

C4ADS

innovation for peace



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**EXPLORING THE ONSHORE NETWORKS BEHIND
ILLEGAL, UNREPORTED, & UNREGULATED FISHING**

ABOUT C4ADS

C4ADS (www.c4ads.org) is a 501(c)(3) nonprofit organization dedicated to data-driven analysis and evidence-based reporting of conflict and security issues worldwide. We seek to alleviate the analytical burden carried by public sector institutions by applying manpower, depth, and rigor to questions of conflict and security.

Our approach leverages nontraditional investigative techniques and emerging analytical technologies. We recognize the value of working on the ground in the field, capturing local knowledge, and collecting original data to inform our analysis. At the same time, we employ cutting edge technology to manage and analyze that data. The result is an innovative analytical approach to conflict prevention and mitigation.

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COVER IMAGE

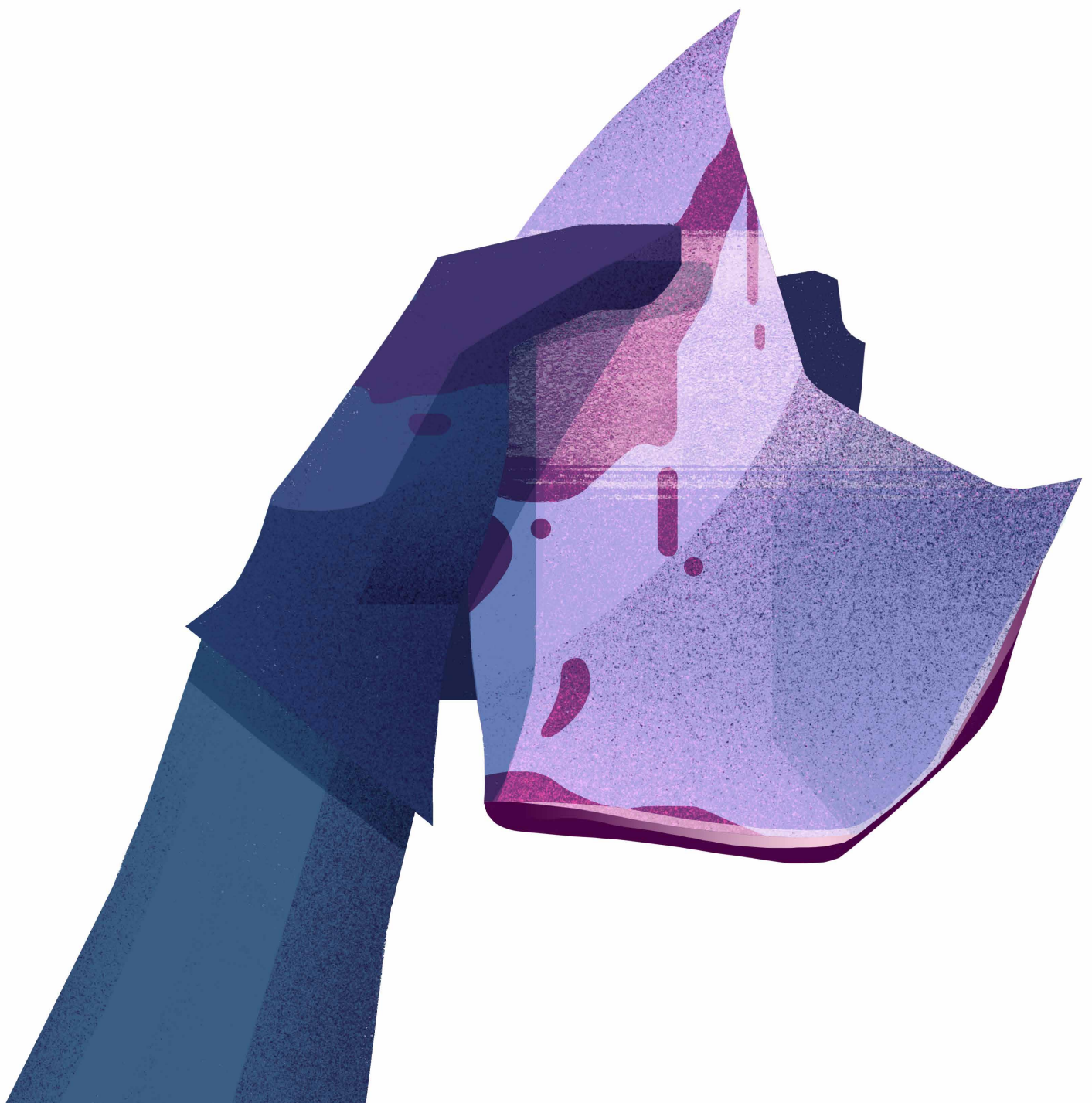
Art by Mark Boardman represented by meiklejohn.co.uk.

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ACKNOWLEDGEMENTS

C4ADS would like to thank Dyhia Belhabib of Ecotrust Canada; Michele Kuruc, Vice-President, Ocean Policy with the World Wildlife Fund (WWF) US; Trygg Mat Tracking (TMT); Gina Fiore; and many others who generously provided insight and advice in reviewing this report. C4ADS would also like to thank its technology partners like Palantir and Windward, whose software and systems were integral to the project's success. Finally, the author would like to thank his fellow team members Anna Wheeler, Evangeline Hines, Marcel Angliviél de la Beaumelle, Devin Thorne, and Mary Utermohlen and consultants like Jennifer Jun without whom the report would not have been possible.



EXECUTIVE SUMMARY

The value generated from illegal, unreported, and unregulated (IUU) fishing is estimated to be between \$10 billion and \$36.4 billion annually, making it the third most lucrative natural resource crime, following timber and mining.^{1 2 3} It continues to pose one of the greatest threats to the world's marine ecosystems while destabilizing the food and job security of billions around the world.⁴ Actors engaging in IUU fishing also depend on other criminal conduct to continue operating at sea and launder illicit catch into the supply chain. These activities can include document fraud, the trafficking of persons, money laundering, and more.⁵ Despite the scale of IUU fishing and its links to other crime types, IUU operators continue to exploit weak enforcement and a lack of transparency in the global fishing industry as they operate under a veil of secrecy.

Current enforcement and regulatory approaches to IUU fishing prioritize the at-sea activity of fishing vessels.^{6 7} Yet this approach has failed to address IUU activity and its associated offenses and crimes as part of a larger onshore system that poses risks to sovereignty, national security, and economic development. Therefore, effective maritime domain awareness requires both at sea and onshore scrutiny to establish a link between IUU fishing vessels and the financial activity of onshore corporations that facilitate IUU fishing. By framing IUU fishing as a problem linked to onshore crimes and facilitators, governments and law enforcement can rely on additional authorities to pursue the networks that sustain vessel activity at sea.⁸

In this report, we present findings from C4ADS' in-depth investigations into the methods used by IUU networks both at-sea and onshore to exploit a systemic lack of transparency and weak enforcement in the global fishing sector.

- In **Section One**, we examine the at-sea risk indicators of vessels engaging in IUU fishing identified across our investigations. We find that these indicators are consistent across regions of the world. Additionally, multiple at-sea indicators observed together can narrow investigations on a pool of high-risk vessels that warrant further examination. In particular, we examine the risk indicators for potential IUU fishing most frequently observed across our investigations for this report, including AIS dark activity through the manipulation or disablement of AIS, vessel identity alterations, flag manipulation, and engagement in unregulated transshipment at sea.
- In **Section Two**, we examine how investigations into IUU networks onshore can begin to lift the veil of secrecy that sustains IUU operations in the global fishing industry. These transnational networks use several methods to exploit vulnerabilities onshore, including shell companies, secrecy jurisdictions, flags of convenience, and gaps in information across the global fishing sector. Our analysis shows that an increased focus on the use of publicly accessible information can help identify the links between fishing vessels engaged in IUU activity and their owners. This in turn will help expose who ultimately profits from IUU fishing.
- In **Section Three**, we examine how a lack of transparency and insufficient scrutiny onshore allows opportunistic actors to exploit the fishing industry. Specifically, IUU fishing converges with a variety of crimes onshore that sustain fishing operations at sea and launder IUU catch, undermining the legitimacy of supply chains around the world. We explore three main points of convergence identified throughout C4ADS's investigations: human trafficking and forced labor, customs and document fraud, and the role of corruption and organized crime groups.

ENDNOTES

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DEFINITIONS

- **Automatic Identification System (AIS):** A radio communications system through which vessels broadcast data signals, including details of the vessel name, latitude, longitude, speed, and direction, among other information. AIS was initially introduced in order to improve maritime safety but is increasingly used by authorities to monitor vessel traffic.^{i ii}
- **Exclusive Economic Zone (EEZ):** An area which extends up to 200 nautical miles off the coast over which a state assumes jurisdiction over the exploitation and exploration of marine resources, including exclusive fishery management authority over all fish and fishery resources.ⁱⁱⁱ
- **Flag of Convenience (FoC):** The flag of a State that allows the owners of foreign vessels to register a ship despite being domiciled in a state different from that of the flag state. They generally offer competitive advantages to vessel owners due to limited regulatory oversight, ease of registration, and ability to obfuscate beneficial ownership.^{iv}
- **High Seas (International Waters):** All parts of the sea that are not included in the exclusive economic zone, in the territorial seas, or the internal waters of a state. The high seas are open to all states for the freedom of navigation, freedom of over flight, freedom of fishing, freedom of scientific research, and freedom to construct artificial installations.^v
- **Port of Convenience (PoC):** A port that fails to implement and enforce regionally agreed upon standards against IUU fishing and where catches can be landed with minimal or no inspection.^{vi vii}
- **Regional Fishery Management Organization (RFMO):** An intergovernmental organization formed by member nations or countries that share practical and financial interests in a particular region of international waters or of highly migratory species. RFMOs are dedicated to the sustainable management of fishery resources, and most of them have management powers including setting catch and fishing effort limits, technical measures, and control obligations.^{viii}
- **Ultimate Beneficial Owner (UBO):** The person(s) who exercise ultimate effective control over an entity or arrangement.^{ix}
- **Vessel Monitoring System (VMS):** A satellite-based monitoring system that provides data to fisheries authorities on the location, course, and speed of vessels.^x

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METHODOLOGY

This report presents findings from 15 months of investigation into IUU fishing vessels and the networks behind them around the world. For this report, we took a network-focused approach to develop a deeper understanding of how IUU networks operate at sea and onshore. C4ADS conducted in-depth network analysis on 29 unique networks engaging in IUU fishing or its associated offenses and crimes. The dataset compiled through C4ADS' 29 network investigations consists of roughly 150 vessels that have been linked to IUU fishing through public reports, blacklists published by RFMOs and national fishing authorities, and open-source investigations, as well as over 2,000 companies, individuals, and vessels that are directly or indirectly linked to these vessels.

For focused investigations, key entities were primarily identified through open-source research, maritime risk analytics platforms, and information provided by our partner network. A combination of at-sea vessel monitoring and corporate network analysis allowed C4ADS to build out beyond suspicious vessels to identify the larger fleets and onshore corporate networks associated with IUU fishing vessels. We began investigations of key ships and fleets of interest by tracking vessel behavior using Windward's Maritime Analytics System, which analyzes and organizes hundreds of millions of data points per day to make sense of ship activities worldwide. To expand the emerging networks, we compiled data from publicly available resources in Central and South America, Africa, Asia, Europe, North America, and Oceania. These sources include, but are not limited to, the following:

- Multilingual analysis of primary source media, including in Chinese, Korean, Spanish, and French
- Authorized vessel lists from RFMOs, national vessel registries (where available), the Food and Agriculture Organization (FAO), and other publicly accessible repositories of vessel data
- Maritime intelligence platforms, including Windward Maritime Analytics System
- Information and leads provided to C4ADS through our partner network
- Aggregated trade databases from a variety of commercial vendors, including Panjiva and Import Genius
- Official corporate records where available, along with commercial credit reports, to substantiate corporate holdings
- Other official documentation, including property and judicial records

We coded this information into our network analytics platform, Palantir Gotham, to identify entities with shared identifiers and map extended transnational networks across the world. To build out a network vertically, from vessel to ultimate beneficial owner, we use public records to uncover the directors and shareholders of companies that owned vessels engaging in IUU fishing. We then built out each network horizontally to identify associated companies and ships, linked through overlapping directorships, shareholdings, common places of business, and other unique identifiers. The figure below displays the different steps in identifying ownership through corporate network analysis:

Step 1: Initial Vessels Identified Through At-Sea Risk Indicators



Step 2: Registered Owners Identified Through Vessel Registries



Step 3: Shareholders & Management Identified Through Corporate Documents



Step 4: Further Shareholder & Management Buildout to Identify Associated Companies



Step 5: As Close to Ultimate Beneficial Ownership as Possible Identified



This report's methodology has several limitations. First, while C4ADS uses official corporate records and commercial credit reports to verify corporate holdings and commercial relationships, this information only represents a snapshot of corporate activity at a given time. Records may not be updated regularly, may not be consistent or wholly accurate, and may not have the same standards of reporting across jurisdictions. Public records also do not reveal all details of the operations of a company or relationships between entities. Second, inconsistencies in vessel ownership and registration reporting across RFMOs mean that vessels operating in certain regions are more extensively and accurately reported than others.

Unless explicitly stated, the mention of any individual, company, organization, or other entity in the report does not necessarily imply the violation of any law or international agreement and should not be construed to so imply.

INTRODUCTION

Illegal, unreported, and unregulated (IUU) fishing is the number one threat to the world's marine ecosystems, destabilizing the food and job security of billions around the world. It undermines the effective management of marine resources and is a major loss of revenue for countries already struggling to monitor their jurisdictional waters. The total losses from IUU fishing are estimated to be between \$10 billion and \$36.4 billion annually, or up to 24% of the \$150 billion global seafood trade.^{1 2 3} While the effects of IUU fishing are disproportionately borne by developing countries, it is a global problem. A lack of transparency has led to a deep integration of illicit fishing activities within the legal seafood supply chain, and IUU catch frequently makes its way into markets around the world, including the United States and Europe.⁴ By some estimates, as much as 30% of total reported catches are linked to illegal and unreported fishing.⁵ Weak enforcement and a lack of transparency in the global fishing sector enables IUU actors to operate under a veil of secrecy.

Current enforcement and regulatory approaches to IUU fishing prioritize tracking the at-sea activity of fishing vessels.^{6 7} This approach on its own has failed to adequately address IUU fishing and its associated offenses and crimes as part of a larger onshore system that poses risks to sovereignty, national security, and economic development. A fishing vessel is just an asset owned by an onshore network and its activities at sea are ultimately determined by the financial interests of its beneficial owners. This ownership and control can be difficult to trace. Vessels can be flagged to one state, but can be owned by another state's citizens and operate in yet another state's waters. **Ultimately, effective maritime domain awareness (MDA) requires both at sea and onshore scrutiny to establish a link between IUU fishing vessels and the financial activity of onshore corporations that facilitate IUU fishing.**⁸

Gaps in existing reporting requirements by Regional Fishery Management Organizations (RFMOs), national fishing authorities, and governments to mandate accurate and detailed information from vessel owners has led to a systemic lack of transparency within the global fishing industry. This enables transnational IUU networks to disguise true ownership and operate with limited risk of detection. **This report demonstrates that the right combination of analytical tools can begin to lift the veil of secrecy and hold accountable those who profit from IUU activity.**

The same conditions that enable actors to engage in IUU fishing also allow them to commit other crimes and offenses with impunity. Over the last decade, there has been an increased understanding among those who monitor and regulate the global fishing industry that IUU fishing is linked to and facilitated by a wide range of onshore crimes, ranging from corruption and money laundering to human trafficking.⁹ These crimes are ultimately coordinated by networks onshore that remain largely hidden, thereby avoiding legal and regulatory penalties.¹⁰ Furthermore, the typical enforcement response to IUU fishing fails to address it as an indicator of other offenses, and thus investigations into IUU networks have not targeted the full scope of criminal activities perpetrated by the networks behind fishing vessels.¹¹ **By framing IUU fishing as a problem enabled by and linked to onshore crimes and facilitators, enforcement authorities are better able to pursue the onshore networks behind vessels.**¹²

ENDNOTES

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What is Illegal, Unreported, and Unregulated (IUU) Fishing?ⁱ

Illegal, unreported, and unregulated (IUU) fishing is broadly defined as any fishing that violates fisheries laws or occurs outside of existing laws and regulations on the high seas or in areas within the national jurisdiction of a state.ⁱⁱ

- **Illegal fishing** includes the fishing activities of a national or foreign vessel in the waters of a state, or on the high seas, that are in violation of the laws and regulations of a state, flag state, or regional fishery management organization. This includes the use of banned fishing gear, fishing without a license, or fishing for prohibited species.ⁱⁱⁱ
- **Unreported fishing** includes activities that are not reported at all or purposefully misreported to the relevant national authority or regional fishery management organization. While underreporting catch can be both intentional and unintentional, fishing vessels can purposefully underreport catch in order to circumvent quotas or avoid taxation and duties for their catches.^{iv v}
- **Unregulated fishing** includes fishing activities in areas or for fish stocks where there are no applicable conservation or management measures in place and that are inconsistent with state responsibilities for the conservation of marine resources under international law.^{vi} Additionally, unregulated fishing also includes vessels operating in areas under the authority of RFMOs that have no nationality or are flagged to a state that is not party to that organization.^{vii} While unregulated fishing may not directly contravene any laws and regulations, it often circumvents conservation or management measures in place designed to regulate fishing operations.^{viii}

ⁱ For a full definition of illegal, unreported, and unregulated (IUU) fishing, as used in this paper, please refer to: International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. (2001). Food and Agriculture Organization of the United Nations. Retrieved from: <http://www.fao.org/publications/card/en/c/71be21c9-8406-5f66-ac68-1e74604464e7>. Archived at: <https://perma.cc/9EHZ-JGYF>.

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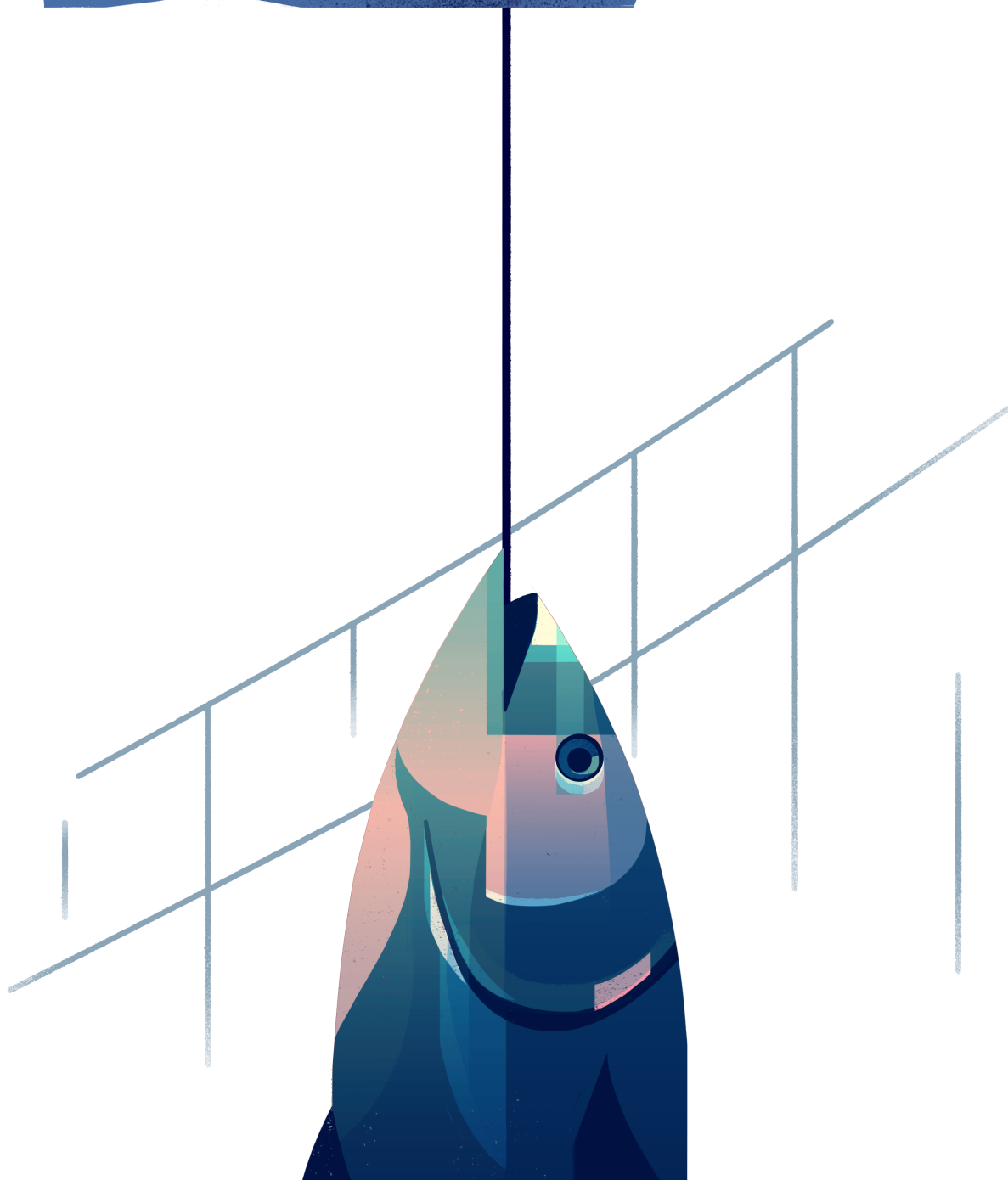
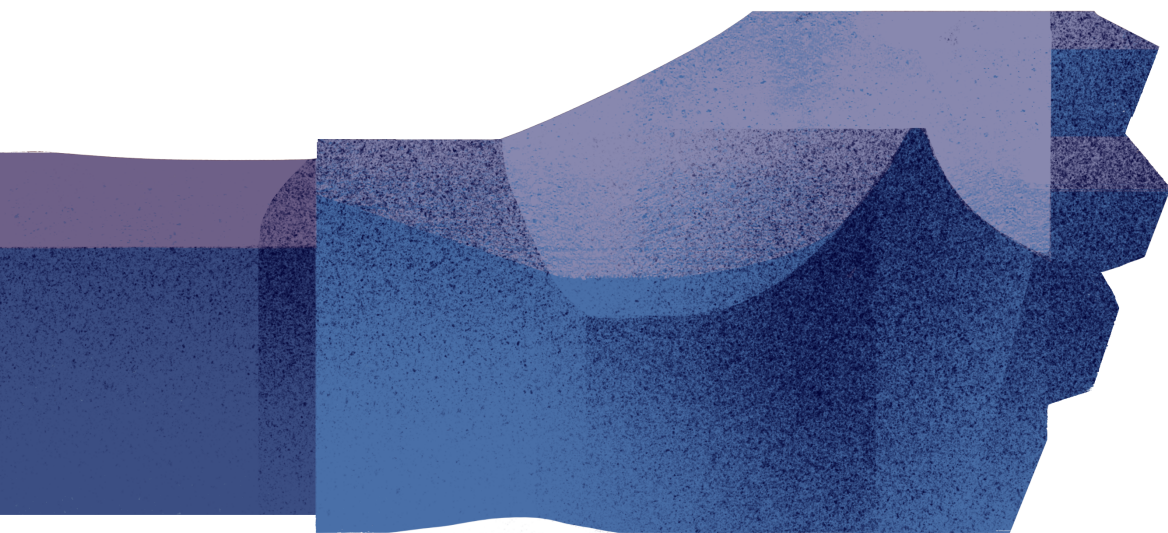
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SECTION ONE

Modeling IUU Networks at Sea

C4ADS conducted investigations into more than 2,000 entities, including companies, individuals, and vessels, associated with IUU activity around the world, ultimately compiling them into a dataset of 29 unique networks. A variety of at-sea risk indicators were identified across networks engaging in potential IUU fishing throughout these investigations. These indicators taken on their own are not necessarily evidence of IUU activity, but when observed together act as red flags for suspicious activity at sea. Thus, layering the at-sea indicators is a means to focus investigations on a high-risk pool of vessels without a significant expenditure of resources. The observation of multiple indicators simultaneously should lead to further investigation to verify whether IUU activity has taken place.

Throughout our investigations, vessels engaging in IUU fishing often displayed multiple risk indicators. The indicators identified by C4ADS as red flags for high risk vessel activity include:

INDICATOR	DESCRIPTION
AIS Dark Activity	The manipulation or disabling of AIS transmissions
Flag Manipulation	The use of flags of convenience, repeatedly reflagging to another flag state, flying multiple flags, or flying no flag at all
Historical IUU Fishing or Illegal Activity	A vessel or vessel owner implicated in past IUU fishing or illegal activities
Ports of Convenience	The use of private or public ports with weaker regulatory oversight
Transshipment at Sea	Meeting with other vessels, in particular refrigerated cargo vessels, at sea to transfer catch, supplies, and other resources
Vessel Identity Alterations	A vessel repeatedly changing vessel identifiers such as vessel name, callsign, or external features

Figure 1: At-Sea Risk Indicators Used by C4ADS

C4ADS found that these at-sea risk indicators were largely the same around the world, as seen in Figure 2, which means that they can be used globally to identify vessels engaging in potential IUU fishing. The at-sea indicators we identified have also been widely documented as common methods to obfuscate illicit activity outside of IUU fishing. For example, the United Nations Panel of Experts and Office of Foreign Assets Control (OFAC) have both found that vessels involved in North Korean sanctions evasion manipulate or disable their AIS transponders in order to obfuscate their activity at sea.^{1 2}



Figure 2: At-Sea Indicators Observed Across Investigations by Region of the World

In this section, we explore the four indicators most frequently observed across our investigations. These indicators are directly perpetuated by the low visibility of vessels at sea in conjunction with weak transparency and reporting requirements onshore. In particular, we examine:

1. AIS dark activity through manipulating or disabling AIS
2. Vessel identity alterations
3. Flag manipulation
4. Transshipment at sea

AIS DARK ACTIVITY

C4ADS observed the manipulation, disabling, or loss of fishing vessels' AIS signals in 80% of the 29 networks. Intermittent transmission of AIS means fishing vessels are virtually undetectable for periods of time and able to enter EEZs without authorization to fish illegally. While AIS loss alone is not an indication of illicit activity, it is an important indicator when combined with other factors that suggest intentional obfuscation of vessel activities at sea. While a lack of nearby AIS receivers, poor weather conditions, signal interference, equipment malfunction, as well as other factors may account for a period of lost AIS transmission, vessels engaging in illegal fishing and other crimes at sea are known to manipulate or disable their AIS transponders in order to operate undetected.^{3 4 5}

Identifying a fishing vessel exhibiting AIS dark activity outside of an EEZ, a marine protected area, or in proximity to a refrigerated cargo vessel (reefer) is an indicator that a vessel may be intentionally disguising unauthorized transshipments or incursions into an EEZ without authorization, among other operations.⁶ Since certain AIS data (e.g. destination port) are manually entered, vessel officers can also input false information either by accident or to make detection more difficult.^{7 8}

One region in which AIS manipulation is particularly prevalent is the Southwest Atlantic Ocean. Outside the EEZ of Argentina, a fleet of more than 300 foreign fishing vessels operates on the high seas during peak squid fishing seasons.⁹ These vessels, which are mostly flagged to China, South Korea, and Spain, frequently engage in periods of AIS dark activity and rely on reefers to continue operating at sea.^{10 11 12} While this activity in itself is not illegal, it is high risk. These vessels exploit Argentina’s limited capacity to effectively monitor and patrol its EEZ. Figure 3 shows that in February 2019, 256 fishing vessels engaged in dark activity while operating just outside the EEZ of Argentina, accounting for roughly 87% of fishing vessels in the area at the time.¹³



Figure 3: During February of 2019, 294 vessels were identified as fishing outside the boundary of the Argentinian EEZ. Of these 294 fishing vessels, 256 engaged in dark activity during this period of time. 87% of the vessels that engaged in these dark activity events were flagged to China. Source: Windward

VESSEL IDENTITY ALTERATIONS AND FLAG MANIPULATION

In over 60% of our investigations for this report, we observed at least one vessel in each network altering key identifiers or its flag registration to avoid detection. This prevalence is partly due to the fact that identity tampering is broadly defined and an easy option for vessels attempting to confuse port, flagging, and inspection authorities.¹⁴ While it is important to note that there are legitimate explanations for altering vessel identifiers and flags, such as changes in ownership, the use of multiple flags simultaneously or using the name of another vessel are fraudulent practices used by IUU fishing vessels to evade detection and operate with impunity.¹⁵ Examples of vessel identity tampering observed in our sample of 29 investigations include:

METHOD	DESCRIPTION	# OF INVESTIGATIONS
Altering Vessel Identifiers	Repeatedly changing vessel identifiers such as vessel name, call sign, MMSI, or the exterior of the vessel	11
Reflagging	Reflagging to another flag state, including flag hopping	10
Stateless Vessels	Flying multiple flags simultaneously or no flag at all	5
Use of a False Identity	Adopting a fabricated vessel name or the identity of another vessel	3

Figure 4: Vessel Identity Tampering and Flag Manipulation Methods Observed Across 29 Investigations

IUU fishing vessels can operate at sea as “ghost vessels” hidden from enforcement if they remain unregistered or frequently change identities.^{16 17} Additionally, fishing vessels can operate under a false identity to avoid detection or operate with a license belonging to another vessel. By assuming the identity of an authorized vessel, multiple ships can share a single license or vessel authorization to cut costs.¹⁸ This behavior has been observed on the part of vessels controlled by the same beneficial owner to continue operating and land catch at port even after the expiration of a license or authorization to fish.

Our analysis supports the claims made by other studies that vessels with no fixed identifiers or registration are some of the most significant perpetrators of IUU fishing. For example, according to the North Atlantic Fisheries Intelligence Group, one third of fishing vessels included on RFMO IUU blacklists or issued Interpol Purple Notices for fishing illegally were either stateless or had no known flag.¹⁹ By reflagging or flying multiple flags simultaneously, vessels can obfuscate prior IUU fishing infractions and operate with no fixed nationality and therefore outside the clear jurisdiction of a single flag state.²⁰ The practice of flag hopping, or frequent and repeated flag changes, is a higher risk form of reflagging.²¹ Ultimately, vessels that are stateless or that reflag frequently can use multiple vessel names or exploit flag states with lower oversight to avoid enforcement.

A Stateless Vessel Seized by Indonesia

When Indonesian maritime authorities detained the Chinese fishing vessel *Fu Yuan Yu 831* in December 2017, authorities found flags from six different states on board, including East Timor, China, Malaysia, and Indonesia.²² The *Fu Yuan Yu 831* was detected entering the Indonesian EEZ repeatedly and may have changed flags in order to evade detection.²³ Additionally, the *Fu Yuan Yu 831* reportedly used illegal driftnets and caught protected shark species in East Timor.²⁴ According to the Chinese Ministry of Agriculture vessel registry, the *Fu Yuan Yu 831* was owned by Fuzhou Hongdong Pelagic Fishery Company Limited (福州宏东远洋渔业有限公司) at the time of detention.²⁵ However, the vessel was simultaneously owned by Best Sea Foods (ET) LDA in East Timor to gain access to a fishing license.²⁶ In the case brought against the *Fu Yuan Yu 831*, the captain and fishing master were fined roughly \$7,000 and the vessel was forfeited to the Indonesian government. It appears no other action was taken against the beneficial owners of the vessel.²⁷



Figure 5: The *Fu Yuan Yu 831*

TRANSSHIPMENT AT SEA

C4ADS observed reported or likely at-sea transshipments in 30% of our investigations.²⁸ At-sea transshipment refers to the transfer of cargo, supplies, and crew between vessels. In the case of fishing, it often occurs between a reefer and a fishing vessel or directly between two fishing vessels. In certain instances, transshipment at sea is a legal practice and is subject to observer programs by RFMOs. But the absence of comprehensive oversight poses an increased risk for IUU catch to be laundered into the legal supply chain.²⁹ Additionally, unregulated transshipments, including between fishing vessels, have been widely documented as enabling other crimes at sea, such as narcotics, weapons, and human trafficking.³⁰ For example, transshipment is used to facilitate the movement of crewmembers between vessels at sea while avoiding inspection at port. This sustains the continued exploitation and abuse of crewmembers onboard substandard fishing vessels.^{31 32}

Ultimately, transshipment enables vessels to continue operating for months or years without having to enter port where they might be subject to inspections of fishing gear, working conditions onboard, or vessel authorizations and documentation.^{33 34} When taken in isolation, transshipment is not in and of itself an indicator of IUU activity. But when observed with other risk indicators, the

significance of transshipments is amplified. Transshipment events that occur between vessels that display other risk indicators, such as extensive dark activity or frequent identity changes, can serve as a chokepoint for monitoring and enforcement. By virtue of their size, reefers are more likely to carry AIS transponders, have a unique vessel identifier, and require greater logistical and financial support than smaller fishing vessels. Therefore, their activity at sea can be more easily tracked and highlight likely areas of fishing activity and regions where IUU catch is potentially laundered into the supply chain.

Risk Indicators & Reefer Activity in West Africa

A fleet of three reefers authorized to operate in West Africa display multiple risk indicators while actively engaging in likely transshipment events in the EEZ of Guinea Bissau.³⁵ The risk indicators displayed include reflagging, the use of flags of convenience, historical allegations of IUU fishing, and the alteration of vessel identifiers.

VESSEL NAME	IMO NUMBER	SHIP FLAG	VESSEL TYPE	REGISTERED OWNER
Saly Reefer	7813925	Moldova	Reefer	Fishing & Cargo Services S.A.
Silver Ice	7819759	Moldova	Reefer	Fishing & Cargo Services S.A.
Gabu Reefer	8300949	Moldova	Reefer	Fishing & Cargo Services S.A.

The Silver Ice and Gabu Reefer have been investigated for alleged IUU activity in West Africa in the past. For example, in 2014, the Gabu Reefer was fined \$2,000 by Liberia for landing fish without the necessary authorizations.³⁶ Then in 2015, the Silver Ice was categorized as a high-risk vessel by the West Africa Task Force (WATF) after the government of Comoros raised concerns about having limited visibility on the vessel's activity in the region.³⁷ Inquiries into the Silver Ice were in part motivated by pressure from the European Union on Comoros to increase oversight of distant water fishing fleets.³⁸ Since the start of 2019, the three reefers have also changed flag registration and vessel identifiers. As of March 2019, all three reefers have re-flagged from Comoros to Moldova, another flag of convenience.³⁹ Additionally, in April 2019 the Silver Ice changed its reported name to that of its sister reefer, the Gabu Reefer, but continues to broadcast a distinct AIS transmission.⁴⁰

According to Equasis, the Saly Reefer, Gabu Reefer, and Silver Ice are all owned by the same Panamanian company, Fishing & Cargo Services S.A.⁴¹ The company is legally represented by Gerli Wren & Co., a maritime law firm incorporated in Panama with "expertise in incorporation and management of onshore and offshore companies."⁴² It is possible that this company facilitated the incorporation of Fishing & Cargo Services and provided nominee directors.^{43 44} In 2017, the reported beneficial owner of these three refrigerated cargo vessels was Sea Group SL, a company incorporated in Spain, according to a report by Greenpeace.^{45 46 47} However, a definitive connection between Fishing & Cargo Services and Sea Group SL is obfuscated through the use of shell companies and nominee directors in Panama. While these refrigerated cargo vessels are reportedly still authorized to operate by Guinea Bissau, they continue to obfuscate their beneficial ownership and display a number of indicators that suggest a higher level of risk in conjunction with their alleged transshipment activity at sea.

Case Study: Risky Vessel Activity in the South Atlantic Ocean

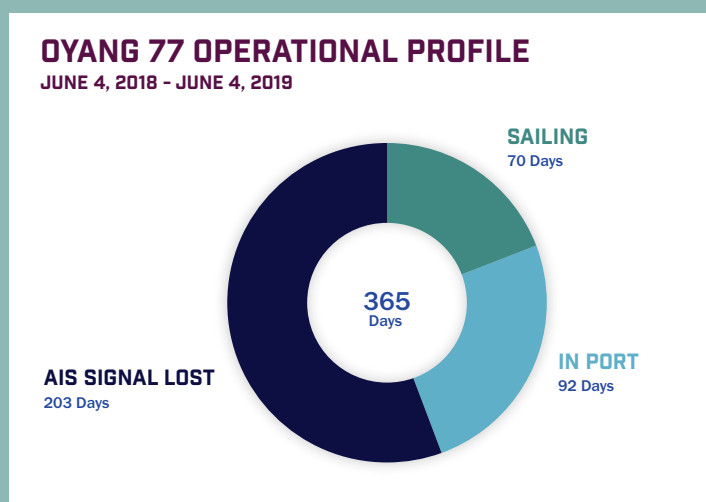
The case of the Sajo Oyang network, a South Korean fishing company operating two vessels in the Atlantic Ocean, demonstrates how risk indicators associated with IUU activity appear in practice. On February 7, 2019, the Oyang No. 77, a South Korean-flagged trawler, was stopped by the Argentine Coast Guard. The Oyang No. 77 was illegally fishing without a license in Argentina's EEZ.⁴⁸ A subsequent inspection of the Oyang No. 77 found the vessel violating fishing net regulations and with more than 142,000 kilograms of catch onboard.^{49 50} The Oyang No. 77 was detained at the port of Comodoro Rivadavia before its release in March 2019. The owners of the vessel, Sajo Oyang Corporation (주식회사 사조오양), reportedly paid a fine of approximately \$600,000 for the release of the vessel before it returned to international waters and continued to operate in the Southwest Atlantic Ocean.^{51 52 53}



According to maritime analysis of the historical AIS transmissions of the Oyang No. 77 and its sister ship, the Oyang No. 75, both vessels have displayed a number of risk indicators identified by C4ADS. These include:

- AIS dark activity for several days to weeks near the boundary of the Argentine EEZ prior to likely transshipments with refrigerated cargo vessels⁵⁴
- Altering the vessel name and call sign transmitted through AIS (Oyang No. 75 only)⁵⁵
- Operating out of a port of convenience, the Port of Montevideo, which has been identified as a major destination where IUU catch is offloaded in the Southwest Atlantic Ocean⁵⁶

Over the last year, the Oyang No. 77 appeared to operate for a cumulative 203 days without transmitting AIS, or roughly 74% of its time at sea.⁵⁷ During this period, the Oyang No. 77 would appear to turn on its AIS before likely meetings with reefers and bunker vessels while operating off the boundary of the Argentine EEZ.⁵⁸



Operational profile of the Oyang 77 between June 4, 2018 and June 4, 2019. Source: Windward

The incident in February of 2018 was not the first time the Oyang No. 77 had been implicated in illegal activities at sea.⁵⁹ In New Zealand, both the Oyang No. 77 and the Oyang No. 75 were implicated in the exploitation of migrant laborers from Indonesia, who reportedly were deceptively recruited to work in abusive and unsafe working conditions onboard the Oyang vessels.^{60 61} They were reportedly forced to work long hours under threat of physical and financial penalty and upon completion of their contracts were severely underpaid or denied pay altogether.⁶²

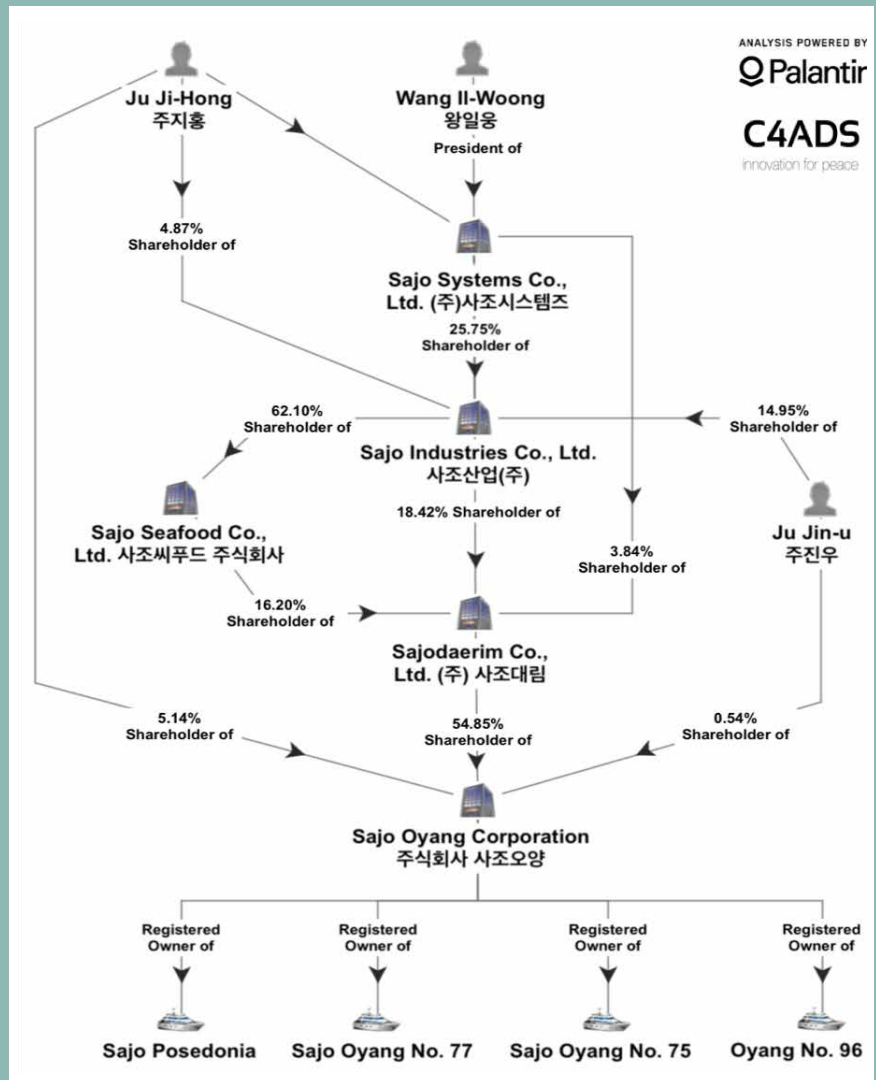
Additionally, between 2012 and 2014, the Oyang No. 75 and Oyang No. 77 were fined for illegally dumping catch and filing false catch returns while operating in New Zealand.^{63 64 65} The vessel owners were repeatedly found to contravene legal statutes to maximize profits during this period of time. Despite the numerous suspected IUU fishing infractions and the alleged illegal exploitation of migrant fishermen under forced labor conditions, Sajo Oyang was able to secure the release of both vessels under a legal bond.^{66 67}

Corporate Network and Historical IUU Infractions

Tracing the ownership of the Oyang No. 77 and Oyang No. 75 onshore reveals a connection to a major South Korean corporation, Sajo Systems Company Limited (주식회사 사조시스템즈).^{68 69} According to the South Korean business registry, the registered owner of the Oyang vessels, Sajo Oyang Corporation, is ultimately owned by Sajo Systems.⁷⁰ The official website of Sajo Systems indicates that the company operates nearly 80 vessels through a series of subsidiaries and associated companies, which includes one of the world's largest fleets of tuna fishing vessels operating across the Pacific and the Atlantic oceans.⁷¹ The Sajo corporation also operates a network of companies across the supply chain in Asia, South America, and North America, including processing and distribution networks of both seafood and other food products.⁷²

The case of the Oyang No. 77 exemplifies how vessels engaging in alleged and reported IUU fishing display a number of at-sea risk indicators that can be used to assess the potential risk of fishing vessels. Additionally, while the Oyang vessels have been reportedly implicated in repeated IUU infractions and forced labor, they continue to maintain operations in the South Atlantic Ocean and appear to conceal their activities at sea through intermittent transmission of AIS and meetings at sea with a fleet of reefers.⁷³

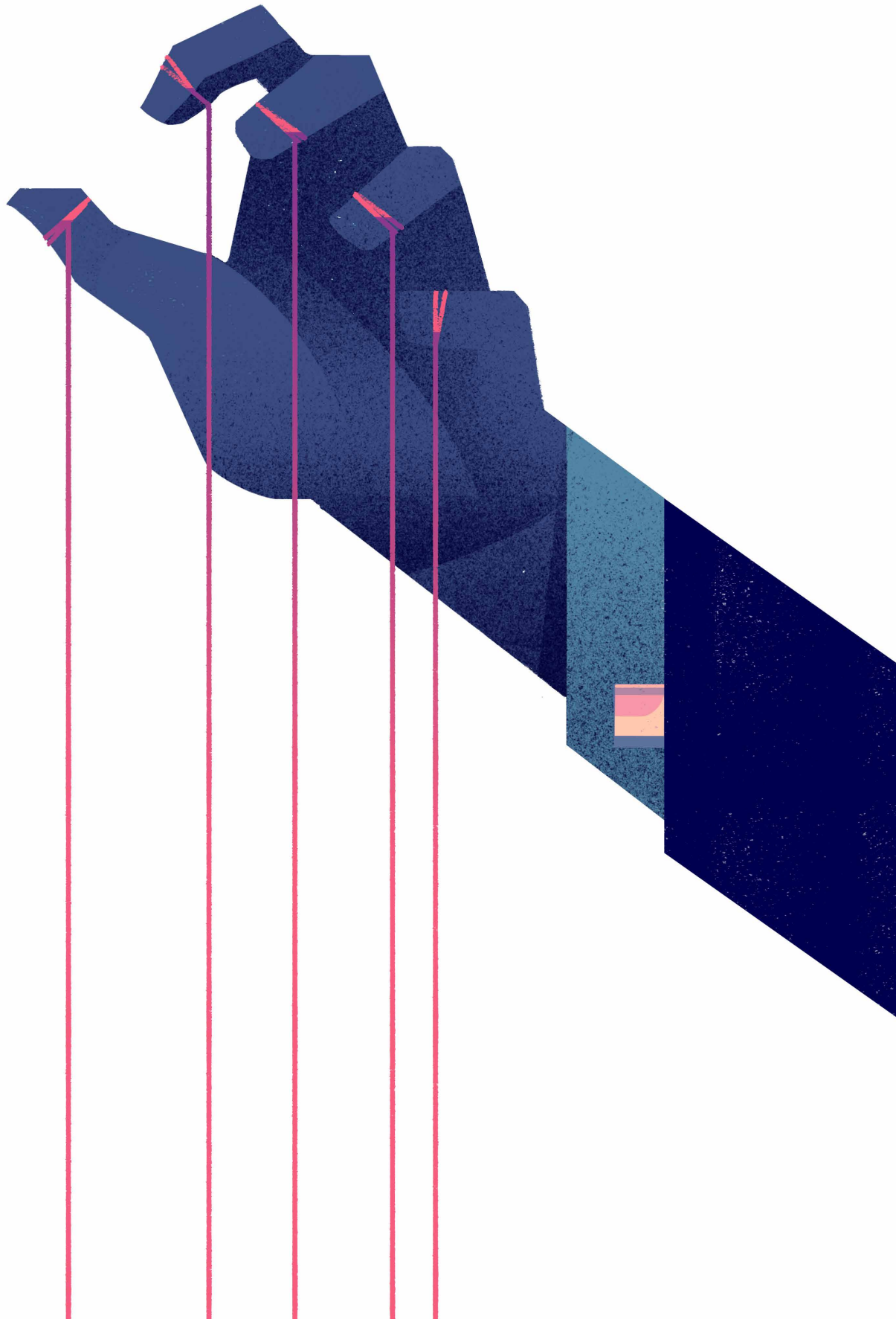
The Oyang No. 77 and Oyang No. 75 are ultimately owned by Sajo Systems Co., Ltd., a publicly traded South Korean conglomerate.



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SECTION TWO

Following IUU Networks Onshore

While assessing a vessel's activity and maritime policing are critical components of addressing IUU fishing, the operations of a vessel are ultimately sustained by ownership networks onshore. Building out from at-sea vessel activity to onshore ownership is a key step toward targeting the ultimate owners and networks behind IUU fishing and determining how they continue to exploit vulnerabilities within the global fishing sector to operate with impunity.

Our research, along with other studies into IUU fishing, underscore that low visibility of vessel ownership is a primary enabler of IUU fishing.¹ A systemic lack of transparency and lack of access to data onshore ultimately has ramifications for the continued obfuscation of beneficial ownership and low accountability for vessel owners.² Effective enforcement in the fisheries sector ultimately requires expansive reform to improve access to vessel and ownership data. In addition, reporting requirements across flag registries, RFMOs, and national fishing authorities must be strengthened. In the absence of this information, vessel owners will continue to disguise their activities with relative ease, especially in countries that lack the investigative resources to combat IUU fishing.

Despite the difficulty of tying individual ships engaged in IUU behavior with their beneficial owners, we can learn more about these networks using publicly available information. Open source investigation and corporate network analysis can begin to expose who ultimately profits from this activity. It can also highlight how and where these actors continue to take advantage of a lack of transparency and a lack of uniform regulation across flag states, jurisdictions, and RFMOs to operate with relative impunity. Linking at sea vessel activity to onshore networks is a necessary step to identify the responsible parties facilitating IUU fishing.

This section focuses on the methods used by vessel owners to disguise ultimate beneficial ownership to evade detection and culpability. These methods include:

LOOPHOLES & METHODS	DESCRIPTION
Shell Companies & Secrecy Jurisdictions	The use of shell or front companies to own fishing vessels, often in secrecy jurisdictions or tax havens, in order to obfuscate beneficial ownership
Flags of Convenience	Flags with lower regulatory oversight and low transparency requirements used by vessel owners to obfuscate beneficial ownership and avoid tax and regulatory burdens
Data Gaps Across the Global Fishing Sector	The exploitation of gaps in information within the global fishing sector, including low access to information and inconsistent reporting across jurisdictions and regulatory bodies

SHELL COMPANIES & SECRECY JURISDICTIONS

C4ADS observed the use of shell or front companies in over 50% of our investigations. Vessel owners use shell companies, or companies without significant assets or business activity, across multiple

jurisdictions to hide beneficial owners from authorities, and even the captain of the vessel at times.³ ⁴⁵ Generally, shell companies have little to no presence beyond basic contact information and when used in a series of layers across jurisdictions, they serve to complicate the process of identifying the beneficial owners.⁶ Vessel owners also can cycle through shell companies in different jurisdictions when necessary to access new flag registries, fishing grounds, and advantages provided to domestic companies and vessels. Ultimately, the use of shell companies undercuts effective attribution of fiscal or legal responsibility over a given vessel while also providing financial and tax advantages when incorporated in tax havens.

The use of shell companies in combination with secrecy jurisdictions and nominee incorporation services can make the identification of the beneficiaries of IUU fishing even more challenging.⁷ Secrecy jurisdictions are frequently criticized for serving as a haven for tax evasion, money laundering, and other illicit activities.⁸ ⁹ These jurisdictions also enable companies that engage in IUU fishing to more effectively conceal ownership. Fishing companies can use nominee incorporation services to expedite the process of incorporating a company and opening bank accounts on their behalf.¹⁰ These services also provide nominee directors and nominal shareholders that have no control in the company and obfuscate those with actual power.

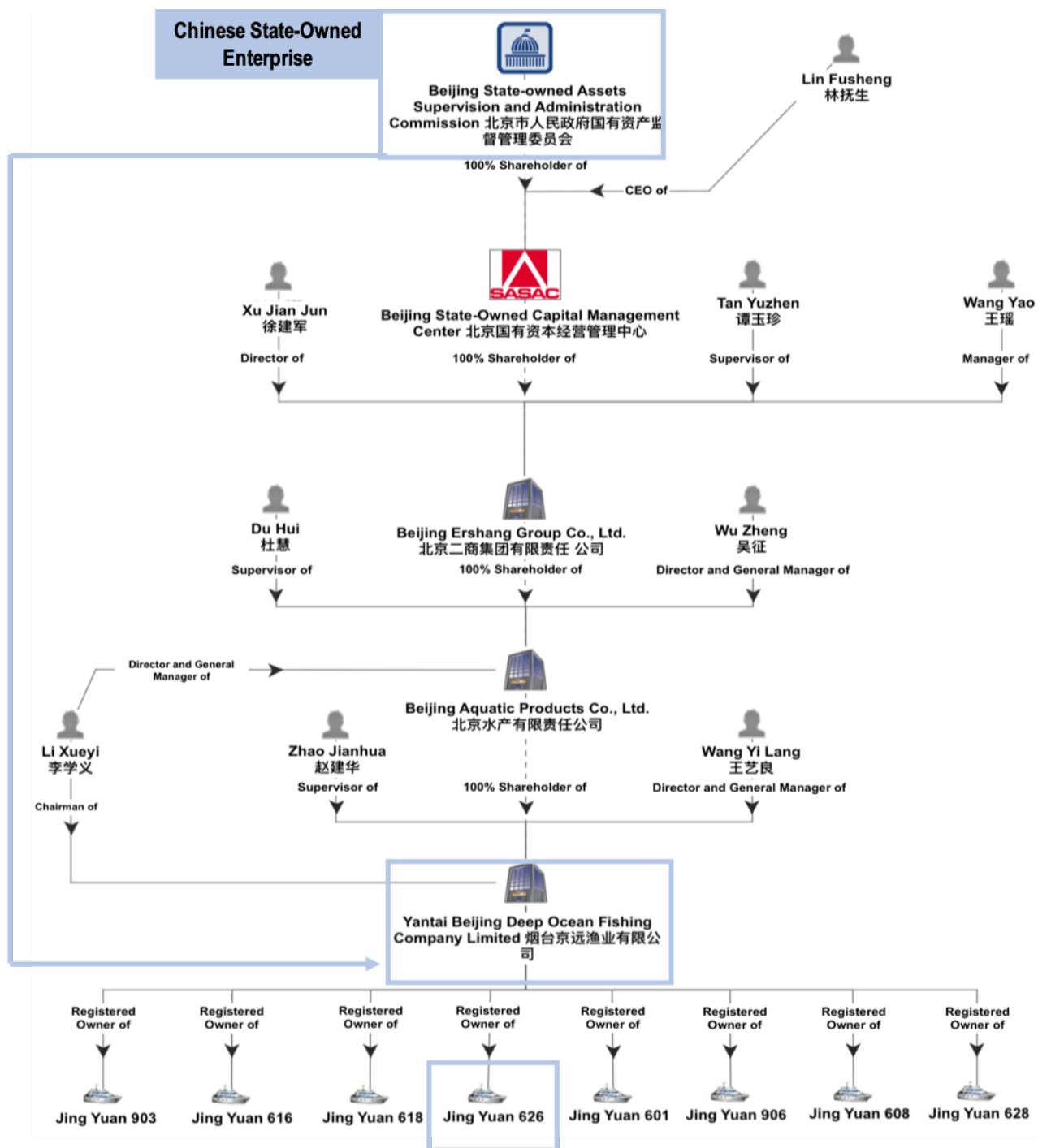
The obfuscation of ultimate beneficial ownership of fishing vessels through shell companies and complex corporate structures can also disguise the role states play in the operations of distant water fishing fleets and IUU fishing. C4ADS observed state-owned enterprises or politically exposed persons (PEPs) as the beneficial owners or shareholders of companies engaged in IUU fishing in 20% of our investigations.¹¹ While investment from SOEs or PEPs in fishing companies and the seafood sector is not illegal, these fishing companies often benefit from the additional support of state sponsorship and well-connected elites. Authorities pursuing action against these vessels are not simply contending with a fishing company but rather the financial interests of another state invested in their operations.

Case Study: State Investment in an IUU Fishing Vessel

On February 21, 2018, the Chinese-flagged Jing Yuan 626 was detected by the Argentine coast guard appearing to fish illegally in the Gulf of San Jorge in the Argentine EEZ.¹² While the Argentine coast guard pursued the Jing Yuan 626, four other Chinese-flagged fishing vessels carried out maneuvers and collision attempts to prevent the Argentine coast guard vessel from intercepting the Jing Yuan 626.¹³ The pursuit of the Jing Yuan 626 lasted 8 hours.¹⁴ The chase was concluded due to inclement weather at which point the Jing Yuan 626 took refuge near the Falkland Islands.¹⁵ In March 2018, an Argentine federal judge ordered the international capture of the Jing Yuan 626 as well as the four vessels that assisted its escape.¹⁶

According to open source research, the registered owner of the Jing Yuan 626 is Yantai Beijing Deep Ocean Fishing Company Limited (烟台北京远洋渔业公司).¹⁷ Chinese corporate records show that the ultimate beneficial owner of Yantai Beijing Deep Ocean Fishing Company is the Beijing State-Owned Capital Operation and Management Center (北京国有资本经营管理中心), which engages in investment and asset management activities, including investment in food processing and agricultural projects.¹⁸ ¹⁹ The link between Yantai Beijing Deep Ocean Fishing and a Chinese SOE demonstrates how the Chinese state is tied to companies engaging in illegal fishing activities.





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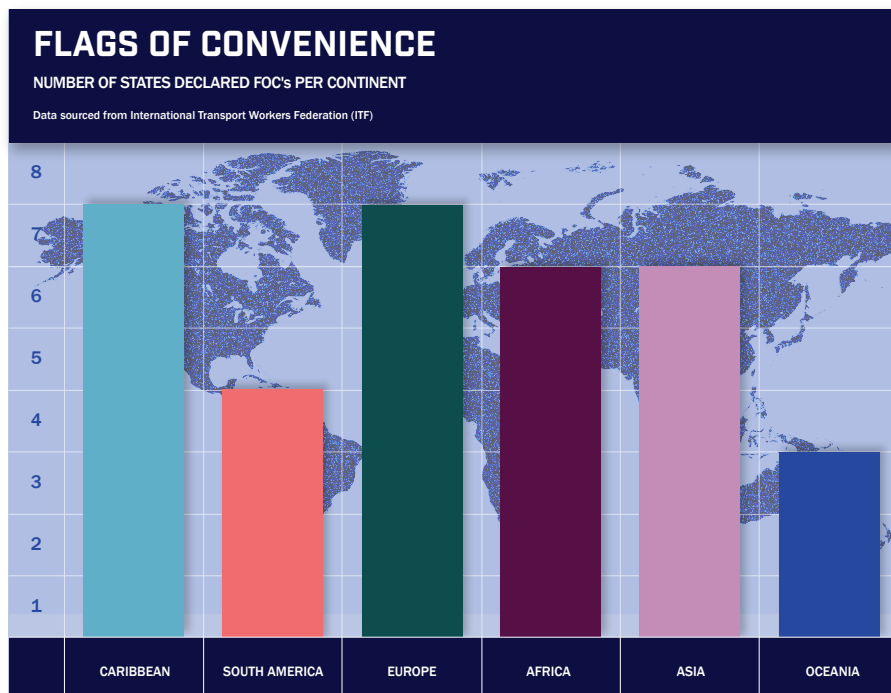
The Beijing State-Owned Capital Operation and Management Center ultimately owns Yantai Beijing Deep Ocean Fishing Co., Ltd. through a series of intermediate companies.

The Jing Yuan 626 was eventually made to pay 500,000 pesos (\$20,768) to cover the costs of the pursuit in addition to a fine of over 7,500,000 pesos (\$343,500).²⁰ The link between a state-owned enterprise and the Jing Yuan 626 illustrates how governments are actively invested in the operations of fishing vessels engaging in IUU fishing beyond the subsidization of distant water fleets.²¹ The lack of visibility of ultimate beneficial ownership of fishing vessels hides the role that states play in the direct continuation of illicit practices at sea.

FLAGS OF CONVENIENCE

C4ADS observed the use of flags of convenience in roughly 30% of the IUU networks investigated. While C4ADS primarily observed the use of FoCs by reefers, they are widely used as they allow vessel owners to obfuscate ownership and reduce the likelihood of prosecution.²²

²³ According to analysis conducted by the North Atlantic Fisheries Intelligence Group, over 80% of vessels with a known flag included on RFMO IUU blacklists or issued Interpol Purple Notices were registered in a country recognized as offering a FoC.²⁴



Countries that offer FoCs tend to operate open registries, which permit foreign owned vessels to use its flag and have lower requirements for registration, including no disclosure of beneficial ownership or historical vessel data.²⁵ In conjunction with shell companies and nominee shareholders, IUU operators are able to hide ownership when registering with a flag of convenience, making it challenging to identify those ultimately responsible for the vessel.

Many flag states offering FoCs also consistently fail to monitor vessels flying their flag due to a lack of enforcement capacity. Authorities with limited technical expertise and resources to run an international ship registry have difficulty coping with the challenges of overseeing the global operations of cargo and distant water fishing vessels.²⁶ In the absence of comprehensive information on the ownership of a vessel and limited financial resources, flag registries that permissively flag foreign vessels are unable to fulfill their flag state duties. This issue is exacerbated by the diffusion of flagging and registration processes to private companies, particularly in smaller developing countries, in which authorities responsible for monitoring and regulating ships are not aware of the full extent of vessels flying their flag.²⁷

Flag states that delegate responsibilities to private companies often have limited visibility on vessels flying their flag, which means carrying out their flag state responsibilities is near impossible. Additionally, many of these third-party flagging companies provide a multitude of services, including the incorporation of shell companies and flag registration across multiple flags. In turn, these companies provide another degree of separation between a flag state, a vessel, and the actual vessel owners. The influx of private companies, with close links to the shipping industry, to manage flag registries creates another avenue for corrupt practices to undermine the effectiveness of international frameworks designed to control vessel activity at sea.²⁸

In the absence of comprehensive due diligence for newly registered vessels, IUU operators can continue to re-flag regardless of their past infractions, establish new shell companies, and continue to contravene national and international regulations and laws.²⁹ The prevalence of flags of convenience in the fishing sector continues to undermine efforts to identify the ultimate beneficial owners of fishing vessels and permits vessel owners to exploit jurisdictions where IUU fishing and its associated offences are not adequately addressed through legal statutes, leaving no prosecutorial avenue for pursuing the vessel and its owners.³⁰

The Comoros and the Risk of an Open Registry

In May of 2017, Comoros was penalized by the European Commission (EC), including a ban on all imports of seafood from Comoros to the European Union, due to its failure to adequately address IUU fishing.³¹ In a press release issued by the EC, the primary reason given was the continued use of the Comorian flag as a flag of convenience.³² The Comoros operates an open registry that allows foreign owned vessels to register with the flag authority irrespective of nationality and has been cited for permitting foreign vessel owners to carry out distant water fishing activity, specifically in West Africa, with limited to no oversight.³³ Vessel owners are not even required to incorporate a domestic company to utilize the Comorian flag.³⁴

Despite the actions taken by the EU against Comoros, the Comorian flag registry still actively invites foreign ship owners to contact deputy commissioners authorized by the Union of Comoros to register their vessels.³⁵ According to the official website of the Maritime Administration of the Union of Comoros, these deputy commissioners are located in Bulgaria, China, Greece, Lebanon, South Korea, Turkey, Ukraine, and the United Arab Emirates.³⁶ Additionally, the deputy commissioner for the Union of Comoros based in Ukraine appears to also serve as one of the flag state inspectors for Comoros.^{37 38} His e-mail, comoros@flagadmin.com, is the same email used by International Ship Registration Services, a Ukraine based organization that advertises the registration of ships under a flag of convenience “within one to two business days.”^{39 40} The company offers registration services for Belize, Cambodia, Jamaica, Moldova, Palau, and Sierra Leone, four of which are classified as flags of convenience.^{41 42}

The Comorian flag registry has also been exploited by vessels associated with North Korea. For example, in January 2017, a vessel named Petrel 8 successfully registered with the Comoros flag registry.⁴³ However, one of the companies associated with the vessel at the time was directly linked to a North-Korean flagged vessel, in potential violation of UN resolutions.⁴⁴ After the Petrel 8 was sanctioned by the United Nations in October 2017, the vessel was eventually de-flagged.⁴⁵ Ultimately, delegating vessel flag registration means there is a disconnect between the flag state and the vessels registered to their flag, while placing the responsibility of due diligence outside the control of the flag state.

DATA GAPS ACROSS THE GLOBAL FISHING SECTOR

In the global fishing sector, data variability and inconsistency are major impediments to effective regulation and monitoring. The lack of standardization of reporting requirements across national and international fishery management bodies allows non-compliant vessels to operate across jurisdictions. Inconsistencies across fishery management bodies are exacerbated by the absence of publicly available information on vessel and fishing activity. Even in comparison to the larger maritime industry, which is hampered by major gaps in data, the fishing sector is riddled with loopholes.

Many key jurisdictions where fishing vessels and companies operate are considered generally data-poor environments. Access to information is low because corporate or vessel data is not required, digitized, or publicized by government or regulatory authorities. For example, in many cases, national vessel registries and flag state registries continue to remain relatively inaccessible. According to analysis by the Environmental Justice Foundation, “only a few states have so far committed to making their fishing vessel registries, fishing license lists, and fishing authorization lists public.”⁴⁶ While data inaccessibility is at times purposeful, it is also a result of low capacity to report and record necessary information.

The complications resulting from limited data accessibility are exacerbated by the lack of uniformity across lists of authorized vessels maintained by RFMOs. C4ADS observed that vessel owners and operators were reported differently to RFMOs during investigations into vessels suspected or known to be engaging in IUU fishing. RFMO reporting data includes extensive details on the identifiers of fishing vessels with rather limited coverage of their owners and operators. In some cases, RFMOs

do not publicize any vessel ownership data for vessels authorized to operate in their convention area.⁴⁷ In the absence of repositories of aggregated vessel and ownership information, identifying the owners and relationships behind these vessels is time-intensive. This creates challenges for identifying and mapping ownership onshore. Regulators' data is restricted to the most basic level of vessel ownership while ultimate beneficial owners remain separated from the vessel by a series of intermediate companies.

Finally, the lack of public repositories of vessel authorizations, license lists, and general registries is further undermined by the lack of a unique vessel identifier (UVI) across all fishing vessels.⁴⁸ A UVI is a number assigned to a vessel from the point of construction through to disposal, regardless of where it operates, what flag it flies, or which name it uses.⁴⁹ Fishing vessels have largely been exempted from the use of a UVI, which means that fishing vessels can change ownership, name, or flags to evade detection and operate with little to no paper trail onshore. Flag states, RFMOs, and national fishery authorities are unable to confirm vessel identity across registries if the information remains opaque and irregular across jurisdictions. The lack of a UVI to trace vessels across registries and over time means that vessels engaged in IUU fishing can alter vessel identifiers to continue operating, as seen throughout our investigations.

Case Study: Lack of Transparency in a Highly Industrialized Fishing Fleet

Even in highly regulated and industrialized fishing fleets, the exploitation of jurisdictions with low transparency and limited data accessibility can serve to obfuscate beneficial ownership and undermine regulatory measures in place to control and monitor fishing efforts on a global scale. For example, the fleet of large-scale tuna purse seiners, which consists of up to 813 publicly listed active and inactive vessels, fly dozens of different flags and operate around the world.⁵⁰ As C4ADS began to map the networks of ownership behind these ships, a primary obstacle was data variability across jurisdictions and RFMOs.

The transnational nature of vessel ownership, even in a fleet comparatively more transparent and better regulated, disguises the jurisdiction of ultimate beneficial ownership. C4ADS identified a total of 41 flag states across the large-scale tuna purse seiner fleet. But fishing vessels flagged to one jurisdiction were commonly beneficially owned by companies or individuals of a different nationality. For example, while 13 purse seiners were flagged to and registered to companies in El Salvador, Guatemala, and Curacao, 100% of these vessels are ultimately owned by Spanish companies. In some cases, it is likely that vessels are flagged to and registered to companies incorporated in developing countries in order to avoid limitations placed on quotas allocated to developed countries in certain RFMOs, such as Spain in the ICCAT convention zone. While this practice is legal, it allows fishing companies to circumvent international measures put in place to manage fishery resources.

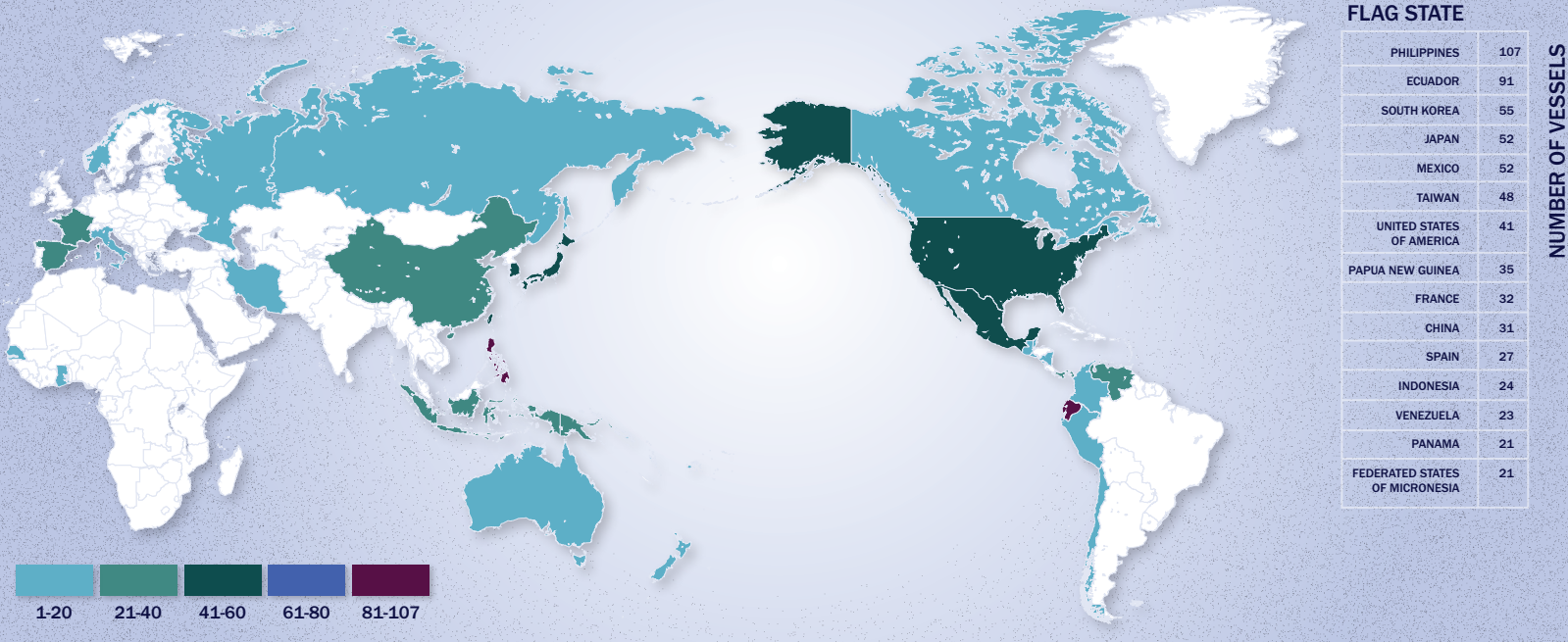
Fishing conglomerates engaging in this type of industrialized fishing also use complex corporate structures across multiple jurisdictions to own single vessels within a larger corporate network. The indirect ownership of vessels absent data on beneficial ownership diminishes the effectiveness of regulations in place to manage the total catch allocated to individual fishing companies. For example, a common trend across Taiwanese-flagged large-scale purse seiners is that individual vessels are registered to separate companies. Those companies are co-located, share the same contact information, and have common shareholders and managers with other vessels. The ownership structure of one ship per company may firewall liability from the ultimate beneficial owners and help disguise their other assets as the identity of these true owners remains obscured behind the use of seemingly independent shell companies as the registered owners of these vessels.

Increased access to beneficial ownership data is a critical step for an industry requiring major reform to improve data access and accountability. Vessel owners should be required to report beneficial ownership when registering to a flag state or receiving authorization to fish. This would improve the accuracy of data regarding which companies are ultimately engaging in industrial fishing activity

around the world. In the absence of this information, it is difficult to ascertain where companies are effectively operating. Governments, RFMOs, and fishery authorities should promote the exchange of this information to enable due diligence of transnational vessel ownership.

GLOBAL TUNA FLEET BY FLAG STATE

COMPARING FLAGS ACROSS THE LARGE SCALE TUNA PURSE SEINER FLEET



ENDNOTES

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SECTION THREE

Convergence of IUU Fishing and Broader Illicit Activity

The opacity of the global fishing industry means that the seafood sector is vulnerable to opportunistic actors looking to capitalize on a profitable and low-risk industry. As a result, the fishing sector is exposed to a greater range of illegal activity that is not traditionally associated with fisheries management concerns. C4ADS observed convergence with other illicit activities in over 60% of our investigations into IUU networks for this report, supporting existing analysis by the UNODC and other organizations that IUU fishing is linked to a wide array of offenses and illicit activities across the supply chain. The crimes observed in convergence with IUU fishing across our sample of 29 investigations include:

CRIME TYPE	DESCRIPTION	# OF INVESTIGATIONS
Human Trafficking & Forced Labor	The exploitation of migrant laborers onboard fishing vessels, including subjecting fishermen to violence and underpayment of wages	13
Document & Customs Fraud	The use of fraudulent documents or the omission of information to launder IUU catch into the supply chain, gain access to fishing rights, or evade detection	11
Corruption & Bribery	The use of local agents or third-party organizations to bribe officials in order to obtain fishing licenses, lobby on behalf of fishing companies, or launder illicit catch into the supply chain	4
Organized Crime	The involvement of organized crime syndicates in the sale and movement of illicit seafood products	2
Tax Evasion	The falsification of documents, misreporting of information, or use of companies in tax havens to evade taxation	1

IUU fishing converges with other types of illicit activity in multiple distinct ways. In regards to crimes such as document and customs fraud, these activities directly facilitate the integration of IUU catch into the seafood supply chain and allow companies to insulate profits accrued from illegal fishing operations.¹ IUU operators rely upon these fraudulent and illegal practices to gain access to legal supply chains while maximizing profits and disguising the origin and traceability of IUU catch.

In the case of human trafficking or organized crime involvement in the seafood sector, the links between IUU fishing and these activities suggest financial motivations enabled by the low risk of detection. Fishing companies seeking to cut operational costs can exploit cheap labor sourced from developing countries to work on fishing vessels. Meanwhile, opportunistic actors that are involved

in other criminal activity not directly linked to IUU fishing activities can engage in the trade of illicit seafood products as a less risky source of additional revenue. These actors are incentivized by a lack of scrutiny of IUU activities and as a result, lower associated financial and legal risks in comparison to other crimes.^{2 3}

While IUU fishing continues to be framed as a fishery resource management issue, noncompliance will remain relatively safe and rewarding. Fines and legal action in response to IUU fishing have not been commensurate with the severity of its impact or the variety of crimes associated with it.⁴ By some estimates, penalties paid for IUU fishing amounted to less than 3% of the total value of IUU catch.⁵ These penalties and fines can simply be accounted for as the cost of doing business. Additionally, the low penalties for IUU fishing and its associated offenses mean that investigations into these activities have not been prioritized by law enforcement.⁶

But law enforcement can use IUU fishing an important indicator for the detection of actors more directly engaged in other potential illicit activities. The convergence of IUU fishing with other types of criminal activity highlight the economic and political risks it poses beyond issues of sustainability. These risks include the reduction of revenues for developing countries most affected by IUU fishing, the destabilization of job and food security, and the deterioration of legitimate and effective governance and fisheries management while fueling violence and corruption onshore.⁷ IUU fishing is not just a fishery management or sustainability issue, but is also compounded by other illicit behavior and vast amounts of money.

A greater range of enforcement actions should be available to authorities to address IUU fishing through increased international collaboration and inter-agency cooperation, domestically and internationally.⁸ By expanding the focus of investigations into IUU fishing to encompass onshore networks as well as the activities of the vessels themselves, we can begin to see how devastating the actual impacts of IUU fishing are. Existing regulatory and enforcement frameworks need to expand the scope of their current approach to address IUU fishing as a predicate offense for other illegal activities and its convergence with crimes that in some cases directly facilitate the laundering of IUU catch into the legal supply chain.

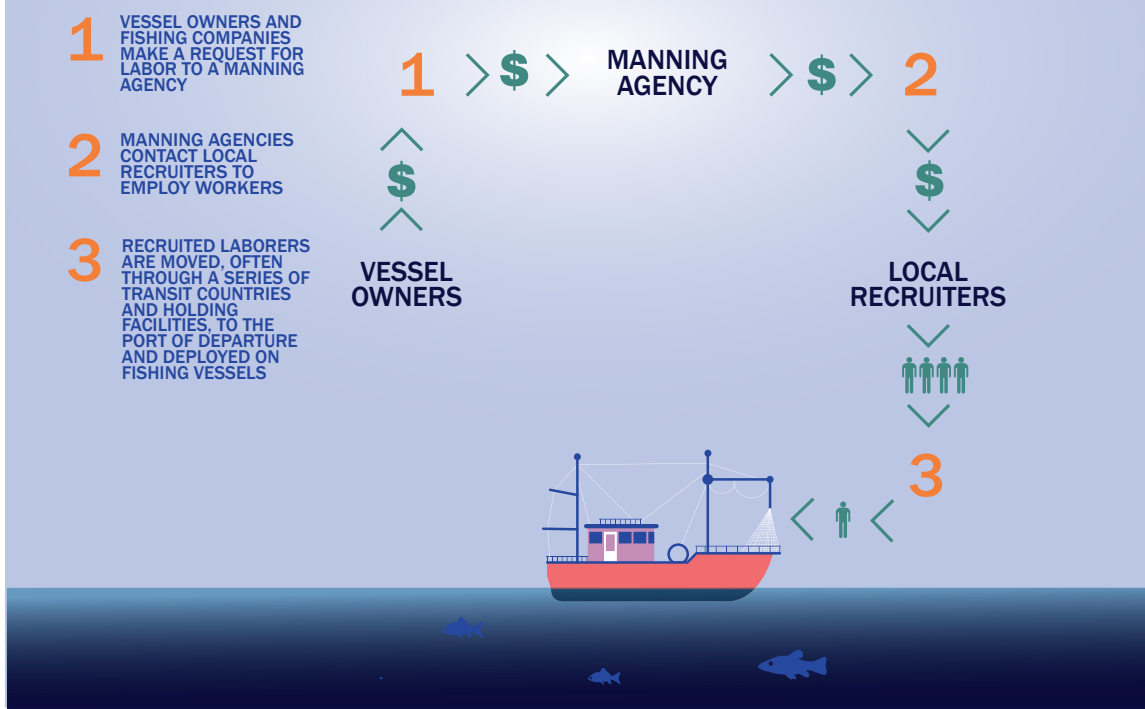
In this section, we examine three points of convergence identified throughout our investigations into IUU fishing. These include human trafficking and forced labor, document and customs fraud, and the infiltration of organized crimes groups and corruption within the IUU fishing supply chain. Absent greater transparency and an enforcement approach that addresses the at-sea and onshore activities of entities engaging in IUU fishing, bad actors will continue to exploit a vulnerable industry and sustain destructive illicit practices, including those beyond the scope of illegal fishing.

HUMAN TRAFFICKING AND FORCED LABOR

Human trafficking and forced labor abuses were documented in nearly 50% of our investigations into IUU networks. IUU actors will often skirt labor rules to lower operating costs and maximize profits. To do so, vessel owners will seek vulnerable labor through networks of recruiters, manning agencies, and regional facilitators to move laborers from source country to fishing vessels.⁹ Limited regulations and oversight, as well as a lack of transparency, means the process of recruitment often conceals the links between the worker, the recruiter, and the fishing company.

At the point of recruitment, vessel owners rely on manning agencies to source and contract cheap labor through local recruiters for distant water fleets. These manning agencies serve as the bridge between fishing companies and recruited labor and provide an additional level of insularity for fishing companies. During the process of recruitment, fishing companies may not appear on a recruitment contract at all.¹⁰ According to our analysis of crewmember testimonials and labor contracts, these laborers often do not know who they will be working for or where the vessel is operating. Workers are also forced to sign contracts in multiple languages that can include undisclosed fees or penalties. The terms of these contracts are also subject to change. For example, wages may be reduced or the length of their contract may be extended without their knowledge.¹¹

LABOR SUPPLY CHAIN IN THE FISHING SECTOR



At sea, fishermen are increasingly vulnerable to exploitation and abuse. In the pursuit of profit, the owners and captains of vessels engaging in IUU fishing will often exploit their crews to the fullest extent possible, subjecting them to violence or withholding food if they refuse to work.¹² Crewmembers' inability to communicate with those onshore combined with the vessel's active avoidance of regulatory authorities at port, means these workers remain at sea for prolonged periods of time with no means of escaping the conditions on board. Ultimately, workers are subject to the whims of a vessel's captain and face the risk of violence, and even death, if they attempt to resist. For example, on the Chinese-flagged *Tai Hong 1*, laborers were reportedly threatened at gunpoint by the Chinese captain and refused food when there was no catch while operating off the coast of Tanzania.¹³ Due to the remote nature of these crimes, a lack of physical evidence, and crew intimidation, there are few avenues for recourse available to crewmembers.¹⁴

Vessels engaging in IUU fishing also often lack critical safety and health equipment, leading to substandard safety and inhumane working conditions in violation of international requirements.¹⁵ These vessels violate international regulations concerning safety and working conditions by flying flags of convenience, evading authorities, or prolonging activity at sea to avoid inspection at port. The risk to crewmembers' safety is exacerbated by the use of falsified documents such as medical records, basic safety training certificates, and seamen's books to expedite the recruitment of workers.¹⁶ The use of fraudulent documentation saves fishing companies and recruitment agencies the cost of training to the detriment of workers who are exposed to illness, injury, and a lack of preparedness for overseas fishing expeditions.

For example, the Taiwanese-flagged *Fuh Sheng 11* was detained at the port of Cape Town for substandard working conditions in May 2018. Crewmembers recounted the repeated human rights abuses they were subjected to at the hands of the vessel's captain and owners. While at sea, the crewmembers reported that they were repeatedly beaten by the captain, forced to work 22-hour shifts, and suffered from illness and injury due to the lack of safety equipment and health standards onboard the vessel.¹⁷ In addition to the physical abuse allegedly suffered by these fishermen, they also reported that they were consistently underpaid and ordered to engage in shark finning and other illegal practices at sea.^{18 19}

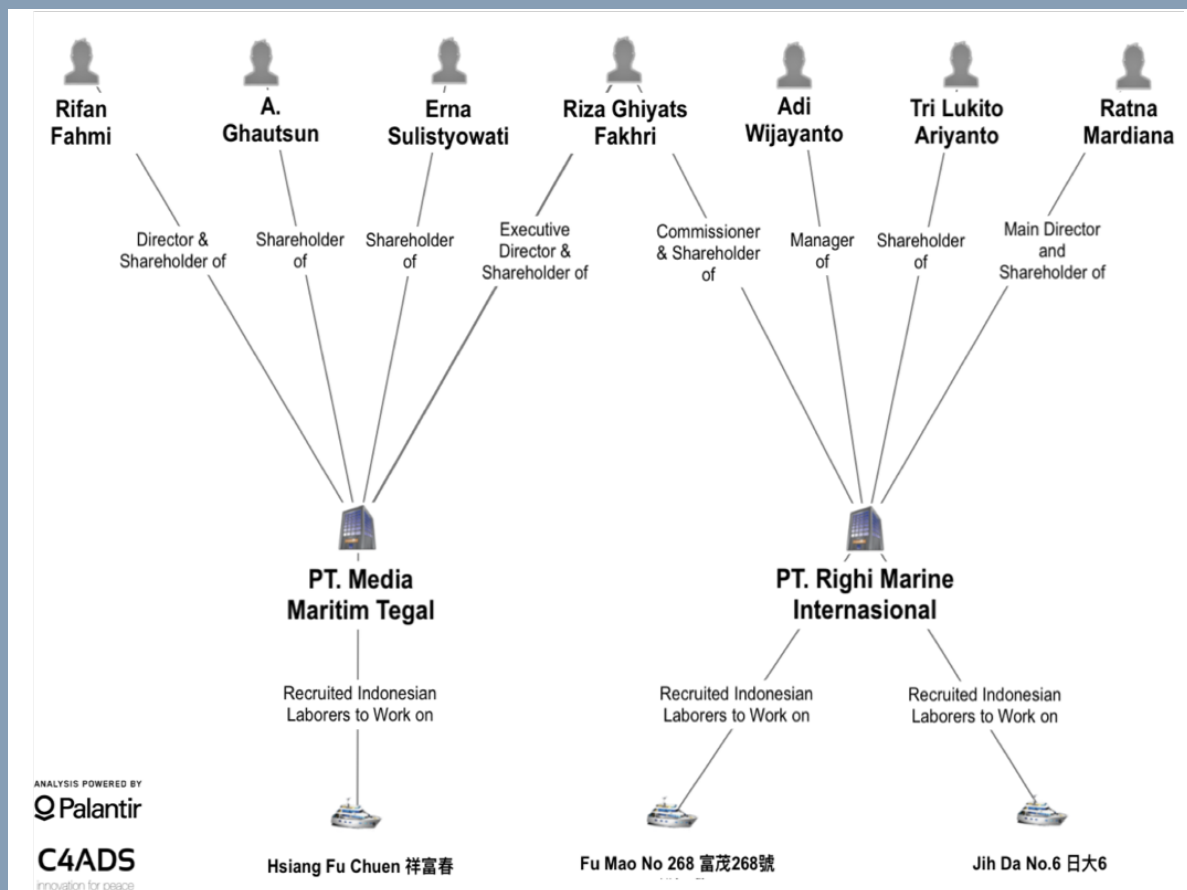
Forced Labor Onboard Distant Water Fishing Fleets

Payment to migrant fishermen recruited to work onboard distant water fishing vessels is frequently withheld despite the fulfilment of their duties and grueling work hours while at sea. After completing their contracts, they return home only to find that the money they were promised is nowhere to be found. With limited resources at their disposal, these migrant fishermen often have no means of reclaiming the money owed once they've returned home.

Recruitment agencies generally serve as the link between the migrant fishermen and the vessel owners, and are responsible for finding laborers and transporting them to the fishing vessel. Payments made to migrant fishermen are transferred through these organizations to be remitted to their family or personal bank account. However, in the event wages are withheld, there are few alternatives for migrant fishermen to recover their compensation. The exploitation of forced labor on fishing vessels is ultimately dependent on the role of recruitment agencies and their disregard for migrant fishermen.

The Recruitment Agencies

PT. Righi Marine Internasional [sic] (PT. RMI) is an Indonesian recruitment agency that places Indonesian migrant fishermen aboard foreign flagged vessels. The now-defunct PT. RMI website advertises placement of workers in destination countries such as Taiwan, Fiji, Thailand, Samoa, Palau, and Mauritius.²⁰ According to the Indonesian business registry, the commissioner of PT. RMI also serves as the main director to another Indonesian recruitment agency, PT. Media Maritim Tegal [sic]. Open source research indicates that these two recruitment companies may have placed Indonesian fishermen aboard Taiwanese fishing vessels on which the workers were never paid,²¹ died from illness while at sea,²² or disappeared after the fishing vessel sunk.^{23 24}



PT. Righi Marine Internasional [sic] recruited labor for at least two Taiwanese fishing vessels. These workers were never paid for the 26 months they worked on board.

Transit to and Working on the Fishing Vessel

Once migrant fishermen are recruited, they are transited to the fishing vessel through a series of regional facilitators and port agents, who are often linked to the recruitment agencies. These companies will often confiscate key documents, like visas or passports, to restrict the ability of recruited crewmen to leave for fear of legal action by local authorities.²⁵ Additionally, the costs of travel, accommodation, and other logistics are subtracted from their wages. The costs accrued enrich the recruitment agencies and regional facilitators while entrapping the migrant fishermen. The high costs pushed on to crewmembers makes breaking contracts financially infeasible, regardless of the conditions onboard the fishing vessel.²⁶

For example, in October 2015, two Indonesian men were recruited to work aboard the Taiwanese-flagged Fu Mao No. 268 by PT Righi Marine Internasional.²⁷ They travelled from Soekarno-Hatta International Airport in Indonesia to Hong Kong, where they were picked up by a Taiwanese agent who took them from the airport directly to the docks where they boarded the Fu Mao No. 268 and immediately departed to Cape Town, South Africa.²⁸ While onboard the Fu Mao No. 268, the two men were often forced to work 19-hour days, from 8 am to 3 am, over the course of 26 months.²⁹ However, upon the completion of their contracts in January 2018, the two men returned home to find their salary had not been paid.³⁰

The Vessel Owner and Fleet

The links between manning agencies and the beneficial owners of vessels engaging in repeated labor abuses at sea can be exposed by tracing vessel ownership networks onshore. For example, the reported owner of the Fu Mao No. 268 is Jue Mao Fishery Company Limited (爵茂漁業股份有限公司), a Taiwanese-incorporated fishing company.³¹ The company shares a phone number, email address, and mutual shareholders and management with six other Taiwanese companies that operate vessels primarily off the coast of South America. The Fu Mao No. 268 and at least three other vessels within this network controlled by the shareholders of Jue Mao Fishery have been sanctioned by Taiwanese fishing authorities for hiring foreign workers illegally.³² In one particular case, an Indonesian crew member was dropped off in Uruguay's Port of Montevideo by the Yun Mao No. 168. Ten days later, he died – reportedly as a result of a tooth infection that went untreated at sea while the captain refused to evacuate the crew member.³³

DOCUMENT & CUSTOMS FRAUD

The prevalence of customs and document fraud undermines mechanisms to improve traceability and counter IUU fishing. C4ADS observed customs or document fraud in nearly 40% of our sample of 29 investigations into IUU networks for this report. Companies and vessels use falsified documentation to obfuscate the country or vessel of origin to land and profit from illegally harvested catch. These types of fraud can disguise the species, origin, and amount of catch landed and sold, undercutting effective implementation of conservation and marine species management programs.³⁴ Additionally, fishing companies seeking to evade taxes or oversight by customs authorities may land catch at private facilities or ports with limited capacity to oversee vessels landing catch, otherwise known as ports of convenience. The use of these facilities permits vessels to more easily misreport the value, quantity, or species within the catch.³⁵ These ports have also been known to be susceptible to bribery and corruption as port officials overlook irregularities and potential fraud.³⁶ The lack of oversight means companies can fraudulently label exports destined for foreign markets to avoid higher import and export duties or prohibitions on the trade of certain species.

One example is the trade in shark fins between Ecuador, Peru, and East Asia. This trade is driven by demand for shark fins in East Asia, with Hong Kong being a major export destination for shark fins from Peru.³⁷ A modus operandi used by Peruvian companies is to import shark fins from Ecuador, where shark fishing is prohibited, to Peru via land routes.³⁸ These companies are able to traffic and launder catch through onshore trafficking networks before using falsified documents or no

documentation at all to export to buyers in mainland China and Hong Kong.³⁹

By omitting information or using fraudulent documentation to inaccurately represent where the catch originated, fishing companies and exporters alike launder illegally harvested catch into licit supply chains. In turn, these seafood products enter distribution networks and are purchased by possibly unknowing consumers and retailers. This perpetuates the cycle of IUU catch infiltrating the seafood supply chain from point of catch through to the end-consumer. These fraudulent practices also mean the fishing sector is vulnerable to tax-related crimes, undercutting revenues from taxation and customs duties in developing and developed countries.⁴⁰ The lack of transparency and viable documentation to link IUU catch back to the companies and vessels involved in its harvest and sale undermine the attribution of the crime to those ultimately responsible.

ORGANIZED CRIME GROUPS & CORRUPTION

Organized criminal syndicates have also been observed engaging in the sale and movement of illicit seafood products. As the demand has inflated the value of specific species, such as shark fins and totoaba bladders, criminal organizations have begun to use this trade as an additional source of revenue. Actors associated with criminal organizations can leverage established networks, trafficking routes, and contacts to apply the same methods used in other illicit activities to trafficking seafood products. The introduction of increased organizational structure and operational capacity means that larger quantities are moved more effectively, exacerbating existing limitations to adequately monitor and detect the illicit trade in protected species. While limited attention is paid to these illicit supply chains, these actors exploit corrupt public officials and weak regulatory oversight to profit from the trade in illicit seafood products.

In our investigations into the totoaba trade in Mexico, known narcotics traffickers and individuals with connections to criminal organizations have been identified as profiting from the harvest and trafficking of totoaba. These members of organized criminal groups are able to take advantage of the high value of totoaba bladders in overseas markets, predominately in East Asia, while facing lower associated risks as opposed to trafficking other illicit products like cocaine. Specifically, members of criminal organizations have subsidized and contracted some groups of local fishermen to harvest totoaba for them.⁴¹

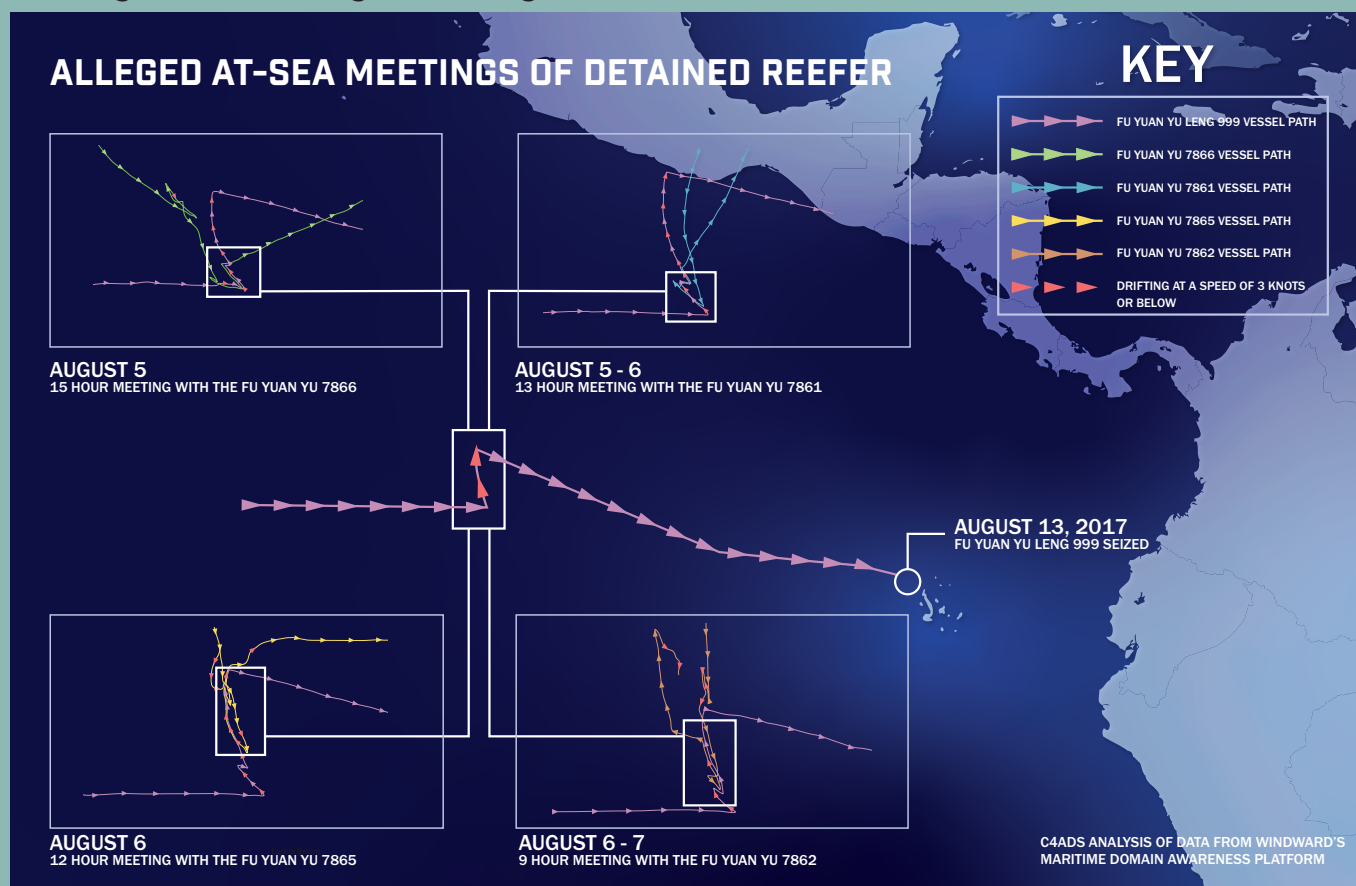
Seafood supply chains are susceptible to infiltration by criminal organizations, particularly due to the involvement of corrupt law enforcement and public figures. One prominent network based in Mexico, the Aispuro Network, at one point reportedly consisted of at least 14 police officers in addition to current and former ministerial officers.⁴² According to an investigation by the media outlet Zeta, individuals within the Aispuro network had alleged connections to the Sinaloa cartel and relied on former ministerial officers to act as a conduit between the illicit network and local municipal officials.^{43 44} Several members of this network, including the central figure of the group, have been arrested since 2017 in possession of narcotics, firearms, and in some cases, totoaba bladders.⁴⁵ Ultimately, networks with connections to criminal organizations, including cartels, in the Gulf of California in Mexico have introduced violence, weapons, drugs and increased corruption into the supply chain. This has destabilized already weak enforcement and regulatory mechanisms to control the totoaba trade.⁴⁶

Case Study: A Large Chinese Fishing Conglomerate & Convergence

Fuzhou Honglong Ocean Fishing Co., Ltd. (福州宏龙海洋水产有限公司) is a Chinese fishing company licensed to conduct distant water fishing and operates across the North and Southeast Pacific Ocean, the Atlantic Ocean, and the Indian Ocean.^{47 48} The company and its ultimate beneficial owner have been linked multiple illegal activities, including allegations of IUU infractions,⁴⁹ bribery of officials,⁵⁰ and the use of forced labor onboard vessels subcontracted through an affiliate company in Indonesia.⁵¹

C4ADS's investigation began with the detention of the Fu Yuan Yu Leng 999, a reefer, in the Galapagos Marine Reserve on August 13, 2017. The Ecuadorian coast guard discovered 300 tons of catch onboard, including 6,620 sharks.^{52 53 54} When the crewmembers of the Fu Yuan Yu Leng 999 were questioned in court on August 27, 2017, they claimed that the 300 tons of fish were received from two Taiwanese flagged ships: the Hai Fang 301 and the Hai Fang 302.⁵⁵ Additionally, according to crew members on the Fu Yuan Yu Leng 999, the transshipments occurred between the 5th and 7th of August over a thousand kilometers northwest of Galapagos.^{56 57} However, the Fu Yuan Yu Leng 999 was not included in a list of registered carrier vessels by the Inter-American-Tropical-Tuna-Commission (IATTC) at the time, so any transshipments it engaged in would be considered illegal.⁵⁸

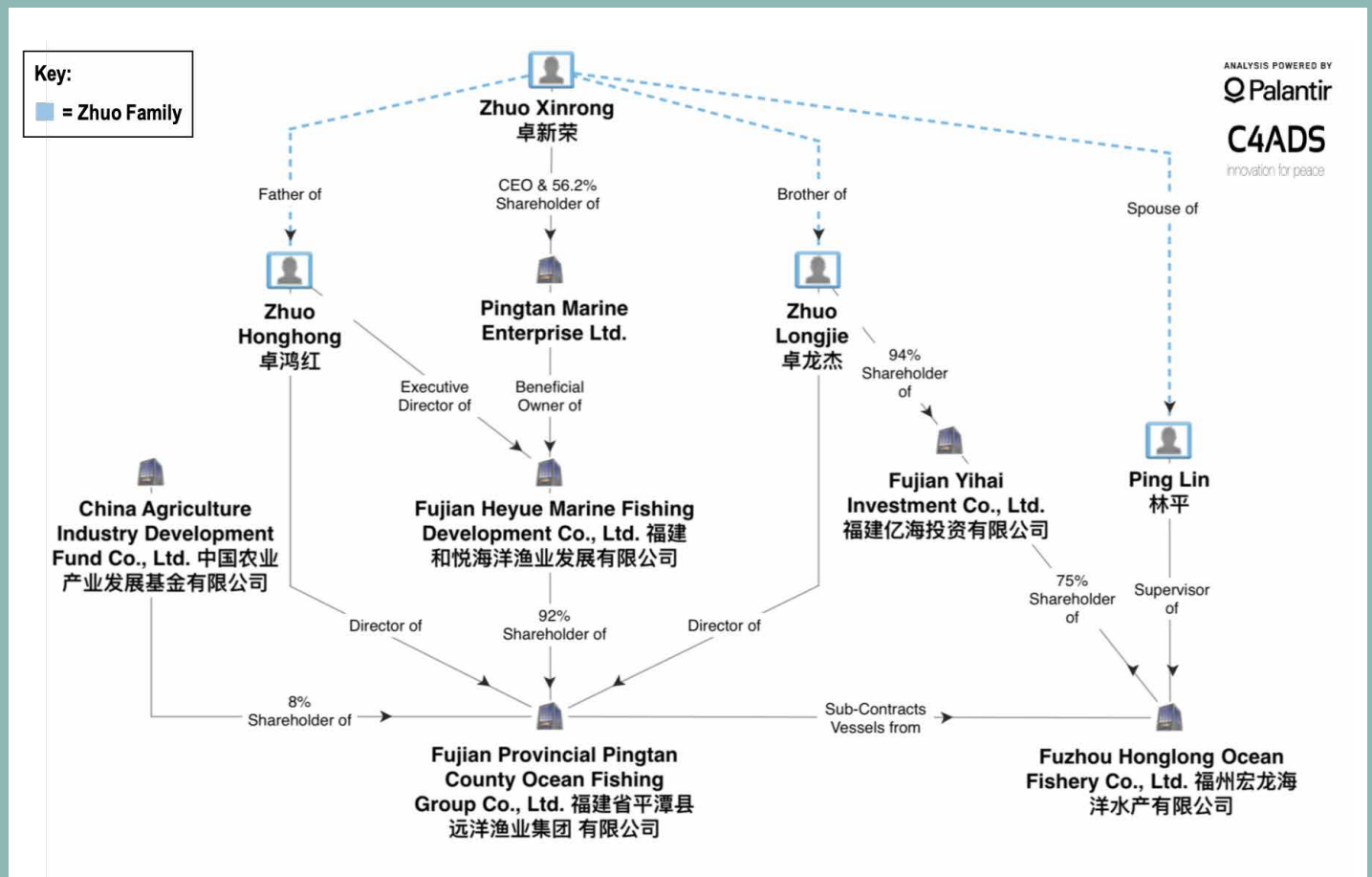
Subsequent analysis of the historical AIS transmissions of the Fu Yuan Yu Leng 999 contradict the claims that it met with the Hai Fang 301 and Hai Fang 302. Rather, before the Fu Yuan Yu Leng 999 was detained by Ecuadorian authorities in the Galapagos Marine Reserve, its AIS transmissions indicate that it may have held alleged at-sea meetings with up to four other ships between August 5 and August 7.⁵⁹ The alleged meetings include:



The other four vessels involved in the alleged meetings at-sea with the Fu Yuan Yu Leng 999 were either owned by Honglong Ocean Fishing or Fujian Provincial Pingtan County Ocean Fishing Group Co., Ltd. (福建省平潭县远洋渔业集团有限公司), another Chinese fishing company.⁶⁰ The four vessels are:

VESSEL NAME	IRCS	IMO	MMSI	FLAG	VESSEL TYPE	AUTHORIZATION	REGISTERED OWNER
Fu Yuan Yu 7861	BVYX7	9828663	412440551	China	Longliner	WCPFC; IATTC	Fujian Pingtan County Ocean Fishery
Fu Yuan Yu 7866	BVYT7	9828716	412440549	China	Longliner	WCPFC; IATTC	Fuzhou Honglong Ocean Fishing
Fu Yuan Yu 7862	BVYY7	9828675	412440552	China	Longliner	WCPFC; IATTC	Fujian Pingtan County Ocean Fishery
Fu Yuan Yu 7865	BVXL7	9828704	412440558	China	Longliner	WCPFC; IATTC	Fuzhou Honglong Ocean Fishing

Open source investigation reveals that Honglong Ocean Fishing and Pingtan County Ocean Fishing Group are closely related. Pingtan County Ocean Fishing Group is a subsidiary of Pingtan Marine Enterprise Limited, a NASDAQ-listed conglomerate incorporated in the Canary Islands.⁶¹ The CEO of Pingtan Marine is Zhuo Xinrong (卓新荣), who founded Honglong Ocean Fishing in 1995 and served as its supervising officer between June 1995 to September 2006.⁶² According to the Chinese business registry, Xinrong's wife, Lin Ping (林平), currently serves as the supervisor to Honglong Ocean Fishing while the majority shareholder is a Chinese investment company controlled by Zhuo Longjie (卓龙杰), the brother of Zhuo Xinrong and a serving director of Pingtan Marine Enterprise.⁶³ Finally, according to SEC filings submitted by Pingtan Marine, Pingtan County Ocean Fishing sub-contracts a fleet of 20 fishing vessels from Honglong Ocean Fishing under a 25-year exclusive operating license.^{67 68}



Allegations of Illegal Fishing, Fraud, Corruption, and the Use of Forced Labor

Since 2014, Honglong Ocean Fishing and Pingtan Marine Enterprise have been repeatedly suspected of or implicated in a multitude of illegal activities while operating fishing vessels across Southeast Asia, including in Indonesia and East Timor. These alleged and accused crimes include human trafficking and forced labor, illegal fishing, document fraud and forgery, and bribery. For example, in 2014, PT. Dwikarya Reksa Abadi, an Indonesian fishing company, was reported in Australian and Indonesian media as having its license revoked by the Ministry of Maritime Affairs and Fisheries in Indonesia for committing criminal offenses.⁶⁹ These alleged crimes included forging documentation for part of its fleet,⁷⁰ abusing and torturing crew members, illicitly trading in protected species, and paying bribes to public officials.^{71 72 73} In 2016, the decision by the Ministry of Maritime Affairs to revoke the license of Dwikarya was upheld by the Jakarta Administrative Court.⁷⁴

According to the Indonesian corporate registry, the majority shareholder of Dwikarya Reksa Abadi was Honglong Ocean Fishing as of May 2017.⁷⁵ Additionally, Pingtan Marine's Annual Report from 2016 claims that PT Dwikarya Reksa Abadi acted as an "agent to apply and renew Indonesian fishing licenses" for Pingtan Marine and its subsidiaries.⁷⁶ Pingtan Marine reportedly did not directly own any Indonesian fishing licenses but made annual payments to Dwikarya and another Indonesian company for items such as "vessel maintenance service" and fishing supplies.⁷⁷ According to the Indonesian Ministry of Maritime Affairs and Fisheries, Dwikarya Reksa Abadi violated the Indonesian moratorium on all foreign vessels operating in Indonesian waters by operating foreign vessels without the necessary documentation or permits.^{78 79}

After Pingtan Marine lost access to Indonesian fishing grounds, it began searching for other alternatives to replace the lost revenues from their fleet operating in Indonesia. To do so, the company apparently began to operate fishing vessels through Honglong Ocean Fishing. In November 2016, a fleet of vessels registered to Honglong Ocean Fishing, the Fu Yuan Yu 9607 through 9621, were granted a 12-month fishing license by the East Timorese fishing authorities to harvest tuna in designated fishing grounds for a fee of less than \$500,000.^{80 81}

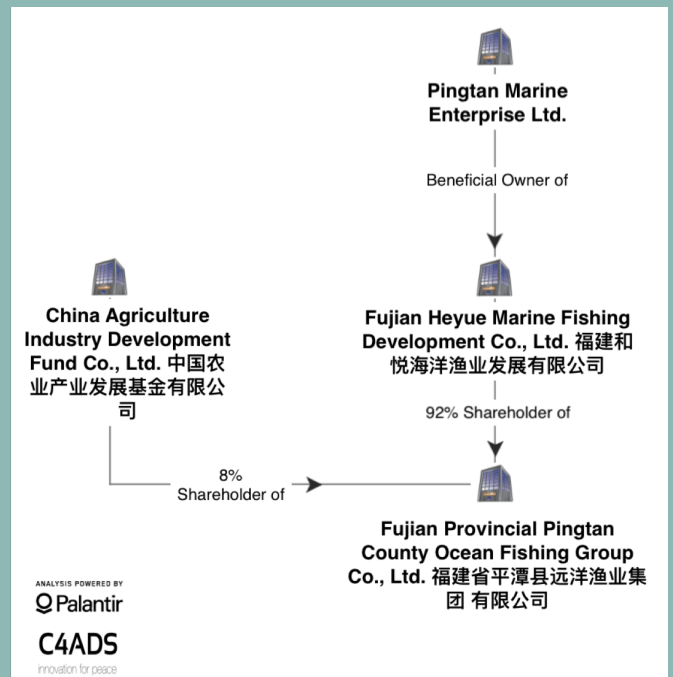
The Minister of Fisheries in East Timor stated that the permit had been issued exclusively to Honglong Ocean Fishing and that he received assurance from Pingtan Marine that they were not involved.^{82 83} However, in Pingtan Marine's annual filings in 2019, the company continues to claim ownership over the 15 vessels active in East Timor, which are sub-contracted by Pingtan County Ocean Fishing Group.⁸⁴ Additionally, Pingtan Marine lists these vessels on their official website as under the control of the Pingtan County Ocean Fishing.⁸⁵

FU YUAN YU 9609	FU YUAN YU 763	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9610	FU YUAN YU 764	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9611	FU YUAN YU 765	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9613	FU YUAN YU 767	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9614	FU YUAN YU 770	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9615	FU YUAN YU 771	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9616	FU YUAN YU 772	Drift Net	Indo-Pacific waters	09/23/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9617	FU YUAN YU 773	Drift Net	Indo-Pacific waters	10/17/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9618	FU YUAN YU 774	Drift Net	Indo-Pacific waters	10/17/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9620	FU YUAN YU 776	Drift Net	Indo-Pacific waters	10/17/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report
FU YUAN YU 9621	FU YUAN YU 777	Drift Net	Indo-Pacific waters	10/17/2014	225	67	In the process of transfer	Ownership Certificate	Valuation Report

The official website of Pingtan Marine lists the Fu Yuan Yu 9609 through 9621 as in the process of transfer to the company. These vessels received a license to operate in East Timor while reporting Honglong as the registered owner.

Additionally, although Pingtan Marine's website identifies Pingtan County Ocean Fishing Group as a wholly-owned subsidiary, Pingtan Marine announced that the China Agricultural Industry Development Fund (中国农业产业发展基金有限公司) purchased an 8% equity interest in Pingtan County Ocean Fishing on February 10, 2015.^{100 101} The China Agricultural Industry Development Fund was established in 2013 and is one of China's largest state-run agricultural industry funds and invests in enterprises in the agriculture sector. The other 92% is owned by Fujian Heyue Marine Fishing Development Co Ltd. (福建和悦海洋渔业发展有限公司), a wholly owned subsidiary of Pingtan Marine Enterprise Ltd., through several layers of holding companies.¹⁰²

At sea, alleged illicit transshipments and IUU activity was observed across vessels ultimately controlled by Honglong Ocean Fishing and Pingtan Marine. Network analysis, however, demonstrates not just how these actors continue to operate with impunity through the complexity of their corporate structures, but also how a wide variety of illicit activities help fund and sustain their operations at sea. While the Chinese Department of Agriculture's Fishing Bureau eventually blacklisted Honglong Ocean Fishing due to its association with the Fu Yuan Yu Leng 999 in 2018, Pingtan Marine continues to operate vessels despite its reported close connection to Honglong Ocean Fishing.^{103 104}

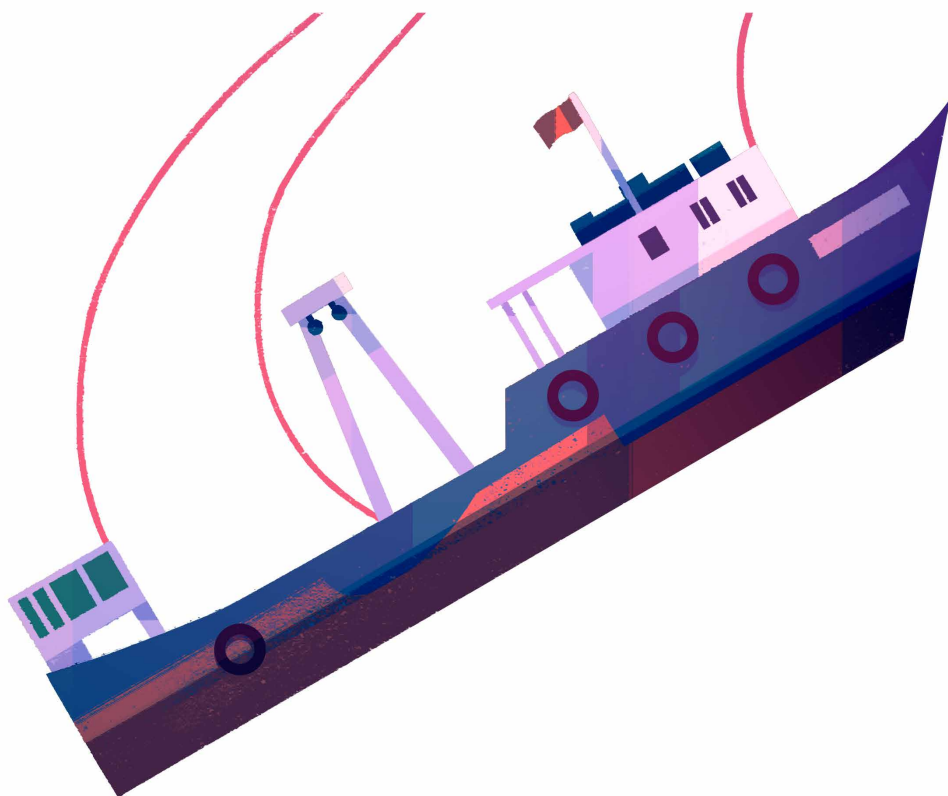


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CONCLUSION & RECOMMENDATIONS

C4ADS's investigations into IUU fishing demonstrate the continued centrality of onshore actors in IUU fishing and further suggest that IUU operators are dependent on key gaps in the current design of regulatory frameworks within the global fishing sector. Fundamentally, a lack of transparency enables those ultimately benefiting from IUU fishing to engage in a variety of offenses that facilitate the integration of IUU catch into global seafood supply chains, and jeopardize the economic security of individuals, communities, and governments across the world.

Our investigations into IUU networks highlight the necessity of expanding the scope of enforcement action against IUU fishing, and drawing attention to the transnational networks behind this activity. Collectively, our case studies show that with the right combination of tools, IUU fishing activities at sea and convergent crimes onshore can be linked to the networks that ultimately profit from the illicit activity. However, it is clear that enforcement needs to adopt measures to more effectively identify and understand the major facilitators that are based onshore, including non-compliant flag states, the ultimate beneficial owners of fishing vessels, and other actors exploiting the fishing sector. Without the continued support of these key actors, IUU fishing vessels at sea would have fewer opportunities to land and launder illicit catch, diminishing the associated profits. IUU fishing can only be adequately addressed through cross-jurisdictional investigations, laws, and regulations targeting the entities behind the fishing vessels.

The consequences of low transparency and a lack of accountability in the global fishing sector extend far beyond issues of sustainability. These vulnerabilities also directly facilitate the extortion of revenue from states and undermine the legitimacy of governance and the legality of the seafood supply chain around the world. Ultimately, C4ADS found that:

- Broad regulatory loopholes prevent relevant authorities from holding IUU vessel owners to adequate standards of due diligence and information reporting.

Recommendation: RFMOs, flag states, and coastal states must increase reporting requirements for vessels and vessel owners to create a model of enhanced due diligence. To do so, these entities should require vessel owners to report ultimate beneficial ownership when registering with a flag state or requesting authorization to fish. Access to ultimate beneficial ownership information would help regulatory and enforcement efforts detect, track, and disrupt investment in illegal fishing vessels within the fishing sector.

- A lack of uniform or aggregated vessel registries including vessel authorization, license, and ownership information across the global fishing industry means vessels historically implicated in IUU fishing can continue to operate with impunity.

Recommendation: RFMOs, flag states, and coastal states should standardize and publicize lists of authorized vessels to improve visibility of global fishing operations. The development of the Global Record of Fishing Vessels by the FAO is a significant step in the right direction. However, these lists would be strengthened further by the development of a universal unique vessel identifier for the global fishing fleet that can be used to confirm vessel identity from point of construction, including changes in name, flag, or ownership. Access to this information would curtail IUU operators' ability to tamper with vessel identity to gain access to ports, fishing grounds, and flag registrations.

- IUU operators are able to exploit non-compliant flag states and ports of convenience to continue operating at sea and land IUU catch with limited regulatory oversight and risk of detection.

Recommendation: Regulators and RFMOs should work to increase the accountability of non-compliant flag states and port states. While steps to address the role of ports of convenience are already underway with the implementation of the Port States Measures Agreement (PSMA), which requires increased reporting from vessels attempting to land at port, other measures are required. To increase accountability, countries should be encouraged to publish a record of registered vessels and require vessel owners to report ultimate beneficial ownership information. Additionally, countries should publicize any legal or administrative actions taken against fishing vessels to increase awareness of non-compliant vessels and vessel owners. In response to non-compliant flag states and port states, governments and NGOs should provide resources and trainings to build capacity for improved monitoring and inspections by customs, port, and fishery management officers. In the absence of reform, greater restrictions can be placed on the import of seafood products from non-compliant countries.

- Weak existing penalties for IUU fishing allow companies and individuals to factor in associated fines as a cost of doing business.

Recommendation: IUU fishing should be targeted alongside the crimes closely linked to it, including document and customs fraud, human trafficking and forced labor, money laundering, and more. Addressing IUU fishing in conjunction with its associated crimes can establish new avenues for enforcement to go after bad actors in the fisheries sector. To do this, trainings are necessary to build capacity for inter-agency cooperation that includes fishery officers. Additionally, domestic fishery statutes should be updated and standardized across jurisdictions to more clearly define IUU fishing infractions, increase penalties, and hold the ultimate beneficial owners of the vessel responsible as opposed to the crew. Penalties that are proportional to the value of the vessel's IUU catch or the value of the company's revenue will be more effective as an appropriate deterrent without causing undue harm to small-scale fishermen.

Ultimately, a poorly regulated and opaque global fishing industry enables IUU operators to function with limited risk of detection or punishment. Focusing on the onshore networks and facilitators behind IUU fishing vessels can help law enforcement more effectively attribute IUU activity to not only vessels, but also to those who ultimately profit from their behavior. Large-scale reform is needed in the global fishing sector to improve how vessel owners report ownership information and prevent the exploitation of opaque jurisdictions and flag states. Without adequate laws and regulations to enforce transparency among vessels at sea and their owners onshore, the ecological, economic, and security risks posed by IUU fishing will continue unabated.



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