesopelagic fish, other squids, and crustaceans (Alegre et al., 2014), while also serving as an important prey for sharks, billfishes, and marine mammals, e.g., sperm whales (Ruiz-Cooley et al., 2004; Vetter et al., 2008; Quispe-Machaca et al., 2025). Its importance in the pelagic ecosystems, particularly in areas like the central Gulf of California, has been recognized by various studies, with its abundance being related to the abundance and distribution of other top predators like large pelagic fish and marine mammals (e.g., Jaquet et al., 2003).

According to existing research, two metapopulations have been identified in the Northern and Southern hemispheres, due to genetic differences (Sotil et al., 2024; Sandoval-Castellanos et al., 2010) or to the response to environmental conditions (Keyl at al., 2008). In the Southeast Pacific, while Nigmatullin et al. (2001) suggest that three phenotypic groups can be identified based on adult sizes with smaller individuals at the center of their distribution area and larger individuals around its peripheries, another describes only two groups in Peru (Argüelles et al., 2001).

The jumbo flying squid was classified as *Data Deficient* by the IUCN in 2010. According to the latest FAO Review of the State of World Marine Fishery Resources, one stock is classified as “maximally sustainably fished” and another one as “overfished” in FAO Area 87 (Southeast Pacific) (Sharma et al., 2025). Although there is no comprehensive stock assessment of the jumbo flying squid due to a lack of agreement on the model to use, parts of the stocks have been assessed in Chile and Peru and the high seas. Most of the latest assessments point toward a maximal or overexploitation of the stock, although the high interannual variability of the stock creates uncertainty on the validity of the used models (Seafood Watch, 2025; Roa-Ureta and Wiff, 2024).

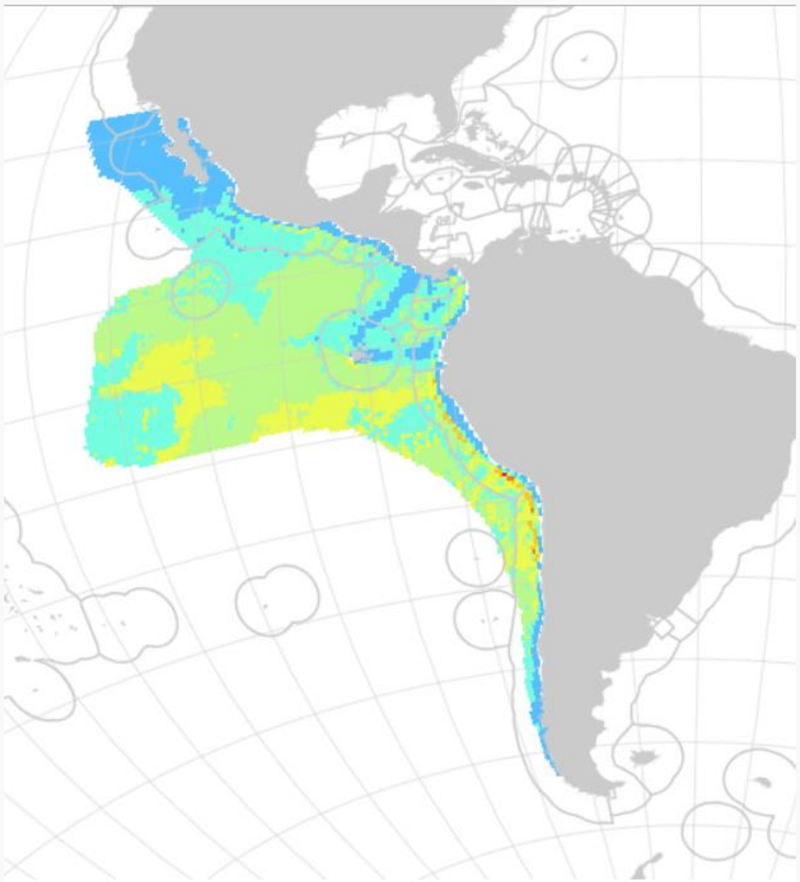


Figure 3-10 | Global biological distribution of jumbo flying squid (*Dosidicus gigas*). Colors refer to abundance, from blue (low) to red (high).

Source: Sea Around Us (Pauly et al., 2025)

3.3.2 Governance and management

Almost all jumbo flying squid landings (>99%) occurred in the Southeast Pacific in the last decade (FAO, 2025). As there is no comprehensive management of the stock, it is being managed by Ecuador, Peru, and Chile in their respective EEZs, and by the South Pacific Regional Fisheries Management Organisation (SPRFMO) for the squid captured in the high seas by the Chinese, Korean, and Taiwanese fleets. Although not an official management entity, industry representatives from Peru, Ecuador, Chile, and Mexico have created the Committee for the Sustainable Management of the Jumbo Flying Squid (CALAMASUR) to propose conservation management measures and stock assessments. In 2024, Chile, China, and CALAMASUR presented attempts to model the stock of jumbo flying squid, but the SPRFMO did not reach an agreement on the model to use for a comprehensive stock assessment (SPRFMO, 2024).

In **Peru**, the Ministry of Production (PRODUCE) manages the fishery and mandates the National Marine Institute of Perú (IMARPE) to perform the stock assessments and recommend a Total Allowable Catch (TAC). During the first quarter of each year, PRODUCE establishes an initial TAC that is updated throughout the year based on fishing data. In 2025, the TAC was increased four times, reaching a total of 648,000 tonnes. The only fishing gears allowed are jigs, and vessels over 32.3 m^3 must fish outside the 80 nautical miles limit, facilitating access to the resource to artisanal fishers. To ensure traceability, authorized producers and processors must register capture, landings, reception, and processing information in the National Traceability System of Fishing and Aquaculture (SITRAPESCA). Peruvian vessels wishing to fish in high seas should also get registered in the *Registro Unico de Embarcaciones*

Pesqueras en la Zona de Alta Mar through the digital system SIVIROP. Moreover, all Peruvian fishing vessels or foreign fishing vessels that wish to enter Peruvian waters should have a vessel monitoring system compliant with the national satellite tracking system SISESAT (PRODUCE, 2014). All these management measures were formalized in 2025 in a fisheries management regulation (PRODUCE, 2025). This decree also created a Technical Dialogue Table, between the private sector, shipowners, fishers, and the government to draft common solutions for the fishery.

In **Chile**, the Institute of Fisheries Development (IFOP) conducts national and regional stock assessments that are then analyzed by the Scientific and Technical Committee of Demersal Resources of the Central-South Region (CCT-RDZCS), which issues a TAC range recommendation. The Ministry of Economy, Development and Tourism (MEFT) then sets an annual quota. This quota system was established in 2012 and set at 200,000 tonnes, though that has never been reached since 2013 (MEFT, 2024). It is split between the industrial (80%) and the artisanal (20%) fleets. The only allowed gears are jigs and there is an observer program.

In **Ecuador**, the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP) manages the fishery based on the recommendations of the Public Institute for Aquaculture and Fisheries Research (IPIAP). In its authorization of the fishery, MAGAP imposed spatial restriction and a 50% observer program coverage for the industrial fleet (MAGAP, 2017). Further regulations from the Ministry of Production, Foreign Trade, Investments and Fisheries (MPCEIP) set spatial restrictions for the artisanal and industrial vessels; require mandatory VMS, use of logbooks, and registration at the SPRFMO; authorize jigs only; and increase the observer coverage to 100% for industrial vessels. As in Peru, all jumbo flying squid captures must be dedicated to human consumption only. The Ministry also establishes an annual quota of 250,000 tonnes with a transferable quota system that is applicable both inside and outside of its EEZ (MPCEIP, 2020).

In the **High Seas**, vessels from members and cooperating partners of the SPRFMO must be registered on the Commission Record of Vessels to be allowed to fish jumbo flying squid. Although there is no catch quota, the SPRFMO limits the number of allowed vessels and their gross tonnage for the Chinese, Korean, and Taiwanese fleets. Fishing gears are restricted to jigs except for developing coastal states (Ecuador, Chile, and Peru). This Conservation Management Measure also includes the mandatory use of VMS and the implementation of a 5% observer monitoring system. Additionally, vessels under 15 meters of length should use a traceability system (SPRFMO, 2025). In its last compliance report, the SPRFMO did not identify any issues and the reported list of vessels engaged in IUU was empty (SPRFMO, 2025).

Table 3-8 | Summary of key management frameworks across the jurisdictions where jumbo flying squid (*Dosidicus gigas)* is distributed in the Eastern Pacific Ocean

Measure	Peru EEZ	Chile EEZ	Ecuador EEZ	High Seas
Organization in charge of managing the fishery	Ministry of Production (PRODUCE)	Ministry of Economy, Development and Tourism (MEFT)	Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP)	SPRFMO Flag states management entities
Organization in charge of assessing the stock	National Marine Institute of Perú (IMARPE)	Institute of Fisheries Development (IFOP)	Instituto Público de Investigación de Acuicultura y Pesca (IPIAP)	Scientific Committee of the SPRFMO
Bilateral agreements	No	No	No	No
Stock assessment	National	National and regional	No formal stock assessment	No formal stock assessment
Input controls				
Data collection	- Pre-season surveys - Fishing data	- Fishing data	- Fishing data - Semestrial sampling report	- Annual catch reports
Authorized gears	Jiggers	Jiggers	Jiggers	Jiggers
Spatial restrictions	Yes (+ specific restrictions for vessels > 32.3 m^3)	No	Yes (different for artisanal and industrial vessels)	No
Other measures	- License system - Mandatory VMS (compliant with SISESAT)	- License system - Onboard observer program	- License system - Logbook and registration at the SPRFMO - 100% onboard observer program for industrial vessels - Mandatory VMS	- Limitations on vessels number and gross tonnage - Mandatory VMS - Onboard observer program - Traceability system
Output controls				
Quota or catch limits	Yes	Yes	Yes	None
Reference points	648,000 tonnes (2025)	195,000 tonnes (2025)	250,000 tonnes (2020)	-
Temporal restrictions	Yes	Yes	No	No
Other measures	- Capture for human consumption only - Traceability system (SITRAPESCA)	- 4,000 tonnes for bycatch	- Capture for human consumption only	- Registry of Peruvian vessels in SIVIROP

3.3.3 Production trends and fishing patterns

As mentioned above, jumbo flying squid (JFS) is the ninth most captured species globally, and the most important squid fishery in the world. In 2023, JFS catches totaled around 1.23 million tonnes, and represented almost one-third (30%) of all squid catches globally. In recent years, these fishery landings yield almost USD 1 billion annually (Pauly et al., 2025).

Historically, the fishery started modestly in the mid-1960s, mostly via the Mexican (Eastern Central Pacific) and Peruvian (Southeast Pacific) domestic fleets. Until 1990, the JFS catches were relatively small, averaging 2,500 tonnes per year. Starting in 1990, the fishery began evolving, with the entry of Chile and the distant water fleets of Japan and South Korea, and later China and Taiwan; except for a few years, annual catches increased steadily until 2014, when they plateaued at around 1.2 million tonnes. After a slight drop in 2015 and 2016, catches resumed increasing and peaked in 2023 with a record high of 1.224 million tonnes (**Figure 3-11**) (FAO, 2025).

Currently, the most important fishing countries are Peru (621,000 t in 2023; 51% of total catches), China (494,000 t; 40%), and Chile (105,000 t; 9%). Combined, these three countries accounted for 99.9% of the JFS catches in 2023. Even though the species is distributed throughout the Eastern Pacific Ocean, up to southern California, virtually all (99.9%) catches are taken in the Southeast Pacific Ocean, up to the Ecuador parallel (SPRFMO, 2023a).

Squid fishing generally takes place in the EEZs of Peru, Chile, and Ecuador, and in the high seas, mostly by jigging vessels. The fleet is composed of 6,600 Chilean and Peruvian small artisanal boats, 30 Chilean pelagic trawls or purse seines, and around 570 Asian jigging vessels fishing in the high seas, mainly from China (Gleadall et al., 2023). All fishing activity from Peru and Chile is conducted by the domestic fleets in their respective EEZs, while most fishing activity and catches from countries such as China and Taiwan are from international waters, outside of the 200 nm line. Even though Peru has dominated in terms of catches in recent years, jumbo flying squid catches in the high seas currently account for almost half of the total catches and are mostly taken from areas bordering the 200 nautical miles line, outside of the Chilean and Peruvian EEZs.

In 2023, fishing in the high seas represented 40% of the total landings. However, there have been some studies pointing to the fact that fishing pressure, as well as catches in the high seas, namely from China, may be considerably higher than reported. China operates the largest distant-water fishing fleet worldwide, with thousands of vessels operating mainly in the high seas. These areas are generally unregulated and poorly monitored, resulting in limited control and high uncertainty over both fishing pressure and real catch rates (Greenpeace, 2022; Montecalvo et al., 2023; Seto et al., 2023).

In the Eastern Central Pacific (FAO 77), the jumbo flying squid is harvested in the EEZ of Mexico by the Mexican fleet only. There has been no or negligible capture in U.S. waters. Although landings peaked at 115,000 tons in the early 2000s, the stock has collapsed since the 2009–2010 El Niño event due to less favorable oceanic conditions and access to productive areas for the individuals (Frawley et al., 2019).

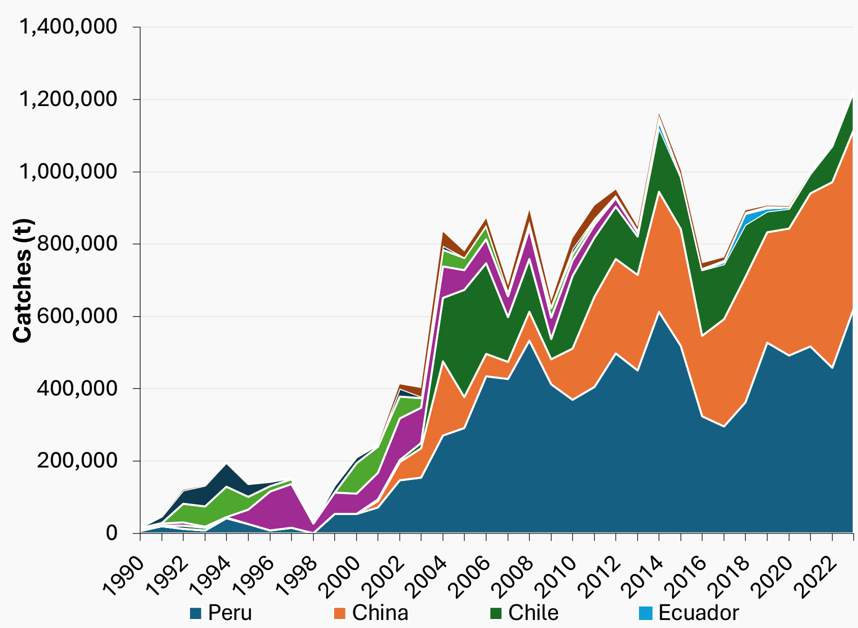


Figure 3-11 | Reported jumbo flying squid (*Dosidicus gigas*) annual catches (tonnes) per flag country, between 1990 and 2023.

Source: FAO

3.3.4 *Trade and markets*

As with other squid species, precise estimates of global trade in jumbo flying squid (JFS) are not available, due to the limited species-level resolution of trade statistics, particularly for major exporters such as China. Nevertheless, given that JFS is by far the most heavily captured squid species globally, it can reasonably be assumed to also be the most widely traded. The four main fishing countries, China, Peru, Chile, and Ecuador, report JFS exports to FAO aggregated with other squid species.

If global squid trade broadly mirrors production patterns, JFS is estimated to account for approximately 30–40% of total global squid trade in recent years. Based on FAO data and inferred species shares, this would correspond to nearly 700,000 tonnes (product weight) of JFS exports in 2023, with an estimated export value of around USD 1.2 billion, assuming an average price of USD 1,714 per tonne[4] (**Table 3-6**). For Peru and Chile, these estimates are likely close to actual JFS exports, as jumbo flying squid represents virtually all their squid and cuttlefish trade. For China, however, the figures should be considered indicative only, as exports are reported under aggregated commodity categories that include multiple squid species (FAO, 2025b).

In terms of bilateral trade, the main destination markets for jumbo flying squid include China, South Korea, Spain, Japan, and Thailand. Further details on export flows and end markets by exporting country are provided in **Table 3-3**, **Table 3-4**, and **Table 3-7**. China and Thailand also act as major processing hubs, which means that a portion of imported JFS is subsequently re-exported. Finally, and as aforementioned, due to aggregated reporting, species-specific trade flows and final destinations for Chinese exports of JFS cannot be fully determined.

[4] This estimate is based on the price per kilo (weighted average) in 2023, as seen in Chilean officially reported jumbo flying squid exports (SERNAPESCA, 2024).

Table 3-6 | Estimated 2023 exports of Jumbo flying squid in tonnes (product weight), calculated using the species' share of total squid and cuttlefish production (2021–2023 average) and FAO export data for total squid and cuttlefish. Source: FAO

Exporter country	% of *Jumbo flying squid.* in the total squid and cuttlefish production (2021-23 average)	Total 2023 squid and cuttlefish exports (tonnes)	Estimated 2023 Jumbo flying squid exports (tonnes)
China	43.3%	498,645	216,113
Peru	99.9%	409,338	409,142
Chile	100%	67,667	67,667
Ecuador	95.6%	35,013	2,371
Total		**932,892**	**695,292**

Table 3-7 | Chilean officially reported jumbo flying squid 2023 exports in terms of quantity (thousand tonnes) and value (x1000 USD) per destination country. Source: SERNAPESCA

Destination country	Quantity		Value		Price/kg
	'000 t	% of total	x1000USD	% of total	
South Korea	19,555	28%	29,501	26%	1.599
Spain	17,311	25%	31,724	28%	1.955
Japan	9,232	13%	13,498	12%	1.520
China	9,213	13%	12,666	11%	1.439
Taiwan	4,052	6%	6,404	6%	1.609
Mexico	2,338	3%	4,890	4%	2.130
Viet Nam	2,109	3%	3,893	3%	1.904
Thailand	1,434	2%	1,846	2%	1.336
Portugal	513	1%	1,056	1%	2.058
United States	474	1%	753	1%	1.976
Other	3,841	5%	7,277	6%	2.291
Total	**70,071**		**113,509**		

3.3.5 Sustainability status

In terms of overall conservation and sustainability, jumbo flying squid is listed as *Data Deficient* on the IUCN Red List (Barratt and Allcock, 2014). At the stock level, the species is assumed to comprise two distinct populations: the Northeast Pacific stock, extending from the United States to Colombia, and the Southeast Pacific stock, distributed across South America and the adjacent high seas and accounting for most of the catches (SFP, 2025d, 2025e).

- The NE Pacific population, fished mainly by Mexico, is considered moderately well-managed and the stock likely in good condition, although uncertainties remain regarding stock status, and some management gaps persist.
- For the SE Pacific population, where management is more complex, the current stock status is unknown. Despite recent progress within Peru's and Chile's EEZs, major challenges continue, particularly in the high seas, where the fishery remains largely unregulated and where there is strong evidence of widespread IUU activity.

More details on the sustainability status of the various fisheries exploiting this species are available in **Table 6-3**.

Box 3
Key issues in the jumbo flying squid fishery

1 No effective integrated and cross jurisdictional management system in place

There are **no integrated management measures in place** for this transboundary stock, which spans across multiple national jurisdictions and the High Seas. Management is currently conducted separately by the various jurisdictions: the SPRFMO oversees the High Seas through flag-state regulations, while individual coastal states manage the fishery within their own waters.

2 The overall stock condition and exploitation status are unknown

Although Chile and Peru conduct their own assessments for jumbo flying squid, and the stock is considered to be in relatively good condition within their jurisdictions, **the overall status and exploitation level of the species across the wider Southeast Pacific remain uncertain**. This uncertainty persists because the SPRFMO has not yet adopted any of the proposed stock assessments, limiting the transition from the current management framework to one based on formally agreed scientific advice.

3 Potential high levels of illegal, unreported, and unregulated (IUU) fishing

The **High Seas portion remains largely unregulated, with limited control and oversight on fishing pressure, and requires significant improvements**. In addition, there is an increased risk of IUU fishing and potential human rights issues in the High Seas, for the distant water fleets (ArtisOnal, 2025; Selig et al., 2022).

4 Unknown wider ecosystem impacts of the fishery

Jumbo flying squid is a key mid-trophic predator in the Eastern Pacific Ocean and an important prey species for marine mammals and large pelagics such as swordfish. However, the **broader ecosystem impacts, and any potential trophic cascade effects, of current fishing levels remain unknown**.

4 TRADE AND MARKET CHALLENGES

According to our analysis on public trade data (Box 4), and some existing literature, **the global squid trade is still characterized by seriously fragmented and opaque value chains**, where catches that originate from poorly regulated or unregulated areas, such as the high seas, may pass through multiple countries – and often offshore transshipments – for processing and export. In this process, these catches can be mixed with products coming from better regulated or sustainable sources and mislabeled as a different squid species or lumped in broader categories such as "mixed squid." This complexity hampers traceability and increases the risk of seafood fraud and unsustainable sourcing practices (Gleadall et al., 2023).

4.1 Complex and fragmented value chains

A key driver of this issue is the **growing dominance of distant-water fishing (DWF) fleets**, particularly from China, South Korea, and Taiwan, which operate across multiple regions and target a wide range of squid species with wider distributions. These fleets have often been operating in areas where no regional fisheries management organizations (RFMOs) exist or where enforcement is weak – such as the Southwest Atlantic, where both Argentine shortfin squid and Patagonian squid are harvested – thus increasing the risk of illegal, unreported, and unregulated (IUU) fishing (Helyar et al., 2014; Lawrence et., 2022; Ospina-Alvarez et al., 2022). An additional challenge is the persistence of transshipment, which has been documented for DWF and the Chinese fleet in the high seas (Bengtsson et al., 2024). This practice not only allows fleets to remain at sea for extended periods, further increasing the fishing pressure, but also contributes to increased traceability issues, as catches are frequently mixed, poorly documented, or underreported without oversight. These unverified at-sea catch transfers make it nearly impossible to track the origin of squid products and significantly increase the risk of IUU fisheries-sourced products entering global markets (Boerder et al., 2018; Seto et al., 2023; Cabanelas & Quelch, 2020). Both the Argentine shortfin squid fishery in the Southwest Atlantic Ocean, as well as the jumbo flying (Humboldt) squid fishery in the Southeast Pacific Ocean have been identified as two key global transshipment activity hotspots associated with squid jiggers (Boerder et al., 2018; Cabanelas & Quelch, 2020).

The processing of squid is carried out mainly in third countries, where specialized facilities handle cleaning, grading, and freezing before the product is exported to international markets. This offshore processing model is common in the sector and reflects both cost efficiencies and the concentration of processing capacity outside the producing nations. However, it adds significant complexity to the value chain, as the removal of identifiable anatomical features in the processing stage, combined with differing labelling requirements and trade names per country, increases the risk of mislabeling, species substitution, and aggregation, ultimately making it very difficult to identify the origin of the raw squid (e.g., Ospina-Alvarez et al., 2022).

Box 4

Opacity and complexity of the squid supply chain: the China example

PRODUCTION

China operates the world's largest squid fishing fleet, with vessels fishing year-round across multiple ocean regions.

In 2023, **China reported close to 1 million tonnes of squid catches**, of which:

At least two-thirds (~660,000 t) were taken by **distant-water fleets operating largely in international waters**, particularly in the Southeast Pacific and Southwest Atlantic. **Fisheries in the high seas are mostly unregulated, with limited oversight and low transparency in catch reporting.**

Around one-third (~360,000 t), from the **Northwest Pacific and Indian Oceans**, was reported under **"Squids nei"**, with no species-level detail.

Considering the number of commercial species that are captured in those waters, this could mean **at least six[2] additional species of squid not adequately reported.**

IMPORTS

China is also the world's largest squid importer, with approximately 453,000 tonnes of products that may **include squid imported in 2023 from 35 different countries.**

If all squid species captured by these countries enter the Chinese market, this could involve **up to 20 additional squid species (or species groups)**.

Almost 40% of squid landings from these countries are not reported at the species level.

At the trade level, **squid exports** to China are **mostly reported in aggregated categories**.

PROCESSING AND EXPORTS

In 2023, **China exported nearly half a million tonnes of products that may include squid to more than 100 countries**. Comparing these exports with estimated catches and imports suggests that **roughly one million tonnes of squid products likely remained in the domestic market**, where squid is highly valued.

Much of the squid that is caught or imported is processed and packaged in China before reaching end markets. At these stages, studies indicate **a high risk of species mixing and substitution** (e.g., D'Amico et al., 2014; Guardone et al., 2017; Reily, 2018).

Several studies have flagged the still **weak packaging and labelling standards, particularly the limited use of ambiguous commercial names instead of standardized trade names, and incomplete disclosure of species and origin** (e.g., D'Amico et al., 2014; Gleadall et al., 2023; Wallstrom et al., 2020).

For squid products that are exported, reporting requirements in both China and importing countries also remain limited. **Global customs systems such as UN Comtrade and HS codes typically record seafood under broad product categories that combine multiple species**, making it difficult to reconstruct species-specific trade flows without access to more detailed national tariff-line data.

KEY ISSUES	
	High supply-chain complexity, with squid captured and sourced from multiple fisheries, fleets, and jurisdictions.
	High risk of species mixing and misidentification at processing and packaging stages, driven by weak labelling requirements.
	Insufficient detail in reporting (landings, trade, and domestic supply) severely limits the ability to link end products to specific fisheries, management regimes, or IUU-risk areas

Icons (credit): Freepik, madness, Nuricon, Smashicons

4.2 Unharmonized marked measures and import control schemes

Seafood import schemes are systems designed to ensure that seafood traded and entering a country is legally harvested, properly documented, and traceable throughout the supply chain. Their main purpose is to prevent illegal, unreported, and unregulated (IUU) fishing products from reaching the market, protect marine resources, promote transparency, and support responsible sourcing practices for importers and buyers. Despite the existence of several such schemes, they are not globally aligned or correctly enforced and in some key countries, especially those acting as major market states, they are still absent altogether (EU IUU Fishing Coalition, 2025).

Furthermore, cephalopods caught in areas beyond national jurisdiction and subsequently landed in the flag State are, in many cases, not legally classified as “imports.” For example, squid harvested by the Spanish fleet operating on the high seas is not considered an import when landed in Spain. This legal distinction limits the applicability of import control schemes and market-based measures, creating regulatory loopholes that allow products originating from unregulated or weakly regulated fisheries to enter domestic and international markets with reduced scrutiny.

4.3 Product mixing and mislabeling

Further complicating monitoring and enforcement is the widespread issue of deficient product labelling and information (e.g., lack of clarity on the squid origin in terms of stock or fishing area), species mislabeling, and species aggregation in seafood trade reporting (Donlan and Luque, 2019; Kroetz et al., 2020).

Squid products are often generically labeled or grouped with other cephalopods such as cuttlefish (Cundy et al., 2023; FAO, 2025a), making it nearly impossible to track species-specific sourcing or ensure sustainability standards are met (Pierce et al.; Marín et al., 2018). Some previous research conducted with DNA-based testing has revealed high rates of substitution and false labeling in some cephalopod products, including squid, both in regions with limited enforcement such as China and the Philippines (e.g., Xiong, 2016; Sarmiento et al., 2018) and in countries such as Singapore or Canada (Ho et al., 2020; Morris et., 2024).

Recent research and publications show the lack of accurate labeling and risk for consumer fraud. In Europe for instance, a study found that only 50% of the squid samples complied with the European regulation on seafood labelling and information (Oceana, 2025). And in the United States, even without any instance of fraud, the lack of required regulatory accuracy on the labels represents a risk for squid distributors and end buyers that sell final products that have been highly processed (Willette, & Joaquin, 2025).

4.4 Highly processed raw materials and variability of final products

Cephalopod processing typically includes removing the head, tentacles, and fins, followed by evisceration, skinning, and freezing. Different parts are used for various products.

Fins and certain mantle sections may go into restructured items, while the mantle can commonly be processed into squid rings; other final products such battered squid, surimi, or fishmeal can also be found in the market.

Once processed, specimens are often impossible to identify through visual inspection alone. In main market destinations “squid” is the standard commercial name for seafood products made from *Loliginidae and Ommastrephidae* families, yet these species can differ substantially in their market value.

Box 5

Examples of squid products, mostly those with high processing involved

Table 4-1| Most common processed squid end-products with final use, typical buyers, and types of packaging

Category	Final products	End use / destination	Typical buyers	Packaging
Fresh & chilled products	Whole squid, tubes (mantles), tentacles, fresh rings	Restaurant, foodservice supply, home consumption	Wholesaler, supermarkets, food service	Chilled trays, MAP packs
Frozen products	IQF whole squid, frozen tubes, IQF rings, frozen tentacles, pre-cooked portions	Food industry, frozen retail, food service, home consumption	Import/export actors (traders) supermarkets, restaurants	IQF bags, cardboard boxes, frozen trays
Canned & preserved	Squid in ink, squid in oil, squid in sauce	Retail sales, convenience, prepared ingredients	Import/export, supermarkets, gourmet stores	Cans, glass jars
Ready-to-eat / precooked	Battered rings (calamari), pre-fried squid, snacks	Snacks, ready meals, food service	Supermarkets (heat & eat), restaurants	Frozen bags, microwaveable trays
Dried / dehydrated	Dried squid strips, salted/dried squid	Long shelf-life snacks	Asian markets, convenience stores	Sealed bags, single-serve packs
Processed products (blends)	Surimi with squid, squid burgers, squid-based patties	Processed foods / prepared meals	Food processing industry, retail prepared foods	Trays, bags, frozen portions
Industrial ingredients / by-products	Squid meal, surimi blend, collagen, ink, extracts	Feed, processed foods, cosmetics, natural colorant	Food processors, feed industry, cosmetic industry	Sacks, drums, industrial containers
Fermented / cured products	Fermented or salted squid snacks	Traditional snacks, regional culinary uses	Local/regional markets, street food	Sealed packs, bags
Value-added / gourmet products	Stuffed squid ready-to-serve, marinated fillets, high-grade ink	Premium restaurants, food service	Gourmet shops, high-end restaurants	Glass jars, vacuum packs, trays
Non-food applications	Collagen/peptides for cosmetics, fertilizer from waste	Cosmetics, agriculture	Cosmetic manufacturers, agricultural suppliers	Drums, sacks

Notes: Please refer to the next page for examples of each type of product.

(1) Fresh & chilled products

(2) Frozen products: Jumbo flying squid tentacles

(2) Frozen products: IQF rings

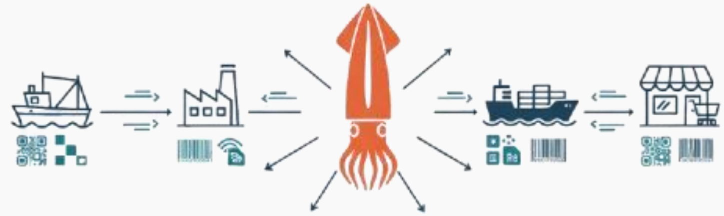
(3) Ready-to-eat / precooked: Battered rings (calamari), pre-fried squid, snacks

(4) Processed products (blends): surimi

(5) Canned and preserved: Unspecified loliginid squid in ink

Box 6

Piloting Digital Traceability in Illex Supply Chains



The Project

Illex supply chains from three buyers with distinct end markets (US, EU, and UK) were followed via use of the digital traceability platform, Wholechain. Retrospective lots were used to map supply chains, exercise data management, identify gaps, and assess the potential and challenges of scaling digital, end-to-end traceability efforts.

Main Findings

Complex and Fragmented Value Chains

+18 months
product lifecycle

Participant supply chains demonstrated both complexity and fragmentation. Catching operations originating in the Argentine EEZ extended across multiple continents, producing long, multi-stage product lifecycles industry-wide (Harte et al., 2019). These dynamics made data collection difficult and were compounded by largely siloed information management systems that diminished visibility into operational activities, fragmenting supply chain oversight and management.

Traceability Limitations

80%
traceability gaps occurred from first landing to first export

Identified gaps revealed systemic traceability limitations. Nearly 80% occurred within upstream supplier operations, where data collection was incomplete. Upstream suppliers function as supply chain "hubs," or critical data junctures, where missing information can cascade downstream (Nocera et al., 2024). These gaps weaken product visibility at key stages and, when combined with limited traceability infrastructure among participants, leave supply chains vulnerable to sustained transparency barriers.

End-to-End Traceability vs. Compliance

100%
compliant

Despite being critical for supply chain transparency, end-to-end Illex traceability remains largely industry driven. Full, event-based protocols sit outside the purview of most compliance mandates, limiting incentives for adoption and orienting industry data collection toward commercially significant events rather than comprehensive traceability. Many major regulatory frameworks, such as import control schemes, do not cover squid species (e.g., US SIMP), lack full-chain requirements, and remain globally unharmonized, resulting in a fragmented regulatory landscape unable to address risks across diverse markets. These gaps are compounded by limited regulatory authority over significant Illex harvesting activity occurring on the high seas, constraining overall effectiveness of compliance and oversight.

Recommendations for Buyers and Retailers

- **Prioritize** full, end-to-end traceability standards in Illex supply chains
- **Adopt** digital traceability systems to enhance data management
- **Ensure** GDST and EPCIS compliance to facilitate scaling
- **Incentivize** integration of upstream suppliers and processors
- **Expand** fishery and vessel risk indicators within traceability protocol

4.5 Limited traceability

In an ideal world, the full supply chain of a seafood product, from its origin in the ocean to its destination on a supermarket shelf or restaurant, would be fully traceable. This is critical to ensure that the product comes from a sustainable source or, if not, that measures are being taken to address the challenges in that fishery.

The complexity of squid value chains means that traceability can be compromised at different stages of storage, transport, or trade. A recent pilot project carried out by members of the Global Squid Supply Chain Roundtable demonstrates the need to strengthen existing mechanisms.

4.6 Additional challenges and conclusions: high risks for buyers and consumers

Beyond traceability, markets for squid and other cephalopods are currently facing additional challenges, including inconsistent product quality, price volatility, and shifting trade dynamics (with Asian countries increasingly becoming dominant players).

At the same time, weak quality control and regulatory weaknesses, across both fishing countries and the jurisdictions, as well as the end markets, create significant hurdles for responsible buyers seeking to avoid IUU-sourced or misrepresented products (Martinsohn, 2011; Borit and Olsen, 2016). As a result, squid supply chains remain highly vulnerable to exploitation, with serious potential implications for sustainability and human rights in squid fisheries and food security in global seafood markets.

Table 4-2 | Market share (proportion of global squid import value) for each continent and top squid-importing country in 2000, 2010, and 2023, and the change in market share between 2000 and 2023. Source: FAO.

Continent / Country	2000	2010	2023	Market share variation
Asia	**44.1%**	**40.2%**	**52.3%**	↑
China	9.6%	11.3%	17.4%	↑
Japan	25.6%	17.8%	9.7%	↓
Thailand	0.6%	3.0%	7.2%	↑
South Korea	2.8%	3.0%	6.5%	↑
Viet Nam	0.0%	0.5%	3.5%	↑
Malaysia	0.4%	1.2%	2.7%	↑
Taiwan	0.0%	0.6%	1.3%	↑
Hong Kong	1.7%	1.0%	1.2%	↓
Philippines	1.0%	0.0%	0.9%	↓
Other countries	2.4%	1.7%	2.0%	↓
Europe	**44.6%**	**45.3%**	**37.2%**	↓
Spain	19.6%	17.9%	14.2%	↓
Italy	14.2%	15.4%	9.9%	↓
France	2.4%	2.1%	2.2%	↓
Portugal	1.7%	2.1%	1.7%	=
Russia	0.0%	0.6%	1.5%	↑
Greece	1.7%	1.5%	1.4%	↓
Germany	1.2%	1.1%	1.2%	=
Other countries	3.7%	4.5%	5.0%	↑
Americas	**9.4%**	**10.5%**	**7.3%**	↓
United States	7.3%	8.1%	4.7%	↓
Canada	1.4%	1.5%	0.9%	↓
Mexico	0.2%	0.2%	0.7%	=
Other countries	25.0%	28.4%	23.3%	↓
Africa	**0.6%**	**1.7%**	**1.8%**	↑
Oceania	**1.4%**	**2.3%**	**1.3%**	↓
Total imports (million USD)	**1,425.0**	**2,962.8**	**7,771.9**	

Notes: most countries report all or a good portion of their squid imports combined with other cephalopods such as cuttlefish. These statistics are thus overestimated regarding squid imports.

5 CURRENT EFFORTS AND OPPORTUNITIES

In response to fishing pressure on global squid stocks and increasing demand for sustainably sourced seafood, multiple initiatives have been implemented to improve the ecological, economic, and social performance of the squid sector. These include voluntary, industry-led measures such as fishery improvement projects and certifications, as well as more formal actions taken by governments and international bodies such as RFMOs and the FAO.

Below are selected examples of past and ongoing efforts, together with opportunities identified for further progress in this sector, with particular attention given to South American squid fisheries.

5.1 Government and RFMO efforts

Since the adoption of the United Nations Convention on the Law of the Sea, many international agreements and conventions have been created to regulate fishing activities and ensure sustainable management and trade of marine resources. Their value depends on countries not only joining these agreements but also implementing them effectively and aligning their rules and practices as flag states, port states, coastal states, and market states. A recent example is China's ratification of the Agreement on Port State Measures, which aims to block illegally caught fish from entering ports. In addition, two new global agreements – the World Trade Organization's agreement to curb harmful fishing subsidies and the treaty on Biodiversity in areas Beyond National Jurisdiction – have the potential to strengthen the management of squid fisheries and improve governance in regions where oversight has historically been weak. Likewise, in the Pacific Ocean, the South Pacific Regional Fisheries Management Organization has in recent years demonstrated a clear interest in strengthening its mandate to improve the management of *Dosidicus gigas*.

5.2 Market-based improvement efforts

5.2.1 FIPs and certifications

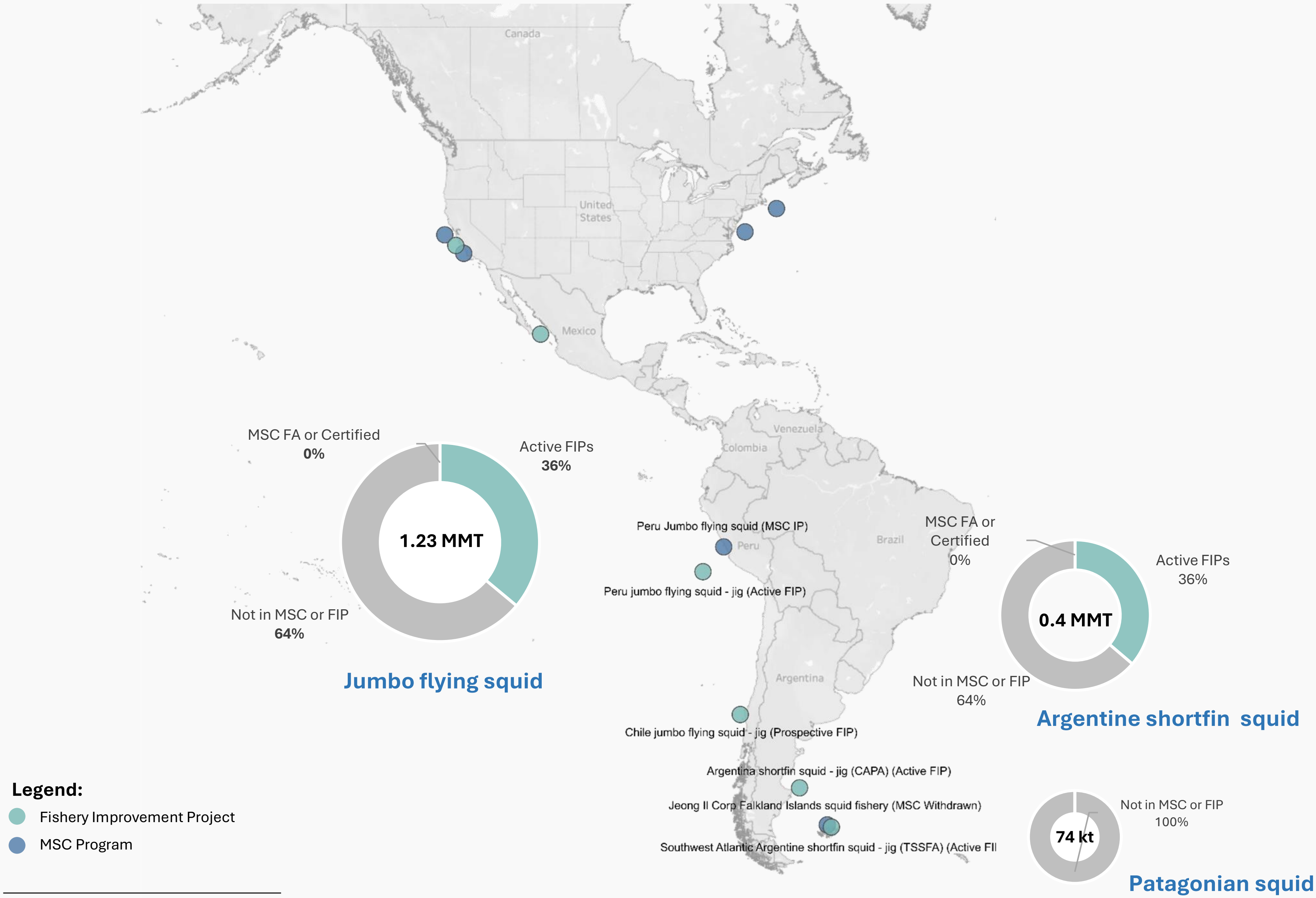
Fishery improvement projects (FIPs) and sustainability certifications are structured, collaborative processes that engage industry, governments, and other stakeholders to address environmental and management challenges in a fishery. By setting clear performance targets, increasing transparency, and tracking progress over time, they create market-driven incentives for continuous improvement. In the *Illex and Dosidicus* fisheries, such initiatives exist and help drive necessary improvements within national Exclusive Economic Zones (EEZs); however, these tools appear to have much more limited applicability for fleets operating on the high seas.

5.2.2 Traceability tools

Traceability is essential for ensuring value chains are free from IUU products and human-rights abuses. Given the risks highlighted throughout this report, robust traceability systems are crucial for markets to assess the risks associated with the products they purchase, process, and trade. The FAO provides comprehensive guidance on how to establish effective traceability frameworks, emphasizing the need for verification through digital tools (Blaha et al., 2023). Likewise, the Global Dialogue for Seafood Traceability initiative proposes a standard to enable interoperable traceability, and numerous service providers now offer digital solutions (e.g., GS1 standard) that support end-to-end tracking across the supply chain.

Box 7

Current and historical Fishery Improvement Projects and certifications covering one or more squid species



Notes: (1) Fisheries in FIPs or the MSC program that cover one or more species within the scope of this study are identified on the map with the name of the fishery. (2) MSC IP = MSC Improvement Program. (3) The doughnut charts show the estimated share of production for each species coming from fisheries in the MSC program, in FIPs, or neither.

5.2.3 Pre-competitive collaborations

Despite the need for individual responsibility and involvement, pre-competitive industry collaborations are essential in the fisheries sector because many of the most pressing challenges – such as stock sustainability, IUU fishing, and labor risks – extend far beyond the capacity or responsibility of any single company. By working together, companies can pool knowledge, align expectations, and drive collective action that strengthens governance, improves fishing practices, and creates more resilient and responsible supply chains. Such collaboration enables systemic change that would be impossible for individual actors to achieve alone. Two examples in the region are:

- CALAMASUR: The Committee for the Sustainable Management of the Jumbo Flying Squid (CALAMASUR) is a group comprised of leading industry players (representatives of the artisanal, industrial, and processing sectors) from Chile, Ecuador, Mexico, and Peru, who are involved in fishing jumbo flying squid and work together for its sustainability. This group met for the first time in January 2018 and was formalized in December of the same year. It has observer status in the SPRFMO (South Pacific Regional Fisheries Management Organization) and has already presented two position statements requesting necessary improvements in science, management, and MCS (monitoring, control, and surveillance) to the delegates of the SPFRMO.
- The Global Squid Supply Chain Roundtable: Facilitated by SFP, it serves as a forum for processors and importers that buy directly from specific squid fisheries to work pre-competitively to promote improvements throughout the supply chain. Together, they can scale-up their individual efforts and more effectively advocate for improvements.

5.3 International Scientific Workshops for the Argentine Shortfin Squid

In a global effort to assess and manage the stocks of Argentine shortfin Squid in the South-West Atlantic, Sustainable Fisheries Partnership sponsored the organization of three International Scientific Workshops for the Argentine Shortfin Squid in 2022 (Chile), 2023 (Panama), and 2024 (Thailand). Joint efforts and coordination meetings will continue to ensure sufficient progress on the shared regional database, with the objective of conducting an initial regional stock assessment. Scientists from the Falkland Islands, Uruguay, Chile, Brazil, China, South Korea, and Taiwan attended one or more of these workshops in their individual scientific capacities; participation did not constitute government representation.

The first workshop aimed to advance toward a regional stock assessment of *Illex argentinus* that could inform fishing regulations in both national and international waters. Participants developed a conceptual model of the spatial functioning of *I. argentinus* across the region and underscored the need for industry-led support to develop regional recommendations (Roa-Ureta and Wiff, 2022). The second workshop continued discussions on stock assessment methodology and the creation of a shared database with a broader range of scientists and countries. The third workshop engaged additional colleagues from Asian institutions, and each participating group described the fishery data they hold and its structure and accessibility, which informed an extension of the database framework to accommodate trawler data. The workshop concluded that it is feasible to develop a regional stock assessment model with the available information and set the goal of attempting a first regional stock assessment at a future workshop, subject to adequate database readiness (Roa-Ureta and Wiff, 2024).

5.4 Other innovative solutions

5.4.1 Monitoring and verification tools

To address persistent transparency challenges across the global squid trade, specifically during harvesting operations, a range of tools has emerged to support at-sea monitoring and verification. Publicly available vessel monitoring platforms, such as those developed by Global Fishing Watch, enable users to confirm vessel identities, analyze AIS-based vessel movements, and examine fishing and transshipment activities over defined periods (GFW, 2023; Petrossian et al., 2022). In parallel, electronic monitoring (EM) systems are increasingly deployed on individual vessels, leveraging onboard cameras and gear sensors to document fishing operations and support more detailed oversight. When integrated with electronic logbooks and review protocols, EM can enhance visibility into fishing activity, bycatch handling, and indicators relevant to compliance and labor risk assessment (Glemarec et al., 2020; Pew, 2019; Pierre et al., 2024).

Complementing these operational tools, verification solutions such as DNA barcoding provide science-based methods for confirming species identity and identifying risks related to mislabeling or misreporting once products enter the supply chain (Shehata et al., 2018; Guardone et al., 2017). Together, these approaches strengthen the capacity of industry and regulators to identify IUU fishing and labor-related risks, monitor compliance and sustainability performance, support product verification, and make more informed, risk-based supply chain decisions.

5.4.2 Policy and transparency initiatives

Broader initiatives complement, and drive the use of, monitoring and verification tools by addressing transparency at the governance and information-disclosure levels. Efforts such as the Global Charter for Fisheries Transparency, Fisheries Transparency Initiative, and the Fisheries Governance Project establish guidance, principles, and best practices that promote transparent access to fisheries data. In doing so, they clarify roles and responsibilities across the seafood trade's interconnected actors, strengthening accountability in fisheries information disclosure and management.

Data standards also support systemic transparency by standardizing data collection and diffusion across entities. Initiatives such as Universal Fisheries IDs facilitate the structured exchange of fisheries data across platforms and jurisdictions. Such efforts help ensure information disclosed through transparency initiatives and generated by monitoring tools remain connected and leveraged throughout global seafood supply chains.

6 RECOMMENDATIONS FOR PROCUREMENT OF SQUID PRODUCTS

If responsibly managed, the world's main squid fisheries can remain productive while supporting marine ecosystems and generating economic value for both coastal nations and distant-water operators.

Squid fisheries worldwide, and in Latin America specifically, face many challenges, including illegal fishing, abuse of human rights, and mislabeling, and some of these issues cannot yet be fully addressed through existing tools and certifications. Consequently, companies engaged in trading squid inevitably take the risk of becoming associated with unacceptable practices in squid fisheries. This guidance cannot offer a full assurance that these problems will be entirely avoided.

The guidance below sets out some measures that SFP believes can be adopted to reduce, not eliminate, risk; further advice is continuously delivered by the Global Squid SR secretariat.

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6.1 Assess your fisheries

As a starting point, identify the fisheries you source from.[5] Companies should clearly identify the fisheries from which they source squid and prioritize sourcing from those with stronger management, transparency, and oversight.

It is recommended to establish a risk-based mechanism grounded in publicly available and verifiable information, to define specific protocols for each procurement process and product.

Special consideration should be taken with any fishery[6] operating in an unregulated area, from countries carded under the EU carding system, and vessels that sail under the flag of a state that:

i. has not adopted the convention on port state measures[7]
ii. has not ratified ILO convention 188[8];
iii. has a flag of convenience.[9]

[5] Identify the fishery using FishSource (Latin name, vessel flag, fishing area (High seas/EEZ), gear) (see **section 6.4**)
6 For Seafood Metrics users, these criteria are considered and can be found in the HRRI
[7] https://www.fao.org/port-state-measures/background/parties-psma/en/
[8] https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11300:0::NO:11300:P11300_INSTRUMENT_ID:312333:NO
[9] https://www.itfglobal.org/en/sector/seafarers/flags-of-convenience

6.2 Look at your supply chain

Catch documentation and controls made by authorities may not be sufficient to ensure that seafood imported is free from IUU fishing or human rights abuses. Considering the weaknesses of currently operating import schemes, companies may be taking a high risk whenever tracing the product back to the vessel is unfeasible. Supply chain-related risks can be mitigated if the product is chain of custody certified under a GSSI approved scheme or has a fully implemented traceability system that meets standards such as Global Dialogue on Seafood Traceability.[10] Furthermore, there are several industry due diligence schemes and codes of practice based on the Guiding Principles on Business and Human Rights whose use is strongly recommended by individual companies, binding in supply chain partners where foreseen.

At a minimum, **companies should ensure basic traceability information** by:

i. Asking the vendor to provide the catch certificate or any other evidence of legality of the sourcing
ii. Asking the vendors for full disclosure of the companies and countries where the raw material has been processed or re-processed prior to last import
iii. Asking the vendor to identify (at least):
    a. Vessel information[11]
    b. First landing port
    c. Transshipments at sea/port.

Periodically review and improve traceability and due diligence mechanisms as better tools and information become available.

6.3 Additional recommendations

i. If you are an importer, participate in and implement the actions agreed upon by the Global Squid Supply Chain Roundtable[12] or other groups and pre-competitive platforms to address IUU and human rights issues in squid fisheries.
ii. If you are a retailer or distributor, ensure that your supplier endorses and implements best practices to address IUU risks and human rights abuses in its squid supply chain.
iii. Join public statements or requests to state actors for improved policies (flag states, port states, coastal states, and RFMOs) and commit further resources to improve science-based management of squid fisheries.
iv. Join public statements or requests to state actors to encourage the endorsement and effective implementation of legal frameworks to combat IUU fishing (e.g., Port State Measures Agreement) and to prevent human rights abuses in global squid fisheries (i.e., endorsement of ILO 188).
v. Support and promote better transparency in fishing fleets by promoting the implementation of the Global Charter for Fisheries Transparency principles.

[10] GDST standard
[11] Basic vessel identification information: home port, name, flag and call sign, IMO or other UVI number
[12] Global Squid Supply Chain Roundtable

6.4 Existing performance evaluations for the fisheries (FishSource profiles) of each of the species covered in this study

Table 6-1 | Fishery attributes, FishSource scores, other ratings, recommendations, and overall sustainability notes for fisheries targeting Argentine shortfin squid (*Illex argentinus*) in the Southwest Atlantic (FAO Area 41)

Fishery attributes				FishSource scores [(2)]							Other ratings and recommendations		Relevant notes on the fishery
Stock	**Jurisdiction**	**Flag vessel country**	**Gears [(1)]**	**MS**	**MC**	**FC**	**SS**	**FH**	**SSF**	**EI**	**Seafood Watch**	**Ocean Disclosure Project**	
Argentine shortfin squid – SW Atlantic Latest catches: **530,010 t** (2021) Sources: **MBAq 2020, MBAq 2021, SFP 2025a, SFP 2025f**	High seas	China	LMH	< 6	< 6	< 6	DD	DD	-	●	Avoid	Needs Improvement	**Management and compliance:** Despite being a transboundary stock, **there are no integrated management measures for regulating the stock and its fishery**. Management is conducted separately by Argentina and the Falkland Islands within their jurisdictional waters, and in the High Seas the fishery is highly unregulated and catches are not reported or verified. The overall management performance varies by management unit and flag country. There is **some evidence of widespread IUU fishing by the foreign fleets**, with records of Chinese jiggers making illegal incursions in the Argentinean EEZ. Moreover, there is no coordinated control of fishing pressure in the High Seas, where hundreds of large fishing vessels operate, catching thousands of tonnes of squid annually. **Stock condition and exploitation levels:** The **stock and exploitation status of shortfin squid in the Southwest Atlantic are unknown**. While Argentina and the Falkland Islands monitor the resource across its distribution range, the available data is either outdated (given the 1-year lifespan of shortfin squid) or insufficient (e.g., from the foreign fleets) to determine the current stock status. **Environmental impacts:** Ecosystem impacts vary depending on the fishing gear and fleet. **In the Argentinean fleet,** although more data on bycatch levels and ecosystem impacts is needed, **there is no evidence of significant effects on protected species or sensitive habitats**. Foreign fleets operating in the High Seas primarily use trawls and jiggers**. Some data suggest**
		South Korea	LMH, TB	< 6	< 6	< 6	DD	DD	-	●	Avoid	Needs Improvement	
		Spain	LVT, TB	< 6	< 6	< 6	DD	DD	-	●	Avoid	Needs Improvement	
		Taiwan	LMH	< 6	< 6	< 6	DD	DD	-	●	Avoid	Needs Improvement	
	Argentinean EEZ	Argentina	LMH, OTB	< 6	< 6	≥ 6	DD	DD	-	●	Avoid	Needs Improvement	
	Argentina / Uruguay shared waters (CTMFM)	Argentina	LMH, OTM	< 6	< 6	NS	DD	DD	-	-	Avoid	Needs Improvement	

Fishery attributes				FishSource scores [2]							Other ratings and recommendations		Relevant notes on the fishery
Stock	Jurisdiction	Flag vessel country	Gears [1]	MS	MC	FC	SS	FH	SSF	EI	Seafood Watch	Ocean Disclosure Project	
		Uruguay	LMH, OTM	< 6	< 6	NS	DD	DD	-	-	Avoid	Needs Improvement	**potential impacts from trawling by these fleets on protected shark and ray species**. However, joint management of these fisheries at the RFMO level is lacking, and information on the impacts on non-target species, including protected species, as well as the broader ecosystem, remains limited. **Other notes:** The fishery hasn't been evaluated yet in FishSource with regard to management in the small-scale fisheries fleet. In terms of other ratings and recommendations: • Seafood Watch: All fishery segments of Argentine shortfin squid are considered "Avoid" in the Seafood Watch recommendations. As noted above, this is mostly due to the ineffective and weak management framework, the potential susceptibility of the species to overfishing, and the uncertainty around the stock status and fishing levels. There is also some evidence that some seabirds like endangered albatrosses are deliberately caught during fishing operations by some fleet segments (MBAq 2020, 2021). • Ocean Disclosure Project: All fishery segments are categorized as "Needs Improvement" (SFP 2025f).
	Falkland Islands	Falkland Islands	LMH, OTB	≥ 6	≥ 6	≥ 6	DD	DD	-		Avoid	Needs Improvement	
		South Korea	LMH	≥ 6	≥ 6	≥ 6	DD	DD	-		Avoid	Needs Improvement	
		Spain	LMH	≥ 6	≥ 6	≥ 6	DD	DD	-	-	Avoid	Needs Improvement	
		Taiwan	LMH	≥ 6	≥ 6	≥ 6	DD	DD	-		Avoid	Needs Improvement	
		Vanuatu	LMH	≥ 6	≥ 6	≥ 6	DD	DD	-	-	Avoid	Needs Improvement	

Notes: (1) Fishing gears abbreviations: LMH, Mechanized lines; LVT, Vertical lines; OTB, Single boat bottom otter trawls; OTM, Single boat midwater otter trawls; TB, Bottom trawls. (2) FishSource scores abbreviations: MS, Management Strategy; MC, Managers compliance; FC, Fishers' compliance; CH, Current health; FH, Future health. SSF, Small scale fisheries: The outcome (red, < 6; yellow, >=6; green, >=8) refers to the Lowest score of the two SSF elements evaluated (Security of Tenure Rights and Participatory Management); EI, Environmental Impacts: Similar to SSF, the outcome (red, < 6; yellow, >=6; green, >=8) refers to the Lowest score of the four EI elements (Bycatch, ETP Impacts, Habitat, Ecosystem). For more information on the criteria and respective scores, visit the respective FishSource evaluations (SFP, 2025a), as well as the Seafood Watch recommendations (MBAq, 2020, 2021, 2025b) and ODP profiles (SFP, 2025e).

Table 6-2 | Fishery attributes, FishSource scores, other ratings, recommendations, and overall sustainability notes for fisheries targeting Patagonian squid (*Doryteuthis gahi*) in the Southwest Atlantic Ocean (FAO Area 41).

Fishery attributes				FishSource scores [2]							Other ratings and recommendations		Relevant notes on the fishery
Stock	**Jurisdiction**	**Flag vessel country**	**Gears** [1]	**MS**	**MC**	**FC**	**SS**	**FH**	**SSF**	**EI**	**Seafood Watch**	**Ocean Disclosure Project**	
Patagonian squid – Falkland Islands Latest catches: **68,210 t** (2023) Sources: **SFP 2025b, SFP 2025f**	Falkland Islands	Falkland Islands	TB	≥ 8	≥ 8	≥ 6	8.4	≥ 8	-	●	-	Managed	**Management and compliance:** Overall, **management in this fishery is effective**. Managers consider scientific advice and have implemented several measures, including 100% coverage by onboard observers, closed areas in spawning grounds, a quota system to limit effort, and temporal restrictions. There is still no specific management plan in place. **Stock condition and exploitation levels:** **Biomass is estimated above the target reference point**, and **fishing mortality is within sustainable levels**. Pre-season surveys are conducted to estimate biomass, spatial distribution, and maturity of Patagonian squid, providing advanced information to anticipate the status of the season. **Environmental impacts:** The fishery is considered highly selective, with the target species accounting for more than 98% of the catches. However, **there is still limited information about the potential impacts on benthic communities, sharks, rays, and other finfish, or the effects of ghost-fishing**. The fishery is having an important impact on the sustainability of the common rock cod stock through bycatch and discard. In addition, hake and toothfish bycatch are deemed to be potentially underestimated. **Other notes:**
		Spain	TB	TB	≥ 8	≥ 8	≥ 6	8.4	≥ 8	●	-	Managed	
		South Korea	TB	≥ 8	≥ 8	≥ 6	8.4	≥ 8	-	-	-	Managed	

Fishery attributes				FishSource scores (2)							Other ratings and recommendations		Relevant notes on the fishery
Stock	Jurisdiction	Flag vessel country	Gears (1)	MS	MC	FC	SS	FH	SSF	EI	Seafood Watch	Ocean Disclosure Project	
		United Kingdom [3]	TB	≥ 8	≥ 8	≥ 6	8.4	≥ 8	-	●	-	-	The fishery is undertaken by large (industrial) trawlers. There are therefore no FishSource evaluations with regard to the small-scale fishers' rights or co-management. There are also still no Seafood Watch evaluations, the ODP profiles that exist consider the assessed fisheries as managed (SFP, 2025).
Patagonian squid – Peruvian	Peruvian EEZ	Peru	LX	-	-	-	-	-	-	-	-	-	NOT EVALUATED YET: This fishery hasn't been evaluated yet in FishSource or in other online platforms such as Seafood Watch. In recent years, **Peruvian catches** of Patagonian squid in the Southeast Pacific **have been residual** (527 tonnes in 2023) (FAO, 2025a).

Notes: (1) Fishing gears abbreviations: LX, Hooks and lines; TB, Bottom trawls (2) FishSource scores abbreviations: MS, Management Strategy; MC, Managers compliance; FC, Fishers' compliance; CH, Current health; FH, Future health. SSF, Small scale fisheries: The outcome (red, < 6; yellow, >=6; green, >=8) refers to the Lowest score of the two SSF elements evaluated (Security of Tenure Rights and Participatory Management); EI, Environmental Impacts: Similar to SSF, the outcome (red, < 6; yellow, >=6; green, >=8) refers to the Lowest score of the four EI elements (Bycatch, ETP Impacts, Habitat, Ecosystem). For more information on the criteria and respective scores, visit the respective FishSource evaluations (SFP, 2025b, 2025f), as well as the ODP profiles (SFP, 2025e). There are currently no Seafood Watch recommendations for this species and respective fisheries. (3) There is currently no active bilateral agreement between the Falkland Islands and the United Kingdom regarding fishing rights on Patagonian squid

Table 6-3 | Fishery attributes, FishSource scores, other ratings, recommendations, and overall sustainability notes for fisheries targeting Jumbo flying squid (*Dosidicus gigas*) in the Northeast and Southeast pacific Ocean (FAO areas 77 and 87).

Fishery attributes				FishSource scores (2)							Other ratings and recommendations		Relevant notes on the fishery
Stock	Jurisdiction	Flag vessel country	Gears (1)	MS	MC	FC	SS	FH	SSF	EI	Seafood Watch	Ocean Disclosure Project	
Jumbo flying squid – NE Pacific Latest catches: **7,320 t** Sources: **SFP 2025d, SFP 2025f**	Mexico Gulf of California	Mexico	LHH, LMH	≥ 6	≥ 6	≥ 6	≥ 6	≥ 8			-	Managed	**Management and compliance:** Although the stock is thought to extend from the United States to Colombia, recorded catches come only from Mexico, where dedicated management measures exist. **In Mexican waters, the fishery is moderately well managed**, but the current strategy does not anticipate specific actions for low-biomass situations. **Other weaknesses, such as limited transparency and insufficient monitoring, also remain**. Legal provisions to ensure compliance are in place, but the level of enforcement and the extent of IUU fishing are unknown. **Stock condition and exploitation levels:** According to the latest assessment, the stock is considered healthy and fishing pressure is within sustainable limits. However, uncertainties in the assessment, along with variability in biomass estimates across years, create some doubt about the stock's true status. **Environmental impacts:** This is **considered a very "clean" fishery, with no bycatch and no contact with the seabed**. However, because jumbo squid play a key role in the trophic chain, there is still limited information on the fishery's potential effects on the ecosystem. **Other notes:** In Mexico, and this fishery in particular, both security of tenure rights and participatory management appear to be moderately well addressed by managers.

Fishery attributes				FishSource scores (2)							Other ratings and recommendations		Relevant notes on the fishery
Stock	**Jurisdiction**	**Flag vessel country**	**Gears (1)**	**MS**	**MC**	**FC**	**SS**	**FH**	**SSF**	**EI**	**Seafood Watch**	**Ocean Disclosure Project**	
Jumbo flying squid – SE Pacific Latest catches: **1,251,500 t** (2023) Sources: **MBAq 2025a, SFP 2025e, SFP 2025f**	Chilean EEZ	Chile	LHH, LMH, TB, TM	≥ 6	8.2	10	≥ 6	DD			Good Alternative	Needs Improvement	**Management and compliance:** Despite being a transboundary stock, **there are no integrated management measures for regulating the stock and its fishery.** Management is handled separately by the SPRFMO for the High Seas (HS) (through the flag vessel countries' own HS regulations) and by individual coastal states within their national waters. **The High Seas portion remains largely unregulated, with limited control and oversight on fishing pressure and requires significant improvement.** While some measures are in place, such as effort limits and observer coverage, there are still no clear management objectives, reference points, or catch limits. Additionally, **there is evidence of IUU fishing in the High Seas, for the distant-water fleets.** Within the coastal states' Exclusive Economic Zones (EEZs), some management measures exist, but their effectiveness in protecting the jumbo squid population is limited, given the lack of coordination and no strategy at the stock level. **Small-scale fisheries occur only within the national jurisdictions of Peru, Chile, and Ecuador** (i.e., the distant-water fleets are all industrial). In Chile, both security of tenure rights and participatory management appear to be well addressed by managers. In Peru, however, management and rights of SSF continue to face challenges and still have considerable room for improvement. **Stock condition and exploitation levels:** The **overall condition and exploitation status of jumbo flying squid in the SE Atlantic remains uncertain.** Three stock assessment models for jumbo flying squid in the Southeast Pacific were presented to the South Pacific Regional Fisheries Management Organisation (SPRFMO) at the last
	Ecuadorian EEZ	Ecuador	LHH, LMH	≥ 6	≥ 6	DD	DD	DD	-		-	Needs Improvement	
	Peruvian EEZ	Peru	LHH TB, PS	≥ 6	10	≥ 8	≥ 6	9.0		-	Good Alternative	Managed	
	SE Pacific High Seas (SPRFMO)	China	LMH	< 6	≥ 6	< 6	DD	DD	-		Avoid	Needs Improvement	

Fishery attributes				FishSource scores [2]							Other ratings and recommendations		Relevant notes on the fishery
Stock	Jurisdiction	Flag vessel country	Gears [1]	MS	MC	FC	SS	FH	SSF	EI	Seafood Watch	Ocean Disclosure Project	
		South Korea	LMH	< 6	≥ 6	< 6	DD	DD	-	●	-	Needs Improvement	meeting (Payá, 2024; Roa-Ureta and Wiff, 2024a; Li et al., 2024;). Their conclusions varied widely, ranging from the stock being fully exploited, to not overfished but likely undergoing overfishing, to healthy and neither overexploited nor experiencing overfishing. However, the SPRFMO did not adopt any of these assessments. In the Exclusive Economic Zones (EEZs) of the coastal states, **the stock in Chilean waters is considered neither overexploited nor undergoing overfishing**, while in **Peruvian waters abundance is estimated as slightly above the limit reference point, and fishing levels are deemed sustainable**. The status of the stock in Ecuadorian waters and the High Seas remains unknown, with no reference points in place. **Environmental impacts:** The ecosystem impacts vary by fishing gear type. Like other fisheries, trawls (used by the Chilean fleet) are likely the most harmful gear, causing higher bycatch levels and affecting ETP species, benthic habitats, and the wider ecosystem. This gear performed poorly across the four EB indicators. In contrast, jigs trolling lines have generally low bycatch rates and impacts on the benthic habitats. **All fishing gears performed poorly in the FishSource evaluations with regard to wider ecosystem impacts**, as these are not well understood due to very limited research.
		Spain	LX	< 6	≥ 6	< 6	DD	DD	-	-	-	-	
		Taiwan	LMH	< 6	≥ 6	< 6	DD	DD	-	●	-	Needs Improvement	

Notes: (1) Fishing gears abbreviations: LHH, Handlines hand operated; LMH, Mechanized lines; LX, Hooks and lines; PS, Purse seines; TB, Bottom trawls; TM, Midwater trawls. (2) FishSource scores abbreviations: MS, Management Strategy; MC, Managers compliance; FC, Fishers' compliance; CH, Current health; FH, Future health. SSF, Small scale fisheries: The outcome (red, < 6; yellow, >=6; green, >=8) refers to the Lowest score of the two SSF elements evaluated (Security of Tenure Rights and Participatory Management); EI, Environmental Impacts: Similar to SSF, the outcome (red, < 6; yellow, >=6; green, >=8) refers to the Lowest score of the four EI elements (Bycatch, ETP Impacts, Habitat, Ecosystem). For more information on the criteria and respective scores, visit the respective FishSource evaluations (SFP, 2025e, SFP 2025f), as well as the Seafood Watch recommendations (MBAq, 2025a, 2025b) and ODP profiles (SFP, 2025e).

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8 APPENDICES AND SUPPLEMENTARY INFORMATION

Appendix A – Global squid production and trade

Table App A- 1 | Reported global squid production (thousand tonnes) from 2014 to 2023, along with each species' contribution to total 2023 production and the main fishing areas associated with each species. Source: FAO

Species name	Scientific name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	% of 2023	Main fishing area(s)
Jumbo flying squid	*Dosidicus gigas*	1,162	1,004	747	763	892	907	905	997	1,076	1,226	42%	SEPO (99.9%)
Various squids NEI	Loliginidae, Ommastrephidae	617	692	629	654	572	616	542	543	550	596	20%	NWPO (59%), WIO (25%)
Argentine shortfin squid	*Illex argentinus*	861	1,008	147	333	299	171	345	491	393	402	14%	SWAO (100%)
Common squids NEI	*Loligo* spp	292	357	319	310	363	328	326	332	338	369	13%	WCPO (83%), EIO (12%)
Schoolmaster gonate squid	*Berryteuthis magister*	108	43	77	79	98	88	111	76	68	93	3%	NWPO (100%)
Patagonian squid	*Doryteuthis gahi*	72	51	56	68	81	95	67	98	106	74	3%	SWAO (99%), SEPO (1%)
Japanese flying squid	*Todarodes pacificus*	340	295	197	156	99	102	119	101	71	72	2%	NWPO (100%)
Opalescent inshore squid	*Doryteuthis opalescens*	133	37	39	63	37	15	25	49	67	24	1%	ECPO (100%)
Longfin squid	*Doryteuthis pealeii*	12	12	18	8.2	12	12	9.4	11	18	18	1%	NWAO (100%)
Wellington flying squid	*Nototodarus sloanii*	18	19	44	19	23	44	42	30	32	10	0%	SWPO (100%)
Northern shortfin squid	*Illex illecebrosus*	7.6	4.0	8.8	24	26	28	31	23	18	8.6	0%	NWAO (62%), NEAO (38%)
Bigfin reef squid	*Sepioteuthis lessoniana*	3.2	3.9	5.2	7.6	7.6	5.8	5.7	8.8	7.1	6.0	0%	WCPO (56%), EIO (44%)
European squid	*Loligo vulgaris*	1.3	1.6	2.1	2.8	2.2	3.9	3.0	3.4	4.5	5.0	0%	NEAO (68%), Med/blk sea (32%)
Broadtail shortfin squid	*Illex coindetii*	4.2	3.1	3.6	4.5	5.2	3.8	2.6	2.8	3.8	4.8	0%	Med/blk sea (55%), NEAO (46%)
Neon flying squid	*Ommastrephes bartramii*	3.3	2.9	3.6	4.3	5.0	7.0	7.6	6.9	4.7	4.3	0%	NWPO (79%), NEAO (21%)
Inshore squids NEI	Loliginidae	5.1	5.1	4.8	5.3	4.9	4.2	3.1	3.1	5.6	4.1	0%	NEAO (98%)
Cape Hope squid	*Loligo reynaudii*	6.6	6.8	9.1	0.6	13.7	7.3	9.0	3.6	4.5	3.0	0%	SEAO (100%)
Indian squid	*Uroteuthis (Photololigo) duvaucelii*	0.6	0.9	0.9	0.6	0.5	0.4	0.6	0.1	2.0	2.2	0%	WIO (100%)
Shortfin squids NEI	*Illex* spp	0.0	1.0	1.1	1.4	2.6	4.3	5.4	12.7	1.2	1.7	0%	NEAO (54%), SWAO (25%)
European flying squid	*Todarodes sagittatus*	0.9	1.0	1.1	1.8	1.2	1.5	1.2	2.1	1.2	1.0	0%	Med/blk sea (46%), NEAO (29%)
Other		0.4	0.5	0.5	0.8	1.4	2.6	2.2	1.4	2.2	1.4	0%	NEAO (58%), Med/blk sea (30%)

Table App A- 2 | Reported global squid production (thousand tonnes) per country from 2014 to 2023, along with each country's contribution to total 2023 production and the main fishing areas associated with each species. **Source**: FAO (FAO 2025)

Fishing country	2019	2020	2021	2022	2023	% of total	Top reported species	Main fishing areas
China	695.7	745.7	900.8	915.1	977.6	32.2%	Jumbo flying squid (51%), Various squids nei (36%), Argentine shortfin squid (13%)	SEPO (51%), NWPO (32%), SWAO (13%)
Peru	538.3	494.1	517.9	457.5	622.5	20.5%	Jumbo flying squid (100%)	SEPO (100%)
Indonesia	194.3	193.6	204.3	191.7	234.7	7.7%	Common squids nei (100%)	WCPO (86%), EIO (14%)
Argentina	96.3	171.2	132.2	167.1	153.3	5.0%	Argentine shortfin squid (100%)	SWAO (100%)
India	112.7	73.0	75.6	109.3	120.6	4.0%	Various squids NEI (100%)	WIO (84%), EIO (16%)
Viet Nam	121.2	121.0	120.9	113.9	119.5	3.9%	Cephalopods nei (100%)	WCPO (100%)
South Korea	75.9	100.4	109.9	90.6	108.9	3.6%	Argentine shortfin squid (48%), Japanese flying squid (47%)	NWPO (50%), SWPO (50%)
Chile	58.1	55.0	53.6	97.7	105.2	3.5%	Jumbo flying squid (100%)	SEPO (100%)
Russian Federation	98.2	125.5	83.8	71.6	93.7	3.1%	Schoolmaster gonate squid (995)	NWPO (100%)
Falkland Islands	73.3	56.9	96.4	101.1	69.9	2.3%	Patagonian squid (995)	SWAO (100%)
Thailand	75.2	77.5	73.9	77.7	68.6	2.3%	Common squids NEI (91%), Bigfin reef squid (9%)	WCPO (81%), EIO (19%)
Philippines	46.9	44.4	46.4	57.3	51.4	1.7%	Common squids nei (100%)	WCPO (100%)
United States	53.6	62.5	77.1	90.8	47.0	1.5%	Opalescent inshore squid (50%), Longfin squid (38%)	ECPO (50%), NWAO (49%)
Japan	73.5	82.2	63.9	59.3	46.6	1.5%	Various squids NEI (51%), Japanese flying squid (42%)	NWPO (100%)
Taiwan	41.6	58.2	151.4	71.5	46.2	1.5%	Argentine shortfin squid (86%), Common squids nei (14%)	SWAO (84%), NWPO (16%)
Malaysia	48.8	45.5	39.8	43.6	42.5	1.4%	Various squids NEI (100%)	WCPO (54%), EIO (46%)
Spain	11.5	26.1	25.9	45.0	25.2	0.8%	Argentine shortfin squid (57%), Patagonian squid (12%), Broadtail shortfin squid (12%), Northern shortfin squid (9%)	SWAO (74%), NEAO (20%), Med (5%)
Morocco	18.7	24.4	29.3	14.2	19.8	0.7%	Various squids NEI (100%)	ECAO (98%), Med (2%)
Uruguay	1.0	6.2	6.2	8.8	11.6	0.4%	Common squids nei (100%)	SWAO (100%)
New Zealand	43.9	42.0	29.9	32.6	10.6	0.3%	Wellington flying squid (99%)	SWPO (100%
Other	83.0	73.8	71.2	66.4	65.2	2.1%		
Total	**2,561.7**	**2,679.1**	**2,910.5**	**2,882.8**	**3,040.5**			

Notes: Viet Nam and a few other countries (e.g., Cambodia, Madagascar, Mozambique) report all cephalopods combined. Squid catches for these countries were inferred based on reported trade data for squid.

Appendix B – Apparent squid fishing effort

This appendix presents the results of the analysis conducted using the Global Fishing Watch platform (GFW 2025), focusing on apparent fishing effort expressed in hours. The analysis was based on AIS-derived data and considering only jiggers, one of the main gears used to target squid species. It covered two main regions: the Southwest Atlantic (FAO Area 41), which includes fisheries for Argentine shortfin squid and Patagonian squid (caught as bycatch by jiggers), and the Southeast Pacific (FAO Area 87), where the fishery primarily targets jumbo flying squid. Fishing effort was investigated both across all nations combined and separately by the principal fishing nations operating within each area. The analysis refers to data from the year 2024, as illustrated in the diagram below (see Diagram in **Figure App B- 1**).

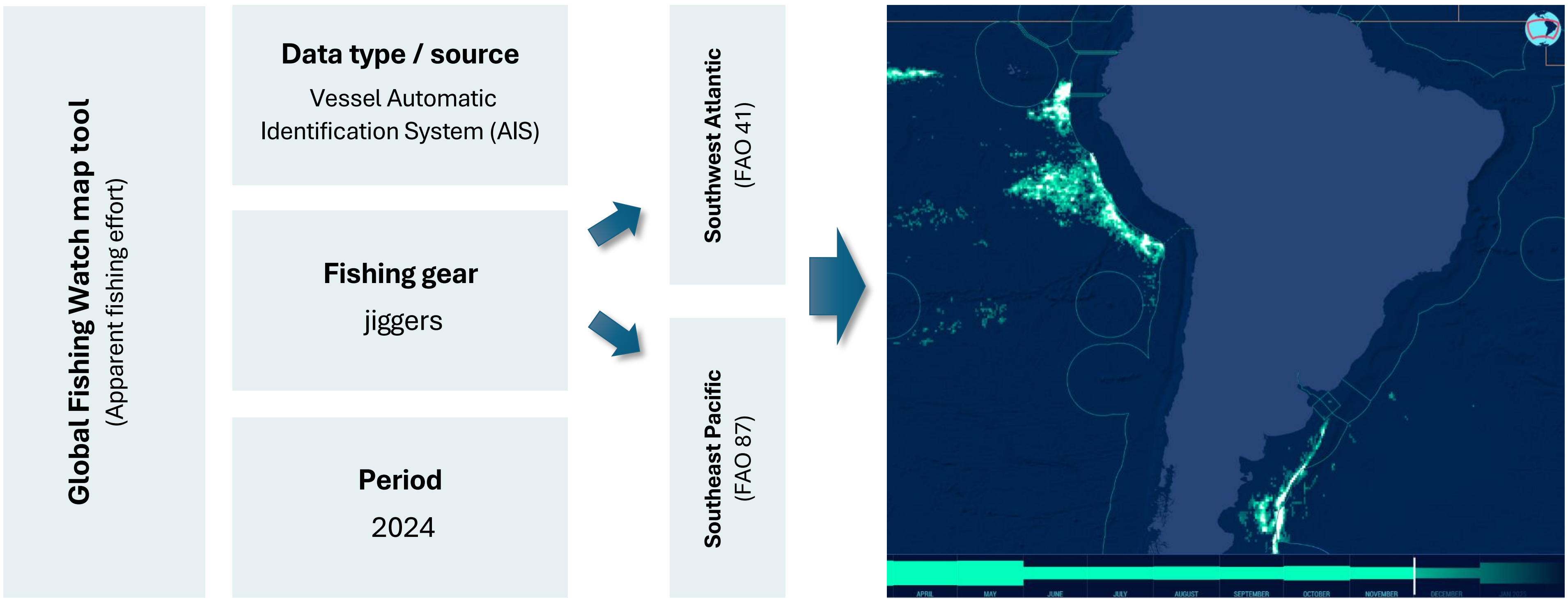

Figure App B- 1 | Diagram showing the data collection process and criteria for the analysis apparent fishing effort using the Global Fishing Watch platform (GFW, 2025).

Southwest Atlantic Ocean

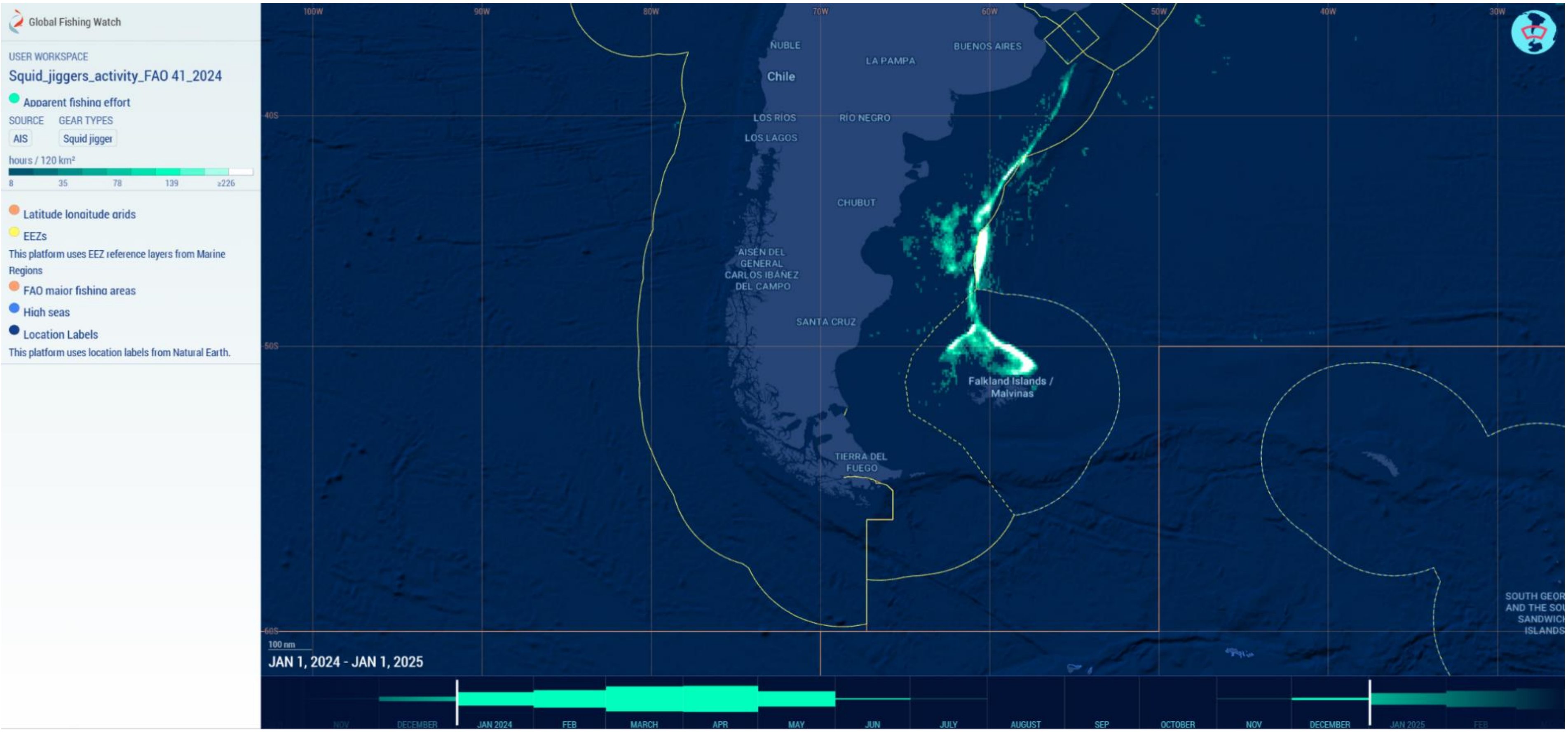

Figure App B- 2 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in the Southwest Atlantic (FAO 41) for all vessels classified as squid jiggers. **Source**: Global Fishing Watch (GFW, 2025).

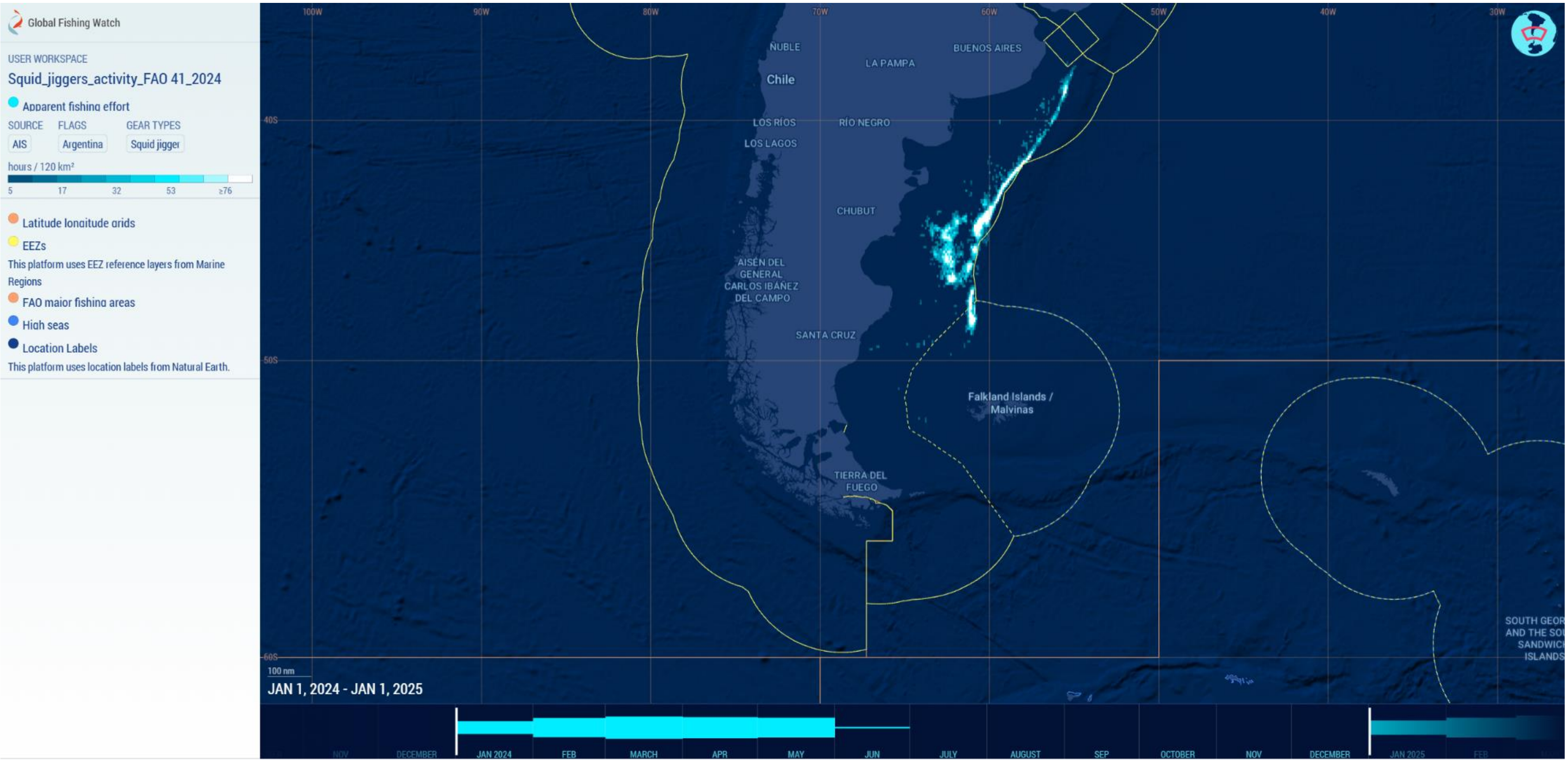

Figure App B- 3 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in the Southwest Atlantic (FAO 41) for Argentina-flagged vessels classified as squid jiggers. **Source**: Global Fishing Watch (GFW, 2025).

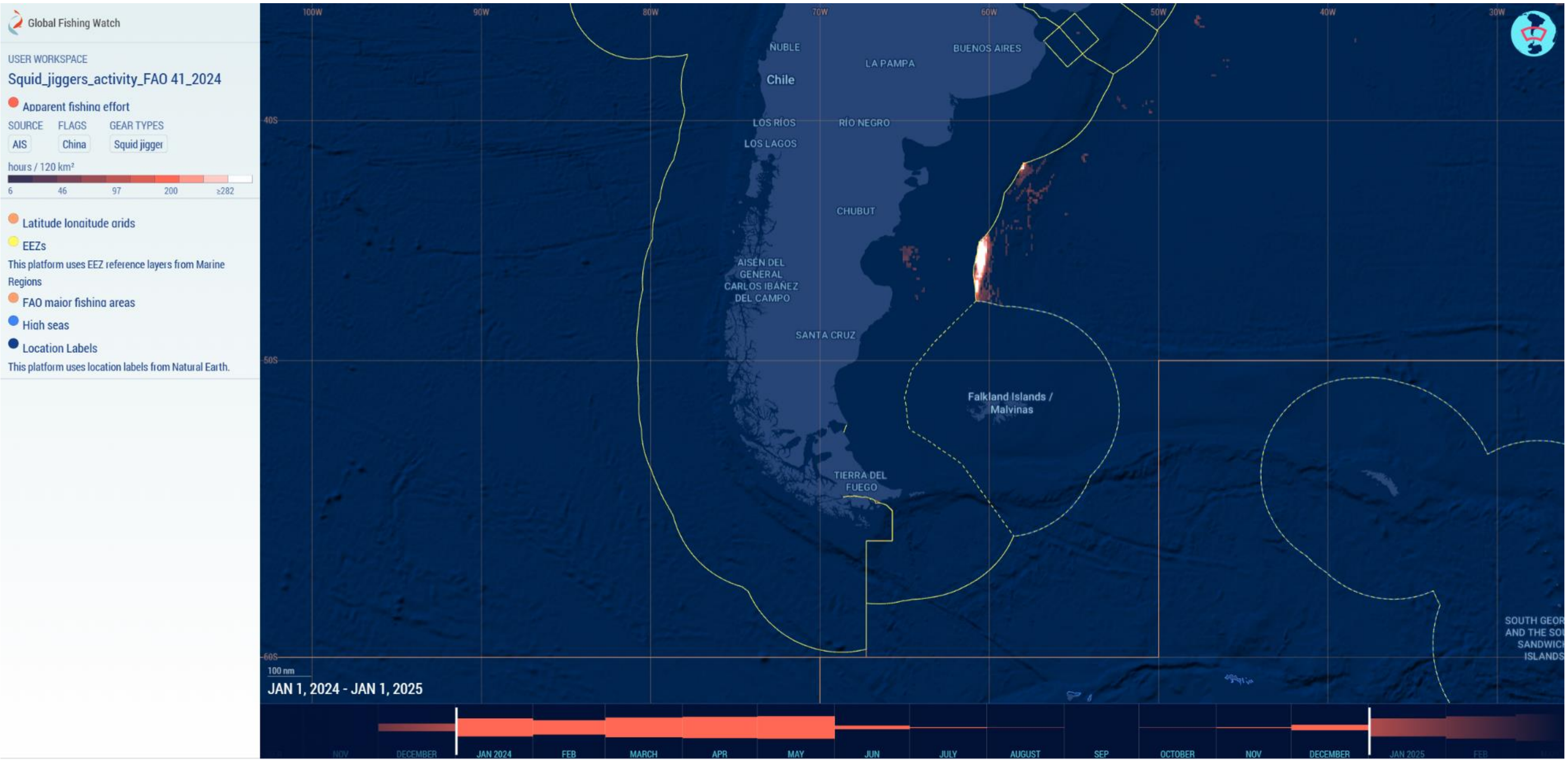

Figure App B- 4 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in the Southwest Atlantic (FAO 41) for China-flagged vessels classified as squid jiggers. Source: Global Fishing Watch (GFW, 2025).

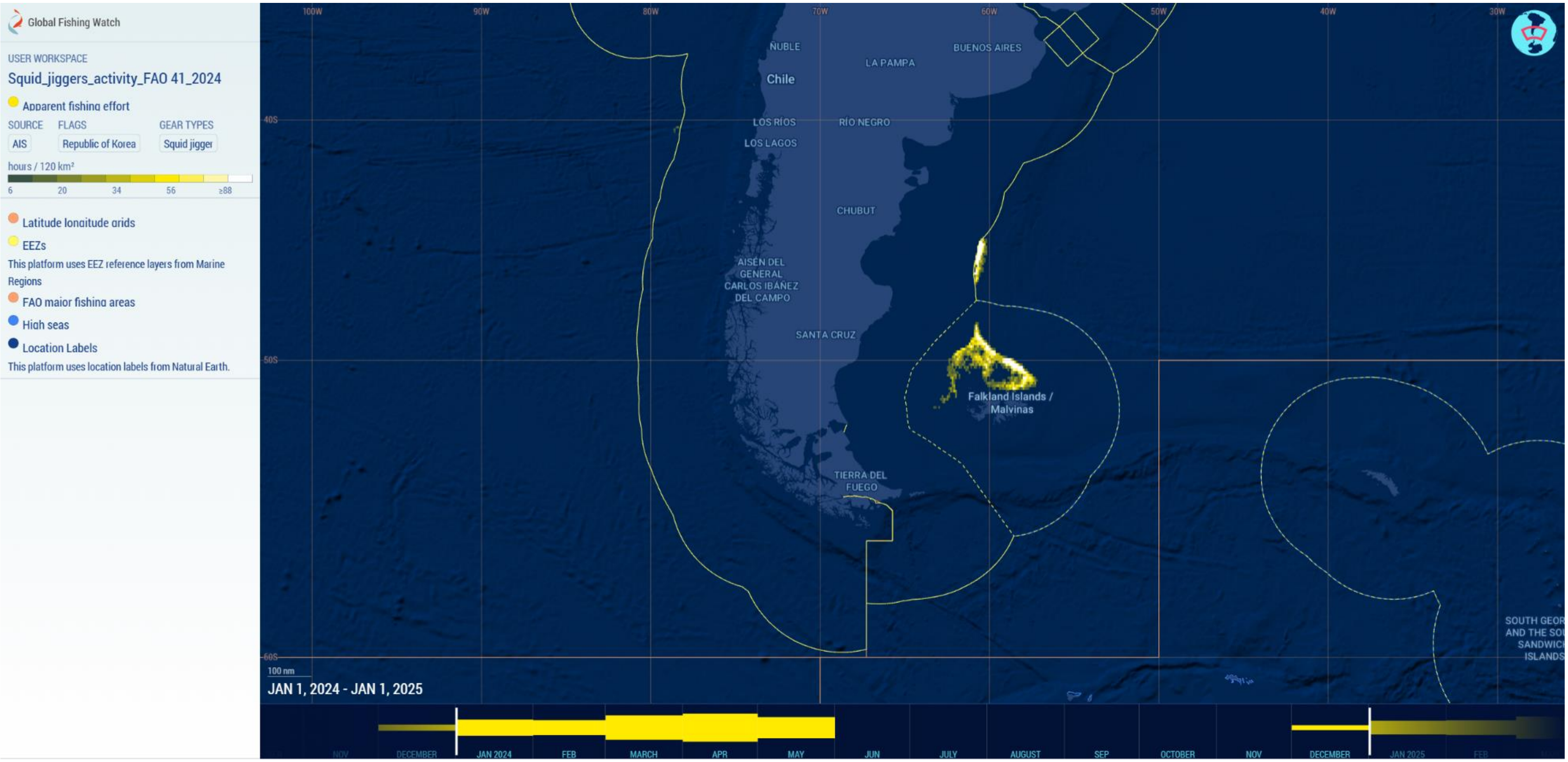

Figure App B- 5 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in the Southwest Atlantic (FAO 41) for South Korea-flagged vessels classified as squid jiggers. Source: Global Fishing Watch (GFW, 2025).

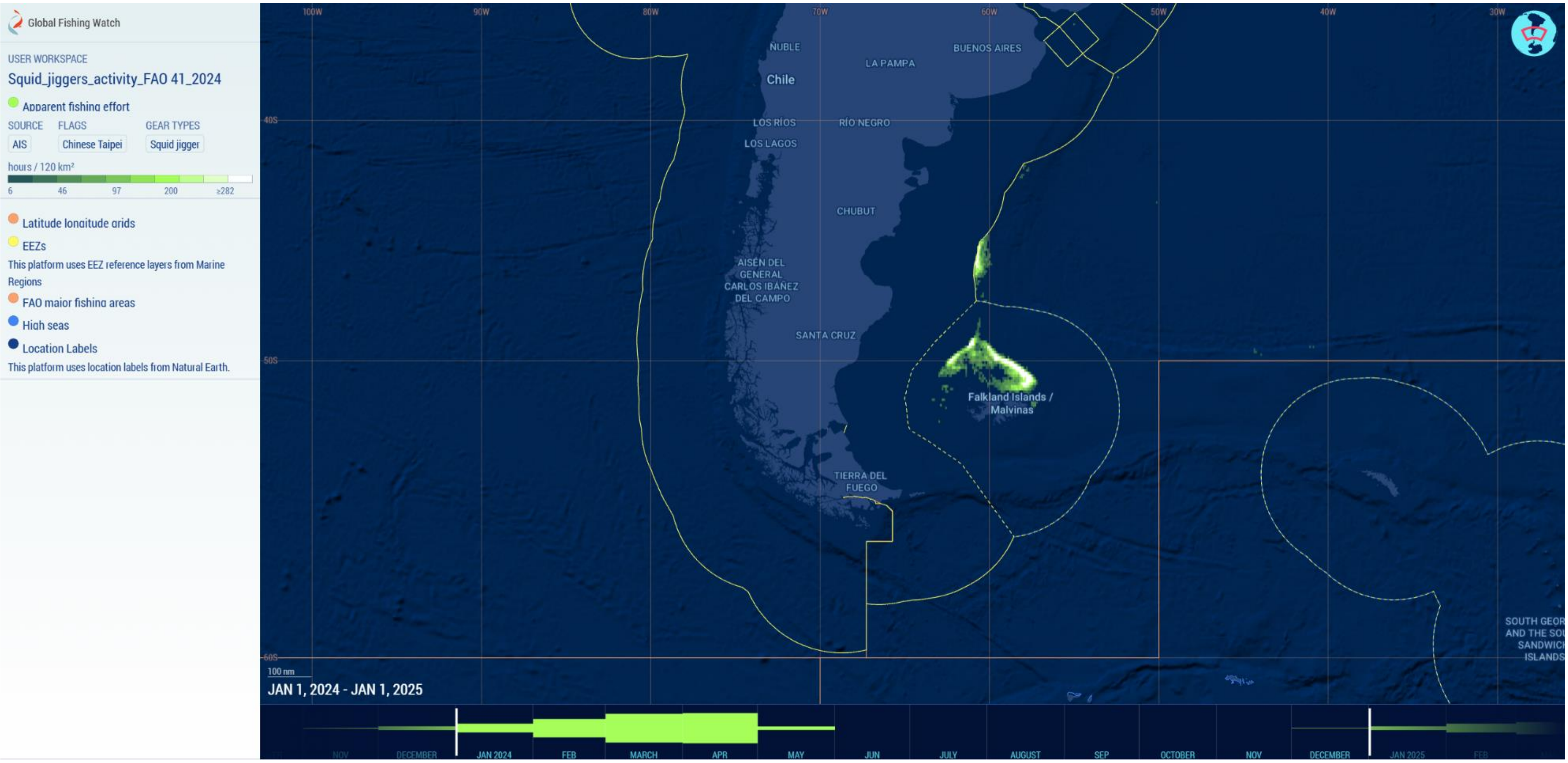

Figure App B- 6 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in the Southwest Atlantic (FAO 41) for Taiwan (Chinese Taipei)-flagged vessels classified as squid jiggers. Source: Global Fishing Watch (GFW, 2025).

Southeast Pacific Ocean (FAO area 87)

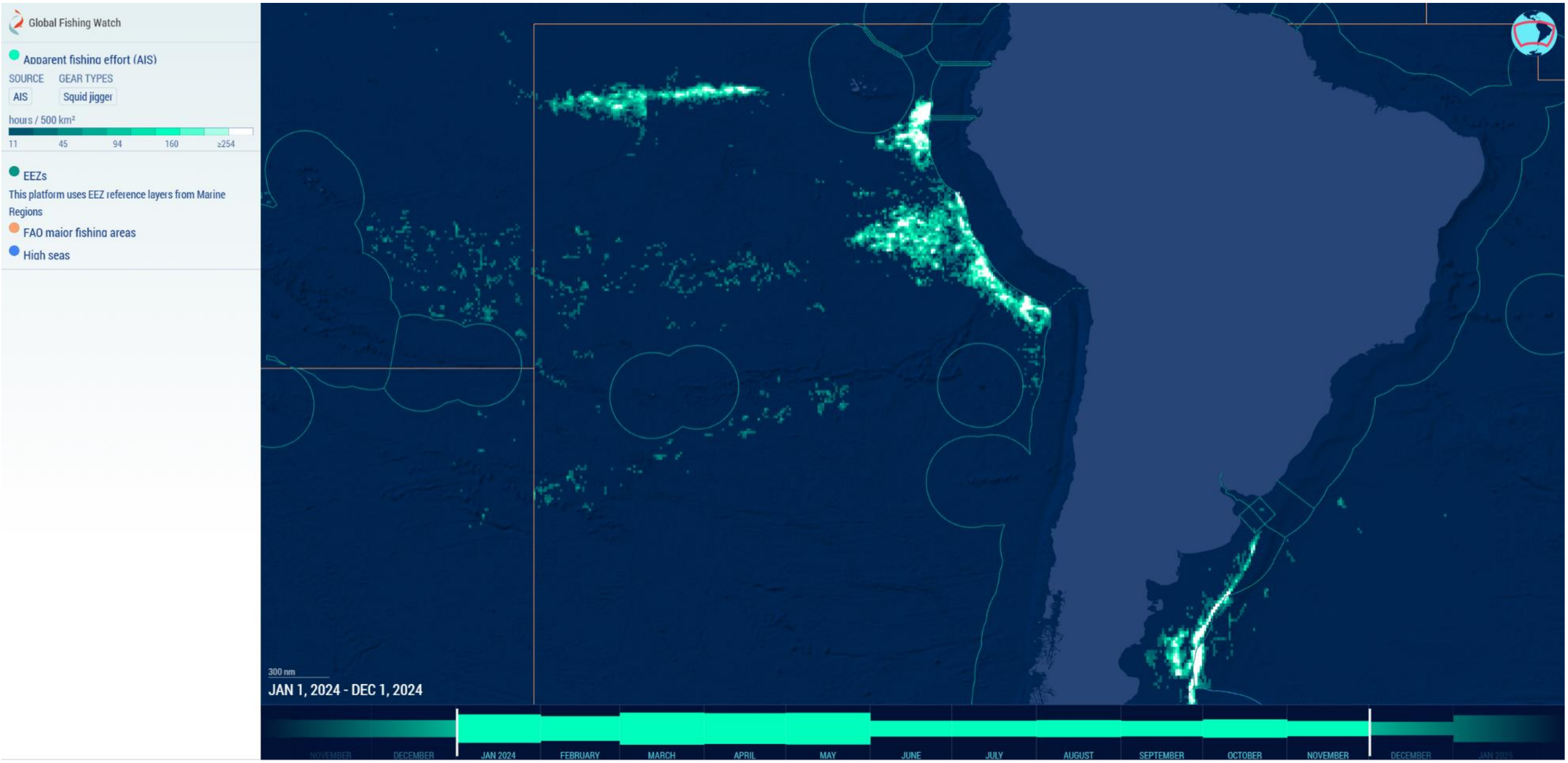

Figure App B- 7 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in the high seas of the Southeast Pacific Ocean (FAO 87) for all vessels classified as squid jiggers. Source: Global Fishing Watch (GFW, 2025).

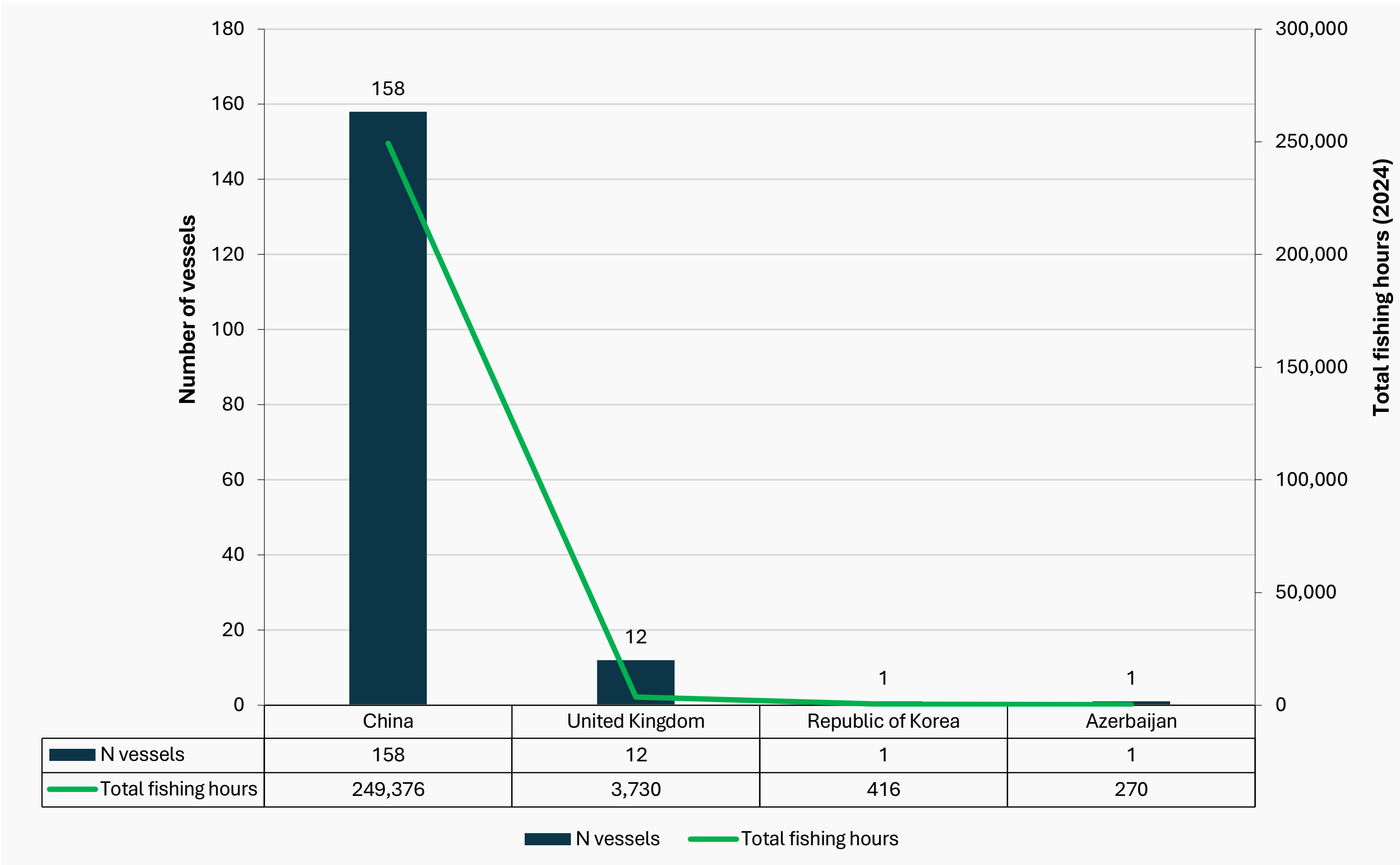

Figure App B- 8 | Estimated apparent fishing effort in the Southeast Pacific Ocean in 2024, using AIS data. Effort is presented in terms of number of identified vessels (bar) and estimated total fishing hours (hours fished) and number of registered fishing vessels (line) and monthly effort distribution (bottom chart) in the high seas of the Southeast Pacific Ocean (FAO 87) for all vessels classified as squid jiggers. **Source**: Global Fishing Watch (GFW, 2025).

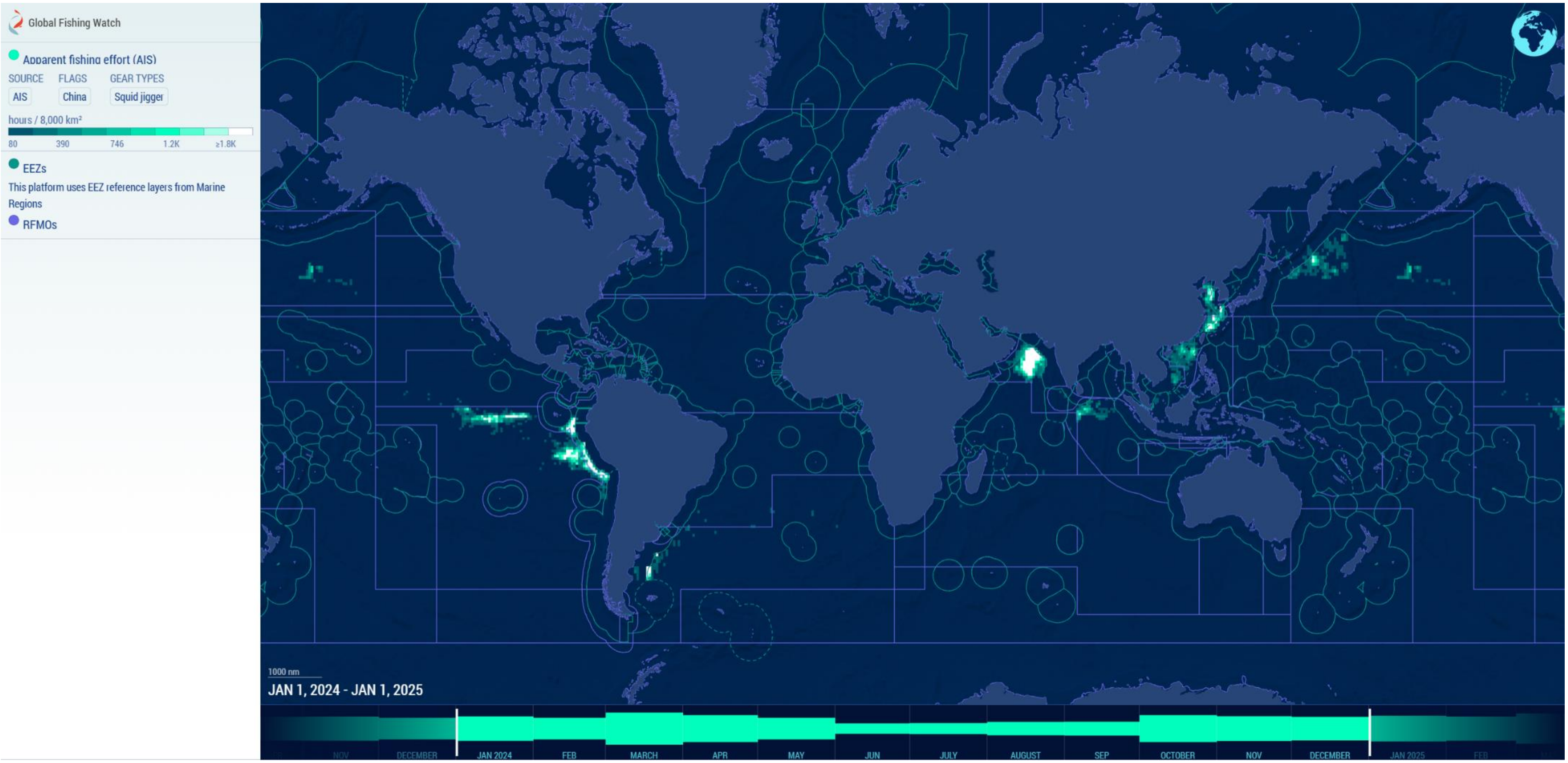

Figure App B- 9 | Map showing the 2024 apparent fishing effort (hours fished) by location (top chart) and monthly effort distribution (bottom chart) in marine waters of around the globe, for China-flagged vessels classified as squid jiggers. Source: Global Fishing Watch (GFW, 2025).

Appendix C – Literature review of the main squid fisheries issues

As part of this study, a literature review was conducted to identify the most pressing issues in key Latin American squid fisheries. The research was carried out between June and October 2025, mainly using well-established online search platforms for both scientific and general literature. Eligible sources included reports, scientific articles, blogs, news articles, and other reliable internet posts. Searches targeted the relevant fisheries by using combinations of key terms related to main species, fishing areas, and major fishing countries, both in English and Spanish.[13]

The initial screening involved reviewing the summaries or abstracts to determine whether each source addressed relevant issues (such as illegal, unreported, and unregulated (IUU) fishing, overfishing, traceability, or labor abuses). After this first stage, a total of 23 sources (comprising reports, scientific papers, blogs, news articles, and other online materials) has been retained to moment for a detailed analysis.

In the subsequent phase, each eligible source went through a comprehensive review to extract information on the issues identified, including the specific fisheries involved, relevant time periods, targeted fleets or regions, and source types. The following diagram summarizes the research and categorization process. The compiled results are presented separately in an accompanying Excel file, which is publicly available at:
https://docs.google.com/spreadsheets/d/1oHjViT2rLsRW2bTbKPMfRLK13znpq1Oxz24F3joApKs/edit?gid=0#gid=0

Desktop research (Jun - Oct 2025)

Online platforms used

- IUU Squid Fishing Resource Library (from SFP's Global Squid SR)
- Google scholar
- Science direct
- Scopus
- Google

Sources considered

- Reports
- scientific papers
- blogs
- online newspaper articles
- other type of internet posts considered reliable

Criteria/keywords
(in isolation or combined)

Species: Jumbo flying Squid, *Dosidicus gigas*, Patagonian squid, *Loligo gahi*, Argentine shortfin squid (Illex), *Illex argentinus*

Fishing countries: Peru, Chile, Argentina, China, South Korea, Spain, Ecuador, Falkland Islands

Fishing areas: Southwest Atlantic, Southeast Pacific, FAO 41, FAO 87, Argentina EEZ, high seas, 200 nm

Data compilation and analysis (Sep – Nov 2025)

Selection of the relevant sources

Only sources that mentioned one or more of the keywords, and having a note on something that could be regarded as an issue in the fishery.

Data compilation

Mapping of issues by source and listing context of issues (e.g., which fishery, what period the issue(s) refers to, if to a specific fleet or general, source type)

[13] Some additional research was also conducted in Mandarin using AI for translation, but this wasn't conducted exhaustively.

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