



# In Depth Ports Study – Final Report

**A report prepared for The Pew Charitable Trusts** September 2024

# About MRAG Asia Pacific

MRAG Asia Pacific is an independent fisheries and aquatic resource consulting company dedicated to the sustainable use of natural resources through sound, integrated management practices and policies. We are part of the global MRAG group with sister companies in Europe, North America and the Asia Pacific.



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# About this Report

This study was commissioned by The Pew Charitable Trusts. The views in the report represent those of the authors and do not necessarily represent the views of The Pew Charitable Trusts.

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# **EXECUTIVE SUMMARY**

#### Background and approach

Seafood is one of the most extensively traded global food commodities, with exports totalling close to 60 million tonnes (US\$151 billion) in 2020 (FAO, 2022). Ports are central to that trade, serving as hubs for fishing and carrier vessels to land fish as well as undertake other services important to fishing operations (e.g. refuelling, reprovisioning, exchanging crew etc).

Given the logistical and resourcing challenges associated with undertaking effective monitoring control and surveillance (MCS) at sea, and particularly on the high seas, visits by fishing vessels to port serve as a cost-effective opportunity to examine compliance with relevant national and international fisheries management frameworks. The utility of using port State controls as a means of preventing the introduction of seafood derived from illegal, unreported and unregulated (IUU) fishing from entering global supply chains has increasingly been recognised by the international community.

Notwithstanding that, the movement of seafood products through ports from source fisheries to end market, and the extent to which port State controls are applied along the way, has not been widely studied for many ports and supply chains. In that context, The Pew Charitable Trusts ('Pew') contracted MRAG Asia Pacific to undertake an 'in-depth ports study', examining the flow of fish from source fishery to end market and the port controls applied, using four case study ports as examples. The four case study ports – Callao (Peru), Montevideo (Uruguay), Cape Town (South Africa) and Dalian (China) – were chosen broadly for their importance in global seafood trade, the relatively high number of foreign fishing vessel (FFV) visits and the availability of local experts to assist in gathering information and interpreting trends.

The study was undertaken in three main parts:

- A Vessel Activity Report (VAR), which examined the foreign fishing fleets entering each port and the nature of their port usage, the location of the areas fished by these vessels prior to port entry, and the governance arrangements applying to fishing activity;
- A **Port Report** (PR) which examined national policies related to port entry and MCS, institutional arrangements around port State controls, trade flows of seafood products after port entry and the extent of any non-compliance identified for these fleets (e.g. through Regional Fisheries Management Organisation [RFMO] compliance review processes); and
- A **Final Report** which consolidated the Vessel Activity and Port Reports as well as identifying obstacles to fighting IUU fishing and laying out recommendations for supporting port States to strengthen the effectiveness of port State controls.

#### **Case study ports**

#### Callao (Peru)

Callao is Peru's main port, strategically located adjacent to important fishing areas in the southeast Pacific Ocean. Five ports have been designated under the FAO Port State Measures Agreement (PSMA) for FFV entry into Peru, including Callao. The main agencies involved in port management include the Peruvian Navy (through the Directorate General of Captaincies and Coast Guard, DICAPI), the Ministry of Production (PRODUCE), the fishing authority in charge of MCS relating to FFV entry into ports and the Peruvian Customs Authority (SUNAT), which focuses the inspection on cargo movement at ports. The main foreign fishing fleets using the port are (i) Spanish and Japanese longline fleets which fish in the IATTC area targeting swordfish and tuna species respectively, and (ii) Chinese high seas squid jig vessels, which target jumbo squid in the South Pacific Regional Fisheries Management Organisation (SPRFMO) area, often as part of an annual fishing strategy which also involves fishing in unregulated waters of the SW Atlantic. Spanish and Japanese longliners call into port to land product, as well as reprovision and change crews. While the Chinese high seas

squid jig fleet had historically been frequent users of Peruvian ports (e.g. Chimbote, Callao), visits fell to almost zero in 2021 and 2022 following the introduction in 2020 of Peru's requirement for high seas jigging vessels to install Peru's national vessel monitoring system (VMS) and provide six months' vessel tracks prior to entering ports. This followed longstanding concerns of encroachment by high seas squid jig vessels into Peru's maritime domain. This study has shown that the number of Chinese squid jig vessel arrivals into Callao grew substantially in 2023, with many vessels using 'forced arrival' and 'crew change' provisions to enter ports, despite negligible uptake of national VMS requirements. A number of recommendations to strengthen port controls are made including closing loopholes to better reflect the intent of the VMS requirement, establishing an inspection protocol to verify the authenticity of forced arrivals, developing an internal/national IUU list and extending the VMS requirement to provide vessel tracks for one month after departure from port.

#### Montevideo (Uruguay)

Located at the mouth of the Río de la Plata, Montevideo is the only port in Uruguay designated for FFV usage under the PSMA. Since 1992, Montevideo has operated according to a "free port" customs and tax system which offers foreign fishing companies significant competitive advantages over other ports in the region. To that end, for several decades, Montevideo has been the 'port of choice' for FFVs operating on the high seas of the SW Atlantic. The main agencies involved in port management are the National Port Administration (ANP), the National Directorate of Customs (DNA), the Port of Montevideo Coast Guard (PREMO) and National Directorate of Aquatic Resources (DINARA). The main FFVs using the port include (i) Spanish trawlers, who use the port to unload catch (taking advantage of the free port arrangements), (ii) Chinese and South Korean trawlers, who tranship catch at sea but call to port once or twice a year for crew changes, reprovisioning, repairs and maintenance, (iii) South Korean, Chinese and Chinese Taipei squid jiggers, who use the port for extended stays between seasons for maintenance and repairs, as well as crew changes, and (iv) Chinese Taipei and Portuguese longliners which fish in the International Commission for the Conservation of Atlantic Tunas (ICCAT) area for tuna and tuna-like species and call into port regularly to land their catches. A key feature of Montevideo is that most vessels using the port fish in the so-called 'Mile 201' off Argentina's EEZ in the SW Atlantic, one of the last remaining areas of the global high seas unregulated by an RFMO. Catches from this area make their way to a number of major overseas markets. Recommendations to strengthen port management arrangements include broadening participation in Uruguay's International Trade Single Window, revising funding arrangements to allow DINARA to hire more inspectors and reinvigorating the Coordinating Committee on the Prevention of Illegal Fishing created under PSMA regulations.

#### Cape Town (South Africa)

Cape Town harbour is strategically positioned at the southern tip of the African continent, along one of the world's main trade routes between the Atlantic and Indian Oceans. The port is owned and operated by South Africa's Transnet National Ports Authority (TNPA) and is one of three designated ports for entry of FFVs under the PSMA. Other key agencies involved in port management include the Department of Forestry, Fisheries, and the Environment (DFFE), with primary responsibility for fisheries-related issues, the South African Revenue Service (SARS), with control over customs and the import and export of fisheries products, and the South African Maritime Safety Authority (SAMSA) which falls under the Department of Transport (DoT). The primary FFVs using the port are Chinese Taipei, Japanese and South Korean longliners fishing for tuna and tuna-like species in the ICCAT, Indian Ocean Tuna Commission (IOTC) and Commission for the Conservation of Southern Bluefin Tuna (CCSBT) areas. These vessels often tranship their main target species on the high seas, with port visits coinciding with the end of an extended trip to offload by-catch species and to resupply and change crew. Other fishing vessels accessing the port include demersal longline vessels and, less frequently, crab potting vessels and deep-sea trawlers operating in the South East Atlantic Fisheries Organisation (SEAFO), Southern Indian Ocean Fisheries Agreement (SIOFA), and Commission for the Conservation of Antarctic Living Marine Resources (CCAMLR) areas, who use the harbour to land catch and/or for repairs or "layup" between seasons. Recommendations to strengthen port management arrangements include strengthening inter-agency coordination, ensuring adequate risk assessment capacity and ensuring adequate internal training for inspectors.

#### Dalian (China)

Strategically positioned between China's Bohai and Yellow Seas, as well as in close proximity to Russia, South Korea, and Japan, Dalian port serves as the most important seafood trade hub in northeast China and, more broadly, one of the most important hubs in northeast Asia. China is not yet a party to the PSMA, but is actively exploring accession. The main agencies involved in port management include the Dalian Municipal Port Authority, China Maritime Safety Administration (CMSA), China Customs, China Immigration Inspection (CII) and the Bureau of Fisheries. Dalian is not frequently visited by FFVs, but is regularly used by Russian carriers transporting catches from Russia's far east fisheries for processing in Liaoning Province facilities. Pollock is the highest volume species imported and exported from Liaoning, with Germany, the United States, France, Poland and the United Kingdom the main export destinations. We understand existing fisheriesrelated inspection processes for FFVs primarily focus on whether vessels are listed on a RFMO IUU list to which China is a member (undertaken by CMSA), and whether the cargo contains prohibited species (e.g. certain sharks; undertaken by Customs). The Bureau of Fisheries provides information to support inspections, but does not have its own inspection capability. Given China's possible accession to the PSMA, measures to strengthen port control processes include strengthening fisheries-related inspection capacity, promoting effective inter-agency coordination and strengthening transparency of inspections outcomes.

#### Analysis and main messages

Broadly, this study sought to examine the institutional and policy arrangements applying to the monitoring and control of FFVs across four case study ports which are important in the global trade of seafood, as well as the nature of the main foreign fleets visiting each port, the main areas fished by these vessels, the fate of fisheries products moving through the port and any indications of non-compliance associated with those vessels. While the main purpose of the study was to serve as a reference document for future work, there are a range of lessons learned and common themes amongst the case study ports that are valuable to highlight. Many of these reinforce ideas that are widely-recognised by PSM practitioners, and are interrelated in practice (e.g. information sharing and risk assessment).

#### Effective inter-agency coordination and information sharing is essential

A common feature of the institutional arrangements of all case study ports is the involvement of multiple agencies in the process of FFV port State control. In all cases, at least three different agencies are involved, often with a non-fisheries agency (e.g. port authority) taking ultimate control over the decision to approve or deny port entry. To that end, effective implementation of the PSMA and other PSMs requires strong frameworks for multi-agency coordination, with all relevant parties involved. Where possible, information sharing should take advantage of electronic platforms that make information available to all relevant parties in real time. Effective information sharing is also required at the level of States to effectively assess risk, particularly for those vessels regularly accessing multiple third-party countries. The operationalisation of the Global Information Exchange System (GIES) under the PSMA should assist in this regard.

#### Robust risk assessment processes are vital for effective port State control

A common challenge amongst many of the case study ports was a limitation on inspection capacity. While increasing the number of trained inspectors would obviously be beneficial, the practical reality is that resourcing challenges mean that's not possible in many cases. In that context, effective risk assessment processes are valuable both for highlighting IUU risks as well as in ensuring limited inspection resources are focused in the most effective manner. The nature and scope of risk assessment processes also varied considerably between ports. In that context, there would be benefit in sharing information on risk assessment approaches amongst parties to the PSMA, as well as potentially developing a 'best practice' type risk assessment template that could be customised to each party's circumstances. The operation of robust risk assessment processes is closely tied to other key components of an effective port control system including information sharing between States.

#### Effective PSMs can help compensate for broader fisheries governance weaknesses

While most areas of the global high seas are covered by RFMOs, some gaps remain. In Montevideo case, a key feature of the fleets using the port for landing and logistics port is that most of them fish in 'Mile 201' off Argentina's EEZ, one of the few remaining areas of the global high seas unregulated by an RFMO. Given the absence of an RFMO, there is very limited transparency of fishing activity in the area and effective port State controls offer one of the few practical opportunities to independently generate a picture of fishing activity in the area and undertake compliance monitoring (e.g. for crew welfare issues). In that context, strengthening Uruguay's port inspection and analytical capacity represents an important opportunity for global fisheries governance given catch harvested by vessels using the port typically flows to major overseas markets.

#### **Transparency in PSMA processes**

Notwithstanding the use of local experts to assist with this study, information on many of the processes used by parties to implement the PSMA was often opaque or difficult to obtain. In some cases, this was complicated by the multiple agencies involved in the process with differing mandates. In order to build confidence that the Agreement is being implemented effectively by all parties, transparency in the process of application is required. We note that the process of stepping through the stages required for practical implementation can often help highlight areas where additional coordination and information sharing required amongst relevant agencies.

#### AIS data requires substantial 'grooming' and ground-truthing

The increasingly widespread adoption of Automatic Identification System (AIS) by fishing vessels together with 'big data' analytical approaches has offered unique and previously unavailable insights into the behaviour and operation of global fishing fleets. Nevertheless, this study highlighted that AIS datasets constructed using machine learning and other approaches contain a range of errors and other misclassifications that can substantially influence the outcomes of any analysis if not corrected. To that end, studies attempting to use publicly available AIS data to examine trends in fishing fleet behaviour should ensure that they have robust data grooming and ground-truthing processes in place to identify and remove erroneous data, as well as publishing details of how this was undertaken. The process of ground-truthing is best done with subject matter experts who have a strong practical knowledge of the fleets involved.

# **1** INTRODUCTION

Seafood is one of the most extensively traded global food commodities, with exports totalling close to 60 million tonnes (US\$151 billion) in 2020 (FAO, 2022). Ports are central to that trade, serving as hubs for fishing and carrier vessels to land and tranship fish as well as undertake other services important to fishing operations (e.g. refuelling, reprovisioning, exchanging crew etc).

Given the logistical and resourcing challenges associated with undertaking effective monitoring control and surveillance (MCS) at sea, and particularly on the high seas, visits by fishing vessels to port serve as a cost-effective opportunity to examine compliance with relevant national and international fisheries management frameworks. The utility of using port State controls as a means of preventing the introduction of seafood derived from illegal, unreported and unregulated (IUU) fishing from entering global supply chains has increasingly been recognised by the international community, including through the adoption of port State measures (PSM) resolutions through Regional Fisheries Management Organisations (RFMOs) and the development and entry into force of the United Nations Food and Agriculture Organisation (FAO) Port State Measures Agreement (PSMA). The effectiveness of implementation of the PSM conservation and management measures varies across RFMOs and of the 79 Parties to the PSMA, all are at different stages of implementation.

Notwithstanding these developments, the movement of seafood products through ports from source fisheries to end market, and the extent to which port State controls are applied along the way, has not been widely studied for many ports and supply chains. In that context, The Pew Charitable Trusts ('Pew') contracted MRAG Asia Pacific to undertake an 'in-depth ports study', examining the flow of fish from source fishery to end market and the port controls applied, using four case study ports as examples. The four case study ports – Callao (Peru), Montevideo (Uruguay), Cape Town (South Africa) and Dalian (China) – were chosen broadly for their importance in global seafood trade, the relatively high number of foreign fishing vessel (FFV) visits and the availability of local experts to assist in gathering information and interpreting trends.

The study was undertaken in three main parts:

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- A **Port Report** (PR) which examined national policies related to port entry and MCS, institutional arrangements around port State controls, trade flows of seafood products after port entry and the extent of any non-compliance identified for these fleets (e.g. through RFMO compliance review processes); and
- A **Final Report** which consolidates the Vessel Activity and Port Reports as well as identifying obstacles to fighting IUU fishing and laying out recommendations for supporting port States to strengthen the effectiveness of port State controls.

This report is the Final Report. The report is broadly structured in three sections, following this introduction. Section 2 sets out the approach used for both the Vessel Activity and Port Reports, including some of the data challenges experienced. Section 3 sets out the results and analysis for each of the case study ports. For each case study port, an overview of the port is provided, together with the governance framework for the control and monitoring of port usage at the national level, the FFV usage of the port, an analysis of associated fishing and transhipment activity (and associated authorisations), an analysis of the movement of fish through the port and a high-level analysis of non-compliance associated with the main fleets. Finally, Section 4 provides an analysis of the main messages arising from the study and recommendations to strengthen the effectiveness of port MCS arrangements.

# 2 APPROACH

## 2.1 Vessel Activity Report

The VAR relied primarily on data on AIS vessel positions from Orbcomm and Spire, obtained from Global Fishing Watch (GFW) via their public Application Programming Interface (API). These data were cross-referenced with that from a second AIS-based platform, Starboard Maritime Intelligence<sup>1</sup> ('Starboard'), which provide AIS vessel information from Spire but with different data cleaning/categorisation processes to that of GFW. Understanding the limitations of AIS data, as described in Annex 1, they were supplemented by data from national governments, where possible.

Broadly, queries of the GFW global dataset of AIS positions allowed us to determine which vessels entered port and anchorage locations for each of the case study ports between 2021 and 2023. Once vessels entering the four study ports were identified, the activities of those vessels during the study period were queried from the GFW database (fishing, encounters, loitering events; described below). To obtain a picture of FFV activity prior to port entry, this 'event dataset' was then subset to those events which occurred after a port exit from a non-case study port but prior to a case study port/ anchorage entry. Fishing effort and the duration of loitering and encounter events were summarized according to 0.25 x 0.25 degree cells of latitude and longitude (effectively 15nm x 15nm) across the 2021-2023 period. Encounters were classified according to the class of the two vessels involved (i.e., fishing-fishing, carrier-fishing). Carrier vessels are known to visit numerous ports and not land fish (e.g., to pickup parts etc.). Accordingly, the activity of carrier vessels that entered the case study ports between 2021 and 2023 was analysed across the entire 2021-2023 period, rather than focusing solely on voyages between their last port of exit and entry to a case study port. These processes are outlined in more detail below.

#### Port and anchorage identification

GFW has compiled an extensive dataset of anchorages worldwide. This dataset was created by partitioning the globe into approximately equal-sized grid cells, with each cell spanning roughly 0.5 kilometres on each side. Using a global dataset of vessel AIS positions obtained from Orbcomm and Spire, spanning 2012 to 2021, grid cells where at least 20 vessels remained stationary for a minimum of 12 hours (with a maximum distance travelled of less than 0.5 kilometres) were identified. The mean coordinates of all stationary events within a grid cell were then recorded as anchorage points, resulting in a dataset comprising 166,514 such points globally.

#### Port visits

Port visits were detected utilizing GFW's worldwide dataset of AIS vessel positions obtained from Orbcomm and Spire. Initially, these visits were recognized at the granularity of an anchorage point, with the assumption that a vessel "entered" an anchorage when its AIS position was within 3 kilometres of the anchorage point, and "exited" when the position was more than 4 kilometres away. To prevent the recording of vessels merely transiting near an anchorage (which may meet the basic entry and exit criteria), vessels were required to exhibit one of two additional events within a port visit: either making a stop at an anchorage or displaying a noticeable gap in AIS transmission. Visits to individual anchorage points were then aggregated to anchorage and port clusters for Montevideo, Cape Town and Callao due to the different services/activities vessels can perform in these areas. Dalian visits were aggregated at the port level, as all entry events by FFVs during the study period involved use of the port area.

<sup>&</sup>lt;sup>1</sup> <u>https://starboard.nz/</u>

#### Fishing and encounter events

Similar to port visits, any reference to 'fishing' and 'encounter' events in this report should be understood in the context of GFW's algorithms and classification rules.

An **encounter** is an event during which two vessels are identified within a proximity of 500 meters from each other for a minimum of two hours, maintaining a median speed below 2 knots, and situated at least 10 kilometres away from a coastal anchorage.

GFW classify **"apparent fishing activity"** by analysing alterations in vessel speed and direction. Fishing events are classified according to the following rules:

- Sequential positions marked as fishing are amalgamated into a unified event;
- Fishing events within 1 hour and 2 kilometres of each other, potentially containing intermittent transit points, are grouped into one event; and
- Fishing positions that occur consecutively but are separated by 10 kilometres or more, or a time gap of over 2 hours are treated as distinct events.

Additionally, the dataset is refined by excluding brief and rapid fishing events, which are less likely to represent genuine fishing activity. These include events <20 minutes in duration, events comprising five or fewer AIS positions, events covering <0.5 km (excluding estimated squid gear, which for which the cutoff is <50m) and events where average vessel speed is >10 knots.

As caveated by GFW and relevant to results of this study "As AIS data varies in completeness, accuracy, and quality, it is possible that some events are not identified. It is also possible that some events are identified but are incorrect or do not indicate actual fishing, transshipment, or port access. For these reasons, Global Fishing Watch qualifies all designations of events, including synonyms of event terms such as "fishing effort," "fishing" or "fishing activity," as apparent rather than certain".<sup>2</sup>

#### Vessel identities

Identity information for fishing vessels (vessel name, callsign, gear type and flag State) was initially based on GFW's database, developed by combining information on 30 public vessel registries worldwide with the predictions of a machine learning model<sup>3</sup>. Nevertheless, a not insignificant proportion of vessel information was identified by the analysts and local experts as incorrect. As a result, grooming of vessel information was required for every port and amendments to vessel information was not restricted to a specific fleet or flag. These amendments required the manual verification of vessel information across numerous public and private information sources, including the advice of local experts.

While this study involved extensive ground-truthing, surpassing the efforts of many other published studies (noting AIS data is often used "as is"), due to budgetary and time restraints, and limitations of AIS data, it is likely that some vessel identities remain incorrect. Therefore, all values derived from AIS data should be regarded as "best estimates" (noting this language is consistent with disclosures provided by AIS data providers, GFW and Starboard). The main AIS data challenges are discussed in more detail in Annex 1.

## 2.2 Port Report

The Port Report was compiled with the assistance of local experts contracted in each of the case study ports. Local experts were selected based on their knowledge of the port, port management processes in the context

<sup>&</sup>lt;sup>2</sup> <u>https://globalfishingwatch.org/our-apis/documentation#introduction</u>

<sup>&</sup>lt;sup>3</sup> https://globalfishingwatch.org/datasets-and-code-vessel-identity/

of FFV access and capacity to access relevant information on national policies, authorities, trade flows and potential non-compliances. Local experts were:

- Callao Eloy Aroni;
- Montevideo Sabina Goldaracena;
- Cape Town Chris Heinecken (CapFish); and
- Dalian Shihao Liu.

Each of the local experts was provided with a Port Report template addressing the issues set out in the terms of reference. Local experts then led the process of local data collection and initial drafting of chapters for each case study port.

The main information sources used included publicly available material accessed through national government and RFMO websites, contacts and interviews with local government officials involved in port State controls and national data sourced through formal data requests (e.g. on vessel entries, trade flows). Broadly, information on the national authorities involved was relatively readily available, while practical information on decision-making responsibility and processes within the port State control chain, quantitative data including movement of fisheries products passing through ports, internal resources allocated to MCS and foreign vessel inspections, and the extent of non-compliance identified were more challenging to access.

# 3 CASE STUDY PORTS

## 3.1 Callao (Peru)

## 3.1.1 Overview of port

Callao is the largest seaport on the west coast of South America<sup>4</sup>, and strategically located adjacent to important fishing areas in the southeast Pacific Ocean (Figure 1). In 2023, seafood exports reached US\$2.87 billion dollars (FOB) (1.2 million t)<sup>5</sup>, with fishmeal and oil from anchovy and frozen giant squid caught by domestic fleets the main products exported. In the same year, seafood imports reached US\$323 million dollars (CIF) (107,635t), with tuna products accounting for around 38% of total volume<sup>6</sup>.

<sup>5</sup> Oceana annual report | Peruvian seafood exports in 2023.

<sup>6</sup> Oceana annual report | Peruvian seafood imports in 2023.

<sup>&</sup>lt;sup>4</sup> <u>https://www.porteconomics.eu/ranking-2023-of-latin-american-ports-and-container-terminals-the-seesaw-game/;</u> rankings according to TEUs (twenty foot equivalent units)

https://peru.oceana.org/blog/informe-2023-un-ano-inusual-para-las-exportaciones-pesqueras/

https://peru.oceana.org/blog/informe-importaciones-pesqueras-peruanas-en-2023/



*Figure 1: The distribution of Callao's port. (1) Navy Industrial Services Shipyard (SIMA-Callao) for hull maintenance and repairs. (2) Fish unloading and transhipment area. (3) Fishing vessels anchorage area.* 

The port of Callao also offers a variety of services to FFVs, including fish landing, transhipments in port, use of the shipyard for hull maintenance and engine repair, crew change, and other administrative services (e.g. renewal of certificates). This makes the port an attractive destination for foreign fishing fleets operating in the southeast Pacific Ocean.

Callao port is primarily used by two foreign fishing fleets:

- the **drifting-longline tuna fleet** mainly flagged to Spain, Japan, and Portugal which uses the port to land and tranship catch; and
- the **distant-water squid fleet** mainly flagged to China which uses the port for maintenance, crew changes, and administrative matters (e.g. renewal of certificates). These vessels do not typically land or tranship squid in port, with the majority of catch transhipped at sea. Squid vessels flagged to Chinese Taipei<sup>7</sup> and South Korea have historically entered Callao port, but have not done so in recent years.

The port is also used occasionally by tuna purse seine vessels flagged to Ecuador, Panama, Mexico, and other countries with temporary tuna fishing licenses granted by the Peruvian government, as well as infrequently by other types of vessels (e.g. trawlers).

Figure 2 shows the location of areas designated 'port' and 'anchorage' areas for the purposes of this study. Anchorages were mainly located to the northwest of the port, with sporadic other anchorages located to the north of the port.

<sup>&</sup>lt;sup>7</sup> Chinese Taipei is referred to by different names in different fisheries fora including 'Chinese Taipei', 'Taiwan, Province of China', and 'The Fishing Entity of Taiwan'. Here we have used 'Chinese Taipei' throughout the document for consistency.



Figure 2: Callao "port-stop" Anchorages used by FFVs, 2021 – 2023.

#### 3.1.2 Port governance

#### 3.1.2.1 Authorities involved

The main national agencies involved in managing port entry and use by FFVs include:

- The Peruvian Navy (La Marina de Guerra del Perú) the Peruvian Navy, through the Directorate General of Captaincies and Coast Guard (DICAPI) and its National Maritime Authority, is responsible for the controlling and monitoring of vessels seeking entry into the Peruvian maritime domain<sup>8</sup> until they arrive at port. Vessels are tracked using the Aquatic Traffic Information and Monitoring System (SIMTRAC) platform;
- The Ministry of Production (PRODUCE) PRODUCE is the fishing authority in charge of MCS relating
  to the entry of foreign fishing vessels into ports. The MCS centre of PRODUCE, SISESAT, monitors the
  entry and departure of FFVs through available tracking systems (e.g. AIS) and the organisation
  manages around 200 inspectors distributed along the Peruvian coast. When suspected illegal fishing
  behaviour is detected (e.g., through AIS tracks), SISESAT notifies the port inspector to conduct a
  vessel inspection in coordination with DICAPI and the Specialized Environmental Prosecutor's
  National Office (FEMA). This was the case with the Chinese squid vessel RUN DA 608, which was
  suspected of fishing illegally during its transit to port in 2018<sup>9</sup>;
- The Peruvian Customs Authority (SUNAT) because FFVs are considered foreign vessels with "cargo in hold", SUNAT has competence for inspections focused on cargo movement at ports<sup>10</sup>. The

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<sup>9</sup> Áncash: trial begins against Chinese ship for illegal extraction of squid in the Peruvian sea
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<sup>&</sup>lt;sup>8</sup> Peru is not a signatory to the United Nations Convention on the Law of the Sea (UNCLOS), and therefore does have an 'exclusive economic zone'. Instead, it claims a 'maritime domain' extending to 200nm which is applied consistent with UNCLOS.

https://ojo-publico.com/edicion-regional/ancash-inicia-juicio-contra-barco-chino-por-extraccion-ilegal-pota

<sup>&</sup>lt;sup>10</sup> General procedure CONTROL-PG.02: execution of extraordinary control actions. Supervision and Prevention of Smuggling and Border Control of Peruvian customs.

Customs Intelligence Division conducts inspection operations in coordination with PRODUCE and FEMA. For example, Customs inspects landings by foreign longline vessels as part of the national program to reduce the illegal shark fin trade<sup>11</sup>; and

The National Port Authority (Autoridad Portuaria Nacional, APN) – the APN administers the
operation of Peru's national ports system. In the context of FFV entries into port, the APN makes
decisions on the approval or denial of physical port entry taking into account input from DICAPI and
PRODUCE. APN also handle operational issues such as anchoring, provisioning, and other logistics in
the port area.

Other agencies play related roles – for example, the Ministry of Foreign Trade and Tourism who administer Peru's Foreign Trade Single Window (or 'VUCE'), through which entry documentation is submitted.

#### 3.1.2.2 National policies/processes

The framework of conditions and processes for entry into, and use of, Peru's ports by FFVs is broadly established by:

- The National Port System Law (No. 27943)<sup>12</sup>;
- The General Fisheries Law and associated regulations;
- Supreme Decree Nº 013-2011-MTC Supreme Decree approving the Regulations for the Reception and Ship Clearance in the Ports of the Supreme Decree approving the Republic of Peru<sup>13</sup>;
- Supreme Decree No. 016-2016-PRODUCE Establishing measures to authorize operations in Peruvian ports and shipyards of foreign-flagged vessels that carry out fishing activities of highly migratory, staddling or cross-border hydrobiological resources on the high seas<sup>14</sup>;
- Supreme Decree No. 016-2020-PRODUCE Supreme Decree amending Supreme Decree No. 016-2016-PRODUCE<sup>15</sup>; and
- Relevant RFMO CMMs (mainly IATTC Resolution C-21-07 and SPRFMO CMM 07-2022).

The National Ports Law establishes the National Ports System and provides that the entry and exit of ships and the loading and unloading of goods at the port, as well as their reception, stay and treatment in the port and/or port area, is the exclusive responsibility of the National Port Authority. The Law also provides for the National Port Authority to regulate access to port infrastructure, as well coordinate with other authorities to facilitate compliance with requirements of each authority.

The General Fisheries Law and associated regulations establish the basic framework for the management of fisheries resources within Peru's jurisdiction. In the context of FFV entries, relevant provisions include a requirement for all transhipments to be undertaken in port with approval sought from PRODUCE at least three days in advance.

Supreme Decree Nº 013-2011-MTC establishes the general framework for the entry of foreign vessels into Peru's ports. It reaffirms the Port Authority's competence over the entry and exit of ships and the loading and unloading of goods at the port, and requires that information including a cargo declaration, clearance from last port, crew list be provided in electronic form through the Single Trade Window (VUP; now the

<sup>&</sup>lt;sup>11</sup> Shark Fin Trade Thriving in Latin America, Despite Promises of Progress

https://insightcrime.org/news/shark-fin-trade-thriving-latin-america-progress/

<sup>&</sup>lt;sup>12</sup> https://www2.congreso.gob.pe/sicr/cendocbib/con2\_uibd.nsf/309DEF042F5FCC90052577E50055704F/\$FILE/2national.pdf

<sup>&</sup>lt;sup>13</sup> <u>https://cdn.www.gob.pe/uploads/document/file/19199/9998-publicacion-del-decreto-supremo-n-013-2011-mtc-en-el-diario-oficial-el-peruano.pdf?v=1699180800</u>

<sup>&</sup>lt;sup>14</sup> <u>https://faolex.fao.org/docs/pdf/per159992.pdf</u>

<sup>&</sup>lt;sup>15</sup> <u>https://faolex.fao.org/docs/pdf/per200655.pdf</u>

Foreign Trade Single Window – VUCE) at least 24 hours prior to the vessel's arrival. It also provides that Authorities, other than the Port Authority, may undertake inspections of the vessel, subject to prior coordination with the Port Authority (with the exception of the National Maritime Authority). The Decree also sets out 'forced arrivals' provisions, noting that vessels may enter under circumstances of forced entry after clearance has been granted. Forced arrivals clearances are administered by the National Maritime Authority, which communicates with other agencies.

Supreme Decree No. 16-2016 – PRODUCE was established in response to a substantial increase in foreign fishing activity on the high seas adjacent to Peru's maritime domain and concerns around inadequate monitoring and conservation measures. The Decree requires that vessels seeking to enter and use Peru's ports be flagged to a State which is (a) a party to International Treaties or Agreements related to maritime safety, conservation and preservation of the marine environment, and (b) a member or a non-contracting cooperating party of an RFMO of which Peru is a member. The Decree provides that compliance with these requirements will be verified by the National Maritime Authority, with PRODUCE to be informed of the list of vessels approved for entry into national ports or shipyards. FFVs seeking entry into Peru ports to tranship or land fish were required to have a VMS consistent with the RFMO in which it was authorised to fish, as well as submit to PRODUCE information on catch volumes and associated fishing activity, a vessel position track and relevant fishing authorisation details.

In 2020, following Peru's ratification of the PSMA in 2017 and increasing concern around possible encroachment of FFVs into its maritime domain, Supreme Decree 016-2020-PRODUCE was issued to further strengthen control over access to Peru's ports by certain high seas fishing vessels (principally those fishing for SPRFMO managed species, including squid). Supreme Decree 016-2020-PRODUCE modified 16-2016 – PRODUCE, introducing a number of new requirements including:

- The vessel must not be on any RFMO IUU list;
- The vessel must install Peru's national VMS (SISESAT), and provide position reports for at least six months prior to requesting port entry; and
- The vessel must report via the National Maritime Authority's tracking system (SIMTRAC) to its control centre for the six months prior to port entry.

Application of the requirement to have the SISESAT VMS equipment installed commenced effectively on 1 January 2021. Non-compliance with the new requirements would result in the denial of any request for port entry.

In addition to national frameworks, as a member of IATTC and SPRFMO, Peru is also required to comply with relevant conservation and management measures covering port entry and use. IATTC's PSM Resolution (C-21-07) entered into force on 1 January 2022 and requires that "each CPC, in its capacity as a port CPC, shall apply this Resolution for an effective scheme of port inspections in respect of foreign fishing vessels carrying IATTC-managed species caught in the Antigua Convention Area (Convention Area) and/or fish products originating from such species caught in the Convention Area that have not been previously landed or transshipped at port...". As part of the Resolution, CPCs wishing to grant access to their ports to FFVs are encouraged to designate ports to which FFVs may request entry and ensure that it has sufficient capacity to conduct inspections in every designated port. SPRFMO agreed CMM 07-2022 (Conservation and Management Measure on Minimum Standards of Inspection in Port) which requires each member or CNCP in its capacity as a port State to apply an "effective scheme of port inspections in respect of foreign fishing vessels carrying SPRFMO-managed species caught in the SPRFMO Convention Area and/or fish products originating from such species that have not been previously landed or transhipped at port, or at sea following the applicable SPRFMO procedures...". The CMM requires, amongst other things, designation of authorised ports for FFVs, prior notification of entry (>48hr in advance), the inspection of "at least 5% of landing and transhipment operations in their designated ports made by notified foreign fishing vessels" and a requirement to deny port entry where there is evidence the vessel has engaged in IUU.

#### **PSM processes**

Five ports have been designated for FFVs to request entry into within Peru under the PSMA, including Callao<sup>16</sup>. The same ports (Paita, Ilo, Callao, Chimbote, Pisco) are also designated under IATTC Resolution 21-07<sup>17</sup>, while a total of seven ports (Paita, Chimbote, Salaverry, Paracas, Ilo, Islay, Huacho/Supe/Callao) are designated under SPRFMO CMM 07-2022<sup>18</sup>. The basis for the mismatch in designated ports under the PSMA and SPRFMO CMM 07-2022 is not clear.

Our understanding of the basic process of port State measures applied by Peru is set out in Figure 3.



Figure 3: Peru's port State measures process.

Applications for port entry by FFVs are submitted by maritime agents through the VUCE. Supreme Decree № 013-2011-MTC requires applications to be received at least 24 hours prior to port entry, although both the IATTC and SPRFMO port State measures CMMs require notifications at least 48 hours prior to arrival. The arrival request must include vessel, crew and cargo details, amongst other things<sup>19</sup>, as well as any information required by the PSMA and RFMO CMMs (e.g. in the case of SPRFMO vessels, the FFV must fill out the "Port Call Request Template," including information on the purpose of the port call [landing, transhipment, refuelling, emergency]).

Applications for entry are primarily reviewed by DICAPI and PRODUCE, according to their areas of competence. We understand formal risk assessments prior to deciding on a vessel's entry into port are

<sup>&</sup>lt;sup>16</sup> <u>https://psma-gies.fao.org/designated-</u>

ports?pageIndex=0&pageLen=20&sortColumn=portname&sortDirection=ascending&country=3c10801c-c984-4c52-8813-0a9d0e75740b <sup>17</sup> https://www.iattc.org/getattachment/f23eae22-5938-4f6d-9082-

fab0067130f0/Medidas%20del%20Estado%20rector%20del%20Puerto%20(Peru)

<sup>&</sup>lt;sup>18</sup> <u>https://www.sprfmo.int/fisheries/conservation-and-management-measures/cmm-07-port-inspection/points-of-contact/peru/</u>
<sup>19</sup> Set out in Supreme Decree No. 011-2011-MTC"

https://cdn.www.gob.pe/uploads/document/file/19199/9998-publicacion-del-decreto-supremo-n-013-2011-mtc-en-el-diario-oficial-el-peruano.pdf?v=1699180800

relatively limited, with DICAPI's assessment largely focused on national security type issues, while PRODUCE's are focused on clear examples of international non-compliance (e.g. the vessel is on an RFMO IUU list, INTERPOL notices).

Both the Navy/DICAPI and PRODUCE reportedly monitor the speed and position of the vessel through available technology (e.g. AIS) on its transit into port.

The decision on physical entry into port is ultimately made by the Port Authority after receiving advice from both DICAPI and PRODUCE. SPRFMO inspection reports completed by PRODUCE inspectors make clear that where entry is requested under certain circumstances (e.g. 'crew change', 'certificate renewal'), competent authorities other than PRODUCE 'are in charge of authorising arrival'<sup>20</sup>.

Once in port, PRODUCE aims to inspect 100% of FFVs with inspectors operating 24 hours a day at the three main fishing ports of Paita, Chimbote, and Callao. Inspectors review whether the vessel complies with national fishing regulations and other international agreements, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as well as meeting relevant RFMO port inspection protocols. More comprehensive inspections may be carried out where a vessel displays suspicious behaviour in transit into port (e.g. possible fishing activity).

For high seas squid vessels, PRODUCE carries out a vessel inspection in compliance with the *SPRFMO's Format for Port Inspection Reports* and national fishery legislation. All records of port inspection must be submitted to the SPRFMO Secretariat within 15 days of the inspection, who then share a copy with the flag State. SPRFMO report that a centralised point of contact established by Peru for the distribution of port-related information to the Secretariat is working effectively<sup>21</sup>.

For IATTC authorised FFVs, vessels must comply with C-21-07 including notifying the port State at least 48 hours before its arrival and providing information on the purpose of the port call (landing and/or transhipment). Installing Peru's VMS system is not mandatory for this fleet. The vessels must only provide a digital satellite positioning diagram to PRODUCE covering the journey from the last departure until arrival at the national port. For IATTC longline vessels, an important component of the inspection is to review compliance with conservation measures to protect sharks (including the requirement that fins must remain naturally attached until the first landing in port).<sup>22</sup>

We understand that PRODUCE make decisions on allowing port usage after the vessel inspection. In practice, we understand that port use is authorised unless otherwise denied. Port departure arrangements are coordinated with the Port Authority after relevant clearances are provided (e.g. PRODUCE, DICAPI).

### 3.1.3 Foreign fishing vessel port usage

Callao port is important to foreign fishing fleets due to its strategic location, logistics, and shipyard services. The distant-water squid fleet, in particular, has historically entered the port of Callao to use the shipyards' services for hull maintenance and repairs, since returning to their home port can result in a loss of three to four months in transit time. However, the fleet's use of shipyards has dramatically reduced since the introduction of Peru's mandatory VMS system requirements. Instead, many vessels have chosen to spend more time fishing at sea. Currently, foreign squid vessels enter Callao port mainly to change crew and, to a lesser extent, renew certificates.

<sup>22</sup> RESOLUTION C-23-07 – Conservation Measures for the Protection and Sustainable Management of Sharks

<sup>&</sup>lt;sup>20</sup> e.g. <u>http://www.fis-net.com/fis/worldnews/worldnews.asp?id=127735&l=e</u>

<sup>&</sup>lt;sup>21</sup> <u>https://www.sprfmo.int/assets/Meetings/03-CTC/11th-CTC-2024/meeting-documents/CTC11-Doc08-Implementation-Report-Inspections.pdf</u>

In the case of the foreign tuna longline fleet, port entry is for landing of tuna, tuna-like species, and sharks. Landing is undertaken directly into freezer containers which are then loaded onto cargo ships transporting tuna to their respective country ports, including Vigo (Spain), Yokohama (Japan), and Leixoes (Portugal).

PRODUCE is responsible for supervising the entire landing process. However, due to the presence of foreign cargo in the vessel's hold, Customs is also involved.<sup>23</sup> The Customs' cargo manifest contains information about the landing, such as the number of tuna freezer containers, the name of the container vessel and the delivery port. After that, the vessel loads bait (e.g. chub mackerel) and returns to fishing areas. Also, the vessels sometimes carry out crew changes and maintenance.

While foreign tuna purse seine vessels occasionally enter Callao port, the majority of landings are undertaken in Paita because processing facilities are mainly concentrated in this area.

While Callao serves as Peru's most important port for seafood imports and exports, it is not the primary port for unloading fish from the domestic fishing fleets, both industrial and artisanal. The industrial fleet predominantly unloads catches such as anchovy and jack mackerel in Chimbote and Chicama ports using their own landing docks. Meanwhile, the artisanal fleet focuses on catching giant squid and dolphinfish, primarily operating in the ports of Paita and Pucusana.

### 3.1.3.1 FFV visits by flag

Total visits by foreign-flagged vessels to Callao remained stable from 2021 to 2022 but increased dramatically in 2023 (Figure 4).



Figure 4: Number of foreign flagged vessel entry events to port and anchorage locations 2021-2023.

The increase was driven by the return of Chinese squid jigging vessels to Callao, following a period of low usage in 2021-22 after the introduction of the Peruvian government's VMS requirements which came into effect from 1 January 2021 (MRAG Asia Pacific, 2023). We understand many Chinese squid jigging vessels entering Callao early in 2023 did so on the basis of 'forced arrival', while more recently most entries have been on the basis of 'crew change' and, to a lesser extent, 'certificate renewal'. 'Forced arrival' is granted

<sup>&</sup>lt;sup>23</sup> DESPA-PG.11 - General Transhipment Procedure from Peruvian customs authority.

when the vessel's safety is at risk and/ or has a crew member whose life is in danger. We understand that vessels entering port under forced arrivals for crew medical attention may disembark crew, but not embark new crew. The vessel should also not receive services other than those directly related to the safety issue at hand.

While the PSMA understandably contains relevant provisions for forced arrival (force majeure), the evidence indicates that foreign squid fleets have used this provision – and more recently crew change provisions – to circumvent the intent of Supreme Decree 16-2020 (including the requirement to install the national VMS).<sup>24</sup> Roughly three and half years after the introduction of the VMS requirement, uptake has been negligible<sup>25</sup>, despite entries into Callao port in 2023 returning to levels similar to those before the VMS requirement.<sup>26</sup>

While the Callao anchorage was heavily used by the Chinese jigging fleet in 2023, the number of FFVs entering the port was largely similar across the 2021-23 period, with only a slight downward trend. Between 2021 and 2023, Callao's FFV entries mainly came from Spanish, Chinese, Japanese, and Panamanian vessels (Figure 5). Among them, only the entries by Chinese fishing vessels showed an increasing, driven by the return of Chinese squid jigging vessels to Callao in 2023.



#### Figure 5: FFV entries by flag to port OR anchorage areas.

Compared with the number of fishing vessel visits, the number of carrier visits in Callao were minimal. This is not surprising given high seas jigging vessels typically tranship catch at sea, while IATTC longliners either tranship the majority of the catch at sea (in the case of Japanese longliners) or land catch at port (in the case Spanish longliners). As shown in Figure 6, the carriers visiting Callao from 2021 to 2023 mainly came from six countries: the Bahamas, Liberia, Russia, South Korea, Panama, and Vanuatu. These flags are frequently used by the owners of carrier vessels, who may themselves be beneficially owned and operated from other countries.

<sup>&</sup>lt;sup>24</sup> No traps: Peru demands transparency from distant water fleets entering its ports

https://en.calamasur.org/post/sin-trampas-per%C3%BA-exige-transparencia-a-flotas-de-aguas-distantes-que-ingresan-a-sus-puertos-1; <a href="https://artisonal.wixsite.com/my-site/en/squid-fleet-2018-2023">https://artisonal.wixsite.com/my-site/en/squid-fleet-2018-2023</a>

<sup>&</sup>lt;sup>25</sup> We understand only five vessels installed Peru's national VMS by the end of 2020, with anecdotal information suggesting data transmission lasted only a few months

<sup>&</sup>lt;sup>26</sup> https://artis0nal.wixsite.com/my-site/en/squid-fleet-2018-2023



Figure 6: CV entries by Flag to port OR anchorage areas.

#### 3.1.3.2 FFV visits by gear type

FFVs entering Callao from 2021 to 2023 were mainly drifting longliners, tuna purse seiners, and squid jiggers (Figure 7). Among them, entries by drifting longliners and tuna purse seiners declined slightly across the study period, while entries by squid jiggers increased significantly in 2023, related to the return of the Chinese squid fleet.



#### Figure 7: FFV entries into Callao by gear type.

The usage of port vs anchorage areas in Callao varied by gear type (Figure 8). The (primarily Chinese) squid jig fleet almost exclusively use the anchorage area, with very few entries into the port itself. Most of these vessels have requested entry on the basis of 'crew change' or 'certificate renewal', which can be completed in the anchorage area via local ferry boats.



Figure 8: FFV entries to port and anchorage by gear type, respectively.

Drifting longline vessels use both the anchorage and port areas, with similar numbers of entries into each. Many of these vessels will wait in the anchorage area before proceeding to a port berth (to land catch), and to that extent the similarity in the number of visits and trends across years is not surprising.

#### 3.1.3.3 Port visit duration by vessel type

All types of FFV typically remain in the anchorage area for shorter periods than the port area (Figure 9). The only exception were trawlers, which had very few visits overall (12 in total between 2021-2023) and in the case of 2021, was influenced by a single vessel which remained in the anchorage for around five months.

Drifting longline vessels remained in the port area longer than the anchorage in 2021 and 2022, with the mean duration being about 21 days. As mentioned above, these vessels often land bycatch in port, resulting in longer stays. Squid jiggers only visited the port area in 2023, with an average duration of around 24 days.



+ 2021 + 2022 + 2023

Figure 9: Mean port visit duration to Callao by gear type, location in port, and year of entry.

### 3.1.4 Fishing activity and governance

#### 3.1.4.1 Fishing patterns of key foreign fleets

Collectively, Spanish and Japanese longline vessels targeting tunas and tuna-like species in the IATTC area and the Chinese jig fleet targeting squid in the SPRFMO area accounted for around 80% of the total FFV entries into Callao across the 2021-23 period.

#### Spanish longline fleet

A total of 27 Spanish flagged longline vessels entered Callao port or anchorage during the 2021 to 2023 period. An analysis of fishing patterns in trips preceding port entry indicated that fishing effort was exclusively in the high seas of the SE Pacific, with much of the effort concentrated between 10°S and 30°S (Figure 10).

Minte-Vera et al (2022) report that "unlike the other distant water fleets that catch swordfish as part of their longline fishing for tunas, the Spanish fleet targets swordfish, and brought their experience fishing for swordfish in other oceans to the Pacific Ocean. The Spanish fleet has been the main player in the fishery since the early 2000's and currently (2017-2019) accounts for 30% of the catches, while the other distant water fleets combined account for 24%". According to an early IATTC report (2011)<sup>27</sup>, although the Spanish fleet catches swordfish all year round, catches generally peak in the second and third quarters of each year.



*Figure 10: Spanish drifting longline fleet fishing activity preceding Callao port entries and encounters, 2021 -2023. All encounters were between fishing vessels.* 

<sup>&</sup>lt;sup>27</sup> https://www.iattc.org/getattachment/2c68589a-d5eb-4f97-8367-d4149afe3fef/SAC-02-09 Swordfish-assessment-2010.pdf

#### Japanese longline fleet

A total of 13 Japanese flagged longline vessels entered Callao port or anchorage during the 2021-23 period. As with the Spanish longline fleet, an analysis of trips immediately preceding entry into Callao port indicated vessels exclusively fished in the high seas of the SE Pacific, with much of the effort concentrated in tropical waters between 20°S and 8°S (Figure 11). Some effort is also concentrated off the Chilean EEZ between 80°W and 90°W.



Figure 11: JPN drifting longline fleet activity preceding Callao port entries and encounters, 2021 -2023.

We understand Japanese longliners mainly target bigeye and yellowfin tuna in tropical waters and albacore in higher latitudes. The fleet catches bigeye tuna and albacore throughout the year in IATTC waters, with peak catches of bigeye generally occurring in the first and fourth quarters of each year<sup>28</sup>. The IATTC has established a quota system for bigeye tuna in the Eastern Pacific, but there are no clear restrictions on the albacore fishery south of the equator.

Unlike the Spanish longline fleet, Japanese longliners entering Callao had a number of encounters with carrier vessels during trips prior to port entry during 2021-23. A total of 15 encounters were with Panamanian flagged carriers, with one additional encounter with a Japanese flagged carrier (Figure 12). Anecdotal evidence indicates that many of these Panamanian-flagged carriers are formerly Japanese-flagged carriers and continue to be controlled and operated by Japanese companies. There are 36 Panama-flagged carriers registered with IATTC (some of which have Japanese names) and 4 Japanese-flagged carriers<sup>29</sup>.

<sup>&</sup>lt;sup>28</sup> <u>https://www.iattc.org/en-US/Data/Bigeye-catch</u>

<sup>&</sup>lt;sup>29</sup> https://www.iattc.org/en-US/Management/Vessel-register#Japan



Figure 12: Number of fishing-carrier vessel encounters by flag for the Japanese drifting longline fleet that entered Callao port between 2021 and 2023 (FVs on the left, CVs on the right).

### Chinese squid jig fleet

Chinese flagged vessels undertook a total of 170 visits to Callao during the 2021-23 period, with 162 (95%) undertaken by squid jig vessels (Figure 13). An analysis of fishing activity in the period immediately preceding entry into Callao port indicated that fishing effort is largely concentrated in high seas waters of the tropical SE Pacific off the Peru and Ecuador EEZs, as well as in the SW Atlantic in the high seas off Argentina's EEZ. These results are generally consistent with a fishing pattern often colloquially referred to as the 'squid route' which sees vessels fishing in the high seas off Argentina in the first half of each year targeting Argentine shortfin squid and transferring to the SE Pacific in the second half of the year targeting jumbo flying squid. The squid fishery outside the Argentine EEZ is not subject to management by an RFMO.



Figure 13: Chinese squid jig fleet activity preceding Callao port entries and encounters, 2021 - 2023.

The Chinese squid jig fleet operating in both the SE Pacific and SW Atlantic relies heavily on transhipment to carrier vessels as part of its operation. During the period 2021 to 2023, a total of 2,068 fishing vessel/carrier encounters were recorded in the GFW dataset, with most carriers flagged to Panama, China, Vanuatu and Liberia (Figure 14). The beneficial owners of many of these carriers flagged to Panama, Liberia and Vanuatu are likely to be Chinese companies or individuals.



Figure 14: Number of fishing-carrier vessel encounters by flag for Chinese squid jig vessels that entered Callao port between 2021 and 2023 (FVs on the left, CVs on the right).

### 3.1.4.2 Governance arrangements

As described above, the waters fished by the main fleets visiting Callao are managed by two RFMOs – IATTC in the case of the Spanish and Japanese longline fleets and SPRFMO in the case of the Chinese squid jig fleet. The SW Atlantic area fished by the Chinese squid jig fleet remains one of the last major high seas fishing grounds in the world not regulated through an RFMO.

#### IATTC

IATTC primarily manages bigeye tuna catch through an annual quota on each country's fleet operating within the IATTC area<sup>30</sup>. Japan currently has the largest annual quota at 32,372t for the 2022-2024 period<sup>31</sup>. As part of its compliance arrangements, each IATTC member (CPC) is required to "submit to the Director, by 15 July, a national report on its updated national compliance scheme and actions taken to implement these measures, including any controls it has imposed on its fleets and any monitoring, control, and compliance measures it has established to ensure compliance with such controls". Resolution C-03-01 also requires that all bigeye tuna, when imported into the territory of a Contracting Party, be accompanied by an IATTC Bigeye Tuna

<sup>&</sup>lt;sup>30</sup> https://www.iattc.org/getattachment/74a4207d-33bf-4c80-84cc-b01ceada794b/C-99-09 Bigeye-tuna.pdf

<sup>&</sup>lt;sup>31</sup> <u>https://www.iattc.org/GetAttachment/e3dc0a7e-e73c-4b8e-889e-a4cd2cdd7b8b/C-21-04-Active\_Tuna-conservation-in-the-EPO-2022-2024.pdf</u>

Statistical Document or an IATTC Bigeye Tuna Re-export Certificate. The former must be validated by a government official or other authorized individual or institution of the flag State of the vessel that harvested the tuna, while the latter must be validated by a government official or other authorized individual or institution of the state that re-exported the tuna. The extent to which bigeye is landed in Callao is not known, although in the case of the Japanese fleet it is likely most bigeye are transhipped at sea prior to landing in Callao.

Unlike the northern albacore stock in the IATTC area, the southern albacore stock is not subject to a specific Resolution governing catch and access arrangements. Nevertheless, the fishery is subject to general measures around catch reporting and the most recent assessment of the (combined WCPFC-IATTC) South Pacific albacore stock indicated the stock remained well above BMSY (Castillo Jordan et al, 2021). Similarly, swordfish in the SE Pacific are not subject to a specific IATTC Resolution.

Each CPC shall ensure that at least 5% of the fishing effort made by its longline fishing vessels greater than 20 meters length overall carries a scientific observer<sup>32</sup>.

#### SPRFMO

The main SPRFMO management measure applying to the jumbo flying squid fishery is CMM 18-2023. Key provisions in the CMM include:

- Limits on both the number and total gross tonnage of jigging vessels targeting jumbo flying squid for each of China, South Korea and Chinese Taipei;
- A requirement to report catches to the Secretariat;
- A requirement to carry VMS;
- A requirement to report on vessels that have actively fished for jumbo flying squid, and those that have engaged in transhipment;
- A requirement to ensure a minimum observer coverage of 5 full time at sea observers or 5% of fishing days on Jumbo Flying Squid Jigging vessels flying their flag.

Other relevant CMMs applying to the jumbo squid fishery include:

- CMM 12-2023 (Conservation and Management Measure for the regulation of Transhipment and Other Transfer Activities) – the CMM requires, amongst other things, the competent authorities of both the unloading and receiving vessels notify the Secretariat of an intention to tranship, at least 12 hours before the estimated transhipment and, in the case of transhipments involving jumbo squid, the competent authorities notify the operational details of the transhipment (using standardised SPRFMO templates) within 20 days of the end of each quarter;
- CMM 11-2023 (Conservation and Management Measure for High Seas Boarding and Inspection Procedures for the South Pacific Regional Fisheries Management Organisation); and
- CMM 06-2023 (Conservation and Management Measure for the Commission Vessel Monitoring System in the SPRFMO Convention Area).

PRODUCE examines compliance with these measures through port inspections consistent with CMM 2022-07.

### 3.1.5 Movement of fish

According to SUNAT data, the volume of imported tuna from landings through foreign fishing fleets in Peruvian ports averages 8,000 tons annually (Figure 15). Most of this (97%) comes from the foreign purse seine fleet, with only 3% coming from the foreign longline fleet. Furthermore, unloadings in the port of Callao

<sup>&</sup>lt;sup>32</sup> https://www.iattc.org/GetAttachment/614c5692-74c5-40a7-a8b0-148ec0e52206/C-19-08-Active\_Observers-on-longliners.pdf

only represent 1% of the total tuna unloaded. Instead, the ports of Paita and Chimbote are responsible for most tuna unloadings, with 86% and 13%, respectively. Callao port services only foreign longline vessels, with products purchased by SANTA ELENA S.A.C.

Tuna harvested from international waters via foreign fishing fleets and landed in Peru accounts for only 27% of the total imported tuna volume (Figure 15).



# *Figure 15: Peru's tuna unloading volumes, imports, and exports (tons) between 2010-2020. Source: Peruvian Customs Authority (SUNAT)*

Peruvian tuna exports are mainly directed towards the European market, including Germany, Spain, and Italy, representing 36% of the total exports. The primary exported items to this market are processed products such as fillets, loins and canned tuna. By contrast, Ecuador receives mostly unprocessed frozen tuna, which accounts for 25% of the total tuna exports.

The foreign squid fleet does not use Callao port for landing or transhipment.

#### 3.1.6 Indications of non-compliance

#### 3.1.6.1 RFMOs

#### **SPRFMO**

SPRFMO report that 146 requests were received by Peru for foreign vessels to access port services in the October 2022 to September 2023 period, with 145 vessels inspected and no infringements detected<sup>33</sup>. This

<sup>&</sup>lt;sup>33</sup> <u>https://www.sprfmo.int/assets/Meetings/03-CTC/11th-CTC-2024/meeting-documents/CTC11-Doc08-Implementation-Report-Inspections.pdf</u>

rose from 20 requests in the previous period (October 2021 to September 2022), with 19 vessels inspected and no infringements detected<sup>34</sup>.

In the most recent SPRFMO (2024) Final Compliance Report, there were no possible compliance issues identified associated with the main CMM governing the Jumbo Flying Squid Fishery (CMM 18-2023) by any member<sup>35</sup>.

Against other CMMs, China was considered:

- Non-Compliant No Further Action against CMM 05-2023 (Record of Vessels) in this case, China failed to provide notification of the removal of a vessel from the Authorized vessel list within the established timelines; and
- Non-Compliant No Further Action against CMM 06-2023 (VMS) this case involved 31 possible compliance issues pertaining to VMS reporting requirements in the 2022/23 Reporting period. VMS data has reportedly subsequently been recovered.

Chinese Taipei was considered Non-Compliant - No Further Action against CMM 05-2023 (Record of Vessels) – this case related to a "failure to update the Secretariat within the specified timeframes as per paragraphs 7-8 regarding the change of vessel name and other relevant vessel data for the SHUENN CHING NO.1 in May 2023, and the consequential cessation of the SPRFMO authorization, due to a change in vessel ownership".

No member was considered 'seriously/persistently non-compliant' against any CMM, while only Liberia was considered 'priority non-compliant' against CMMs relating to VMS and transhipment. The latter case related to Liberian flagged vessels not providing transhipment notifications at least 12 hours in advance of the activity as required for two Liberian carriers. SPRFMO currently has no vessels on its IUU List.

#### IATTC

Each of the Spanish longline vessels entering Callao are registered with IATTC, with some also registered with WCPFC. No Spanish fishing vessels are on IATTC's IUU list.

All 13 Japanese longliners entering Callao in 2021-23 are registered with IATTC, and some of them are also registered with WCPFC. No Japanese fishing vessels have been included in the IATTC IUU list.

IATTC annual reviews of Member compliance with CMMs are not made public.

#### 3.1.6.2 Other indications of non-compliance

In the last eight years, the Peruvian government has sanctioned around ten FFVs for non-compliance with the Regulation of General Fisheries Law (RLGP)<sup>36</sup> (Table 1). These violations include illegal fishing in Peruvian waters, providing inaccurate or incomplete information to port inspectors, and failing to comply with tuna fishing regulations. The evidence comes from the port inspectors and SISESAT. Once the infraction is proven, the vessel receives a monetary penalty and confiscation of the associated fish.

#### IUU fishing in Peruvian waters

According to article 134 of the General Fisheries Law of Peru, a foreign fishing vessel cannot conduct fishing within the Peruvian maritime domain without prior authorization. In 2018, the Peruvian government

 <sup>&</sup>lt;sup>34</sup> <u>https://www.sprfmo.int/assets/Meetings/03-CTC/10th-CTC-2023/CTC10-Doc07-Implementation-Report-Port-Inspections.pdf</u>
 <sup>35</sup> <u>https://www.sprfmo.int/assets/Meetings/01-COMM/12th-Commission-2024/Report-and-Annexes/Annex-6a-2024-Final-Compliance-Report-2022-23.pdf</u>

<sup>&</sup>lt;sup>36</sup> Supreme Decree No 017-2017-PRODUCE – Regulations for the Supervision and Sanction of Fishing and Aquaculture Activities.

detected an alleged incident of illegal fishing within its waters involving the Chinese squid vessel, formerly RUN DA 608, now registered as NING TAI 717. During a port inspection, authorities found 19 tons of squid in the vessel's hold, suspected to have been caught in transit. As a result, the authorities confiscated the catch and required that the vessel's owner, Zhoushan Zhongju Ocean Fisheries Co. Ltd., pay \$19,000 to the Peruvian state as civil compensation.<sup>37</sup> The case is currently in the oral stage of prosecution pending a final ruling.

#### Providing incorrect or incomplete information

Other violations of Peruvian fishing regulations include not submitting required information or documents on time, submitting incorrect documents during the port inspection, and maintaining fishing speeds less than 2 knots for over an hour in Peruvian waters. Any FFV must keep a consistent speed and course, and any suspicious behaviour during its trajectory will also be considered a violation. Between 2016 and 2019, seven FFVs (5 Chinese and 2 Chinese Taipei) were fined between \$10,000 and \$40,000 for not providing complete information on the vessel's trajectory (VMS) and maintaining speeds of less than 2 knots within the Peruvian maritime domain (Table 1).

#### Non-compliance with Tuna Fisheries Management Regulations

Foreign purse seine vessels authorized by the Peruvian government to fish for tuna must adhere to specific regulations, including ensuring at least 30% of the crew are Peruvian nationals. Furthermore, the vessel is prohibited from fishing within ten nautical miles of the coast.<sup>38</sup>

In 2019, the PRODUCE sanctioned two Ecuadorian-flagged tuna purse seine vessels for violating the Tuna Fisheries Management Regulations. The first vessel, DOÑA ROGE, was caught fishing illegally within a prohibited area (within ten nautical miles). As a penalty, a fine of \$50,000 was imposed on the vessel, and 268 tons of tuna (yellowfin and skipjack tuna) were seized and later donated to low-income families. The second vessel, DON MARIO, did not follow the regulations that required them to hire at least 30% of Peruvian national crew during the fishing license period. As a consequence, a fine of \$88,000 was imposed on the vessel. Both vessels are restricted from requesting a tuna fishing license until they comply with the fine imposed.

 <sup>&</sup>lt;sup>37</sup>https://www.gob.pe/institucion/mpfn/noticias/309445-ministerio-publico-consiguio-que-caso-run-da-608-pase-a-juicio-oral;
 https://sosgalapagos.wordpress.com/2020/11/02/peru-increases-controls-on-the-foreign-fleet-that-uses-its-ports/
 <sup>38</sup> Supreme Decree No 032-2003-PRODUCE – Tuna Fisheries Management Regulations.

	Vessel		Gear		Inspection	
	name	Flag	type	RFMO	date	Reason for sanction
1	RUN DA 608	CHN	Squid jigger	SPRFMO	2018-10-08	IUU fishing within the Peruvian waters during their transit to port.
2	TAH YUAN No.11	TWN	Squid jigger	SPRFMO	2016-10-26	Present incomplete information on the vessel tracking data (VMS)
3	SHUN XING No.16	CHN	Squid jigger	SPRFMO	2019-09-21	Gaps in satellite positioning data while navigating in Peruvian waters.
4	PU YUAN 825	CHN	Squid jigger	SPRFMO	2018-06-27	Failure to provide information on the vessel tracking system (VMS) and a fishing speed of less than 2 knots within the Peruvian waters.
5	HUA YING 819	CHN	Squid jigger	SPRFMO	2018-07-02	The fishing speed was less than two knots during transit to the Peruvian port.
6	HONG DA 1	TWN	Squid jigger	SPRFMO	2017-08-22	Failure to provide the fishing authority information on the vessel tracking system (VMS).
7	FENG CHENG 101	CHN	Squid jigger	SPRFMO	2018-09-19	The fishing speed was less than two knots during transit to the Peruvian port.
8	HONG YANG 8	CHN	Drifting longline	IATTC	2017-08-07	Failure to provide the fishing authority information on the vessel tracking system (VMS).
9	DOÑA ROGE	ECU	Tuna purse seine	IATTC	2019-06-26	The fishing speed was less than two knots within a no-fishing area 10 miles from the coast.
10	DON MARIO	ECU	Tuna purse seine	IATTC	2019-06-22	Failure to hire >30% Peruvian national crew members.

Table 1: List of foreign fishing vessels subject to sanctions for non-compliance with Peruvian fishing regulations.

Importantly, only the cases involving the two purse seine vessels have been resolved with the payment of the imposed penalty, largely driven by the requirement for these vessels to be free of debts with PRODUCE in order to reapply for a fishing license. We understand the cases involving Chinese and Chinese Taipei vessels are currently under review by the appeals council of the fishery authority and have not yet been forwarded to the public prosecutor. The case of RUN DA 608 is the only one in the final stage of an oral trial to determine a final sentence. No vessel was added to a relevant RFMO IUU List.

#### **3.1.7** Measures to strengthen port State controls

Peru took a significant step by being the first country in Latin America region to incorporate the PSMA into its national regulations through Decree Supreme 016-2020-PRODUCE. This decree aimed to strengthen the monitoring and control of the distant-water squid fleet, requiring the installation of the national VMS as an important pre-requisite for accessing Peruvian ports (including shipyard services). However, three years after introducing the decree, uptake by foreign squid fleets has been negligible. While squid vessel visits to Peru ports declined substantially in 2021 and 2022, visits increased again in 2023 with vessels initially accessing ports primarily under 'forced arrivals' provisions, and later in 2023 and 2024 primarily under requests for 'crew change' and 'certificate renewal'. The latter events capitalised on limitations in the port regulations

which allowed access to ports by high seas squid jig vessels under these provisions, without the need to comply with the VMS requirement.

In order to further enhance port control, we offer the following recommendations:

#### 1. Implement proposed Supreme Decree to close loopholes in current VMS regulation

In 2024, PRODUCE issued a proposed update on port regulations which aimed to broaden and clarify the circumstances under which foreign squid vessels must install national VMS to include the use of ports for all activity related to or linked to fishing. This included "crew change", "document renewal", services in shipyards and repairs and maintenance, amongst others. On the face of it, the proposed Decree would assist in better achieving the intent of Supreme Decree 16-2020, as well as closing existing avenues for relevant FFVs to circumvent the VMS requirement. On that basis, we recommend Peru proceed with the proposed Decree.

#### 2. Establish an inspection protocol to verify the authenticity of forced arrival requests

In the context of reports indicating that some vessels have reportedly provided inaccurate information regarding the true purpose of their entry into Peruvian ports<sup>39</sup>, PRODUCE may wish to consider establishing a protocol to monitor vessels while in the area of ports to ensure activities are consistent with those set out in the entry request. Outcomes of the review protocol should be factored into future risk assessments under the PSMA to determine whether to allow port entry/use.

#### 3. Internal/National IUU list

Peru's existing regulations only prohibit entry into port where the vessel is listed on an RFMO IUU Vessel List. At present, there is no local regulatory framework in place to restrict the entry of vessels sanctioned for illegal fishing outside of the RFMO IUU lists. In that context, Peruvian authorities may wish to consider the establishment of an internal IUU list (or something which functions in a similar way). This list could consider the history of verified infractions in Peruvian waters, as well as other relevant jurisdictions (e.g. Argentina, given many of the same squid vessels operate adjacent to both jurisdictions). Information on the list should be used in pre-entry risk assessments, as well as targeting subsequent inspections. The development of a comprehensive list would be assisted by information sharing amongst relevant States internationally (e.g. information on infraction history/details, inspection outcomes, intelligence), including through the GIES under the PSMA.

#### 4. VMS after leaving port

Experience indicates that some foreign squid vessels leave port with their AIS turned off, while others leave with AIS on but suffer breaks in transmission in the vicinity of Peru's EEZ boundary<sup>40</sup>. Extending the VMS requirement for one month after leaving port (in addition to the six months' prior to entry) would provide for greater transparency of vessel behaviour while in Peru's EEZ and adjacent to its boundary.

<sup>&</sup>lt;sup>39</sup> <u>https://drive.google.com/file/d/1HNSp0HPp8egCCJ4v6VR27Bnil-PFoUsg/view</u>

<sup>&</sup>lt;sup>40</sup> https://drive.google.com/file/d/1HNSp0HPp8egCCJ4v6VR27Bnil-PFoUsg/view

# 3.2 Montevideo (Uruguay)

## 3.2.1 Overview of port

Uruguay lies on the east coast of South America, sharing borders with Argentina to the south and Brazil to the north. Located at the mouth of the Río de la Plata, Montevideo port has been at the centre of much of Uruguay's historical economic development. Port operations currently include container, bulk, fishing, cruise, passenger, vehicle and general cargo vessels. Montevideo is the only port in Uruguay designated for FFV usage under the PSMA.

Port facilities are located along the eastern coast of the bay, with the exception of the new Puerto Capurro Fishing Terminal and the oil terminal, both located in the north (Figure 16). The port facility has about 110 hectares of land area and more than 4,500 lineal meters of dock. Offshore from the eastern docks currently used by FVs is an extended stay anchorage area. This area is typically used by FFVs either before or after docking, but in some cases vessels may receive port services in this area without docking. The Puerto Capurro fishing terminal, which has 966 m of dock and berthing capacity for 50 ships, is expected to be operational from September 2024.



Figure 16: Aerial view of Montevideo port, with main areas accessed by foreign fishing vessels.

Services offered to fishing fleets in Montevideo include landing of catch, provisioning, bunkering, repairs and maintenance and crew exchange. Nevertheless, overall vessel repair capacity has substantially decreased since the collapse of the *Tsakos Industrias Navales* floating dock in December 2022, with the Greek company announcing in 2024 that it is ceasing operations in Uruguay.

In addition to the port itself, Uruguay manages five designated anchorage areas in shared waters with Argentina outside the 7 nautical mile exclusive jurisdiction zone (Figure 17). The three western anchorages are under the jurisdiction of the Port of Montevideo Coast Guard, while the two eastern anchorages fall under the jurisdiction of the Maldonado Coast Guard. While these areas are in waters of common use with Argentina, they are administered by Uruguay due to their proximity to the Uruguayan coastline (albeit both countries can use them freely). This delimitation was established by the Treaty of the Río de la Plata and its Maritime Front, and the zones created by the Administrative Commission of the Río de la Plata.



Figure 17: Anchorage areas within waters shared with Argentina. (Source: modified from Starboard Maritime Intelligence)

For several decades, Montevideo has been the main port for distant water fishing fleets (DWFF) operating on the high seas of the Southwest Atlantic (or FAO 41 statistical area). While tuna and other highly migratory species in this area are managed under ICCAT, there is no RFMO for demersal and other species (e.g. squid) in this area.

Since 1992, Montevideo has operated according to a "free port" customs and tax system which offers foreign fishing companies significant competitive advantages over other ports in the region. Under the free port arrangements, Montevideo port functions as a customs exclave, meaning that goods can be landed and re-exported while remaining exempt from all taxes, surcharges and authorisations applicable to imports. Together with the 'protectionist' policies of Argentina, the relative inefficiency of Brazilian ports and the absence in the Falkland Islands (Malvinas)<sup>41</sup> of suitable port facilities, these factors mean that Montevideo is a 'port of choice' for foreign fishing fleets operating in the region.

Montevideo is also the main port for the national industrial fishing fleet, which is prohibited from transhipping at sea.

For the purposes of AIS analysis, the port and service anchorages (i.e., Zona de Servicios) of Montevideo were separated due to the different activities vessels can perform in each (Figure 18). While entry into the port of Montevideo is required to land catch or tranship, a previous study indicated that FFVs and carriers were able to receive services unrelated to the movement of catches (e.g. repairs, crew changes, resupply, provisioning) in the service area<sup>42</sup>.

<sup>&</sup>lt;sup>41</sup> For this study we have followed the naming convention for the 'Falkland Islands (Malvinas)' recommended in the United Nation Secretariat's relevant Editorial Directive for documents prepared in English (<u>https://digitallibrary.un.org/record/277543?ln=en&v=pdf</u>). This does not imply any position on the sovereignty dispute over the islands.

<sup>&</sup>lt;sup>42</sup> MRAG Asia Pacific (2023) Port State Measures Before and After Study.





#### 3.2.2 Port Governance

#### 3.2.2.1 Authorities involved

The main authorities involved in port management are:

- the National Port Administration (Administración Nacional de Puertos);
- the National Directorate of Customs (Dirección Nacional de Aduanas);
- the Port of Montevideo Coast Guard (Prefectura del Puerto de Montevideo); and
- the National Directorate of Aquatic Resources (Dirección Nacional de Recursos Acuáticos).

The main functions and powers of each are discussed below.

**National Port Administration (***Administración Nacional de Puertos -ANP***).** The general powers of the ANP at the Port of Montevideo are to:

- (a) exercise management, conservation and development of the port.
- (b) advise the Executive branch in port matters; and
- (c) provide port services directly or indirectly<sup>43</sup>.

Within these powers, broadly the ANP is responsible for:

<sup>&</sup>lt;sup>43</sup> Port Law, N° 16246, of 08/04/1992, art. 11.

- leading, coordinating and overseeing activities related to the entering, visit and departure of ships; and the stowage, loading, unloading, transfer and storage of goods, containers and other objects;
- promoting port operational efficacy and efficiency;
- coordinating port services, systems and maintenance with relevant authorities, including migration, processing and customs formalities with the Coast Guard -*Prefectura Nacional Naval*<sup>44</sup>.

Under the ANP, the Port Captain is in charge of coordinating activities.

**National Directorate of Customs (***Dirección Nacional de Aduanas -DNA***)**. Broadly, Customs controls the movement of cargo and goods through the port. This includes clearing and supervising the movement of goods, settling Customs taxes and duties, preventing smuggling, compiling statistics and verifying that goods remaining within the port comply with relevant regulations<sup>45</sup>. For FFVs, Customs handles clearance forms when ships unload or if provisions or spare parts are loaded. However, where FFV catches remain within the free port area, Customs have no involvement.

**Port of Montevideo Coast Guard (***Prefectura del Puerto de Montevideo - PREMO***).** PREMO serves as the maritime compliance authority within the Montevideo Port area, as well as three anchorage areas in the Río de la Plata (Service area, West Anchorage and Waiting, and Alfa area). Broadly, its role is to exercise law enforcement functions, carry out investigations of vessel or ship incidents, and control compliance with port regulations in addition to international and national maritime rules related to safety of navigation of ships in the port.<sup>46</sup> PREMO does not have a specialized unit for fishing law enforcement and has limited resources (e.g. vessels) to monitor vessel activity (e.g. in the anchorage areas).

**National Directorate of Aquatic Resources (***Dirección Nacional de Recursos Acuáticos -DINARA***).** DINARA is Uruguay's main national agency for the management of fisheries and aquatic resources. In the context of port and fisheries management, its main powers include controlling the handling, transport and storage of fisheries products bound for internal and external markets, in coordination with other competent authorities. It also acts as the competent authority regarding food safety of the fishing products, and monitoring compliance with Uruguay's international fisheries commitments<sup>47</sup>.

Within DINARA, the Port State or RFMO ("OROPS") office is in charge of:

- 1. authorizing the port entry of FFVs or carriers as well as inspections;
- 2. controlling their unloading and issuing the certification of transhipment at a port area (European Community Catch Certificate, when their catches are sent to that destination);
- 3. validating the European Community Catch Certificate for national fishing vessels;
- 4. validating the legal Uruguayan Catch Certificate for national fishing vessels that intend to carry out exports to destinations other than the EU; and
- 5. authorizing certificates for imported catches, where they are to be processed and re-exported by a domestic processing facility.

<sup>&</sup>lt;sup>44</sup> Port Law, N° 16246, of 08/04/1992, art. 16.

<sup>&</sup>lt;sup>45</sup> Regulation of the Uruguayan Free Ports and their Relationship with the State Control Bodies. Approved by Decree Nº 455/994, of 06/10/1994 article 1, art. 50.

<sup>&</sup>lt;sup>46</sup> Decree N°.256/92, of 09/06/1992, Organisation and functions of the National Naval Prefecture [Coast Guard], art. 4.10.

<sup>&</sup>lt;sup>47</sup> Law of Declaration of General Interest. Conservation, Research and Sustainable Development of Hydro-biological Resources and Ecosystems, N° 19.175, art. 12

### 3.2.2.2 National policies/processes

Uruguay shares a Fishing Common Area (FCA) with Argentina - an area of 216,000 km<sup>2</sup> in the Atlantic Ocean, occupying its entire contiguous zone and almost all its EEZ (Figure 19). Created in 1973 by the Treaty of Río de la Plata and its Maritime Front, the FCA is managed by the Joint Technical Commission for the Maritime Front. Although each country may authorize foreign vessels to exploit living resources in their own side of the FCA, they are banned from crossing the maritime limit between both countries<sup>48</sup>. However, there are currently no FFVs authorized by either of the two States.



Figure 19: Fishing Common Area shared between Uruguay and Argentina.

With the exception of Argentine vessels, Uruguay's Fishing Law No. 19.175 requires that vessels wanting to fish in its EEZ must be registered on the national registry and flagged to Uruguay. Access to fish can also only be granted to individuals or legal persons based in Uruguay, although the Executive branch can grant exploratory or research fishing permits for short periods to foreign ships. In practice then, in order to be able to fish in Uruguay, a ship that is not Uruguayan or Argentine must reflag, and the holder of the permit must be a legally incorporated company registered in the country.

FFVs of all States have the right of innocent passage through the territorial sea and the right of free navigation in the contiguous zone and EEZ. We are not aware of any restrictions in the Fishing Act or regulations regarding the navigation of FFVs in national waters (e.g. maintaining a certain speed, maintaining fishing gears stowed and secured, etc).

Montevideo is the only port at the national level designated for FFV entry/use<sup>49</sup>. Uruguay receives ships that do not fish in its waters without limitation other than they must not fly the flag of the Falkland Islands (Malvinas) (given the sovereignty dispute and an agreement between both Argentina/Uruguay). However, vessels can enter under the United Kingdom flag. FFV catches must be landed exclusively in Montevideo, except where expressly authorized otherwise by DINARA.

Our understanding of arrangements for port entry and use are set out in Figure 20.

<sup>&</sup>lt;sup>48</sup> Treaty of Río de la Plata and its Maritime Front, art. 75

<sup>&</sup>lt;sup>49</sup> Decree 323/017, PSMA Regulation, art.5.


#### Figure 20: Port State control processes within Montevideo port.

Every foreign fishing or carrier vessel seeking to enter the Port of Montevideo must submit a request (usually via a shipping agent) through the International Trade Single Window (SW, or VUCE in Spanish). The VUCE is an electronic platform which facilitates information exchange on trade and serves as the main mechanism for the sharing of information amongst State agencies involved in the control and monitoring of FFV port entry and use. Advance requests for entry into port (AREP) must be received at least four days prior to arrival for FFVs and five days for foreign carrier vessels, according to PSMA regulation.<sup>50</sup> However, we understand that vessels often submit applications with less advance notice and are accepted.

As part of the AREP, the vessel must identify itself and the responsible shipping agency, state the reasons for its entry to port and provide details of the fish in its holds and the quantity to be landed/transhipped. It must also include:

- a statement by the Master that it has not been involved in IUU fishing;
- a customs clearance form;
- a pre-entry form (PMSA Annex A);
- the fishing license and temporary permits issued by its flag State or by third countries in the event the ship has perform fishing activities in waters of a third country; and
- a VMS certificate.

Carriers must also provide details of every donor vessel in their AREP.

In the VMS certificate, the flag State provides the details of the last trip, and certifies that during that period, the ship was monitored and did not perform activities other than those authorized by the relevant permits or licenses. In the case of toothfish, a CCAMLR *Dissostichus* Catch Document (DCD) is also required, if it is a target species or an incidental catch that exceeds a benchmark ratio of the total catch (which can be the case with trawlers).

<sup>&</sup>lt;sup>50</sup> Decree 323/017 PSMA Regulation, art. 7.

DINARA then verify if all conditions established by the PSMA are complied with and, if so, will issue an authorization. A series of alerts are received by the different authorities on the decisions made by DINARA. Following DINARA's approval, ANP can allow physical port entry. Once the certificates, statements and other authorizations are managed and approved, the SW system automatically sends the documents to the National Directorate of Customs. PREMO receives notifications on DINARA decisions by email but is not currently part of the SW system.

Once the vessel is in the port, DINARA's RFMO office carries out the initial inspection of paperwork for all ships. The criteria to determine whether a physical inspection is undertaken include:

- 1. Analysis of information provided prior to arrival;
- 2. Analysis of IUU lists of different RFMOs/organisations or of sanctions made known through RFMOs without the vessel having been IUU listed;
- 3. Compliance with port State control measures and recommendations from RFMOs regarding port inspections; and
- 4. Inspection of ships flying flags of convenience or flags of States suspected of weak control over their vessels.

If any suspicion arises from that analysis, an on-board inspection is carried out. DINARA also ensure it complies with physical inspection requirements of RFMOs to which Uruguay is a member (e.g. 100% CCAMLR, 5% ICCAT, etc)<sup>51</sup>.

According to the CCAMLR protocol, vessels entering with CCAMLR products have to declare them, with 100% inspection required of vessels declaring toothfish. We understand Uruguay completed 15 inspections of foreign vessels which landed Antarctic marine products in Montevideo between July 1, 2021 and June 30, 2022, and 17 between July 1, 2022 and June 30, 2023<sup>52</sup>. We understand this was the fourth and third most inspections among the parties in each year, respectively.

We understand that port use is authorized by DINARA's Port State office, although any denial of port use is elevated to the DINARA Director. PREMO authorizes port use in cases of forced arrival.

Requests for departure from port need to be made in person to PREMO. Departure arrangements are coordinated with ANP following relevant clearances (e.g. DINARA, Immigration).

Until the end of 2019, FFVs and cargo ships performed crew changes, reprovisioning and other operations at the anchorage areas on the Río de la Plata without giving formal notice to DINARA. Since 2020, PREMO enforced a rule establishing that *"arrival at port is understood as both the entry of a ship or vessel to the port facilities, as well as any operation with said port, carried out by a ship or vessel that is in waters under national jurisdiction"*. As a result, PREMO began issuing inward clearance for ships seeking to access anchorage areas and providing notice to DINARA of their arrival<sup>53</sup>.

Advance requests for entry into anchorage areas are required through PREMO, although this is a separate process to an AREP consistent with the PSMA. Accordingly, vessels using anchorage areas with the intention of later entering the port must still submit an AREP consistent with the process described above.

Fishing or support vessels arriving in anchorages or the service area with the intention of using these areas for services must complete an AREP (through the VUCE) with all the required information prior to arrival. We understand requests are assessed by the DINARA Port State office, with a recommendation made by the head of the Port State office to the DINARA Director, who has the authority to approve or deny port use. We

<sup>&</sup>lt;sup>51</sup> DINARA in response to a request of access to public data. File 2024-7-2-0000339.

<sup>&</sup>lt;sup>52</sup> These vessels would be longliners targeting and landing Patagonian toothfish.

<sup>&</sup>lt;sup>53</sup> Law N° 13637, art. 216

understand the only services not authorised in the service area are transhipment and bunkering. Nevertheless, the fact that a fishing vessel or fishing support vessel is anchored in any of the existing anchorage areas does not mean that it is going to request services or that it intends to enter the port of Montevideo<sup>54</sup>.

## 3.2.3 Foreign fishing vessel port usage

The principal FFVs visiting Montevideo are from Spain, South Korea, China and Chinese Taipei, with vessels also from Great Britain, Portugal and Norway. In 2023, data from the ANP indicates the Port of Montevideo received a total of 1493 arrivals from 215 industrial fishing and carrier vessels. This included 1117 arrivals of 44 national industrial fishing vessels, 358 arrivals of 162 FFVs and 18 arrivals of 9 foreign carrier vessels (Table 2).

<sup>&</sup>lt;sup>54</sup> DINARA in response to a request for public information (File 2024-7-2-0000611).

	2021					2022					2023				
Fleet	Vessels	Tot. arr.	Offl. arr.	Not offl.	Offload.	Vessels	Tot. arr.	Offl. arr.	Not offl.	Offload.	Vessels	Tot. arr.	Offl. arr.	Not offl.	Offload.
SPAIN															
TR	24	118	96	22	57,181	28	156	128	28	76,972	27	121	98	23	57,184
LL ICCAT	9	9	9	0	1580	4	11	11	0	1,023	3	12	11	1	998
TOTAL	33	127	105	22	58,761	32	167	139	28	77,995	30	133	109	24	58,102
SOUTH KOREA															
TR	7	13	2	11	380	6	8	1	7	75	9	20	2	18	250
LL CCAMLR	6	18	14	4	1,763	6	19	15	4	2,168	6	18	14	4	2,229
SJ	23	31	4	27	1,159	28	29	2	27	626	28	36	4	32	1,317
TOTAL	36	62	20	42	3,302	40	56	18	38	2,869	41	73	20	53	3,796
CHINA															
TR	22	24	0	24	0	16	17	3	14	650	27	33	14	19	6,532
SJ	9	10	0	10	0	32	35	2	33	910	26	33	4	29	753
TOTAL	31	34	0	34	0	48	52	5	47	1,560	53	66	18	48	7,285
CHINESE TAIPEI															
LL ICCAT	11	19	17	2	3,925	8	26	25	1	4,265	9	19	19	0	3,940
SJ	3	3	1	2	700	4	4	0	4	0	10	17	7	10	1,250
TOTAL	14	22	18	4	4,570	12	30	25	5	4,265	19	36	26	10	5,190
PORTUGAL															
LL ICCAT	2	13	13	0	2,118	2	11	11	0	1,815	2	13	12	1	2,161
TR											1	4	3	1	941
TOTAL											3	17	15	2	3,102
GB FI															

#### Table 2: Number of FFV arrivals, offloads, and individual vessels by nationality and type at Montevideo port, 2021-2023<sup>55</sup>

<sup>&</sup>lt;sup>55</sup> Based on data from ANP obtained through a Request for Access to Public Information. (Vessels = # individual vessels entering port; Tot. arr. = total number of arrivals; Offl. Arr. = # of arrivals involving offloading; Not offl. = # arrivals not involving offloading; Offload. = volume offloaded in MT; TR: trawlers; LL: longliners; SJ: squid jiggers; F: carrier: fish carrier; GC: General Cargo; Supp. V.: support vessels.

TR	18	35	0	35	0	16	39	0	39	0	15	28	1	27	150
ш	1	3	0	3	0	1	3	1	2	300					
TOTAL	19	38	0	38	0	17	42	1	41	300	15	28	1	27	150
UK ST HELENA															
LL	3	7	0	7	0	3	3	0	3	0					
STH AFRICA															
TR											1	1	0	1	0
BELIZE															
TR	1	1	0	1	0	1	2	2	0	1,420					
NORWAY															
TR	2	3	2	1	3,422	2	4	2	2	1,800					
RUSSIA															
TR											1	4	2	2	1250
TR TOTAL	74	194	100	94	60,983	71	226	136	90	80,917	81	211	120	91	66,307
LL TOTAL	32	69	53	16	9,386	24	73	63	10	9,571	20	62	56	6	9,328
SJ TOTAL	35	44	5	39	1,859	64	68	4	64	1,536	64	86	15	70	3,320
FFVs TOTAL	141	307	158	149	72,228	159	367	203	164	92,024	165	359	191	167	78,955
F.CARRIERS	Vessels	Tot. arr.	Offl. arr	Not offl.	Offload.	Vessels	Tot. arr.	Offl. arr	Not offl.	Offload.	Vessels	Tot. arr.	Offl. arr	Not offl.	Offload.
PANAMA	2	4	0	4	0	2	2	1	1	4,200	1	1	0	1	0
VANUATU	1	6	6	0	21,622						1	1	0	1	0
CHINA											2	3	3	0	13,452
BAHAMAS											2	4	0	4	0
LITHUANIA	1	2	0	2	0	2	5	0	5	0	1	1	0	1	0
NORWAY	1	5	4	1	11,590	1	7	7	0	49,524	1	7	6	1	50,151
G. C.															
NETHERL.	1	2	2	0	6977										
SUPP V TOT.	6	19	12	7	40,189	5	14	8	6	53,724	8	17	9	9	63,603
Grand total					112,417					145,548					142,558

This was broadly consistent with numbers detected via AIS, with >321 FFV entries into Montevideo port identified annually between 2021 and 2023 (Figure 21). Differences in number of port visits between these data sources occur primarily because of the way an AIS event is determined<sup>56</sup>, which often results in multiple AIS events for a single real-world event.



Location - Port - Service



Entry events into the services area identified by AIS (Figure 21) occur primarily where the vessel spends time in this area on their way to or from the port. Very few FFVs use the services area only. For example, an analysis of AIS data through the Starboard platform indicated that, of the vessels registered by PREMO to enter the service area in 2023, only 6 did not also enter the port (at least 2 of these were to disembark crew members requiring medical attention). To that end, entries into the port and services area should not be summed to estimate a total number of FFV arrivals in the context of the PSMA (in practice, there will be substantial overlap, and FFVs may also move between anchorages).

Among the FFVs, ANP data indicated Spanish vessels accounted for the highest number of arrivals in 2023 (133, 37% of the total FFV fleet), followed by vessels flagged to South Korea (73 arrivals; 20%), China (66; 18%), Chinese Taipei (36; 10%), the Falkland Islands (Malvinas) under the flag of Great Britain (28; 8%) and Portugal (17 arrivals; 5%). Again, this was consistent with AIS data which showed Spanish flagged fishing vessels were the main users of Montevideo between 2021 and 2023, registering 128-167 port entries depending on the year (Figure 22). Fishing vessels flagged to the Falkland Islands (Malvinas) and Portugal primary entered the port area, rather than the service area (Figure 22). Conversely, South Korean and Chinese flagged vessels regularly entered both port and service areas, as did Chinese Taipei vessels albeit to a lesser degree (Figure 22). Notably, South Korean and Chinese flagged vessels also often remained in the west anchorage area (Figure 17) for many days/weeks.

<sup>&</sup>lt;sup>56</sup> i.e., a single event requires classification rules outlined in Approach to be met, the continual transmission of AIS, and a single vessel identity to be maintained (i.e., no change in name, callsign, flag etc. while in port).



Figure 22: Number of AIS detected FFV entries to Montevideo port and services area, by flag, 2021-2023.

Among the FFVs, Spanish vessels accounted for the highest volume of landings, with 58,102 t of product landed in 2023 (Table 2). This is broadly driven by the fact that, unlike Asian vessels, Spanish vessels are required by their flag State to unload, reprovision and refuel in port.

ANP data indicates that half of the FFVs entering in 2023 were trawlers (80), followed by jiggers (64) and longliners (20) (Table 2). This is also generally consistent with trends in vessel visits by gear type across the 2021-2023 period identified through AIS data (Figure 23).



Figure 23: Number of AIS detected FFV entry events to Montevideo port and services area, by gear type, 2021-2023

The fishing activity of trawlers and squid jiggers which enter the port is typically concentrated in the so-called 'Mile 201' immediately outside the Argentine EEZ, or in Falkland Islands (Malvinas) waters (although before and/or after that they also operate in the Mile 201 area). Trawlers catch squid, toothfish (*Dissostichus spp.*), whitemouth croaker, hake – common (*Merluccius hubbsi*), Patagonian (*Merluccius patagonicus*) and Southern (*Merluccius australis*) - Southern blue whiting (*Micromesistus australis*), Patagonian blennie, skate, ray, and

sole<sup>57</sup>. Most vessels of Spanish origin have a fishing agreement with Falkland Islands (Malvinas) and tend to be better monitored than others. Some carry observers, while the harvest of toothfish in mixed species catches means that landings are subject to strict inspections. In practice, CCAMLR authorises a 5% bycatch of toothfish. During inspections, DINARA officers calculate catch composition – toothfish in catches that do not exceed the 5% threshold can be exported like any other species; if the 5% threshold is exceeded, the CCAMLR Catch Documentation system is applied. We understand Spanish trawlers do not usually exceed 5%.

Chinese fleets in the SW Atlantic operate with less independent oversight. Catches are generally transhipped at sea, mainly to Panamanian and Chinese flagged carriers, which transport fish to Chinese or other Asian ports. Given the absence of an RFMO, there is limited reporting of catch and effort. Chinese vessels largely enter Montevideo when no other alternative exists, principally for repairs and maintenance, and crew health issues. Interestingly, DINARA data for 2016-2021 shows that, while both Spanish and Chinese trawl vessels fished in similar areas at similar times, only the Spanish fleet declared catches of toothfish. DINARA staff noted that in the absence of an RFMO, the independent oversight of the ships operating in the Argentine Mile 201 depends on their capacity to inspect vessels<sup>58</sup> (which is limited).

Among the longliners visiting in 2023 (Table 2), 14 mainly catch tuna from Uruguay northwards in ICCAT waters. The remaining six longliners are under CCAMLR, some because they are authorised to fish in Antarctic waters and others because they catch toothfish in the Southwest Atlantic. Toothfish are regulated by CCAMLR, which requires the ports of the State parties to have the same controls on fleets fishing for protected species inside or outside Antarctic waters. However, the number of longliners entering the port is small compared to trawlers and jiggers.

Spanish trawlers accounted for the highest volume of landings in 2023, contributing more than a third of the total volume of catches of the foreign fleet, including cargo vessels (Table 2). These vessels typically target common hake. With seven arrivals in 2023, a Norwegian cargo vessel, which unloads krill meal fished and processed in the Antarctic by Norwegian FVs, accounted for another third of the total landings (more than 50,000 tonnes). The remaining third is mainly divided between ICCAT longliners (Chinese Taipei, and a handful of Portuguese and Spanish), South Korean longliners, Chinese trawlers and Chinese support vessels (listed in the ANP register as fishing vessels). In addition, a fleet of Chinese Taipei squid vessels belonging to the same corporate group (An Fong) began landing catch in Montevideo in 2023. These vessels have remained at the anchorage area north of the Waist Dyke until the next squid fishing season.

Broadly, the motives and dynamics of access to the port by FFVs can be categorised as follows:

 one set of vessels could be called the 'Montevideo fleet'. These vessels do not visit any other port. They are typically (i) Chinese and South Korean trawlers that only fish in the area adjacent to the Argentine EEZ and typically tranship at sea<sup>59</sup>, calling to port once or twice a year for crew changes, reprovisioning, repairing and maintenance, and (ii) Chinese Taipei and Portuguese ICCAT longliners,

<sup>&</sup>lt;sup>57</sup> Based on data on commercially valuable species caught by the Argentine trawler fleet within the EEZ, in whose adjacent area on the high seas these DWF trawlers operate.

<sup>&</sup>lt;sup>58</sup> DINARA inspectors during a Global Fishing Watch training workshop in Montevideo, June 7<sup>th</sup>, 2022.

<sup>&</sup>lt;sup>59</sup> While these vessels typically tranship at sea, offloads from Chinese trawlers increased in 2022/2023.

which come in regularly to unload their catches. This group, especially the ICCAT vessels, depends on Montevideo for their logistical and provisioning operations;

- 2. another set of vessels typically South Korean, Chinese and Chinese Taipei squid jiggers stay each year in extended stays from late autumn or winter for maintenance and repairs, as well as crew changes. These vessels typically tranship their catch at sea;
- 3. Spanish trawlers typically enter port in October, before the start of the squid season, to carry out repairs or maintenance. Trawlers operating under Falkland Islands (Malvinas) licences call at Montevideo on their way to or from the ports of Vigo and Marin in Spain; and
- 4. finally, a small number of vessels call for a specific reason (e.g. force majeure), but do not return. Chinese jiggers are the most frequent vessels in this category, although other vessels may access the port under these circumstances.

It is worth noting that since the collapse of the *Tsakos* floating dock, Chinese and Spanish trawlers and South Korean jiggers that have been frequent users of Montevideo can be seen by AIS entering shipyards in Rio de Janeiro and Rio Grande port, Brazil.

## **Carrier vessels**

Amongst the carrier vessels, most port entries over the 2021-2023 period were by two vessels flagged to Norway, which are known to transport krill from Antarctic trawl vessels and land this krill in Montevideo (Figure 24). Both vessels were CCAMLR authorised, and transhipments involve the recording of the catches transferred to the carrier vessels, as required by the Norwegian Directorate of Fisheries under regulation J-208-2017. Landings made in Uruguay are reported through sales notes and cross-referenced against transhipment declarations (Hønneland et al., 2020). All krill fishing trips must have an observer on board the vessel, and where possible, a scientific observer will also be present to record all catches and discards (Hønneland et al., 2020).



Figure 24: Carrier vessel entry events to Montevideo port by flag State, 2021-2023, according to AIS data.

## 3.2.4 Fishing activity and governance

#### Trawl

#### **Spanish trawlers**

Spatial patterns of fishing effort for Spanish trawlers preceding Montevideo port entry in the 2021-2023 period showed that most effort occurred on the high seas adjacent to the Argentinean EEZ, with lower levels of fishing effort occurring within the Falkland Islands (Malvinas) EEZ (Figure 25). Most fishing effort prior to Montevideo port entry occurred between February and October.



Figure 25: Spanish flagged trawl vessel activity preceding Montevideo port entries, 2021-2023 (left) and encounters prior to Montevideo port entry (right).

Spanish trawlers land their catches in the Falkland Islands (Malvinas) and Montevideo, and consistent with this, there were no carrier—fishing vessel encounters evident on trips terminating in Montevideo between 2021 and 2023, according to AIS (Figure 25).

#### **Chinese and South Korean trawlers**

Chinese and South Korean flagged trawl vessels exhibit similar spatial patterns of fishing effort along the Argentinean EEZ boundary prior to Montevideo port entry (Figure 26). At least two of the South Korean flagged trawlers that fished the high seas adjacent to the Argentinean EEZ and later entered Montevideo are known to target horse mackerel and squid during the first few months of the year (Addison et al., 2021). These vessels then trawl for krill from late May-June in the CCAMLR area, which is transhipped to carriers landing catch in South Korea or Japan (Addison et al., 2021). These South Korean trawlers then fish the high seas off Argentina again from June-September, albeit the exact timing of high seas vs. CCAMLR fishing is variable between years. Nevertheless, these species may not be representative fishery targets of the entire fleet. The UN FAO reports that between 2015 and 2021, the most common species landed by South Korea from FAO area 41 were various squid species, hakes, toothfish, rays and marine fishes nei (FAO, 2020). According to the FAO, Chinese catch from area 41 over the same period comprised >99% Argentine shortfin squid (FAO, 2020).

While fishing the high seas adjacent to Argentina's EEZ, both the Chinese and South Korean flagged trawl fleets regularly met with carrier vessels, meaning their catch is likely being landed at other global ports, in addition to Montevideo (Figure 26).



*Figure 26: South Korean and Chinese flagged fishing vessel activity prior to Montevideo port entry, 2021-2023, according to AIS.* 

Fishing-fishing vessels interactions were more common in Chinese and South Korean trawl fleets than in the Spanish fleet. These meetings were not flag exclusive, with 37% and 18% respectively of Chinese and South Korean trawler encounters with fishing vessels occurring with vessels of the opposite flag (i.e., Korean-Chinese or Chinese-Korean) between 2021-2023.

#### Falkland Islands (Malvinas) trawlers

Trawlers flagged to the Falkland Islands (Malvinas) use Montevideo port, but do not generally land catches. These vessels primarily target squid (*Doryteuthis gahi*) fished within the Falkland Islands (Malvinas) EEZ and on the high seas adjacent to Argentina's EEZ. Compared to other fleets, Falkland Islands (Malvinas) flagged vessels displayed comparatively low fishing effort (max. 200hrs per grid cell) prior to Montevideo entry (noting that Falkland Islands (Malvinas) ships returned to the Spanish ports of Vigo and Marin a month before the ordinary closure of the season in 2023 due to low squid biomass<sup>60</sup>). In 2021 and 2022, due to limited air services to the Falkland Islands (Malvinas) through the COVID pandemic, we understand this fleet increased its use of Montevideo port to undertake crew changes. No encounters were identified through AIS between trawlers flagged to the Falkland Islands (Malvinas) and other fishing or carrier vessels on trips that terminated in Montevideo (Figure 27).



Figure 27: Falkland Island (Malvinas) flagged trawl vessel fishing effort preceding Montevideo port entry, 2021-2023.

## Squid jig

#### South Korean jiggers

Most squid jigger visits to Montevideo 2021-2023 were by South Korean flagged vessels, which fished primarily around the Falkland Islands (Malvinas) prior to Montevideo port entry (Figure 28). This fleet primarily targets *Illex* and *Martialia* Squid, according to their Falkland Islands (Malvinas) licenses, and fish an annual season which runs from December to May but most effort occurs between March and May. During the 2021-2023 fishing seasons, South Korean squid jiggers primarily used Stanley, Falkland Islands (Malvinas) as their main port. Nevertheless, lower levels of fishing activity were evident on trips where Montevideo was the terminal port (Figure 28). These trips occurred primarily in January and February, and most South Korean squid jig vessels remained docked in Montevideo port between fishing seasons (i.e., from June-December).

<sup>&</sup>lt;sup>60</sup> https://en.mercopress.com/2023/08/31/consistent-decline-of-biomass-forces-falklands-early-closure-of-loligo-season



*Figure 28: South Korean flagged squid jigger fishing activity (left) and encounters (right) on trips that terminated in Montevideo, 2021-2023, according to AIS.* 

The South Korean squid jig fleet tranships both inside and outside of the Falkland Islands (Malvinas) EEZ to a mix of South Korean and Panamanian flagged carrier vessels (Figure 29). Illex squid are usually transported as frozen blocks to processing facilities in Asia, with most squid processing occurring in China (Harte et al., 2018).



*Figure 29: South Korean squid jig encounters between FVs (left) and carrier vessels (right) prior to Montevideo port entry, 2021-2023. All FV-FV encounters prior to Montevideo entry were between two South Korean flagged vessels.* 

#### **Chinese jiggers**

Chinese squid jiggers displayed a very different pattern of fishing effort, with the fishing activity of most (~80%) of vessels that visited Montevideo between 2021 and 2023 extending across the known 'squid route' from the SW Atlantic to the SE Pacific (Figure 30). This route involves vessels fishing the SW Atlantic off Argentina for the first half of the year, before transiting to the SE Pacific for the second half of the year. When these vessels did return to China, the journey typically occurred at the end of the Atlantic squid season, with vessels departing the South American coast for China between April and June (stopping at various ports along the way, like the route plotted in Figure 31).

Chinese squid jiggers typically tranship their catch at sea, evident through the large number of fishing vesselcarrier interactions detected through AIS (Figure 30). A large number of encounters between fishing vessels at sea were also detected. Anecdotal information from Chinese fishing companies indicated these were likely to be exchanging supplies.



Figure 30: Chinese flagged squid jig fishing effort (left) and encounters (right) prior to Callao, Punta Arenas, or Montevideo port entry, 2021-2023, according to AIS.

The remaining ~20% of vessels that visited Montevideo exhibited a different pattern of activity between 2021 and 2023. These vessels fished the high seas off the Argentinean EEZ during the first half of the year, but then transited to North Pacific waters under North Pacific Fisheries Commission (NPFC) management during the second half of the year to fish for neon flying squid and/or pacific saury (Figure 31). The Chinese squid jiggers plotted in Figure 31 are part of a larger fleet exhibiting this activity on an annual basis and are discussed further in the Cape Town section. Anecdotal information from Chinese companies indicated that most vessels offload catch in China and rest, prior to resuming fishing in NPFC waters. They also noted that most companies prefer to use their own fishing vessels to transport catch where possible, rather than use carriers which add cost.



Figure 31: Activity of Chinese squid jiggers that visited Montevideo between 2021 and 2023, and fished an annual season between SW Atlantic high seas and the northern Pacific.

Waters of the SE Pacific fished by Chinese vessels are under control of the SPRFMO, and most Chinese flagged squid jiggers that fished in this area were able to be matched to the authorised list of vessels on the SPRFMO vessel register. Nevertheless, ~9% of Chinese squid jig vessels (n=4) that visited Montevideo 2021-2023 and fished in SPRFMO waters (according to AIS and GFW classification rules) could not be matched to the SPRFMO vessel register according to name or callsign. China has self-reported that all vessels are authorised in Implementation Reports of the SPRFMO CMMs 2021-2023, so these may have occurred due to AIS inaccuracies.

Chinese squid jiggers largely use Montevideo for services (e.g., refuelling, reprovisioning, crew changes) and in cases of emergency, rather than to land catch. Instead, these vessels largely tranship their catch to carrier vessels, which in turn transport the catch back to China. AlS data suggests most of the carrier vessels which met with the Chinese squid jig fleet using Montevideo port were flagged to either China or Panama (Figure 32). Many of the latter carrier vessels are likely to be controlled by Chinese owned companies.



Figure 32: AIS detected Chinese squid jig encounters between FVs (left) and carrier vessels (right) prior to Montevideo port entry, by flag, 2021-2023.

#### **Chinese Taipei jiggers**

The relatively low use of Montevideo by the Chinese Taipei flagged squid jig fleet between 2021 and 2023 was somewhat surprising given >70 Chinese Taipei vessels fish with Falkland Islands (Malvinas) licences on an annual basis. This is more than the South Korean and Spanish fleets combined, which both use Montevideo frequently. Nevertheless, Chinese Taipei squid jiggers fished similar waters as South Korean and Chinese vessels prior to Montevideo port entry (i.e. within the Falkland Islands [Malvinas] EEZ and 'Mile 201' adjacent to Argentina's EEZ) (Figure 33).



*Figure 33: Chinese Taipei flagged squid jigger fishing activity (left) and encounters (right) on trips that terminated in Montevideo, 2021-2023, according to AIS.* 

More broadly, Chinese Taipei squid jig vessels fished the Atlantic for the first half of the year, then migrated to the north Pacific, fishing the NPFC Convention Area for the second half of the year (similar to the Chinese squid jig fleet; Figure 31). We understand that Chinese Taipei flagged squid jiggers primarily visit Montevideo for vessel maintenance, crew changes and other services, rather than landing catch which generally occurs to carriers in Berkeley Sound or in the port of Stanley, Falkland Islands (Malvinas). It is unknown whether some vessels transport catches back to Chinese Taipei (or elsewhere) themselves on the way to NPFC managed waters.

## Drifting longlines

#### **Spanish longliners**

The Spanish longline fleet that used Montevideo 2021-2023 fished adjacent to the Brazilian EEZ (Figure 34), and were authorised to target swordfish, albacore and tropical tunas in the ICCAT area. Spanish longline vessels targeting swordfish have long landed catch in Montevideo (and Mindelo, Cape Verde, Walvis Bay, Namibia and Horta, Portugal) and no at sea transhipment of catches takes place (Bureau Veritas Iberia, 2016). After swordfish catch was offloaded in Montevideo, it was loaded into a bonded container and shipped to Vigo,

Spain by reefer, where unloadings are monitored and full traceability back to catching vessel is required, at least historically (Bureau Veritas Iberia, 2016).

Montevideo is an authorised port for foreign vessel use under ICCAT arrangements and no carrier-fishing vessel encounters were evident in Spanish drifting longline vessel AIS data for the 2021-2023 period (Figure 34). ICCAT Recommendation 2018-09 requires authorised vessels to provide information on the vessel, its fishing authorisations, transhipments and catch at least 72-hours prior to arriving in port<sup>61</sup>.



*Figure 34: Spanish drifting longline fishing activity (left) and encounters (right) on trips that terminated in Montevideo, 2021-2023, according to AIS.* 

## **Chinese Taipei longliners**

Chinese Taipei longline vessels showed similar patterns of fishing activity to that of Spanish longline vessels (Figure 35), and were also authorised to catch swordfish, albacore and tropical tunas in ICCAT waters. While Chinese Taipei longliners enter the port of Montevideo to unload their catches, fishing-carrier vessel encounters were also evident on trips that terminated in Montevideo between 2021 and 2023 (Figure 35). The single carrier vessel that serviced the Chinese Taipei drifting longline fleet prior to Montevideo port entry was flagged to Panama and was authorised under ICCAT at the time of these encounters. Nevertheless, this carrier vessel did not enter Montevideo between 2021 and 2023, indicating this catch is distributed to other global ports. All transhipments of ICCAT species which occur outside of port must occur between eligible fishing vessels (>20m in length) and be monitored under the ICCAT Regional Observer Programme for transhipment.

<sup>&</sup>lt;sup>61</sup> https://www.iccat.int/Documents/Recs/compendiopdf-e/2018-09-e.pdf



*Figure 35: Chinese Taipei flagged drifting longline fishing activity (left) and encounters (right) on trips that terminated in Montevideo, 2021-2023, according to AIS.* 

## 3.2.5 Movement of fish

Of the fisheries products landed by FFVs, we understand none of it is processed locally or sold on the domestic market (with the exception of blue shark which is processed locally for export of fins). These products do not enter Uruguay for customs purposes, remaining within the free port area (either for immediate shipping or in temporary cold storage) prior to export.

Of the main fisheries products landed by FFVs in Montevideo, squid is exported, as is toothfish (destinations unknown). Spanish trawlers, which target common hake, export all of it for consumption in the EU. They reportedly unload the fish in bulk in frozen sacks sorted by size and species, ready for export via container to Europe<sup>62</sup>.

In general terms, Montevideo's free port regime promotes the export of goods of foreign origin by sea without leaving the port facilities. We understand Montevideo is the only port in the SW Atlantic area to offer these arrangements. To that end, moving catches from high seas fishing zones to export markets through Montevideo port offers substantial advantages for FFVs compared to other ports in the region. The free port regime also provides an incentive for FFVs to move product through the port to export markets without processing locally.

## 3.2.6 Indications of non-compliance

## 3.2.6.1 RFMOs

A unique feature of Montevideo is that most FFVs calling into the port operate in the 'Mile 201' area adjacent to Argentina's EEZ, one of the few remaining areas of the global high seas unregulated by an RFMO. That is partly due to the ongoing disagreements between Argentina and the UK over sovereignty of the Falkland Islands (Malvinas), which used to be a fishing zone for the Argentine fleet. Argentina refuses to negotiate an RFMO with the UK because it considers that it would be accepting its status as a coastal State. Joint management is impossible without the participation of all coastal States. In that context, there are no internationally agreed fishing regulations, including quotas or fleet capacity restrictions, which apply to species harvested in this area (outside of ICCAT regulations for tuna and tuna-like species).

<sup>&</sup>lt;sup>62</sup> Inteview with Oscar Pin

To that end, fishing activity in the south west Atlantic would be considered to be 'unregulated' consistent with the FAO IPOA IUU definition of 'IUU' to the extent that "...such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law"<sup>63</sup>.

## 3.2.6.2 Other indications of non-compliance

Of those vessels that visited the port in 2023, available records indicate:

- Three Spanish trawlers, one South Korean trawler, one Portuguese trawler, and one Chinese squid vessel (4% of the total) <sup>64</sup> are included in the list of vessels caught and fined by the Prefectura Naval Argentina<sup>65</sup>. Several have been sanctioned for varying infractions in the past. For example, the Portuguese trawler Calvao has a long record of infractions between 2005 and 2016 against Northwest Atlantic Fisheries Organization (NAFO) CMMs, including under-reporting of catches in logbooks and directed fishing for species with a bycatch limit<sup>66</sup>. Caught in 2020 for illegal fishing in Argentina's EEZ, it returned to the Southwest Atlantic after three years in Portugal;
- Two South Korean longliners<sup>67</sup> using the port breached a CCAMLR CMM in December 2017 by launching gear 24 hours after the season closing<sup>68</sup>;
- Four Spanish trawlers with a history of non-compliance with NAFO's CMMs between 2004 and 2006, and still belonging to the same companies, visited the port<sup>69</sup>;
- The Spanish trawlers that were in Mile 201 off Argentina in 2020 and 2021 were fined by the Spanish Merchant Navy for not transmitting AIS, following a report by Oceana<sup>70</sup>. All are frequent users of the port;
- In the years 2017 to 2021, 21 of the 162 FFVs that visited the port in 2023 arrived at the port without first making a prior request to DINARA, as required by Decree 94.017 of 3 April 2017. DINARA reportedly has no record of these arrivals. Almost all of the vessels are trawlers (19 = nine Spanish, six Chinese, two South Korean and two from the Falkland Islands [Malvinas]), many of which landed catch without DINARA being formally aware that they had entered; and
- Finally, 23 vessels that entered in 2023 visited the anchorage areas during 2017 to 2021 without DINARA apparently being aware of their arrivals or, in most cases, that they were receiving services. This was mainly the case for Chinese vessels<sup>71</sup>. Also in 2023, two Chinese Taipei jiggers belonging to the same business group tried to enter without having made a prior arrival request to DINARA, but were detected.

<sup>&</sup>lt;sup>63</sup> https://openknowledge.fao.org/server/api/core/bitstreams/a80c3bfb-1d5b-4ee6-9c85-54b7e83986a2/content

<sup>&</sup>lt;sup>64</sup> José Antonio Nores (21/2/2005), Playa Pesmar Uno (4/2/2018), Piscator (17/1/2013), Oyang No.77 (7/2/2019), Calvao (3/5/2020), and Lu Rong Yuan Yu 668 (28/4/2020).

<sup>65</sup> Available at: https://www.argentina.gob.ar/prefecturanaval/resumen-operativo/buques-capturados

<sup>&</sup>lt;sup>66</sup> NAFO Notice of Infringements. Available at: <u>https://www.dfo-mpo.gc.ca/international/mcs-citations-eng.htm</u>; NOAA *Improving International Fisheries Management Report to Congress* (February 2015)

<sup>&</sup>lt;sup>67</sup> Southern Ocean and Hong Jin 701.

<sup>&</sup>lt;sup>68</sup> NOAA Improving International Fisheries Management Report to Congress (2019)

<sup>&</sup>lt;sup>69</sup>NAFO Notice of Infringements. Available at: <u>https://www.dfo-mpo.gc.ca/international/mcs-citations-eng.htm</u>

<sup>&</sup>lt;sup>70</sup> Dirección General de la Marina Mercante de España (2023) ASUNTO: Resolución del procedimiento administrativo sancionador 22-470-0160. Available at: <u>https://europe.oceana.org/wp-content/uploads/sites/26/2023/12/Resoluciones-AIS-apagado.pdf</u>

<sup>&</sup>lt;sup>71</sup> The last three paragraphs arise from public data obtained from ANP, DINARA and PREMO from 2016 to 2021, processed as part of a project with National Geographic Pristine Seas, published in *Port State Measures Before and After Study* (MRAG Asia Pacific, 2023) and reprocessed for their presentation in the present section.

## 3.2.7 Measures to strengthen port State controls

#### Broadening participation in the Foreign Trade Single Window

At present, neither the Coast Guard (PREMO) or the National Navy Fleet Command (COMFLO), which exercises control over jurisdictional waters and exchanges data on ships and their activities with DINARA, are part of the SW system. In the Coast Guard's case, communications with other authorities are performed manually through email or telephone.

Experience indicates this can lead to lack of coordination. For example, in the fall of 2023, COMFLO advised DINARA that Chinese Taipei squid jigger *An Fong 138* had accessed Montevideo two days after a non-authorized encounter with a Chinese Taipei cargo ship inside the EEZ. The jigger had also not requested the authorization prior to arrival (for which it was fined). In this instance, COMFLO noticed something that it could have verified with DINARA earlier if it had access to the SW. All this suggests that (i) it would be beneficial for the other agencies (PREMO and COMFLO) to have access the SW and (ii) while both DINARA and ANP have had access to the SW since at least mid-2023, coordination between them must still be improved.

While we understand that advances in coordination between PREMO and DINARA in the last four years have allowed the DINARA to register arrivals in anchorage areas, access to the SW by PREMO would still be beneficial to strengthen the exchange of information between both authorities.

Three other limitations regarding information sharing between agencies are also important to highlight:

- (i) There is no systematized record of all the documents submitted by the fishing vessels entering Montevideo (different documents are submitted to different authorities and not available collectively through the SW);
- (ii) there is no record of criminal background information on which to base intelligence analysis; and
- (iii) there is no commonly available satellite-monitoring platform that can be used by all the agencies. At present, DINARA requests paper VMS certificates (but no tracks). No common AIS-based platform is used.

To that end, broadening participation in the SW and strengthening arrangement for coordinated information sharing amongst agencies should be considered.

## **DINARA Staffing**

One issue faced by DINARA is a reduction in staff numbers over time. We understand that in 2005, it had about 150 officials; today it has around 107. The Port State section has two inspectors and one manager. Given the limited resources available for inspection, DINARA understandably prioritises port visits for which a mandatory inspection is required (e.g. trawlers who declare that they will unload Patagonian toothfish).

Although DINARA collects a fee for inspections of FFVs, we understand the funds collected can only be used for spending on infrastructure and machinery, rather than hiring personnel.

To that end, it would be helpful to amend arrangements such that fees charged by DINARA for the inspection of FFVs could be used to hire additional staff. Given the majority of FFV entries into Montevideo are from the fleet fishing at Mile 201, increasing staff numbers would strengthen DINARA's capacity to monitor fleets fishing in one of the few remaining unregulated parts of the world's oceans. Implementation of a formal, rigorous risk assessment process may also assist in targeting limited inspection resources.

## Coordinating Committee on the Prevention of Illegal Fishing

Finally, the PSMA regulations created a Coordinating Committee on the Prevention of Illegal Fishing made up of one representative each from the Ministry of Livestock, Agriculture and Fishing (the Director of DINARA, who presides over it and calls meetings), the Ministry of Transport and Public Works, the Foreign Affairs Ministry and the Defence Ministry. The objective of the Committee is to coordinate implementation of the PSMA, as well as any follow up enforcement and propose necessary improvements to systems over time<sup>72</sup>. However, we understand the Committee has not met in the past three years.

To that end, Uruguay should consider reinvigorating this committee to assist in strengthening the practical implementation of the PSMA.

## 3.3 Cape Town (South Africa)

## 3.3.1 Overview of port

Cape Town harbour is strategically positioned at the southern tip of the African continent, along one of the world's main trade routes between the Atlantic and Indian Oceans. The first protected harbour was built in 1860 with the construction of the first breakwater that developed into the Victoria and Alfred Basin. Today, there are there are 34 berths in total including layby berths (Figure 36). Anchorage areas are located to the north-east and east of the harbour.



Figure 36: Cape Town harbour (Source: Google Earth)

The Duncan Dock has several multipurpose quays for general cargo, including a dedicated cold store for fish products with docking space for up to six FFVs. The dock is also used by carrier vessels for in-port transhipment, while FFVs also land fish into containers in this area. The adjacent Victoria and Alfred Basins have a variety of berths available for local fishing vessels, ship and boat building or repairs, as well as berthing of smaller vessels, including research vessels and visiting naval ships.

In addition to handling cargo, Cape Town harbour provides ship repair facilities, with the largest drydocking facilities in southern Africa. The Duncan Dock repair quay and the synchro-lift is regularly used by FFVs for repairs and maintenance, painting etc.

<sup>&</sup>lt;sup>72</sup> Decree N° 323/017, PSMA Regulation, art. 6.

Due to the geographic location of South Africa, a significant number of vessels transit through the EEZ enroute from east Asia to fishing grounds in west Africa or the south Atlantic. The port is frequently used by transiting fishing vessels who stop for logistical support as much as fish landing. Asian fishing fleets also often use Cape Town as a transhipment, logistics and repair base.

For the purposes of analysing FFV visits for this study, two key areas were considered:

- 'Port areas', which include all docks/berths located inside the port of Cape Town, where vessels can land fish, tranship, and receive various services (e.g., provisions, fuel, maintenance etc.); and
- 'service areas' anchorages located outside the harbour where vessels can receive services but not land or tranship their catches (Figure 37).



Figure 37: Cape Town port and service area anchorages used by FFVs 2021-2023, according to AIS.

## **3.3.2 Port Governance**

## 3.3.2.1 Authorities involved

Cape Town harbour is owned and operated by South Africa's Transnet National Ports Authority (TNPA) which is one of five operating divisions of Transnet SOC Ltd, a state-owned company.<sup>73</sup> TNPA operates within a legislative and regulatory environment created by the National Ports Act 2005 (NPA) and the associated Port Rules (Government Notice No. 255 6 March 2009). Under the Port Rules, the Harbour Master retains authority over all port activities relating to marine safety for all vessels coming into the harbour. This includes the legislative authority to decide on port entry, as well as berthing and tug services in the port. The Harbour Master's Office is also often referred to as 'Port Control'.

The Port Rules also make provision for the Authority to enter into co-operation agreements with other government departments required to perform a function within the harbour. These departments include:

<sup>&</sup>lt;sup>73</sup> https://www.transnetnationalportsauthority.net/OurPorts/Cape%20Town/Documents/(TNPA)%20Cape%20Town%20Brochure Ir.pdf

- the Department of Forestry, Fisheries, and the Environment (DFFE), having control over all fishing or fishing related vessels using the harbour;
- the Department of Home Affairs, with control over foreign crew and immigration;
- the South African Revenue Service (SARS), with control over customs and the import and export of fisheries products;
- the South African Police Services, having control over harbour security; and
- the South African Maritime Safety Authority (SAMSA), under the Department of Transport (DOT), who lead on maritime safety inspections and have a Memorandum of Understanding (MOU) with the Department of Employment and Labour (DEL) to lead on labour inspections.

The authorities listed above, together with the TNPA Harbour Master, exert collective control over the port; all have an integral part in supporting fisheries compliance in the implementation of the PSMA.

In the DFFE's case, the Department was established in 2019 by incorporating the forestry and fisheries functions from the previous DAFF into the Department of Environmental Affairs. The Fisheries Management branch within DFFE is responsible for the long-term sustainable utilisation of marine living resources. MCS is one of six sub-programs within the branch, with primary responsibility for enforcement and compliance-related issues under the Marine Living Resources Act 1998 (MLRA). A key function of the MCS sub-program is the inspection and monitoring of all fish and fish product landings from both national and international vessels in accordance with the MLRA.

In order to facilitate coordination between relevant government departments, a Port of Entry Control Centre (PECC) was established in the Port of Cape Town in 2013<sup>74</sup>. The PECC was a joint initiative involving the then Department of Agriculture, Forestry and Fisheries (DAFF), the South African Police Services, Revenue and Customs, Home Affairs (Immigration) and other relevant Departments, with responsibility for joint fisheries operations and inspection of FFVs. This has subsequently been replaced by initiatives in Operation Phakisa to set up an integrated management team between the various departments for information sharing. However, we understand that this mechanism does not function particularly effectively, with meetings only taking place once a month and DFFE not always attending.

## 3.3.2.2 National policies/processes

South Africa acceded to the PSMA in 2016. Prior to that, South Africa conformed to both the 1993 FAO Compliance Agreement and the 1995 UN Fish Stocks Agreement for the inspection of FFVs and sharing information with other States that are parties to international CMMs. As a member of the IOTC, South Africa also conformed to the IOTC Resolution 10/11 on Port State Measures (PSMR) which entered into force on 1<sup>st</sup> of March 2011 (superseded by IOTC Resolution 16/11).

Our understanding of arrangements applying to the entry and use of ports by FFVs in Cape Town are set out in Figure 38.

<sup>&</sup>lt;sup>74</sup> <u>https://www.ccsbt.org/system/files/resource/en/5435a1d04b58f/CC9\_SBTFisheries\_SouthAfrica.pdf;</u> <u>https://www.treasury.gov.za/comm\_media/speeches/2014/2014050201%20-</u> <u>%20Speech%20by%20Minister%20Gordhan%20Cape%20Town.pdf</u>



## Figure 38: Port State control processes applying to FFVs in Cape Town.

Under the MLRA, FFVs or fisheries related vessels (e.g. carriers) that do not have a licence to operate within the South African EEZ, but wish to enter a designated South African port, must apply for a "EEZ permit" (also sometimes referred to as an "gear permit"). Detailed conditions are associated with these permits, which are revised annually to accommodate any changes to existing regulations or new regulations. Permit conditions cover several important functions to facilitate monitoring of catches as well as facilitating conformance with the PSMA AREP. Key permit conditions include<sup>75</sup>:

- 1. providing at least 24 hours' notice of the vessel's Estimated Time of Arrival (ETA);
- 2. ensuring that the AIS and/or VMS are functional and reporting at least 50 nautical miles prior to entering the South African EEZ and continuously while within South African EEZ (except when in port);
- 3. contacting DFFE Fishery Control Officers (FCOs) of the intended port of call;
- requiring that all fishing activity pertaining to marine products on board has been undertaken in accordance with the South African MLRA and the CMMs of the relevant RFMOs to which South Africa is either a member or a Cooperating Contracting Party<sup>76</sup>; and
- 5. requiring the skipper of the foreign vessel to report the weight of the catch on board for each species within a tolerance level of 15%.

Applications for EEZ permits/port entry are submitted through the IOTC ePSM system (which is used for all EEZ permit/port entry applications, irrespective of fishing location). The information required by the EEZ permit corresponds closely to that of the PSMR AREP, allowing the department to decide to authorise or deny the entry of the vessel into its port. An initial weakness of using the IOTC ePSM system for all FFV entries was that

 <sup>&</sup>lt;sup>75</sup> 2023 Permit Conditions: Foreign Vessels Entering South Africa's Exclusive Economic Zone (EEZ) and Designated Ports Section B
<sup>76</sup> Including CCAMLR, CCBST, IOTC, ICCAT, SIOFA and SEAFO. Note that although not a member of SIOFA, South Africa is a range State and has agreed to comply to all SIOFA conditions.

it did not allow for detailed analysis of IUU risk for vessels from other regions<sup>77</sup>, although DFFE compliance personnel indicate that revision of the system over the last few years has eliminated this risk.

Following receipt of an EEZ permit application, a risk assessment is undertaken by DFFE following a basic matrix using the traffic light system for low, medium and high risk according to six primary indicators<sup>78</sup>:

- 1. vessel and operator IUU history;
- 2. vessel authorisation;
- 3. vessel operations;
- 4. use of flags/ports of convenience; and
- 5. labour and safety risks.

Based on the outcome of the risk assessment, the approval or denial of the permit is communicated back to the vessel or its representative. We understand that DFFE communicates any denial of EEZ permit to the Harbour Master, but does not automatically communicate approvals of EEZ permits.

The Harbour Master retains authority to approve or deny entry into the port itself. Notwithstanding that, there is currently no formal mechanism to require the Harbour Master to consult with DFFE on PSMA/IUU issues in deciding whether to grant approval for port entry (Snijman, 2024).

For FFVs granted approval for port entry, all vessels are inspected by FCOs or an honorary inspector to the extent that resources allow. FCOs are full time employees contracted to DFFE and have full authority to inspect any fishing vessel in South African ports under the MLRA. Honorary inspectors work under contract and have same powers as the FCOs. The MLRA provides a wide range of powers to FCOs including the authority to apprehend a vessel, confiscate catch, or arrest a vessel or personnel in the event of any contraventions being found on both foreign flagged and locally flagged vessels. Inspections of FFVs to verify compliance with EEZ permits are exclusively carried out by FCOs. There are currently seven full-time FCOs and eight honorary inspectors allocated to Cape Town.

Most landing or transhipment is monitored by FCOs or a Fishery Monitor (FM). During the process, fish are sorted by species or species groups on deck and weighed. The FCOs/FMs enter details into a landing declaration form which is also signed by a representative of the vessel.

The requirement for FMs is outsourced to private companies, who train and provide FMs to monitor both domestic and foreign fish landings at all South African ports or landing sites. FFVs may only land fish at one of three designated ports (Cape Town, Port Elizabeth, and Durban) and are monitored by FMs under supervision of an FCO. There are currently 25 FMs allocated to Cape Town, who work together with the FCOs.

Following port use, departure arrangements are coordinated through vessel agents. Departure requires relevant clearances from DFFE and Customs, as well as logistical coordination with the Harbour Master.

While a recent review indicated that powers to implement most PSMA provisions are available under the MLRA (Snijman, 2024), on 19 January 2024, the Minister of DFFE proposed new Regulations relating to the entry of FFVs into South African waters. These regulations will provide a new permitting procedure applicable to FFVs traversing South African waters or requesting port entry with a view to incorporating any aspects of the PSMA that are not currently covered in the Act and EEZ permit.

78 DFFE pers. comm

<sup>&</sup>lt;sup>77</sup> This created the possibility of IUU vessels being allowed port entry. This was highlighted in a workshop in February 2021 which identified that at least one vessel on the ICCAT IUU list had been granted permission to enter port. (Nelson Mandela University FishFORCE Project, workshop Cape Town, February 2021)

## 3.3.3 Foreign vessel port usage

FFVs entering Cape Town port to land and tranship fish are predominantly pelagic longline vessels of various flags operating on the high seas in areas managed by ICCAT, CCSBT and IOTC. These vessels often tranship their main target species on the high seas, with port visits coinciding with the end of an extended trip to land by-catch species, resupply and change crew. These vessels also use the repair facilities at the end of a season.

Other fishing vessels accessing the port include demersal longline vessels and, less frequently, crab potting vessels and deep-sea trawlers operating in the area managed by SEAFO, SIOFA, and CCAMLR, who use the harbour to offload catch and/or for repairs or "layup" between seasons.

Carrier vessels come into the harbour for in-port transhipments from pelagic longline vessels and enroute between the Indian and Atlantic oceans to exchange ROP observers.

## 3.3.3.1 Total number of visits and visits by flag

The number of FFV visits to Cape Town port and anchorage areas were relatively stable between 2021 and 2022, however a notable increase in the number of visits to both areas was evident in 2023 (Figure 39). DFFE data on EEZ permit applications indicates the increase in 2023 was likely to be simply a return to more normal levels of visits following the COVID pandemic. During this three-year period, the majority of vessels that visited Cape Town entered the port area, with at least 198 visits annually, while only 11-25 visits were made to service anchorages outside the port (Figure 39).



Location - Port - Service



The vast majority (>99%) of FFVs visiting Cape Town during this period were authorised in at least one of the following RFMOs: CCSBT, CCLAMR, IATTC, ICCAT, IOTC, NPFC, SEAFO, SIOFA, SPRFMO. Nevertheless, 15 FFVs that visited Cape Town 2021-2023 could not be matched to the available RFMO vessel registers (Table 3). Most of these vessels fished in the southwest Atlantic or within the EEZs of other countries. The only exception is 'SH', which fishes in the IATTC area and meets with IATTC authorised carrier vessels, according to AIS. However, we suspect that the inability to match this vessel is due to incomplete or incorrectly provided AIS information (e.g., call sign is '1234567', no IMO number), rather than it not being registered. Vessels flagged to Cameroon (CMR) are suspected of engaging in IUU fishing (Table 3) and are discussed below.

Vessel nome		Flag	Coorthurso	Area of fishing operations, 2021-2023,					
vessei name	5510	Flag	Gear type	according to AIS.					
AN FONG No.33	312886000	BLZ	inconclusive	Mauritania EEZ					
LU RONG YUAN YU 895	412329695	CHN	trawlers						
LU RONG YUAN YU 898	412329696	CHN	trawlers	High seas of SW Atlantic, adjacent to					
LU RONG YUAN YU 818	412331015/ 412331017	CHN trawlers		Argentina's EEZ					
LU RONG YUAN YU 819	412331016	CHN	trawlers						
SH	412340010	CHN	drifting longline	IATTC area					
HELSINGFORS	613003411	CMR	trawlers						
TRONDHEIM	613003597	CMR	trawlers	Angolan EEZ (with historical suspicions of IUU					
FREDRIKSHAMN	613003598	CMR	trawlers	fishing, including in EEZs of neighbouring					
AVACHINSKY	613003609	CMR	trawlers	countries; see 'Trawl' section)					
OLUTORSKY	613003611	CMR	trawlers						
FORSA	613003740	CMR	trawlers	Angolan EEZ					
POWERBOAT1	232010289	GBR	Inconclusive	Tristan da Cunha and Gough Island, within EEZ.					
	440528000	KOD	troudors	SE Atlantic high seas, adjacent to Argentina's					
PRATIDINA NO.26	440528000	KUK	trawiers	EEZ, and Falkland Islands (Malvinas) EEZ					
				SE Atlantic high seas, adjacent to Argentina's					
OYANG 88	441430000	KOR	trawlers	EEZ, and Russian EEZ, from Kuril Islands shelf					
				north to Beringovskii.					

Table 3: FFVs that entered Cape Town between 2021 and 2023, according to AIS, that could not be matched to CCSBT, CCLAMR, IATTC, ICCAT, IOTC, NPFC, SEAFO, SIOFA, SPRFMO vessel registers.

Chinese Taipei flagged FVs were the main users of Cape Town port and anchorage areas, with 70-152 entries to the port area annually and 7-13 entries to the service area, depending on the year (Figure 40). FFVs flagged to Japan were the second most frequent users. The number of annual visits by FFVs flagged to South Korea, China and Cameroon were stable at lower levels through time (Figure 40).



Figure 40: Number of FFV entries to port and service areas of Cape Town, 2021-2023, according to AIS.

The lower relative use of service anchorages compared to port areas was also evident for carrier vessels visiting Cape Town between 2021 and 2023 (Figure 41). Between 69-72 visits to the port area occurred annually between 2021 and 2023, compared to 3-6 visits to the services area annually over the same period.



Location - Port - Service

Figure 41: Number of foreign carrier vessel visits to port and service areas of Cape Town, 2021-2023, according to AIS.

Bahamas flagged carriers registered the highest number of entries into the Cape Town port or services area (Figure 42), with the number of entries increasing notably in 2023. Carriers flagged to Panama and Liberia were the second and third most frequent users of Cape Town but showed no clear temporal trend in number of visits over the study period. Entries by Japanese flagged carriers decreased across the study period, while entries by Singaporean carriers increased (Figure 42). Many of the changes in the number of entries by flag States may be influenced by the reflagging which occurs relatively commonly amongst the carrier fleet.



Figure 42: Number of carrier vessel entries to port or service areas by flag, between 2021 and 2023, according to AIS.

## 3.3.3.2 FFV visits by gear type

Drifting longline vessels were the primary FFVs to enter Cape Town during the 2021-2023 period, with >150 visits annually (Figure 43). Longliners regularly land catch in Cape Town and consistent with this, most longline visits between 2021 and 2023 involved entry to the port area, with far fewer visits to the service anchorages. Squid jiggers were the second most common FFV gear type to enter Cape Town over the study period, with entries into the port area increasing from 5 in 2021, to 12 and 86 entries in 2022 and 2023, respectively (Figure 43). The number of squid jigger entries to the service area similarly increased from 1 in 2021 to 17 in 2023. Most of these vessels were flagged to Chinese Taipei and we understand that these vessels primarily use Cape Town for services, such as bunkering, reprovisioning and crew changes whilst in transit to and from their fishing grounds, rather than for landing/transhipping catch. We understand the notable increase in Chinese Taipei

flagged squid jigger visits to Cape Town in 2023 appears to coincide with a reduced number of entries to the Falkland Islands (Malvinas) (Berkeley Sound, Stanley).



Figure 43: Number of FFV entries to port and service areas, 2021-2023, according to gear type.

## 3.3.3.3 Port visit duration by vessel type

Trends in visit duration to port and anchorage areas largely reflect the different fishing operations of each gear type. Drifting longline vessels primarily visit Cape Town to land catch. This means their visit duration in port is less than set longlines and trawlers as they aim to keep port visit duration brief, so they can return to fishing, and keep costs down (Figure 44; we understand the 2022 datapoint for the service area is an anomaly). Squid Jiggers do not generally unload catch in Cape Town and mainly visit port and service areas for supplies. This explains their lower mean visit duration in port, and 1-2 day mean visit duration at service anchorages while they refuel and receive provisions without coming into port (Figure 44). Set longline vessels layup between seasons, which differ in timing depending upon whether they are fishing in the CCAMLR, SEAFO or SIOFA areas. This may explain the long visit duration and wide standard errors plotted for this gear type (Figure 44).



+ 2021 + 2022 + 2023

Figure 44: Mean port visit duration of various fishing gears in port and service areas of Cape Town.

## 3.3.4 Vessel activity and governance

## 3.3.4.1 Fishing patterns of key foreign fishing fleets

## **Drifting longlines**

## **Chinese Taipei longliners**

Most drifting longline vessels that entered Cape Town between 2021 and 2023 were flagged to Chinese Taipei. Prior to Cape Town port entry, these vessels broadly fished across the Atlantic and south-western Indian Ocean (Figure 45), across several RFMO managed areas, primarily targeting tuna species. In the Atlantic, vessels target bigeye and yellowfin tuna in tropical waters, and albacore in southern latitudes. We understand Chinese Taipei longliners also target oilfish south of the South African EEZ. Most catches are known to be transhipped at sea to carriers which also play a supporting function (refuelling, provision of consumables including bait). Indeed, several fishing-carrier (and fishing-fishing) vessel encounters occurred on trips where Cape Town was the terminal port (Figure 45). Most fishing-carrier encounters were between a Chinese Taipei longliner and carriers flagged to Panama (n=93), Japan (n=59) or Chinese Taipei (n=52), with a smaller number of encounters with carriers flagged to Singapore, Liberia, South Korea and St Vincent and the Grenadines. Catches of yellowfin and bigeye are often landed in Asian ports and sold to the sashimi market, while albacore is generally sold to globally distributed canneries which primarily supply the US and European markets.

Some fishing effort also occurred within the CCSBT managed area. These vessels were likely targeting southern bluefin tuna, which is transhipped at sea or in Cape Town port, before being freighted to Japan. All transhipment/landing in port must be accompanied by a catch monitoring form (CMF) /catch tagging form (CTF). We understand that inspection rates of landings/transhipments in port are likely to be close to 100%.



*Figure 45: Chinese Taipei flagged drifting longline fishing activity (left) and encounters (right) on trips that terminated in Cape Town, 2021-2023, according to AIS.* 

## **Japanese longliners**

Japanese flagged vessels were the second most common drifting longline vessels to enter Cape Town between 2021 and 2023. Compared to Chinese Taipei flagged drifting longline vessels, Japanese vessels displayed a more restricted spatial pattern of fishing effort prior to port entry, with most effort occurring on the high seas of the Atlantic Ocean, extending across several RFMO managed areas (Figure 46). Fishing effort was also evident within the EEZs of Namibia, Madagascar, Mozambique, and South Africa (Figure 46). We understand some

Japanese flagged longliners are under chartering arrangements to fish within these EEZs<sup>79</sup> (in the case of South Africa, FFVs need to be associated with a local company).



# *Figure 46: Japanese drifting longline fishing activity (left) and encounters (right) on trips that terminated in Cape Town, 2021-2023, according to AIS.*

Japan is a founding member of CCSBT and Japanese-flagged longline vessels fishing south of 40°S are likely targeting southern bluefin tuna. All southern bluefin tuna products caught by Japanese vessels must be landed in Japan, with direct landings and export from foreign ports prohibited. While transhipments at sea do occur, Cape Town is the most frequently used designated port for transhipments by Japanese vessels<sup>80</sup>. When southern bluefin tuna is transhipped in Cape Town, Japanese vessels must first obtain approval from the Fisheries Agency of Japan (JFA) for in port transhipment (with the request lodged 10 days prior to transhipment) as well as submit the relevant Catch Document Scheme (CDS) documents including the CTF.<sup>80</sup> JFA (2023)<sup>81</sup> note that:

- a document is then issued "to RSA, which confirms that (i) each vessel is authorized to conduct transhipment, and (ii) all of the transhipped SBT will be transferred to Japan, and the CMF will be validated after full inspection at a Japanese port by Japanese government officials";
- in cases where the vessel does not intend to tranship southern bluefin tuna, JFA issues a document confirming that no southern bluefin tuna transhipment will be undertaken; and
- "At the time of transhipment, the fishing vessel obtains the certification from the Master of the receiving vessel on the CMF. The Master of the receiving vessel then brings the CMF and CTF to the landing port in Japan, so that they can be cross-referenced with information obtained from inspections of landing of the transhipped products at a designated Japanese port by Japanese Government officials".

In the Atlantic Ocean, north of 40°S, the main species landed by Japanese-flagged longline vessels are likely comprise bigeye tuna, yellowfin tuna, and blue sharks based on nominal catch information provided to ICCAT<sup>82</sup>. South of 20°S some albacore tuna may also be targeted.

## **South Korean longliners**

South Korean flagged longliners accounted for far fewer entries to Cape Town between 2021 and 2023 (n=58 vs 199 Japan and 243 Chinese Taipei) and displayed even more contracted spatial patterns of fishing effort prior

<sup>&</sup>lt;sup>79</sup> e.g., <u>https://www.iccat.int/com2020/TRI/COC-303\_Table-10\_A\_Chartering-Arrangements\_2019-2020.xlsx</u>

<sup>80</sup> CC 18 - SBT Fisheries - Japan

<sup>&</sup>lt;sup>81</sup> CC 18 - SBT Fisheries - Japan

<sup>&</sup>lt;sup>82</sup> Nominal catch information from ICCAT-CICTA-CICAA

to port entry (Figure 47). Most effort occurred south and east of the Tristan de Cunha EEZ, or on the high seas of the Atlantic and Indian oceans. One vessel, NO.637 DONGWON appeared to operate within the Madagascar EEZ.



*Figure 47: South Korean drifting longline fishing activity (left) and encounters (right) on trips that terminated in Cape Town, 2021-2023, according to AIS.* 

Most South Korean fishing effort south and east of Tristan de Cunha is likely for southern bluefin tuna. South Korea is a member of CCSBT and has similar processes in place to that of Japan with respect to transhipment authorisation and monitoring<sup>83</sup>. South Korea has reported that its southern bluefin tuna fishing vessels "prefer in-port transhipment at Cape Town over at-sea transhipments because the sea condition tends to be very rough in the areas far from port" (CCSBT, 2022). Most of the southern bluefin tuna caught by South Korean-flagged fishing vessels is landed in Japan (Shimizu)<sup>84</sup> and no southern bluefin tuna was exported to South Africa by South Korean vessels in 2021<sup>85</sup> or 2022<sup>86</sup>.

## Squid jiggers

## **Chinese Taipei jiggers**

Most squid jigger visits to Cape Town between 2021 and 2023 were by vessels flagged to Chinese Taipei. These vessels use Cape Town while transiting to/from their fishing grounds around the Falkland Islands (Malvinas) and on the high seas adjacent to Argentina's EEZ, where they spend the first half of the year, and the Northern Pacific, where they fish the second half of the year (Figure 48).

<sup>83</sup> CC 17 - SBT Fisheries - Korea (Rev.1)

<sup>84</sup> CC 17 - SBT Fisheries - Korea (Rev.1)

<sup>&</sup>lt;sup>85</sup> CC 17 - 04 - (Secretariat) Compliance with CCSBT Management Measures

<sup>&</sup>lt;sup>86</sup> CC 18 - 04 - (Secretariat) Compliance with CCSBT Management Measures (Rev.1)



Figure 48: Typical AIS tracks of Chinese Taipei flagged squid jiggers that visited Cape Town port, 2021-2023.

Fishing activity of Chinese Taipei squid jiggers immediately preceding Cape Town port entry occurred within the Falkland Islands (Malvinas) EEZ and on the high seas adjacent to Argentina's EEZ (Figure 49). However, we understand that these vessels do not generally unload their Illex catches from the SW Atlantic in Cape Town. Rather, these catches are landed in China/Chinese Taipei for processing and storage (Harte et al., 2018). The frequency by which Cape Town was used as a stopover point from the SW Atlantic between 2021 and 2023 was variable across years and vessels, but broadly stops occur going in both directions (e.g. Singapore, Mauritius). Given Chinese Taipei squid jiggers rarely used Montevideo between 2021 and 2023, presumably Cape Town offers some benefits in terms of receiving services - maybe better flight connections for crew changes from Chinese Taipei, a cheaper cost of doing business, or Cape Town may just be geographically positioned on a more direct route between Falkland Islands (Malvinas) and Chinese Taipei/the North Pacific.





As discussed above, the notable increase in Chinese Taipei flagged squid jigger visits to Cape Town in 2023 appears to coincide with a reduced number of entries to the Falkland Islands (Malvinas) (Berkeley sound, Stanley) (Figure 50), although the reasons for this are unclear.





#### **Chinese jiggers**

Chinese flagged vessels were the second most common squid jiggers to enter Cape Town, with vessels fishing primarily on the high seas adjacent to Argentina's EEZ and to a lesser degree on the high seas of the SE Pacific prior to port entry (Figure 51). In the SE Pacific, this fleet targets jumbo squid while in the SE Atlantic most of the catch is Argentine shortfin squid. A number of encounters with carrier vessels were evident on trips terminating at Cape Town (Figure 51) and, consistent with this, we understand that most catch from Chinese squid jig vessels in this region is transhipped back to China, with Cape Town used as a stopover port for services.



Figure 51: Chinese squid jig fishing activity on trips that terminated in Cape Town, 2021-2023, according to AIS.

Given the fishing activity evident directly prior to visiting Cape Town and thereafter transiting to China (Figure 52), vessels are likely to transport catch back to China themselves before resuming fishing in NPFC waters (see Montevideo chapter for discussion). Some vessels then transit back to the SE Atlantic, and then onto the SE Pacific, along the 'squid route' (Figure 52).



Figure 52: Typical AIS tracks of Chinese flagged squid jiggers that visited Cape Town port, 2021-2023.

## South Korean jiggers

South Korean vessels accounted for the third most entries to Cape Town port during 2021-2023 and showed a similar pattern of activity to Chinese Taipei and Chinese flagged squid jiggers. Fishing activity prior to Cape Town port entry was in the Falkland Islands (Malvinas) EEZ and high seas adjacent to Argentina's EEZ, with Cape Town used as a stopover point for services while transiting to/from the SW Atlantic/ Northern Pacific (Figure 53).



Figure 53: Typical AIS tracks of South Korean flagged squid jiggers that visited Cape Town port, 2021-2023.

#### **Trawlers**

#### **Korean trawlers**

Most trawler visits to Cape Town 2021-2023 were by vessels flagged to South Korea. Vessels were broadly of two types:

- 1. 'SW Atlantic/North Pacific vessels' which use Cape Town as a stopover point between these areas, similar to the squid jig fleets plotted above; and
- 2. vessels authorised to fish for krill in CCAMLR waters, at least for part of the year, and did not transit back to South Korea between 2021 and 2023.

Of the three South Korean trawlers that fish in CCAMLR managed waters, one vessel is a dedicated krill trawler (SEJONG), while the other two vessels (SAE IN CHAMPION and SAE IN LEADER) fished the high seas adjacent to the Argentinian EEZ for horse mackerel and squid for part of the year (Figure 54). The krill caught in CCAMLR waters is transhipped at sea to carriers, which often visit Cape Town post-transhipment, but reportedly land catches in South Korea and Japan (Addison et al., 2021).



*Figure 54: South Korean trawler fishing activity (left) and encounters (right) on trips that terminated in Cape Town, 2021-2023, according to AIS.* 

#### **Cameroon trawlers**

Cameroon flagged vessels accounted for the second most visits to Cape Town by trawlers between 2021 and 2023. AIS data suggests these vessels largely fished within the Angolan EEZ, however broken vessel tracks and AIS gap events occured across the Namibian EEZ (Figure 55).


Figure 55: AIS detected activity of six Cameroon flagged trawlers that entered Cape Town, 2021-2023. Left = zoomed in, right = zoomed out. Note broken tracks (dotted lines) across Namibian EEZ. (Source: Starboard Maritime Intelligence)



# 3.3.4.2 Foreign carrier vessel activity

As mentioned above, most foreign carrier vessels that visited Cape Town 2021-2023 were flagged to the Bahamas. Most Bahamas vessels were NEAFC and/or ICCAT authorised, however AIS tracks indicate vessels generally transited from port-to-port with no encounters at sea detected between 2021 and 2023 (Figure 56).



*Figure 56: AIS vessel tracks of BHS flagged carrier vessels that visited Cape Town, 2021-2023. (Source: Starboard Maritime Intelligence)* 

In total, 23 different Bahamas flagged vessels visited Cape Town between 2021 and 2023. According to Starboard, ~56% of these vessels were operated by Cool Carriers<sup>87</sup> and ~30% by Seatrade<sup>88</sup>, with the remainder operated by individual or unknown operators. While these companies are known to transport fish, the frequency by which these vessels transported seafood between 2021 and 2023 remains unclear.

Carrier vessels flagged to Panama were the second most common users of Cape Town over the 2021-2023 period. Many of these vessels were authorised in numerous RFMOs and displayed AIS activity across the globe through the 2021-2023 period. We understand that these carriers visit Cape Town port to undertake in-port transhipments from pelagic longline vessels and to exchange ROP observers while enroute between the Indian and Atlantic oceans. Between 2021 and 2023, at-sea encounters with fishing vessels and loitering events in areas where transhipments are known to commonly occur were also evident (Figure 57). Based on the location of at-sea encounters, transhipped catch is likely to be primarily tuna and squid.



Figure 57: Panama carrier fleet activity preceding Cape Town port entry.

# 3.3.5 Movement of fish

## Fish Landings from foreign vessels

Based on data included in DFFE AREPs, the total weight of fish and fish products landed in Cape Town from 2019 to 2023 amounted to 63,628 tonnes. Pelagic longline vessels accounted for 94% of vessel entries, but only 55% of total landings (Table 4), with the data skewed by a single deep-water trawler landing 23,971 tonnes in 2022.

Tabla 1.	Vaccal antriac	and landings	hu agar tung in	Cana Tauna	hatwaan 2010 to	2022 (Data course	
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Gear	No. vessel entries	Landings (tonnes)	% vessel entries	% Landings (tonnes)
Pelagic Longline	273	34983	94%	55%
Trawl	4	27202	1%	43%
Refrigerated Cargo	8	677	3%	1%
Demersal Longline	2	105	1%	0%
Longline Trap	2	112	1%	0%
Jigger	2	548	1%	1%

<sup>&</sup>lt;sup>87</sup> A subsidiary of Baltic Reefers (Dynamar, 2019); <u>https://www.cool.se/</u>

<sup>&</sup>lt;sup>88</sup> Noting 20% of these vessels operated solely by Seatrade, 9% are GreenSeas fleet which was founded by Seatrade and Green Reefers ASA on a 50/50 basis (Dynamar, 2019): https://www.seatrade.com/

Landings were dominated by vessels from Chinese Taipei and a single SIOFA-registered trawl vessel from the Cook Islands (Figure 58). Despite relatively similar numbers of vessel entries between Chinese Taipei (135) and Japanese (113) longline vessels, landings differed substantially, with Japanese vessels landing roughly 1/3 of the volume landed by Chinese Taipei vessels. This could be related to differences in nature of the operation – with Chinese Taipei vessels focusing on albacore at more temperate latitudes with a higher proportion of the catch landed in port, while Japanese vessels target bigeye and yellowfin in tropical waters with a greater proportion of the catch transhipped at sea – although this is not known.



*Figure 58: Total volume of fisheries products landed in Cape Town between 2019 and 2023 (inclusive), by flag. (Data source: DFFE)* 

Amongst pelagic longline vessels, seven species accounted for around 94% of landings (Table 5). Of these, albacore dominated Chinese Taipei vessel landings, while landings from the Japanese fleet were more evenly distributed across albacore, yellowfin, bigeye and southern bluefin tuna. As discussed above, the volume and composition of landings will be influenced by the extent to which catch is transhipped at sea prior to port entry, which is common across Asian longline fleets in the Indian and Atlantic Oceans. A large number of bycatch species are also landed, the composition of which may differ by flag State and fishing strategy.

Flag	ALB	YFT	BET	SBT	SWO	OIL	BSH
Chinese Taipei	19567	235	554	8	240	1248	1131
Japan	1282	1000	1285	1582	138	223	1728
South Korea	385	292	125	157	22	20	87
Seychelles	28	1	5	0	17	1433	54
St Vincent & Gren.	14	2	48	0	51	0	0

Table 5: Volume of the main species landed by pelagic longliners in Cape Town, 2019-2023. (Data source: DFFE)

Of the other vessels, the main species landed during the single landing event by the SIOFA-registered Cook Islands trawler in 2020 were alfonsino, black cardinal fish and orange roughy. Trawlers from Ukraine and China landed krill (and possibly meal processed from krill) as well as unknown product (1,982t in total), while jiggers flagged to Vanuatu and South Korea landed a total of 548t of squid during one landing event each in 2023.

Fish offloaded by foreign vessels go to three main outlets:

- landed into containers;
- transhipped from the fishing vessel to a refrigerated carrier vessel; or
- kept in bonded cold storage for later export.

Occasionally, carrier vessels offload fish they received from transhipments at sea into containers in Cape Town to meet market demand.

## Fish Export

The Fisheries Management branch of DFFE issues permits for both importing and exporting fish. Export permits for bigeye tuna, southern bluefin tuna, swordfish, Antarctic toothfish and Patagonian toothfish require relevant catch documents provided and approved by the DFFE for each shipment.

Data from SARS is available on tuna and tuna-like species exports (Table 6). We understand the data available will largely reflect catches taken by domestically flagged vessels within the South African EEZ, although there is some possibility that small amounts of bycatch from FFVs is included in the figures.

Table 6: Exports of pelagic longline species (tonnes) between 2019 and 2023. (Data source: SARS) (ALB = albacore; BET = bigeye tuna; BFT = bluefin tuna; FIN = shark fins; SBT = southern bluefin tuna; SJK = skipjack; SWO = swordfish; TOT = toothfish; YFT = yellowfin tuna)

Species	2019	2020	2021	2022	2023	Total
ALB	4327	5397	6257	5080	3601	24662
BET	628	158	203	446	481	1915
BFT <sup>89</sup>	2	2	0	0	0	5
FIN	17	0	0	0	0	17
SBT	77	0	10	53	59	200
SKJ	0	0	0	0	0	0
SWO	455	27	13	147	251	894
тот	0	0	16	23	1	40
YFT	633	604	95	716	1243	3291
Total	6139	6189	6594	6466	5635	31023

SARS data shows the export destination by species highlights regional preferences. High-value species including southern bluefin tuna, bigeye tuna, and yellowfin tuna, popular in sashimi markets, tend to be exported to the Americas and Asia. Traditionally, South African-caught swordfish goes to America, while exports to Europe and other African countries are dominated by albacore.

# 3.3.6 Indications of non-compliance

## 3.3.6.1 RFMO

As a member or participant in multiple RFMOs, and with Cape Town an important 'hub' port for vessels fishing in multiple oceans basins and fisheries, South Africa has a complex array of RFMO obligations and CMMs to monitor and comply with.

## **CCAMLR**

At its most recent meeting, the CCAMLR Standing Committee on Inspection and Compliance (SCIC) assessed South Africa as 'minor non-compliant' against CMM 10-03 in relation to two incidents for which inspections were not completed within the mandatory 48hr period after a vessel enters port<sup>90</sup>. In the first instance, the Norwegian-flagged vessel *Antarctic Endurance* entered Cape Town port on 29 Sep 2022 and was inspected on 06 Oct 2022. In this case, South Africa noted that strike action at the port of Cape Town prevented access by the inspectors. In the second case, the Spanish-flagged vessel *Tronio* entered Cape Town port on 17 May 2023

<sup>&</sup>lt;sup>89</sup> Anecdotal information indicates this may be SBT misclassified under BFT export codes.

<sup>&</sup>lt;sup>90</sup> https://meetings.ccamlr.org/en/system/files?file=meeting-reports/e-scic-2023-rep\_1.pdf

and was inspected on 22 May 2023. In this case, South Africa noted that a 'high influx' of local commercial vessels and foreign vessels meant that the communications team missed *Tronio*'s port entry notification. The SCIC considered no further action was required in either incident.

# ICCAT

Amongst the main fleets fishing in the ICCAT area, the most recent summary of compliance with ICCAT measures<sup>91</sup> indicates:

- Japan received letters from the Compliance Committee on a late notification of vessel charter (2022) and minor overharvest of southern albacore and blue marlin (2023). Japan noted the 'overharvest' was a technical issue related to the timing of fishing season, and not actual non-compliance; and
- South Korea received a letter from the Compliance Committee on late reporting (e.g. transhipment reporting) as well as some VMS transmissions not being received (2022). No compliance action was taken in 2023.

In 2022, South Africa also received a letter indicating the possible import of fish from an IUU vessel, although subsequent analysis demonstrated the fish was taken by a vessel operating in accordance with Namibian domestic laws.

# ΙΟΤϹ

Comprehensive analysis of CPC compliance with IOTC obligations is undertaken by the Secretariat each year<sup>92</sup>. In the most recent (2024) assessment, Japan was assessed as having an overall 75% compliance rate in 2023, down from 81% in 2022. Several of the areas of non-compliance are broadly unrelated to fleets using Cape Town (e.g. failure to transpose bans on driftnetting into national legislation), although some relate to failure to provide data on bycatch species (e.g. turtles, seabirds). China's overall compliance rate in 2023 was assessed at 77.8%, down from 82% in 2022. The profile of non- and partial compliances was similar to Japan's, with a failure to provide data on bycatch, as well as other issues such as a failure transpose a requirement to report on results of investigations on possible infractions during transhipment into national legislation. South Korea had one of the highest compliance rates in 2023 at 92.7%, which remained stable from the 2022 rate of 92%.

South Africa was assessed at compliant against 7 of 10 relevant obligations under Resolution 16/11 on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, and partially compliant against the remaining three (on port inspection reports, inspecting at least 5% of landings and transhipments, and reporting vessels engaged in IUU fishing following an inspection)<sup>93</sup>. The reasons for partial compliance are not clear from the report.

Part of the role of observers acting under the IOTC Regional Observer Program is to examine possible infractions of IOTC measures. Infractions are broadly analysed across four categories – possible infractions relating to (i) authorisation to fish (ATF), (ii) Vessel Monitoring System (VMS), (iii) fishing logbooks, and (iv) marking of fishing vessels. In the most recent reporting period, the Chinese Taipei fleet had a total of 74 possible infractions reported, the majority of which were for vessel marking (37) and fishing logbook (30) issues<sup>94</sup>. The Japanese fleet had 2 possible infractions reported, both for VMS issues. The Chinese fleet had 40 possible infractions, mainly for authorisations to fish (18) and vessel marking (11). Each CPC provided

<sup>&</sup>lt;sup>91</sup> https://www.iccat.int/Documents/BienRep/REP\_EN\_22-23\_II-1.pdf

<sup>&</sup>lt;sup>92</sup> <u>https://iotc.org/sites/default/files/documents/2024/04/IOTC-2024-CoC21-03 Rev1 E -</u> <u>Summary Report on the level of Compliance FINAL.pdf</u>

<sup>&</sup>lt;sup>93</sup> <u>https://iotc.org/sites/default/files/documents/2024/04/IOTC-2024-CoC21-03 Rev1 E -</u> <u>Summary Report on the level of Compliance FINAL.pdf</u>

<sup>&</sup>lt;sup>94</sup> <u>https://iotc.org/sites/default/files/documents/2024/02/IOTC-2024-WPICMM07-04\_Rev1\_</u> <u>Review possible infraction under ROP in 2023\_0.pdf</u>

responses to each possible infraction, although the detail of the original incidents or responses are not published.

## **CCSBT**

South Africa is a cooperating non-member of CCSBT but has acknowledged more significant cases of noncompliance with CCSBT CMMs in recent years. These include failure to submit corrective action plans, attend CCSBT meetings, submit national reports, provide scientific data, submit CDS forms, provide port inspection records within the required timeframes, and for allowing an unauthorised vessel to fish during the 2021 season, among others (CCSBT, 2022, 2023).

In 2022/23, Japan reported 17 at-sea transhipments<sup>80</sup>, while in 2021/22 Japan reported 18 SBT transhipments at sea<sup>95</sup>. During both periods, no possible infractions were pointed out by IOTC/ICCAT transhipment observers<sup>80,95</sup>. More broadly, Japan appears largely compliant with CCSBT CMMs, with only minor issues which resulted from impacts of the COVID-19 evident in recent years (CCSBT, 2022, 2023).

In 2021/22, 100% of southern bluefin tuna catch by South Korean-flagged vessels was transhipped in port, and 75% of total South Korean southern bluefin tuna catch was transhipped in port in 2022/23<sup>96</sup>. No infringements were detected during the transhipment activities and the Korean Fisheries Monitoring Center also did not identify any infringements or suspicious activities<sup>96</sup>. In terms of South Korea's broader compliance with CCSBT CMMs over recent years, South Korea has persistently not submitted copies of all expected CDS documents to the Secretariat and has demonstrated non-compliance with respect to observer coverage, albeit the latter was due to impacts of the COVID-pandemic (CCSBT, 2022, 2023).

# 3.3.6.2 Other indications of non-compliance

An analysis of historical non-compliance incidents during the period 2008 to 2018 provided by DFFE indicates nine broad categories of offence for which vessels were either fined, apprehended and/or had catch confiscated (Table 7). Minor infringements incur a cash fine payable to DFFE (Maximum R5000) without prosecution, while for major infringements a case docket is produced for court proceedings. If found guilty the vessel may:

- pay a fine of upward of R500,000,
- have catch confiscated; and
- forfeit the vessel to the State.

We understand that costs associated with vessel forfeiture (e.g. docking costs) can be substantial, which may act as a disincentive to applying that sanction.

Table 8 sets out the number of infringements reported amongst FFVs by flag State between 2008 and 2018<sup>97</sup>.

<sup>95</sup> CC 17 - SBT Fisheries - Japan

<sup>96</sup> CC 18 - SBT Fisheries - Korea

<sup>&</sup>lt;sup>97</sup> Data was not available after 2018

Category of Infringement	Severity
Shark fin weight exceeds minimum 5% of trunk weight	Major
Shark fins onboard without permit	Major
False documents	Major
EEZ permit expired, not available on demand or not displayed, or vessel entered EEZ prior to issue of the EEZ permit	Minor
Fish species onboard incorrectly declared	Minor
Fish species onboard not declared	Major
Fishing without RFMO authorisation	Major
Declared weight of fish onboard exceeded 15% tolerance	Major
Entering South African EEZ without an EEZ permit	Major
Fishing on High Seas without a permit	Major

#### Table 7: Main categories of infringements committed by FFVs between 2008 and 2018 (Data source: DFFE)

Table 8: Number of reported infringements by FFVs by flag State during the 2008 and 2018 (Data source: DFFE)

Country	Number of recorded Infringements
Japan	21
Chinese Taipei	20
South Korea	15
Indonesia	11
China	7
Panama	2
Australia	1
Cook Islands	1
Oman	1
Russia	1
Saint Vincent	1
Vanuatu	1

In the most recent years available (2017/18), most of the offences by Japanese flagged vessels related to contravening the 15% tolerance limits on catch reporting required as a condition of EEZ permits. For South Korean vessels, most of the offences in the 2016-2018 period were for failure to have the EEZ permit available for inspection, although vessels have been found guilty of more serious offences historically (e.g. fishing illegally in CCAMLR waters, landing of fish without an EEZ permit). Each of the offences by Indonesian flagged vessels occurred in 2013, except one in 2009.

Several vessels flagged to Cameroon during the study period have been historically suspected of misreporting catch<sup>98</sup> or have been suspected of illegal fishing in Namibian waters<sup>99</sup>, but were not intercepted. Previous reports have also identified AIS gaps from these vessels whilst transiting through the Namibian EEZ, during

99 Helingsfors, Avachinsky: https://informante.web.na/?p=353205

Olutorsky, Trondheim: https://www.namibian.com.na/namibia-loses-n15-billion-a-year-to-illegal-fishing/

<sup>&</sup>lt;sup>98</sup> Trondheim: <u>https://channel16.dryadglobal.com/cameroon-becomes-a-go-to-country-for-foreign-fishing-vessels</u>

which the inferred speed was significantly lower than the vessel's usual transit speed, indicating that they could have engaged in transhipment operations during these periods.<sup>100</sup> Just one of the six vessels appears to have been historically aprehended (Olutorsky). This vessel was fined by Angola for catching mackerel during a closed season and falsifying data<sup>101</sup>. Cameroon is not a contracting party or a cooperating non-contracting party to any RFMOs, hence none of these vessels are RFMO authorised or IUU listed.

AIS data indicates that between 2021 and 2023 these vessels likely landed and/or transhipped their catch to carriers within the ports of Moçâmedes and Luanda, Angola. It is not clear whether these vessels landed any catch in Cape Town. At least one Cape Town port entry by Avachinsky, Fredrikshamn, and Trondheim in 2021 was reportedly for drydock maintenance<sup>102</sup>. However, large gaps in AIS transmission, particularly in Namibian waters, mean it is not clear whether the vessels fished prior to Cape Town port entry.

The Euopean Commission named all six Cameroon-flagged vessels that entered Cape Town between 2021 and 2023 in its 2021 decision to "yellow card" Cameroon under the EU IUU Regulation<sup>103</sup>. These six vessels (in bold<sup>104</sup>) were amoung at least 12 fishing vessels registered to Cameroon over a short period of time (2019 and 2020), but were not included in the list provided to the Commission. This indicated that Cameroon contravened Article 94(2)(a) of UNCLOS and paragraph 42 of the IPOA-IUU which provide that every State shall maintain a register of ships containing the names and particulars of ships flying its flag, and also that Cameroon did not possess a robust and established registration procedure of vessels under its flag<sup>105</sup>. The Commission also noted that registration of these vessels "poses question as regards the capacity for the authorities of Cameroon to establish a genuine link between Cameroon and these vessels which is in breach of the conditions set out for the nationality of ships in Article 91 of UNCLOS"<sup>106</sup>.

In January 2023, the European Commission identified Cameroon as a non-cooperating third country in the fight against IUU fishing ("red card"). The European Commission outlined that post-"yellow card" registrations in Cameroon were an important factor in its decision<sup>107</sup>.

# 3.3.7 Measures to strengthen port State controls

A 2021 workshop for DFFE departmental heads<sup>108</sup> highlighted several challenges in the implementation of the PSMA. These broadly included:

- interagency communication and cooperation issues;
- DFFE internal coordination problems; and
- a lack of training at all levels.

Discussions with stakeholders for the current study indicate that, while good progress has been made on several issues recently, many of these problems persist. Recognising the funding and capacity challenges which

<sup>&</sup>lt;sup>100</sup> <u>https://stopillegalfishing.com/publications/transhipment-issues-and-responses-in-the-fcwc-region/</u>

<sup>&</sup>lt;sup>101</sup> <u>https://www.verangola.net/va/en/072020/Defense/20733/Angolan-authorities-seize-Russian-vessel-with-more-than-1200-tonnes-of-fish.htm</u>

<sup>&</sup>lt;sup>102</sup> <u>https://africaports.co.za/2021/03/14/africa-ports-ships-maritime-news-15-march-2021/</u>

<sup>&</sup>lt;sup>103</sup> <u>https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021D0219(02)&rid=3</u>

<sup>&</sup>lt;sup>104</sup> **OLUTORSKY (IMO No 8826151); TRONDHEIM (IMO No 8832112); HELSINGFORS (IMO No 8033297)**; SVEABORG (IMO No 7610414); SEI WHALE (IMO No 7703950); **AVACHINSKY (IMO No 8138695); FORSA (previous name BORNHOLM, IMO No 8721208)**; GREY WHALE (IMO No 7703962); MARSHAL VASILEVSKIY (IMO No 8033869); **FREDERIKSHAMN (IMO No 8730132)**; VEGA (previous name SKAGEN, IMO No 8325353); HUMPBACK WHALE (IMO No 9120281).

<sup>&</sup>lt;sup>105</sup> <u>https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021D0219(02)&rid=3</u>

<sup>&</sup>lt;sup>106</sup> <u>https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021D0219(02)&rid=3</u>

<sup>&</sup>lt;sup>107</sup> https://ec.europa.eu/commission/presscorner/detail/en/QANDA 22 7891

<sup>&</sup>lt;sup>108</sup> Training on the Port State Measures Agreement facilitated in South Africa: 8<sup>th</sup> to 9<sup>th</sup> March 2021, Westin Hotel, Cape Town.

exist in the South African government system, consideration should be given to the following measures, to the extent that resources allow:

## **Promote inter-agency coordination**

A key challenge for port States in the effective implementation of the PSMA and other PSMs is to ensure effective coordination and information sharing amongst multiple agencies involved in the port management system. While a number of mechanisms have been established over time to facilitate coordination (e.g. the PECC, initiatives under Operation Phakisa), we understand these have not worked particularly effectively in practice and frustrations around inter-agency coordination remain.

To that end, consideration should be given to examining the mechanisms in place for inter-agency coordination on port management (including PSMA) issues, with a view to strengthening both strategic and operational coordination, including effective information sharing. Any new mechanisms should have senior executive support. We understand that the importance of strengthening inter-agency coordination and information exchange (including through the establishment of a national level mechanism for electronic exchange of real time information) was recognised amongst an inter-agency workshop on port inspections held in April 2024<sup>109</sup>.

One issue highlighted by a review of the implementation of the PSMA in South Africa's domestic legislation that could be addressed through inter-agency coordination is the process for denial of FFV entry into port (Snijman, 2024). At present there is no power under the MLRA for the DFFE to deny port entry to a vessel on the basis of IUU fishing. The review noted that while amendments could be made to the MLRA to provide DFFE with this power, a more practical arrangement may be to establish an MOU that obliges that Harbour Master to consult with DFFE prior to allowing FFV into port.

## Ensure adequate risk assessment capacity

Until very recently, we understand that DFFE had very few trained staff available to undertake detailed risk assessments of port entry applications. In practice, this led to bottlenecks in the PSMA process with vessel operators and agents confirming that delays in processing applications had forced vessels to wait outside the EEZ, and DFFE noting that undertaking detailed assessments was challenging given time pressures to issue permits.

Given the challenges associated with achieving 100% inspection coverage targets, and the likely resourcing constraints on funding additional inspection staff, ensuring adequate risk assessment capacity in place is important in effectively targeting limited resources. We understand that DFFE has very recently sought to resolve this issue by increasing the number of staff capable of assisting with risk assessments and EEZ permit applications.

## Encourage internal training for inspectors

While we understand IOTC has undertaken a number of PSM/ePSM-related training workshops since the implementation of the PSMR, and organisations such as FishFORCE<sup>110</sup> provide valuable ongoing legal and PSMA-related training, we understand that there is currently limited internal training provided for new inspectors, who reportedly largely learn on the job.<sup>111</sup> We understand that the challenges associated with a lack of training for new staff is exacerbated by high staff turnover rates, driven by funding shortages and other factors. To that end, consideration should be given to strengthening internal training processes to ensure all

110 https://fishforce.org/

<sup>&</sup>lt;sup>109</sup> South Africa event on the cooperation between the Indian Ocean Memorandum of Understanding on Port State Control and the Indian Ocean Tuna Commission on port State inspections.

<sup>&</sup>lt;sup>111</sup> DFFE compliance pers. comm.

staff with involvement in the PSMA process have the necessary skills and knowledge to effectively perform their roles.

# 3.4 Dalian (China)

# 3.4.1 Overview of port

Located on the southernmost tip of China's Liaodong Peninsula, Dalian is the second-largest city in Liaoning Province (Figure 59). Dalian port is strategically positioned between China's Bohai and Yellow Seas, as well as in close proximity to Russia, South Korea, and Japan, and serves as the most important seafood trade hub in northeast China and, more broadly, one of the most important hubs in northeast Asia. According to China Customs data, the volume of aquatic products imported or exported through Dalian Port was 1.73 million tonnes in 2017<sup>112</sup>.



## Figure 59: Aerial view of Dalian port (Google Earth)

Dalian Port has 10 branch ports surrounding Dalian City. Many of the ports that provide services to FFVs are concentrated on the eastern coastline of Dalian City. Since different branch ports have different planned anchorages, the anchorages of Dalian Port can appear relatively 'chaotic'. This was likely to have been particularly the case during the COVID-19 pandemic (2021-2022), when strict Chinese quarantine controls led to long wait times to receive quarantine results and port entry notifications. During this period, vessels may have been arranged in different anchorages to wait for entry into the port, and after entering port, may have temporarily held in 'non-traditional' locations to facilitate management of entry by port authorities.

For our AIS analysis, we considered the area contained within the green box below 'Dalian port' (Figure 60). We note that an anchorage area appears to be located outside this box, and this area is also classified by GFW as 'Dalian'. Nevertheless, the purpose of the anchorage area outside of the port remains uncertain. One official from the Dalian Fisheries Authority indicated he thought this anchorage was an unplanned/ unofficial anchorage which may have been in higher use during COVID years.

<sup>112</sup> http://www.cappma.org.cn/view.php?id=2602



Figure 60: Dalian 'port' (green box) and offshore 'anchorage' area.

# 3.4.2 Port Governance

# 3.4.2.1 Authorities involved

The main agencies and entities involved in the monitoring and regulation of FFVs and carriers accessing Chinese ports include:

- Port Authority: The Port Authority is the government entity responsible for the management of the port. With the Chinese government's "separation of government and enterprise" reforms since the beginning of the 21st century, most of China's port authorities have been separated into local port management agencies and state-owned companies responsible for delivering port services. In Dalian, the local port management agency is the Dalian Municipal Port Authority, which is affiliated with the Dalian municipal government. Dalian Port Co., Ltd. is responsible for the actual operation of Dalian Port, providing pilotage, berthing and cargo handling services.
- China Maritime Safety Administration: Affiliated with the Ministry of Transport, CMSA is responsible for accepting and approving port entry applications of all 'international navigation ships' accessing China and preventing the entry of non-compliant ships in accordance with relevant international regulations (including those ships listed in the IUU lists of RFMOs of which China is a member). CMSA is also primarily responsible for Port State Control (PSC) inspection and other security inspections of boats accessing Chinese ports. These currently focus solely on marine safety issues (as opposed to fisheries and other matters), although we understand there has been increased communication between Chinese fisheries authorities and the CMSA in preparation for China's possible accession to the PSMA.
- China Customs: China Customs is responsible for recording and inspecting all goods entering China and has branches in every international port. Dalian Customs and its branches are responsible for recording and inspecting all goods entering China through Dalian Port.
- China Immigration Inspection: CII is part of the Chinese government's police department, with the National Immigration Administration its superior management agency. In the context of visits by FFVs, CII is responsible for recording and inspecting all individuals and their carry-on baggage passing through Chinese ports. CII has a permanent branch in Dalian (Dalian CII Inspection Station), which is responsible for related work in all ports under the jurisdiction of Dalian and its surrounding areas.
- **Bureau of Fisheries:** The Bureau of Fisheries is affiliated with the Ministry of Agriculture and Rural Affairs. The Bureau of Fisheries is responsible for regularly updating the IUU fishing vessel list and the

list of animals and fish species that distant-water fishing vessels are not allowed to bring into China (e.g. sharks prohibited by RFMOs) to CMSA and Customs.

• China Overseas Fisheries Association: COFA is a semi-official organization that assists the Bureau of Fisheries in managing China's distant-water fishing industry and also provides various services to China's distant-water fishing companies. For example, COFA is responsible for issuing electronic customs clearance certificates and fishing certificates to Chinese distant-water vessels fishing for specific species regulated by RFMOs (bluefin tuna, bigeye tuna, etc.).

Amongst the above departments, only CMSA and Customs can conduct inspections of 'international navigation ships' and cargo. We understand that CMSA's inspections largely focus on the parts of fishery regulations that involve the safety of vessels and crew, while Customs primarily focus on the details of the catch against RFMO CMMs (mainly to identify any prohibited species) as well as the fishing certificate for each vessel. The Bureau of Fisheries and its affiliates retain control over compliance inspections of domestic vessels fishing within China's EEZ, but do not inspect FFVs.

There is no public data on the number of inspection personnel employed by Dalian CMSA and Dalian Customs, however both have permanent branches covering all Dalian branch ports.

Arrangements for day-to-day coordination and information exchange amongst 'equal level' agencies exist within the Chinese Government system. In addition, Chinese government regulations provide that the 'port supervision agency' is responsible for convening a joint meeting of agencies involved in ship import and export to work through operational issues related to inspections<sup>113</sup>. In Dalian's case, the Dalian Municipal Port Authority is the coordinating agency. However, due to the limitations of its own administrative level and scope of power, we understand the Dalian Municipal Port Authority often enlists its superior agency, the Dalian Municipal Government or other superior agencies, to act as the coordinating agency.

Information exchange between Government departments occurs at all international ports in China to varying degrees, with the mechanism of exchange varying according to each department's organizational structure and the circumstances of each port. At Dalian Port, at the national level, the Bureau of Fisheries regularly updates the IUU list of each RFMO and the list of species that are strictly prohibited from fishing to CMSA and Customs. CMSA and Customs also regularly share their inspection results with the Bureau of Fisheries.

At the local agency level, Dalian CMSA began information exchange with Dalian Customs in 2004. Dalian CMSA shares information on vessels applying for entry into the port with Dalian Customs through an electronic platform. This helps Dalian Customs conduct targeted inspections of the cargo of ships accessing the port. We understand there is also a similar information exchange mechanism between the Dalian CMSA, the Port Authority and Dalian Customs.

Various departments in Dalian Port also conduct information exchange and joint operations on inspection and law enforcement. For example, since 2021 Dalian CII has worked with Dalian CMSA, Dalian Customs and other departments to carry out a joint law enforcement operation called "Clean Sea". This operation takes place once a year (lasting six months) and aims to combat maritime crimes (e.g. illegal docking, unlicensed ships, and smuggling) in the waters near Dalian.

# 3.4.2.2 National policies/processes

The Chinese government divides its international ports (including land ports, airports and water ports) into two categories: national ports and regional ports. "High-level" national ports are open to foreign transportation (airplanes, ships, trains, etc.) from any country. In principle, regional ports are only open to countries adjacent

<sup>&</sup>lt;sup>113</sup><u>https://faolex.fao.org/docs/pdf/chn220356.pdf</u>

to the port<sup>114</sup>. Dalian Port is a "high-level" national port, meaning ships from any country can apply for access. As of 2022, there are 58 national water ports, of which about 30 are "high-level" water ports (including inland river ports) open to foreign ships.

Among the foreign ships that can apply to access Dalian Port, only certain South Korean fishing vessels are authorised to fish within China's EEZ. Where FFVs flagged to other countries wish to use Chinese ports to load and unload cargo (including fish), they can be regarded as a foreign carrier and apply for port entry in accordance with the requirements for general foreign flagged vessels. However, no cargo transfer between ships is allowed without approval from relevant Chinese authorities.

In addition, the Chinese government defines all ships operating in international waters as 'international navigation ships'. These ships must apply before accessing a Chinese port, regardless of nationality. Chinese distant-water fishing vessels and Chinese carriers engaged in at-sea transhipment are also considered international navigation ships. Catches transported back to China by these vessels are regarded as imported goods for inspection by Chinese Customs (but are not included in China's import and export statistics).

# **Application for entry**

China is not currently a party to the PSMA, so Dalian does not have port State measures in place consistent with the Agreement.

International navigation ships seeking to enter Dalian Port are required to go through a three-step process (Figure 61).



## Figure 61: Vessel entry application process.

After receiving the FFV's application, the local CMSA will review the documents provided (e.g. against RFMO IUU lists, past port entry records, etc.). At this stage, CMSA mainly assesses the authenticity of the ship's information and any safety risks (e.g. whether the crew members have relevant documentation, whether they are carrying dangerous goods, etc.). CMSA also makes decisions on the berth, as well as loading and unloading

<sup>&</sup>lt;sup>114</sup>https://www.gov.cn/xxgk/pub/govpublic/mrlm/201301/t20130109\_65827.html

points to be used. At this stage, applications for entry by fishing vessels on relevant RFMO IUU Lists will be rejected.

Table 9 lists the documentation required upon application for entry into port.

Table 9: Documents required for entry application.

No.	Document name	Description
1.	Application form for international navigation ships to access the port	Basic ship information – e.g. name of the ship, nationality, length of the ship, brief information on the cargo carried, number of crew members, etc.
2.	Ship Profile Sheet	Details of the ship itself (e.g. engine power), details of safety certificates, crew details/documents, safety inspection records.
3.	General declaration form	Summary of past voyages, cargo on board, passengers.
4.	Cargo declaration form	Details of the cargo on board (type, customs code, weight, dimensions.)
5.	Crew list	Crew details (name, nationality, date of birth and personal identification number, etc.).
6.	Passenger list	Passenger details (as above for crew, but not required if no passengers).
7.	Ship seaworthiness and inspection- related certificates	Original or scanned copies of all safety certificates.
8.	Crew certificates	Copies of certificates of all crew members on board
9.	Clearance certificate from previous port	If the ship's last port of call was a foreign port, the relevant clearance certificate/s are required.
10.	Details of local agent	Foreign ships must provide details of their local port agent.
11.	Maritime declaration of health	Checklist of sanitary conditions and health status of personnel on board ship

## **Vessel inspection**

The decision to undertake a physical inspection of the vessel is based on analysis of the entry application documentation provided. According to Chinese government regulations, if international navigation ships visiting Chinese ports are not from epidemic areas (human or animal diseases), CMSA will generally not conduct a physical inspection of the vessel.

Nevertheless, CMSA, China Customs and the China Coast Guard retain the power to inspect international navigation ships, with three types of inspection able to be undertaken:

• **Port State Control (PSC) inspection:** PSC inspections, undertaken by CMSA, are particularly focused on safety issues including navigation and pollution prevention. While the proportion of vessels inspected not disclosed, we understand CMSA often selects older ships for inspection because they are more

prone to safety problems. Dalian CMSA conducted a total of 715 PSC inspections on foreign-flagged ships in 2023, of which 130 inspections were on ships over 25 years old<sup>115</sup>;

- **"Operation" Inspection:** CMSA, China Coast Guard, Customs and other departments carry out individual or joint law enforcement operations from time to time, with physical inspections important components of such operations. Although the theme of each operation is different, all are aimed at combating problems such as smuggling, illegal fishing and ship safety hazards; and
- Health quarantine boarding inspection: Customs typically conduct a health-focused risk assessment based on the application documents, with physical inspections undertaken for ships assessed as high risk. This inspection is mainly focused on the sanitary condition of the ship and the health of the crew. Between 2021 to 2023, during the COVID-19 pandemic, most ships entering Chinese ports were subject to health quarantine boarding inspections.

# **Cargo inspection**

All ships accessing Chinese ports from abroad are required by Customs to unload imported goods to designated locations and undergo inspection and quarantine checks before the goods can be transported into the Chinese market. The distant water catches of Chinese fishing vessels are also subject to the above inspections.

During the inspection, Customs first conducts a document inspection and evaluation of the imported goods. Based on this, they can choose to undertake a manual inspection, a 'machine inspection' (essentially an electronic scan of goods to check for prohibited items, similar to a scan of passenger luggage at airports), or provide an exemption from inspection. Customs also conduct random manual inspections of an undisclosed proportion of imported goods.

Customs requires the applicant to provide the certificate of origin for all aquatic products, while for aquatic products caught outside of the Chinese EEZ, applicants are required to provide fishing certificates for the goods. For imported catches, Customs conduct inspections of species prohibited by RFMOs based on information provided by the Bureau of Fisheries, while also checking for species listed under the CITES.

COFA provides the fishing certificates of Chinese distant-water fishing vessels, which include registration information and fishing authorisations (permitted waters, species). In addition, for species managed by RFMO CDSs (bluefin tuna, bigeye tuna and swordfish, etc.), COFA issue a catch document after confirming that the Customs declaration and transfer certificate provided by the distant-water fishing vessel are accurate. We understand COFA has access to VMS information for all Chinese distant water vessels, and therefore capacity to verify reported fishing timing and location.

# 3.4.3 Foreign fishing vessel port usage

# 3.4.3.1 FFV visits by flag

Dalian port is relatively infrequently visited by FFVs but is a major port for foreign carrier vessels (Figure 62). The number of carrier entries increased substantially across the study period, consistent with the progressive relaxation of COVID-related port access restrictions.

Amongst FFVs, vessels flagged to Russia, South Korea and Vanuatu were the only vessels to enter the port (Figure 63), with a total number of entries peaking at 12 in 2021. Given Vanuatu's open ship registry, it is highly likely that these vessels were controlled by Chinese companies. Despite the progressive relaxation of COVID-

<sup>&</sup>lt;sup>115</sup>https://www.xindemarinenews.com/topic/PSC/2024/0516/54499.html

related restrictions, FFV visits did not increase in 2022-23. This is consistent with advice from local sources who confirmed Dalian was rarely visited by FFVs, even pre-pandemic.



Figure 62: Number of foreign vessel entry events to port and anchorage locations 2021-2023.



## Figure 63: FFV entries by flag to port OR anchorage areas.

The South Korean fleet is entirely composed of small nearshore fishing vessels allowed to operate within China's EEZ under the China-South Korea Fisheries Agreement. These vessels visit Dalian to land their catch, which is sold in the Chinese market. Since Dalian is very close to South Korea, these vessels do not need to obtain food supplies and fuel at the Dalian port, and there is no need to replace crew members.

While visits to Dalian by FFVs are limited, the port is home to a large fleet of domestic Chinese vessels. The fleet is broadly of two types: (i) the nearshore fleet with Dalian as its home port and (ii) the distant-water fleet returning to Dalian. The nearshore fleet only undertakes short trips within China's EEZ, typically using gillnets and small trawls to target species such as yellow croaker, silver pomfret and Oriental shrimp. Catch is supplied to China's local market. They regularly return to Dalian Port and its sub-ports to land catch, reprovision,

undertake maintenance and replace crews. Since they are not 'international navigation ships', they do not need to apply to CMSA to enter Dalian Port, and their catch does not need to pass Customs inspection.

China's domestic distant-water fleet using Dalian port is dominated by drifting longliners and trawlers. Drifting longliners mainly fish in the WCPFC, IOTC and IATTC areas targeting tunas and other highly migratory species. The trawlers operate mainly within Russia's EEZ, targeting species such as pollock. We understand that almost all the Chinese distant water vessels accessing Dalian come from the Chinese fishing companies registered in Dalian. These vessels return to Dalian regularly to reprovision, undertake ship maintenance and replace crews, before returning to sea. Some of them land their catch at Dalian Port, while others return to Dalian after landing catch at other ports in China or transhipping their catch at sea.

Carrier visits to Dalian are dominated by Russian-flagged carriers transporting products from Russia's far east fisheries (mainly pollock and salmon) to be processed in Dalian or surrounding areas. These vessels account for 81% of total carrier entries across the study period (Figure 64). The number of visits increased substantially from 2021 to 2023, with the number of visits in 2023 being roughly similar to the number of visits in 2020 reported by Hosch et al. (2023), prior to the Chinese government's suspension of unloading by foreign ships at Chinese ports in 2021. Russian carriers may reprovision and exchange crews in Dalian but do not seem to be loading fisheries products for transport back to Russia, with only very small volumes of fisheries products imported into Russia from China.

Japanese and Panamanian flagged carriers were the next most frequent visitors to Dalian port, albeit at levels considerably lower than Russian carriers. Japanese vessels accounted for around 9% of total entries, with numbers relatively stable across the study period. Notably, on August 24, 2023, the Chinese government prohibited the import of all Japanese fisheries products following the release of treated wastewater from the Fukushima nuclear power plant. Prior to this, China mainly imported shellfish and commercial fish such as mackerel and saury from Japan.

Panamanian carriers accounted for 6% of entries across the study period, increasing substantially in 2023. Other carriers entering Dalian were flagged to the Bahamas, South Korea, Liberia, and North Korea. Collectively, these vessels accounted for only 4% of total visits.



Figure 64: CV entries by flag to port OR anchorage areas.

## 3.4.3.2 FFV visits by gear type

FFVs entering Dalian from 2021 to 2023 were mainly trawlers (Russian), drifting longlines (Vanuatu), and gillnets (South Korean) (Figure 65). The number of visits by trawlers increased across the study period, likely

consistent with a relaxation of COVID-related port restrictions, although visits by all gear types were relatively infrequent. We understand Russian trawlers visit Dalian to land catch, including pollock, salmon and cod, as well as reprovision and refuel, but don't exchange crew.



Figure 65: FFV entries by gear type.

# 3.4.4 Fishing activity and governance

# 3.4.4.1 Fishing patterns of key foreign fleets

# Russian trawl fleet

The Russian flagged fleet entering Dalian between 2021 and 2023 consisted of six trawlers and one set longline vessel. Figure 66 shows the operating area of the Russian trawl fleet in trips immediately preceding entry into Dalian from 2021 to 2023. We understand the target species of at least two of the trawl vessels is pollock, operating within the Russian EEZ. The only set longline vessel is a king crab fishing vessel operating in Russian EEZ waters<sup>116</sup>. The Russian government has quota requirements for both pollock and king crab. Another trawler is registered with the NPFC as a fishing vessel with the target species listed as mackerel.

<sup>&</sup>lt;sup>116</sup><u>https://www.vostok1.com/en/fleet-and-fishing/fleet/</u>



Figure 66: Russian trawl fleet fishing activity preceding Dalian port entries, 2021-2023.

## Vanuatu fleet

We understand the four Vanuatu-flagged drifting longline vessels entering Dalian belong to (or once belonged to) Dalian Ocean Fisheries Co., Ltd. This company has been sanctioned by the United States in recent years for illegal fishing and mistreatment of crew members<sup>117</sup>. We understand the current operating position of the company is pessimistic, although two vessels (Xinglong 905 and Xinglong 906) appear to have still been operating within Brunei's EEZ in 2023<sup>118</sup>.

## South Korean fleet

According to the latest data released by China and South Korea during the 2022 fishery consultations, the number of fishing vessels that the Chinese and South Korean governments mutually allow to enter each other's EEZ each year was about 1,300 to 1,400. South Korean vessels fishing within China's EEZ are mainly gillnetters, targeting fish species such as yellow croaker and silver pomfret, and operating according to a range of restrictions including area (Figure 67), gear type and a requirement to comply with China's summer fishing moratorium<sup>119</sup>.

South Korean vessels wishing to fish in China's EEZ need to apply to the South Korean fishery authorities annually (the application list is not public).

There are many Chinese FVs that enter South Korea's EEZ to operate every year, while there are very few South Korean FVs that enter China's EEZ. Nevertheless, some media reports indicate a large number of South Korean FVs have illegally entered China's EEZ to operate during China's summer fishing moratorium since 2022<sup>120</sup>.

<sup>&</sup>lt;sup>117</sup> https://home.treasury.gov/news/press-releases/jy1154

<sup>&</sup>lt;sup>118</sup> https://www.gdzjdaily.com.cn/p/2853610.html

<sup>&</sup>lt;sup>119</sup> Since 2018, all fishing activities except gillnet, rod and line and cage fishing have been suspended in all Chinese waters (Bo Sea, Yellow Sea, East China Sea, South China Sea, and Beibu Gulf north of 12 degrees north latitude) from mid-May to mid-August each year (the time varies slightly each year).

<sup>120</sup> https://www.163.com/dy/article/I7EFQH65055633DX.html



Figure 67: Area within the Chinese EEZ within which South Korean fishing vessels are allowed to operate (yellow area).

## **Russian carriers**

In practice, Dalian is one of a number of ports in the NE Pacific visited by Russian flagged carriers during the study period, with most visits made to ports in Russia itself (particularly Vladivostok) (Table 10). Busan and Dalian are the main foreign ports visited by these vessels.

The number of entries by Russian carriers to Dalian increased significantly in 2022-2023 (Table 10), following the relaxation of COVID-related port access restrictions for Russian vessels in January 2022<sup>121</sup>. According to Chinese customs statistics, Russian carriers mainly unload pollock and salmon at Dalian Port. Some of the unloaded products are sold in the Chinese market, while the rest are processed and exported to Europe and other markets<sup>122</sup>.

<sup>&</sup>lt;sup>121</sup> <u>https://www.seafoodsource.com/news/supply-trade/russian-pollock-exporters-regain-access-to-china-after-estimated-usd-400-million-in-losses</u>

<sup>122</sup> https://www.sohu.com/a/515865114 121124416

Year	Port	No. of entries
2021	VLADIVOSTOK	483
2021	BUSAN	329
2021	PETROPAVLOVSK	112
2021	SEVERO KURILSK	95
2021	OKTYABRSKIY	46
2022	VLADIVOSTOK	518
2022	BUSAN	322
2022	PETROPAVLOVSK	130
2022	SEVERO KURILSK	126
2022	DALIAN	57
2023	VLADIVOSTOK	557
2023	BUSAN	371
2023	DALIAN	159
2023	PETROPAVLOVSK	131
2023	SEVERO KURILSK	109

#### Table 10: Top ports used by Russian carriers who visited Dalian, 2021-2023.

Russian carriers typically use Dalian as one of a network of ports in Russia, Japan, South Korea and China (Figure 68). Trips appear to be a mix of direct transportation between ports, as well as at sea transhipment from harvesting vessels in key fishing grounds such as the Sea of Okhotsk.



Figure 68: Typical AIS tracks of RUS-flagged carrier vessels visiting Dalian (blue squares indicate port visits).

## Japanese carriers

Vessel tracks from Japanese flagged carriers visiting Dalian during the study period show the vessels visiting a range of ports across China, South Korea, and Japan (Figure 69). In South Korea and China, visits were principally to Busan, Qingdao, Fuzhou, and Haikou. As noted above, on August 24, 2023, the Chinese government banned the import of Japanese fisheries products following the release of treated wastewater from the Fukushima nuclear power plant. Prior to the recent prohibition of Japanese seafood imports, China mainly imported shellfish and commercial fish such as mackerel and saury from Japan. China mainly exports tuna products to Japan.



Figure 69: The movement track of Japanese carriers visiting Dalian, 2021 - 2023.

## Panamanian carriers

Anecdotal information from local sources indicates that at least some of the Panamanian fleet of carriers visiting Dalian during the study period were controlled in practice by Chinese companies. Nevertheless, given their foreign flag, they were subject to the same strict COVID related restrictions on foreign vessel access to Chinese ports applied to other foreign vessels. Like Russian carriers, entries of Panamanian registered carriers increased following the lifting of COVID-related port restrictions, albeit later than for Russian vessels (due to the special agreement between the Chinese and Russian governments, port entry restrictions were relaxed for Russian vessels in January 2022; restrictions on vessels from other countries were gradually opened in 2023) (Table 11). We understand from local sources that the number of Panamanian registered carriers controlled by Chinese companies or individuals is likely to have decreased since 2022, influenced by the strict port access arrangements applied to foreign vessels through the pandemic.

Tabl	e 11:	Тор	ports	used	by	Panamanian	carriers	visiting	Dalian,	2021-2023.
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Year	Port	No. of entries
2021	BUSAN	32
2021	DISCOVERY BAY	8
2021	SENDAI	8
2021	CANSADO	6
2021	USA-1824	6
2022	BUSAN	26
2022	BERKELEY SOUND	8
2022	SHIDAO	8
2022	SENDAI	7
2022	STANLEY	7
2023	BUSAN	33
2023	DALIAN	22
2023	SENDAI	10
2023	DISCOVERY BAY	8
2023	LAGOS	8

We understand the Panamanian carriers visiting Dalian primarily service Chinese tuna longliners operating in WCPFC, IOTC, and IATTC areas, squid jiggers operating in SPRFMO waters and Argentinian waters and vessels operating in NPFC waters. Figure 70 shows the patterns of activity for Panamanian flagged carriers visiting Dalian during 2021-23.



Figure 70: The variable activity of Panamanian-flagged carriers that visited Dalian in 2021-2023. Each colour represents a separate vessel (blue squares represent port stops).

# 3.4.5 Movement of fish

The destinations of aquatic products entering through Dalian Port are broadly of three types: (i) products sold directly in the Dalian local market, (ii) products transported to processing plants in Dalian (or elsewhere is Liaoning Province) for processing, and (iii) products transported to other areas in China (outside Liaoning Province) for processing or sale.

## Local sales

As a coastal city, Dalian's residents have a long history of seafood consumption. We understand that most of the seafood consumed by residents is sourced from China's nearshore waters and local aquaculture products. For imported aquatic products, favoured species include shellfish, such as crabs, shrimps and scallops.

Dalian has also established several trading markets for imported aquatic products to service distributors/buyers from other regions in China. Dalian LIAOYU International Aquatic Products Market, affiliated with LIAOYU Group, is the largest of these. Among the imported aquatic products it sells, the most popular are king crabs from Russia and various types of squid.

## Local processing

Dalian is one of China's most important hubs for seafood processing. According to data from the Dalian Municipal Government, Dalian's aquatic product processing output in 2021 was 1.591 million tons (including freshwater products). Since the early 2000s, seafood processing capacity has gradually expanded from Dalian to other parts of Liaoning Province. In 2022, there were reportedly 862 aquatic product processing factories in Liaoning Province, with more than 300,000 employees. There are also 586 cold storages for aquatic products, employing more than 100,000 people<sup>123</sup>.

In that context, most of the imported fisheries products entering Dalian Port will be transported to various processing plants in Dalian or elsewhere in Liaoning Province. According to China Customs statistics, Liaoning

<sup>&</sup>lt;sup>123</sup><u>http://news.foodmate.net/2023/11/674108.html</u>

Province processed a total of 2.287 million tons of aquatic products (including freshwater products) in 2022. We understand the main species processed were pollock, salmon, halibut, clams, cuttlefish and squid. The processing volume of marine products was 2.266 million tons, including 1.676 million tons of frozen aquatic products, 148,000 tons of surimi products and dried salted products, 243,000 tons of algae processed products, 19,000 tons of canned products, and 63,000 tons of fish meal.

In addition, some processing plants in Dalian (and broader Liaoning) also purchase raw materials from fishing companies elsewhere in China (or other countries). For example, Liaoyu Group Co., Ltd. owns the largest squid processing base in northern China. In recent years, the company has been reducing its own distant water fishing capacity, preferring instead to purchase raw material from other squid fishing companies, mainly from Shandong and Zhejiang provinces. The majority of this product will be transported to Liayou's facilities via Dalian Port by carriers and fishing boats.

# Shipping to other areas

We understand that the volume of aquatic products imported through Dalian Port but shipped directly to areas outside Liaoning Province is relatively small. Dalian is one of the most northerly international ports in China, with many large-scale international ports to its south (e.g. Tianjin Port, Qingdao Port, Shanghai Port, etc). Given almost all of the imported aquatic product processing plants in northeast China are concentrated in Liaoning Province, processing plants and dealers in other parts of China can use other Chinese international ports closer to them for imports. For example, Shandong is an important province for processing imported fisheries products (pollock and squid), with Shandong's processing plants mainly importing raw materials through Shidao Port and Qingdao Port.

In addition, when Dalian's distant water fishing companies choose to use processing plants and dealers in other parts of China to process and sell their catch, they transport their catch directly or via sea transhipment to ports closer to their business partners. For example, some skipjack tuna caught by Dalian distant water fishing companies will be shipped directly to Zhoushan Port for processing by plants in Zhejiang Province, while some squid will be shipped to Shandong Province for processing through Shidao Port.

On that basis, there are only three situations that will result in fisheries products imported from Dalian Port being shipped to other regions:

- Firstly, due to the lack of international ports in their own provinces, processing factories in areas north of Liaoning Province will choose to import aquatic products from Dalian and then ship them directly to their regions;
- Secondly, some carriers or fishing vessels are only willing to dock at Dalian Port. For example, since
  Dalian is the closest international port to Russia, Russian pollock carriers generally only unload in
  Dalian. Russian pollock will then be transported from Dalian to processing plants in other parts of
  China, such as Shandong Province;
- Finally, some bycatch species cannot be processed in Dalian and it is expensive to transport these bycatch species to other ports. Therefore, these species are landed in Dalian and then transported to specialized processing plants by land transport. For example, there is no processing plant for shark bodies in Dalian, so the sharks caught by Dalian's distant-water fishing vessels are landed in Dalian Port and transported to specialized processing plants in Fujian and Zhejiang Provinces.

## Trade data

Chinese Customs statistics are collected based on provinces, with researchers estimating that Dalian's aquatic product exports accounted for an average of 75% of Liaoning Province's data each year during the 2013 to

2019 period<sup>124</sup>. In addition, Dalian Customs disclosed that the total amount of aquatic products imported by Liaoning Province and Dalian City in 2017 was 1.2656 million tons and 1.103 million tons respectively<sup>125126</sup>. Therefore, in that year, Dalian's import volume of aquatic products accounted for about 87% of Liaoning Province. Because Dalian is the most important international water port in Liaoning Province and most fisheries products still rely on sea transportation, the ratio for 2017 is likely to be broadly reflective of general trends.

Table 12 sets out the import and export data of aquatic products in Liaoning Province from 2021 to 2023. We note that import volumes increased substantially in 2023, likely influenced by an easing of COVID-related port access restrictions. We also note a large discrepancy appears to exist between the export data published by China Customs and the Bureau of Fisheries for 2021 (with the Bureau of Fisheries estimate being ~150,000t higher).<sup>127</sup>

Table 12: Liaoning Province's aquatic product import and export data from 2021 to 2023. Dalian's proportion of total imports and exports is likely to be around 87% and 75% respectively. (Data source: China Customs)

Year	Total import volume (t)	Total export volume (t)
2021	522,907	490,420
2022	549,844	447,466
2023	1,013,044	529,995

Table 13 and Table 14 set out the top ten fishery products imported and exported from Liaoning Province from 2021 to 2023, according to Customs data. Pollock is the main imported product, accounting for around 38% of top 10 import volume across the period. Although pollock was imported from four countries (Russia, the United States, Japan and Canada), China Customs data indicate that imports from Russia accounted for >90% of total imports. Frozen sardines, halibut, salmon and herring collectively accounted for a further 41% of imports.

No.	Product name	2021(t)	2022(t)	2023(t)	Total(t)
1.	Frozen pollock	15,5205.5	19,7368.1	318,085.6	670,659.2
2.	Frozen sardines, sardinella, European	495.11	2951.04	193,120.9	196,567.05
	sprat and allis shad				
3.	Other frozen halibut	57,046.03	50,779.32	68,348.75	176,174.1
4.	Other frozen salmon	29,794.98	60,429.82	83,932.05	174,156.85
5.	Frozen herring	15,089.27	41,962.95	114,729.9	171,782.12
6.	Other frozen shrimps and prawns,	52,337.22	27,939.54	39,045.04	119,321.8
	other than shrimp meat				
7.	Frozen cod	41,926.31	31,454.17	44,757.66	118,138.14
8.	Frozen scallops (Scallop, Chlamys	38,493.95	9,678.91	118	48,290.86
	farreri, Giant scallop)				
9.	Frozen other scallop molluscs	NA	27,896.45	21,427.80	49,324.25
10.	Frozen Indian mackerel, Spanish	12,261.54	7,012.86	11,167.64	30,442.04
	mackerel, saury, bonito, marlin,				
	swordfish, four-fin swordfish, etc.				

Table 13: The top ten imported fishery products in Liaoning Province from 2021 to 2023. (Data source: China Customs)

**Note:** products reported under generic categories (e.g. unnamed frozen fish and other frozen fish fillets) have not been included in the table, although may be imported in substantial volumes.

<sup>&</sup>lt;sup>124</sup><u>http://www.cafscfe.com/attached/file/20230726/5.pdf</u>

<sup>&</sup>lt;sup>125</sup><u>https://www.sohu.com/a/218173131 531786</u>

<sup>&</sup>lt;sup>126</sup>http://www.xinhuanet.com/politics/2018-02/06/c\_129806320.htm

<sup>&</sup>lt;sup>127</sup> 2022 China Aquatic Products Import and Export Statistical Yearbook

Amongst the top 10 exports, frozen pollock was the largest single export by volume across the period, accounting for around 23% of the top 10 volume. The main export destinations were Germany, the United States, France, Poland and the United Kingdom. Clam products collectively accounted for around 28% of exports, while cod products accounted for 14%. Given the absence of significant domestic whitefish fisheries, pollock and cod products are likely to be re-exports (i.e. imported, processed and re-exported), while clam exports are likely to have been produced through local aquaculture.

No.	Product name	2021(t)	2022(t)	2023(t)	Total(t)
1.	Frozen pollock fillet	73,885.30	69,324.71	82,322.39	225,532.40
2.	Prepared or preserved clams	52,033.90	50,815.03	48,202.53	151,051.46
3.	Frozen halibut fillets	37,558.33	38,015.32	35,106.99	110,680.64
4.	Frozen salmon, Atlantic salmon and Danube taimen fillets	34,609.53	34,529.55	31,780.09	100,919.17
5.	Live, fresh or chilled clams, other than seedlings	45,112.61	27,361.85	24,336.44	96,810.90
6.	Frozen cod fillet	34,136.08	30,025.77	26,724.65	90,886.50
7.	Frozen herring	6,122.72	243.77	65,132.73	71,499.22
8.	Dried, salted or salted fillets of various species of cod	13,777.44	18,435.23	13,103.75	45,316.42
9,	Other frozen cuttlefish and squid	8,212.27	11,468.35	13,105.41	32,786.03
10.	Prepared or preserved cuttlefish and squid	9,957.27	10,007.16	8,975.21	28,939.64

Table 14: The top ten fishery products exported by Liaoning Province from 2021 to 2023. (Data source: China Customs)

**Note:** products reported under generic categories (e.g. unnamed frozen fish and other frozen fish fillets) have not been included in the table, although may be exported in substantial volumes.

## 3.4.6 Indications of non-compliance

## 3.4.6.1 RFMOs

There are few FFVs visiting Dalian port, with the main foreign fleet being Russian carriers transporting products from Russia's far east fisheries for processing in Liaoning Province factories. To that end, Dalian is not a particularly important port for the verification of FFV compliance with RFMO management frameworks. Nevertheless, Chinese distant water vessels, primarily operated by Dalian-based companies, land catch at the port after fishing in a number of RFMO areas including the WCPFC, IATTC and SPRFMO.

In the most recent WCPFC Compliance Monitoring Report, China was assessed as compliant with all assessed obligations<sup>128</sup>.

IATTC annual reviews of Member compliance with CMMs are not made public.

As discussed above in the Callao case study, the most recent SPRFMO (2024) Final Compliance Report, there were no possible compliance issues identified associated with the main CMM governing the Jumbo Flying Squid Fishery (CMM 18-2023) by any member<sup>129</sup>. China was assessed as non-compliant with no further action required for a number of minor incidents against CMM 05-2023 (Record of Vessels) and CMM 06-2023 (VMS).

128 https://meetings.wcpfc.int/node/21722

<sup>&</sup>lt;sup>129</sup> https://www.sprfmo.int/assets/Meetings/01-COMM/12th-Commission-2024/Report-and-Annexes/Annex-6a-2024-Final-Compliance-Report-2022-23.pdf

No possible cases of non-compliance were identified for any SPRFMO Member against the port inspections CMM (CMM 07-2022).

## 3.4.6.2 Government disclosures

According to Customs data, from 2021 to 2023, Dalian Customs investigated and dealt with an average of more than 1,000 cases of illegally imported goods per year. Customs does not disclose detailed information on all cases of illegally imported goods, with only isolated cases gaining media attention. For example, Dalian Customs seized two batches of frozen shark products in January 2023 and February 2024, including 5 tons and 2.5 tons of blue shark respectively<sup>130</sup>. Blue shark products were seized because it is a 'second-level protected animal' in China and has been included in CITES Appendix II since November 2023.

Dalian CMSA has not disclosed any information on cases where ships were refused entry into the port.

An important recent development in the management of China's distant water fishing fleets has been the establishment of a 'scoring system' to evaluate the performance of fishing companies by the Bureau of Fisheries. The scoring system commenced in 2022, following a trial started in 2019. Under the scoring system, a number of aspects of company management and compliance including internal management, production safety and violations of laws and regulations, are evaluated<sup>131</sup>. The system applies to all Chinese companies operating distant water fishing vessels.

Under the system, a company's starting score is 100 points, and up to 25 points can be added depending on various circumstances (e.g. carrying observers, participating in scientific research). Most distant-water fishing vessel violations result in a 10-point deduction. Companies with scores above 90 points can be assumed to have no major violations of laws and regulations. The outcome of the scoring exercise is closely related to whether Chinese distant-water fisheries companies can successfully obtain the Chinese government's distant-water fisheries subsidies. Table 15 shows the scores of Dalian distant-water fisheries companies from 2021 to 2023<sup>132133134</sup>.

<sup>&</sup>lt;sup>130</sup>http://dalian.customs.gov.cn/dalian\_customs/460673/460675/5659491/index.html

<sup>&</sup>lt;sup>131</sup> <u>https://www.moa.gov.cn/govpublic/YYJ/202203/t20220321</u> 6393084.htm

<sup>132</sup> http://shuichan.jinnong.cn/n/2022/03/16/5714799078.shtml

<sup>&</sup>lt;sup>133</sup>https://baijiahao.baidu.com/s?id=1762511062358704325&wfr=spider&for=pc

<sup>&</sup>lt;sup>134</sup>https://baijiahao.baidu.com/s?id=1794674614794265669&wfr=spider&for=pc

Company name	2021	2022	2023
Liaoyu Group Co., Ltd. (辽渔集团有限公司)	108	99.5	107
Liaoning Pelagic Fisheries Co., Ltd (subsidiaries of Liaoyu Group)	105	103	107
(辽宁远洋渔业有限公司)			
Dalian International Cooperation Pelagic Fisheries Co., Ltd	103	106	105
(大连国际合作远洋渔业有限公司)			
Dalian Jinguang Fishery Co., Ltd. ( <b>大</b> 连金广渔业有限公司)	101	104	106
Dalian Jinshengshui Pelagic Fisheries Co., Ltd. (大连金生水远洋渔业有限公司)	101	100	101
Dalian Haixin Aquatic Products Co., Ltd ( <b>大</b> 连海欣水产有限公司)	100	102	101
Dalian Shenghang Ocean Fisheries Co., Ltd. (大连晟航远洋渔业有限公司)	99.5	96	97.5
Dalian Lianpeng Blue-waters Fishery Co.,Ltd. (大连连蓬远洋渔业有限公司)	99	98	96
Huanqiu Tuna Fishing (Dalian) Co.,Ltd. (环球金枪渔业(大连)有限公司)	99	103	NA*
Liaoning Kimliner Ocean Fishing Co., Ltd. (辽宁金轮远洋渔业有限责任公司)	98	102	101
Dalian Boyuan Pelagic Fishery Co., Ltd. (大连博远远洋渔业有限公司)	97	93	94.5
Dalian Changhai Pelagic Fishery Co., Ltd. (大连长海远洋渔业有限公司)	97	96	95
Dalian Ruitaifeng Pelagic Fisheries Co., Ltd. (大连瑞泰丰远洋渔业有限公司)	96	97	97
Dalian Hailufeng Blue-waters Fishery Development Co.,Ltd.	95.5	95.5	97.5
(大连海陆丰远洋渔业开发有限公司)			
Dalian Huafeng Aquatic Products Co., Ltd. (大连华丰水产有限公司)	95.5	95	95
Dalian Gold Sea Fishery Development Co., Ltd	95.5	96	101
(大连金海远洋渔业开发有限公司)			
Dalian Mengxin Ocean Fisheries Co., Ltd. (大连孟鑫远洋渔业有限公司)	95.5	99.5	98
Dalian Shenghai Ocean Fisheries Co., Ltd. (大连盛海远洋渔业有限公司)	95.5	95.5	95.5
Dalian Yangming Overseas Fishery Co.,Ltd. (大连洋铭远洋渔业有限公司)	95.5	98	101.5
Changhai County Zhangzidao YiFeng Aquatic Product. Co., LTD	95.5	96	96
(长海县獐子岛益丰水产有限公司)			

#### Table 15: Performance scores of all Dalian distant-water fishing companies from 2021 to 2023.

**Note:** Huanqiu Tuna Fishing (Dalian) Co., Ltd, moved from Dalian to Shenzhen in 2023 and changed its name to Aoxian (Shenzhen) Fishery Co., Ltd. The new company did not appear in the 2023 scoring results, and it is possible that the company suspended its distant-water fishing activities due to relocation.

# 3.4.6.3 Other indications of non-compliance

In addition to government disclosures, a number of NGOs have made allegations of non-compliant behaviour of varying types against Chinese vessels associated with Dalian-based companies. For example, the Outlaw Ocean Project (OOP) detailed allegations including forced labor and AIS transmission gaps against a range of Dalian-linked vessels<sup>135</sup>. The OOP also provided information on violations and suspected violations of nearly 200 Chinese squid jiggers. Since Dalian is an important hub for China's squid processing industry and there are few squid fishing vessels controlled by Dalian distant-water fishing companies, Dalian's squid processing plants will

<sup>&</sup>lt;sup>135</sup><u>https://www.theoutlawocean.com/investigations/china-the-superpower-of-seafood/bait-to-plate/vessels/</u>

purchase squid raw materials from squid companies in other regions. This squid raw material may enter Dalian's squid processing plants through Dalian Port.

# 3.4.7 Measures to strengthen port State controls

In the context of strengthening international frameworks working to combat IUU fishing, China has announced that it is actively exploring the option of acceding to the PSMA<sup>136</sup>. Taking into account the outcomes of the Dalian case study and the broader institutional arrangements for the monitoring and control of FFV entry into port, the following recommendations are made:

## Strengthen fisheries inspection capacity and training

The Chinese Government's existing system of risk assessments and inspections for foreign fishing vessels is operated primarily by CMSA and Customs. CMSA review whether vessels seeking port entry are included on any IUU lists of RFMOs to which China is a party, but otherwise their physical inspections focus primarily on vessel safety. Customs focus primarily on the cargo being imported, and in particular whether the cargo includes prohibited fisheries products (primarily protected species – e.g. certain sharks). Although we understand the Bureau of Fisheries assists the process by providing information on RFMO CMMs (IUU lists, prohibited species), outside of those processes, we understand there are few existing checks of other internationally-agreed fisheries management measures.

In that context, effective implementation of the PSMA, as well as other relevant RFMO obligations, is likely to require a strengthening of China's capacity for fisheries risk assessment and inspection. Although data on the existing number of inspectors is not available, assuming inspectors will continue to perform existing functions, this is likely to require both an increase in the number of inspectors capable of inspecting FFVs, as well as dedicated training on relevant PSMA and RFMO inspection requirements and associated RFMO management measures. In Dalian's case, close cooperation with Russian authorities is also likely to be required to assess risks associated with Russian carrier vessels.

## Promote effective inter-agency coordination

The existing governance framework for the monitoring and control of 'international navigation ships' entering Chinese ports involves multiple departments and agencies, including CMSA, China Customs, the Port Authority, Bureau of Fisheries, COFA and CII. These departments are not subordinate to each other in the Chinese government system, and limited information on existing coordination and information exchange mechanisms amongst them is available publicly.

In that context, and given arrangements to implement the PSMA will be 'new' to many of the agencies, it will be important to establish clear and effective mechanisms for both strategic and operational coordination and information sharing (to the extent these do not already exist). Coordination arrangements should make it clear which department (or departments) will take the lead on PSMA implementation, and each respective agency's roles and responsibilities. Mechanisms for the sharing of operational information should be electronic where possible, and ideally share information in near-real time.

## Strengthen transparency of inspection outcomes

Although relevant Chinese government departments conduct checks of RFMO IUU lists on international navigation ships applying to enter Chinese ports, and Chinese Customs conduct inspections on fisheries cargo arriving at ports according to the CMMs of relevant RFMOs, limited information is available publicly on the

<sup>&</sup>lt;sup>136</sup> See, for example, the Joint Statement by China and France on *Strengthening Cooperation on Biodiversity and Oceans: From Kunming-Montreal to Nice* in May 2024 - <u>https://www.elysee.fr/emmanuel-macron/2024/05/06/de-kunming-montreal-a-nice-declaration-conjointe-pour-une-cooperation-renforcee-entre-la-france-et-la-chine-sur-la-biodiversite-et-locean</u>

number and outcomes of inspections. Currently, the only publicly available information is on vessel safety inspections undertaken by CMSA in some ports.

In that context, should China become a party to the PSMA, consideration should be given to publishing relevant summaries of inspection results in order to build domestic and international understanding of China's implementation of the PSMA and other relevant RFMO measures. This may include a summary of the institutional and operational arrangements used to implement port State measures, as well as an overview of inspections undertaken and high-level results.

# 4 ANALYSIS AND MAIN MESSAGES

Broadly, this study sought to examine in detail the institutional and policy arrangements applying to the monitoring and control of FFVs across four case study ports which are important in the global trade of seafood, as well as the nature of the main foreign fleets visiting each port, the main areas fished by these vessels, the fate of fisheries products moving through the port and any indications of non-compliance associated with those vessels. Each of the case study ports had unique characteristics – amongst foreign vessels, Cape Town is largely used as a logistics port by fishing vessels operating in the Indian or Atlantic oceans or transiting between ocean basins; Dalian is most frequently used by Russian flagged carriers transporting products from Russia's far east fisheries to processing facilities in Dalian and Liaoning Province; Montevideo is primarily used by trawlers and squid jiggers operating in Argentina's 'Mile 201', one of the last remaining areas of the high seas without an RFMO for most species; and Callao is used by Japanese and Spanish IATTC longliners to land products, as well as by Chinese high seas squid jiggers seeking access under 'crew change' and 'forced arrival' provisions in recent years. To that end, the main purpose of the study was to provide information on these issues and more broadly serve as a reference document for future work.

Nevertheless, there are a range of lessons learned in undertaking the study and common themes amongst the case study ports that are valuable to highlight. Many of these reinforce ideas that are widely-recognised by PSM practitioners, and are inter-related in practice (e.g. information sharing and risk assessment).

# Effective inter-agency coordination and information sharing is essential

A common feature of the institutional arrangements of all case study ports is the involvement of multiple agencies in the process of FFV port State control. In all cases, at least four different agencies are involved, often with a non-fisheries agency (e.g. port authority) taking ultimate control over the decision to allow or deny port entry. In those circumstances, effective implementation of the PSMA and other PSMs requires strong frameworks for multi-agency coordination, with all relevant parties involved. Where possible, information sharing should be electronic and in real-time.

Effective information sharing is also required at the level of States. For example, a fairly consistent action amongst authorities involved in the case study ports is to check RFMO IUU lists in the process of risk-assessment and deciding whether to approve or deny entry. However, the practical reality is that getting onto a RFMO IUU list is often a bureaucratic and difficult process, with multiple opportunities for interested States to veto inclusion, a number of areas of high seas still lack RFMOs and RFMO IUU lists don't generally reflect IUU offences committed within a vessel's own EEZ or under bilateral access arrangements. To that end, vessels formally listed on RFMO IUU lists almost certainly comprise only a tiny fraction of global fishing vessels that have been sanctioned for some form of IUU activity. In that context, strong information sharing arrangements between States are essential to effectively assess risk, particularly for those vessels regularly accessing multiple third-party countries. The operationalisation of the GIES under the PSMA should assist in this regard<sup>137</sup>.

<sup>137</sup> https://psma-gies.review.fao.org/

## Robust risk assessment processes are vital to effective port State control

A common challenge amongst several of the case study ports was a limitation on inspection capacity. For example, in Montevideo's case, we understand that limits on inspector numbers mean that authorities understandably prioritise compulsory inspections required by RFMOs for which Uruguay is a member, with inspections of vessels fishing in unregulated areas of the SW Atlantic (and not landing CCAMLR species) undertaken only when resources allow. While increasing the number of trained inspectors would obviously be beneficial, the practical reality is that resourcing challenges mean that's not possible for some port States. In that context, effective risk assessment processes are valuable both for highlighting IUU risks as well as in ensuring limited inspection resources are focused in the most effective manner. As discussed above, the operation of robust risk assessment processes is closely tied to other key components of an effective port control system including information sharing between States. In China's case, the adoption of a robust risk assessment processes is likely to be beneficial in any rollout of PSMA measures.

The other observation is that risk assessment processes appear to vary considerably amongst States. Our experience is that some apply quite detailed assessments (e.g. incorporating manoeuvring analyses using VMS/AIS to detect suspect behaviour), while others are more rudimentary (e.g. checking whether the vessel is on an RFMO IUU list). To that end, there would be considerable benefit in parties to the PSMA sharing information on risk assessment approaches and potentially developing a 'best practice' type template to assist States in developing their own robust risk assessment processes to meet national needs and international obligations. Training and capacity building to assist with the implementation of more rigorous assessments is likely to be beneficial for some States.

## Effective PSMs can help compensate for broader fisheries governance weaknesses

While fishing in most areas of the global high seas is now regulated through an RFMO, some gaps remain. In those areas, the absence of an RFMO means there is often limited visibility (outside the flag State) of fishing activity including catch and effort. A key feature of the fleets using Montevideo as a landing and logistics port is that most of them fish in 'Mile 201' off Argentina's EEZ, one of the few remaining areas of the global high seas without an agreed RFMO. In that context, there are no internationally-agreed management arrangements and very limited visibility of fishing activity in the area (e.g. limited information sharing and no public reporting of catch and effort, etc). In the absence of an international management framework, effective port State inspections and data collection processes offer one of the few practical opportunities to independently generate a picture of fishing activity in the area and undertake compliance monitoring of broader regulatory frameworks not dependent on an RFMO (e.g. crew welfare issues). In that context, strengthening port inspection and analytical capacity at key ports such as Montevideo represents an important opportunity for global fisheries governance given catch harvested by vessels using the port typically flows to major overseas markets (in Montevideo's case either via transiting through the 'free port', or being transhipped at sea outside of port visits). Effective implementation of the PSMA also has the potential to play an important role in monitoring catch transhipped in areas of the high seas without an RFMO, given the common practice of flagging carriers to countries with open registries (e.g. Panama, Liberia) (e.g. where a fishing fleet ships product back to processing centres in its own country using carriers flagged to a third country).

## Transparency in PSMA processes

Notwithstanding the use of local experts to assist with this study, information on many of the processes used by parties to implement the PSMA - including the agencies with ultimate responsibility for decision making at each stage of the chain, how decisions were made (e.g. which vessels to inspect and to what extent, decisions around the approval or denial of port use) and the information used to inform them – was often either opaque or difficult to obtain. In many cases, this was complicated by the multiple agencies involved with differing mandates (e.g. different agencies to authorise entry into maritime zones and physical entry into port). The PSMA entered into force in 2016 and serves as an important tool in the international community's efforts to prevent IUU-derived fish from entering global markets. In order to build confidence that the Agreement is being implemented effectively by all parties, transparency in the process of application is important. We note that this can be achieved in multiple ways, including through publishing summaries of PSMA processes on relevant PSMA party websites<sup>138</sup>. Stepping through the process required for implementation can often help highlight areas where additional coordination and information sharing is required amongst relevant agencies.

# AIS data requires substantial 'grooming' and ground-truthing

The increasingly widespread adoption of AIS by fishing vessels together with 'big data' analytical approaches has offered unique and previously unavailable insights into the behaviour and operation of global fishing fleets. Nevertheless, this study highlighted that AIS datasets constructed using machine learning and other approaches contain a range of errors and other misclassifications that can substantially influence the outcomes of any analysis if not corrected. While errors (e.g. misclassifications of vessel type, flag State, gear type) were evident across all case study ports, they were perhaps most stark across vessels accessing Dalian port. In that case, of the 1,920 FFV entries into Dalian port during 2021-2023 in the GFW dataset, 1,892 (~98%) were later considered to be erroneous in some way (e.g. misclassification of other vessel types as fishing [e.g. pleasure craft, sailing vessels, port tenders, tugs, tankers], implausible flag State classification in the context of vessel activity patterns and known Chinese fishery governance frameworks). To that end, studies using publicly available AIS data to examine trends in fishing fleet behaviour should ensure that they have robust data grooming and ground-truthing processes in place to identify and remove erroneous data, as well as publishing details of how this was undertaken. The process of ground-truthing is best done with subject matter experts who have a strong practical knowledge of the fleets involved.

<sup>&</sup>lt;sup>138</sup> e.g. <u>https://www.rmimimra.com/index.php/about-us/port-entry;</u> <u>https://www4.fisheries.go.th/local/index.php/main/site2/psmimplementation</u>

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# Annex 1: AIS data challenges

While AIS information has considerable value in analysing patterns of fishing behaviour, there are substantial limitations which should be acknowledged and considered. Below we outline some the main issues encountered during this project, in order of frequency/ severity.

# Inaccurate vessel identity information

As explained above, vessel identity information was initially obtained from GFW, who combine information on 30 public vessel registries worldwide with the predictions of a machine learning model. However, this information was found to be inaccurate for a considerable number of vessels which visited the four-case study-ports between 2021 and 2023. In order of prevalence, inaccuracies across the four case-study ports comprised:

- 1. Vessels classified as 'fishing' when they were other vessel types (e.g., pleasure crafts, ferries, cargo vessels, tankers, port tenders, tugs, military vessels);
- 2. Vessels with incorrect/ impossible flag information (in some cases likely resulting from MMSI sharing/spoofing); and
- 3. Vessels with incorrect gear information.

Due to time constraints, and given the widespread nature of inaccurate vessel information, we were not able to reconcile identity information for every vessel entering each of the four case study ports between 2021 and 2023 in this study. Nevertheless, a significant amount of time was spent verifying vessel information for those fleets and ports with the most inaccuracies. In particular, the following amendments were made to the raw GFW information obtained for FFVs entering the case study ports, 2021-2023:

- 1. Dalian: 1,920 FFV port entry events reduced to 28 FFV entries after:
  - a. Vessels incorrectly identified as 'fishing' were removed (these included pleasure crafts, sailing vessels, port tenders, tugs, tankers, carriers, WIG vessels, cargo ships);
  - Vessels broadcasting implausible flag information were removed (e.g., vessels flagged to Moldova, Iranian, Iceland, Bosnia and Herzegovina, Bermuda, Cyprus, France, Germany).
     Noting that foreign flagged fishing vessels are generally not permitted to fish within the Chinese EEZ and AIS information indicated that the activities of these vessels between 2021 and 2023 occurred largely within the Chinese EEZ; and
  - c. Vessels with no AIS information (vessel name, flag, gear type, callsign), except MMSI, and vessel tracks only occurring within the Chinese EEZ, suggesting the vessels were domestic, were removed.

The large amount of incorrect identity information for fishing vessels visiting Dalian may suggest that the sharing/ spoofing of MMSI numbers by vessels operating in the Chinese EEZ is more widespread than in other case-study port locations, albeit this was not investigated further in this study as these vessels were likely to be domestic (see also JAC, 2023). Six vessels incorrectly identified as "fishing" were also amended to "carrier".

- 2. Montevideo: 1,411 FFV port entries reduced to 1,372 FFV port entries after vessels incorrectly identified as 'fishing' were removed and vessels with impossible tracks were removed (impossible tracks discussed below). In addition, the assigned gear types of ~25% of Chinese vessels which visited Montevideo were identified as incorrect through systematic review, and gear types of several vessels flagged to Belize, South Africa, Saint Helena and Chinese Taipei were also incorrect. Gear information for these vessels was amended based on advice from local experts, information contained within arrival manifests sourced from the Argentine Naval Prefecture, photos, information from various websites and news reports. Two vessels identified as "other" were also amended to "carrier".
- 3. **Callao:** 747 FFV port entries reduced to 453 FFV entries once vessels incorrectly identified as 'fishing' were removed. In addition, flag information for eight visiting vessels was incorrect and fishing gear

information for 23 vessels flagged to China (n=17), Spain (n=3), Panama (n=2) and Portugal (n=1) was also incorrect and amended based on advice from local experts.

4. **Cape Town:** 974 FFV port entries reduced to 732 entries once vessels incorrectly identified as 'fishing' were removed. In addition, gear types of 15 visiting vessels flagged to China, Cameroon, Cook Islands, Japan and Chinese Taipei were amended based on advice from local experts and RFMO reports.

# MMSI sharing, location spoofing and the variable grooming of AIS data by different providers.

AlS data are inherently noisy, vessel operators can make mistakes while inputting codes, and AlS information can be easily manipulated, most commonly through the changing of vessel identify information, changing MMSI numbers, and the manipulation of vessel location. Several irregularities were evident in the AlS information obtained for the vessels visiting the study ports between 2021 and 2023, including:

- Single vessels using multiple MMSI numbers;
- A single MMSI number being broadcast by multiple vessels; and
- False locations/ impossible tracks.

These issues have been identified by several other studies (e.g. GFW, 2022; JAC, 2023) and in RFMO meetings<sup>139</sup>, alongside concerns regarding the disabling of AIS to avoid detection.

From AIS data alone, it is impossible to determine the reasons for these vessel patterns. Moreover, different data providers, such as GFW and Starboard, appear to interpret these patterns differently despite sourcing AIS information from the same provider (in this case Spire). This adds complexity to the interpretation of true vessel identify and position. Some examples are provided below:

# Example 1: Same MMSI, multiple vessels

Between Jan and June 2021, MMSI 412331079 was identified as 'LU RONG YUAN YU 698' in GFW, a Chinese squid jigger with a single entry to Montevideo and the below activity:



During this same period (Jan-June 2021) the same MMSI (412331079) was identified as two separate vessels in Starboard, LU RONG YUAN YU 698 and LURONG YUAN YU 869. In the latter case, the AIS tracks of both vessels appeared on-top of each other and two entries to Montevideo were recorded (one by each vessel). Also note

<sup>&</sup>lt;sup>139</sup> e.g., <u>https://www.iccat.int/Documents/BienRep/REP\_EN\_20-21\_II-1.pdf</u>

evidence of false location broadcasting/ impossible tracks back to China, Malaysia, and the North Pacific on Starboard, but not on GFW.



# Example 2: Same MMSI, multiple vessels

Example of two vessels broadcasting the same MMSI (412331128) on the same date, LUQUINGYUANYU051 off Senegal and LUQUINGYUANYU050 off Argentina. Also note impossible tracks/ false location broadcasting to a location west of New Zealand's EEZ, whereby the vessel/s would have needed to travel at >100 knots across landmasses (and faster by sea) to reach that location on the date AIS indicates they did.



# Example 3: False location

Example of Chinese squid jigger broadcasting a false location. Note that activity in dark green mirrors that of the rest of China's squid jig fleet, but is offset to occur around NZ. Also note impossible tracks which head towards Antarctica. This exact pattern of false location broadcasting was found to be widespread in the China's squid jig fleet that fish in SPRFMO waters (GFW, 2021).


## Example 4: Same MMSI, multiple names

Example of multiple names transmitted by MMSI 150400453 between 01 January 2020 and 31 December 2022. This vessel visited Montevideo several times between 2021 and 2023. Figure source: JAC, 2023



Similar MMSI swapping was evident in other Chinese flagged vessels. For example, in late 2021, MMSI 150402949 was transmitted by a vessel that was also transmitting intermittent positions from MMSI 412331281. Both MMSI signals were coming from the eastern Pacific Ocean, consistent with the signal being transmitted from a single vessel (in terms of position, speed and course). In January 2022, MMSI 412331281 ceased transmitting. MMSI 150402949 continued to transmit during the first half of 2022 by a vessel named LUQINGYUANYU290, located in the Indian Ocean. This vessel swapped its name to LURONGYUANYU197, still using MMSI 150402949, just before entering the South African EEZ on July 5<sup>th</sup>, 2022. The vessel subsequently switched to transmitting on another MMSI (150402940) before switching to the official, Chinese MMSI

associated with LU RONG YUAN YU 197 on 8 July 2022 (412331281 – i.e., the MMSI that ceased transmitting January 2022). Historic AIS data from October 2019 indicates that two initial MMSIs (150402949 and 412331281) were not being transmitted by the same vessel, further suggesting the widespread sharing of these MMSIs.

Chinese flagged vessels and vessels visiting Dalian port were observed to most frequently change MMSIs, broadcast a single MMSI across multiple vessels or display false locations/ impossible tracks.

The outcomes of the AIS vessel activity analysis should be read with these issues in mind.