

No More Hiding at Sea: Transshipping Exposed

February 22, 2017

Authors: Lacey Malarky and Beth Lowell

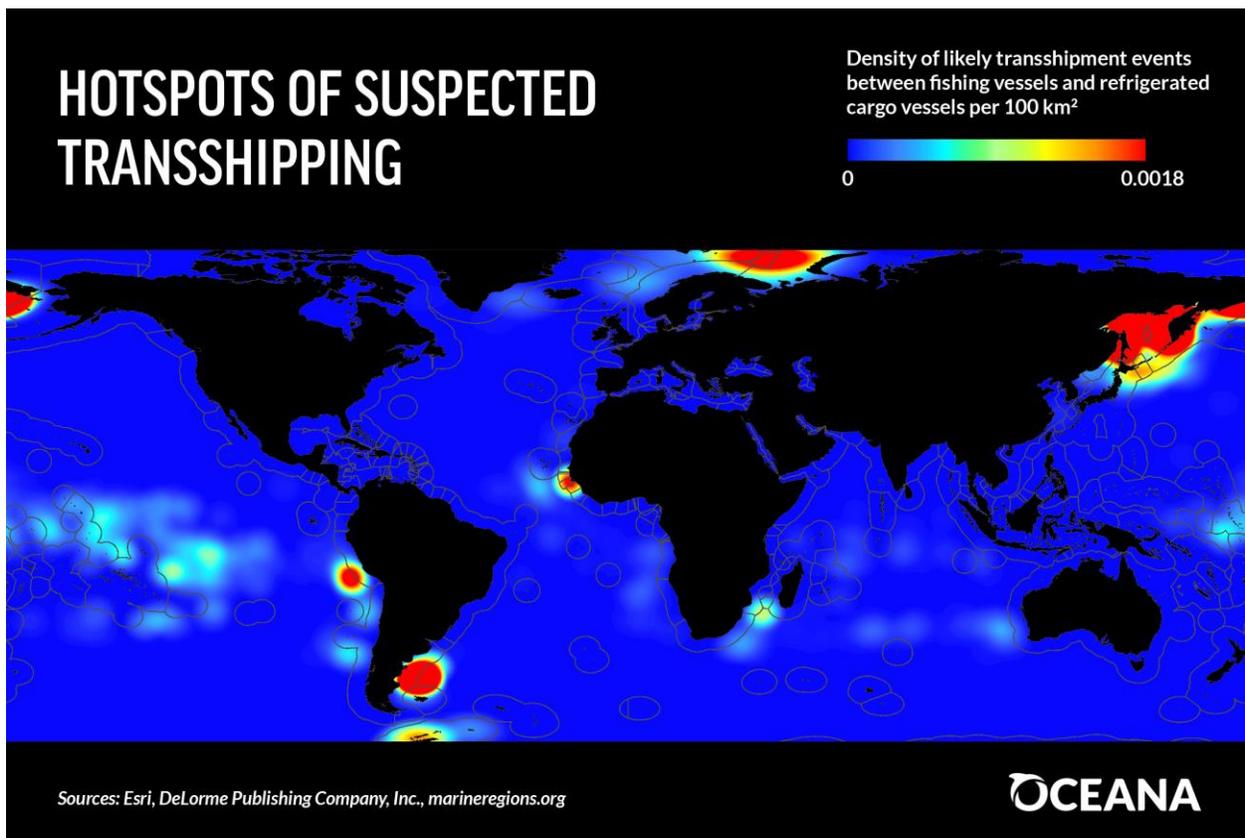


Figure 1: This image shows global hotspots of likely transshipments between refrigerated cargo vessels and the largest commercial fishing vessels from 2012 to 2016.

Executive Summary

Illegal, unreported and unregulated (IUU) fishing is a global problem threatening the sustainability of the world's fisheries. Transshipment can facilitate IUU fishing by enabling vessels to transfer their catch to refrigerated cargo vessels, or "reefers," at sea – far from ports and hidden from fisheries managers. While transshipment is legal in certain waters, it increases the risk of illegal and harmful practices at sea.

Oceana used a new dataset released by Global Fishing Watch, a joint project between Oceana, SkyTruth and Google, to investigate at-sea transshipment on a global scale (Figure 1). Global Fishing Watch's data

includes 5,065 likely transshipment events between 2012 and 2016, which are rendezvous between the largest commercial fishing vessels and reefers.

Oceana's top findings include:

- Almost 40 percent of all likely transshipments occurred on the high seas, beyond country boundaries. Hotspots of likely transshipping include: 1) Russia's Sea of Okhotsk; 2) Outside the Exclusive Economic Zone (EEZ) of Argentina; 3) Outside the EEZ of Peru; 4) Barents Sea Loophole, a high-seas region surrounded by the EEZs of Norway and Russia; and 5) National waters of Guinea-Bissau. These hotspots show localized, high-density regions of likely transshipping.
- Transshipment allows fishing vessels to remain at sea for months to years at a time, which undermines the ability of management organizations to monitor and control high-seas fisheries and can facilitate the laundering of illegally caught fish. Oceana highlights two fishing vessels that relied on reefers to remain at sea for more than one year.
- Top ports visited by reefers engaged in likely transshipping in 2015 are revealed. Three of the top eight countries that reefers visited most frequently have not yet ratified the Food and Agriculture Organization of the United Nations' (FAO) Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. These ports may have weaker port state controls, which could enable transshipped, illegally caught fish to enter the global marketplace, hindering efforts to trace seafood throughout the supply chain.
- Fishing that occurs under flags of convenience (FoC), which is where a nation operates an "open registry" and sells its flag to a foreign vessel, can allow fishers to evade the conservation and management regulations of their own country. Two FoC countries, Comoros and Vanuatu, represented the second and third highest-ranked flag states for fishing vessels involved in likely transshipments in 2016.

Transshipment can be a way for bad actors to get away with illegal and unscrupulous practices far from the eyes of authorities. In order to help stop illegal fishing, governments and those responsible for managing fisheries around the world should ban transshipment at sea, mandate vessel tracking, require unique vessel identifiers such as International Maritime Organization (IMO) numbers, and adopt global catch documentation schemes.

Introduction

One of the greatest challenges of the 21st century will be to feed more than 9.7 billion people by 2050.¹ Abundant oceans will be a vital component of the global food web. Unfortunately, today we face declining fish populations, increased competition for marine resources, and a prevalence of illegal and unregulated fishing practices. The amount of fish consumed by humans was more than 146 million tons in 2014, about 87 percent of the world's fish production.² While the demand for fish has steadily increased, the supply of wild-caught fish has been in decline globally since the mid-1990s.³

¹ Food and Agriculture Organization of the United Nations (FAO) (2016). *The State of World Fisheries and Aquaculture. Contributing to food security and nutrition for all*. Rome. 200 pp.

² Ibid.

³ Pauly D & Zeller D (2016). Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining. *Nature communications*. 7.

Currently, fish provide 3.1 billion people with 20 percent of their animal protein intake, and millions of people rely on the oceans as a source of income.⁴ According to the FAO, an estimated 56.6 million people are employed as fishers and fish farmers, of which small-scale fisheries play a critical role in supporting livelihoods and alleviating poverty for millions of people living in coastal communities. With 89.5 percent of the world's fisheries already fully exploited or overfished, there is an imminent threat to the food and job security for millions of people, especially those living in developing countries that rely on the ocean's bounty for survival.⁵

National governments and international bodies have developed fisheries management plans, laws and regulations. Regional fisheries management organizations (RFMOs) provide management measures for some commercial fish stocks in areas beyond EEZs – a state's sovereign waters, which extend 200 nautical miles from the coast. Effective monitoring and enforcement of global fisheries is an enormous challenge, due in part to the advanced capabilities of distant water fleets, a lack of vessel identification standards, and the magnitude of fishing vessels – estimated around 4.6 million worldwide in 2014.⁶

What is Illegal Fishing?

Illegal fishing is often referred to by the abbreviation "IUU," which encompasses illegal, unreported and unregulated fishing. While there are practical challenges in defining these three dimensions of illegal fishing in absolute terms, generally, illegal fishing is the violation of national laws or international management measures. Unreported fishing can refer to a fishing activity that is not reported, misreported or under-reported to the national authority or RFMO. Unregulated fishing often relates to vessels without nationality or that are non-parties to RFMOs, and can include vessels fishing in national waters of countries that lack the resources to establish fisheries laws or adequate monitoring and enforcement of existing laws.⁷

Global estimates suggest a minimum of 20 percent of seafood worldwide is caught illegally, representing economic losses between \$10 to \$23 billion and 11 to 25 million metric tons of fish.⁸ Illegal fishing can include violations of catch limits, gear restrictions or safety precautions, fishing without authorization or in closed or protected areas, or fishing of prohibited species. IUU fishing can gravely affect small-scale fisheries by exploiting coastal waters on which they depend, especially in developing and small-island nations with insufficient resources to adequately police their EEZs. IUU fishing has also been linked to other organized, transnational crimes at sea, including the illegal laundering of fish, human trafficking, smuggling of migrants, forced labor and drug trafficking.⁹

What is Transshipping?

Transshipping is the transfer of cargo, fuel, provisions, crew, gear or fish catch from one vessel to another, and can take place in port or at sea. While transshipping is a common global practice, it can also

⁴ FAO (2016). *The State of World Fisheries and Aquaculture. Contributing to food security and nutrition for all*. Rome. 200 pp.

⁵ Ibid.

⁶ Ibid.

⁷ FAO (2001). *International Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing*. Rome. 24 p.

⁸ Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, Beddington JR, & Pitcher TJ (2009). Estimating the worldwide extent of illegal fishing. *PLoS one*, 4(2), p.e4570.

⁹ United Nations Office on Drugs and Crime (UNODC) (2011). *Transnational Organized Crime in the Fishing Industry: Focus on: Trafficking in Persons, Smuggling of Migrants, Illicit Drugs Trafficking*.

hide suspicious fishing activities. Often, these events occur between a fishing vessel and a refrigerated cargo vessel, also termed a “reefer,” involving the transfer of fish catch. Although these events are often legal, restrictions on transshipment vary by EEZ, flag state and region.

Transshipping can have profound impacts on the management and sustainability of fisheries resources. Reefers are built to rendezvous with multiple fishing vessels, combining each vessel’s catch in large refrigerated holds for storage before landing the accumulated catch in port. This practice can facilitate illegal fish laundering, where illegally caught fish is mixed with legally caught fish and then sold as such. Likewise, reefers are not always inspected upon arrival in port and can be exempt from providing catch documentation, hindering seafood traceability and transparency. Weak regulatory frameworks allow transshipment to occur at sea without verification of catches or monitoring for potential transnational criminal activities.¹⁰

Detecting Potential Transshipping

Technological advancements in big data analytics, machine learning and cloud computing, combined with the innovative use of Automatic Identification System (AIS) data have allowed Oceana, SkyTruth and Google to create Global Fishing Watch, the world’s first freely available global view of commercial fishing activity. In an effort to bring transparency to transshipping at sea, Global Fishing Watch developed a method to detect encounters of fishing vessels with refrigerated cargo vessels using the Global Fishing Watch database and a list of 794 reefers compiled by SkyTruth. This method identifies a likely transshipment event when two vessels are within 500 meters of each other for longer than three hours while traveling at less than two knots and more than 20 nautical miles from shore.¹¹ Oceana used data generated by SkyTruth, using Global Fishing Watch, to analyze likely transshipment events worldwide. For a description of the dataset used in these analyses, and of the methods behind the data, visit globalfishingwatch.org for SkyTruth and Global Fishing Watch’s companion report on the data analysis behind transshipment.

Global Hotspots of Transshipping

Oceana presents a global view of likely transshipping hotspots from 2012 to 2016. These events represent 5,065 rendezvous between 282 reefers and 965 fishing vessels. The map in Figure 2 highlights some high-density regions of likely transshipments in Russia’s Sea of Okhotsk, outside the EEZ of Argentina, outside the EEZ of Peru and the Barents Sea Loophole, a high-seas region surrounded by the EEZs of Norway and Russia.

The high-density region in the northwest Pacific Ocean, centered on the Sea of Okhotsk and extending into the Bering Sea and Sea of Japan, is a region that has likely been subject to IUU fishing since the 1980s, increasing to about 33 percent IUU fishing between 2000 and 2003.¹² Many uncertainties exist in this region regarding illegal fishing, and the extent of IUU has not been well-documented. Waters within the Russian and Japanese EEZs account for more than 50 percent of the total likely transshipment events globally, making these regions high priority areas for further investigation into transshipment, its associated regulations and IUU fishing.

¹⁰ Environmental Justice Foundation (EJF) (2013). *Transshipment at Sea: The Need for a Ban in West Africa*.

¹¹ Global Fishing Watch & SkyTruth (2017). *The Global View of Transshipments: Preliminary Findings*.

¹² Agnew D, Pearce J, Peatman T, Pitcher TJ, & Pramod G (2008). *The global extent of illegal fishing*. Fisheries Ecosystems Restoration Research Fisheries Centre, University of British Columbia and Marine Resources Assessment Group, Vancouver and London.

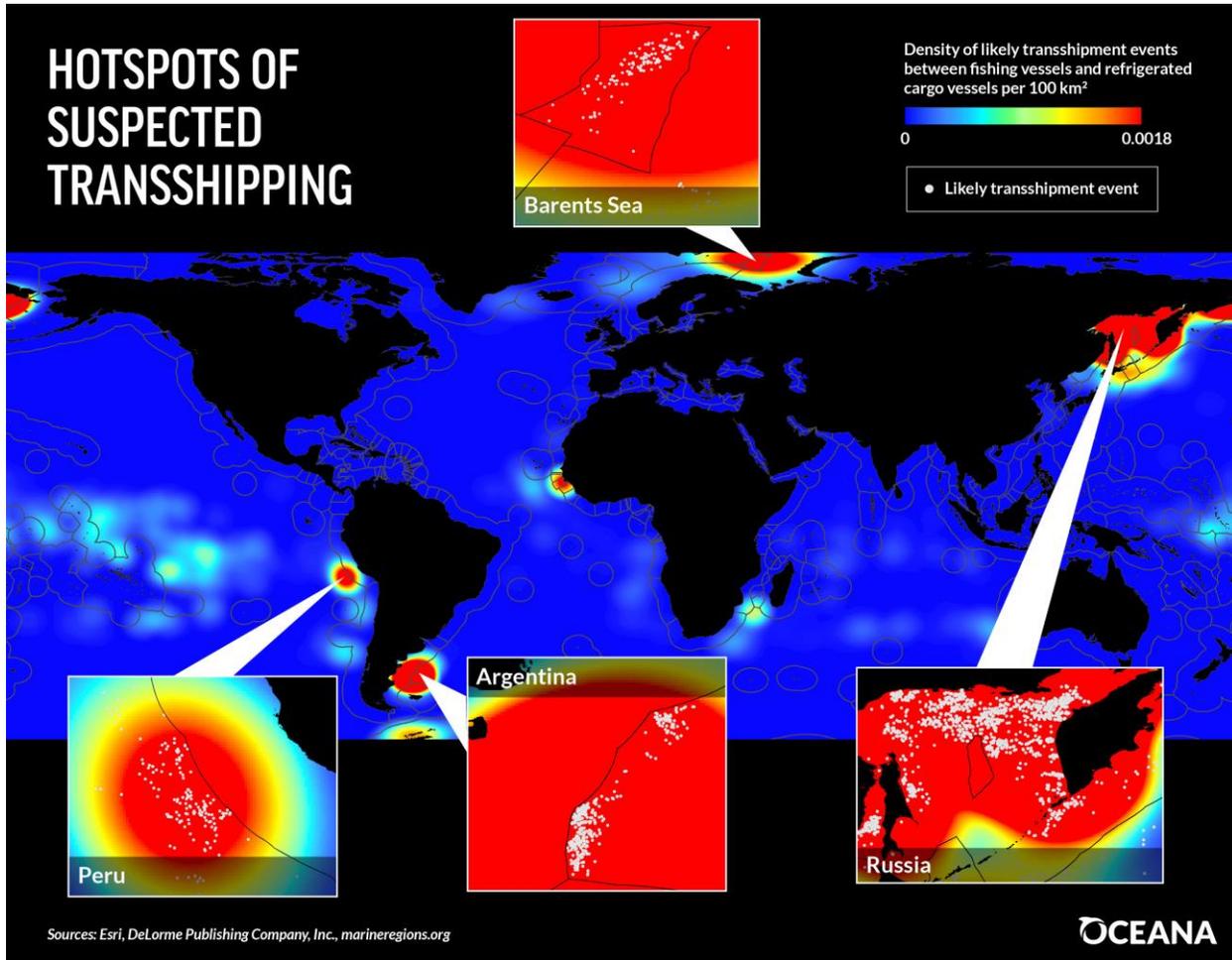


Figure 2: This image shows global hotspots of likely transshipments between refrigerated cargo vessels and the largest commercial fishing vessels from 2012 to 2016. Four hotspots are shown in greater detail to reveal patterns of individual transshipment events.

The region immediately off of Argentina’s southeastern coast is another major hotspot for likely transshipments. There, 425 likely transshipment events occurred outside of, but within close proximity to, the Argentinian EEZ. Regulations on transshipment vary depending on the target catch. For example, for tuna and tuna-like species, transshipping and fishing activity by large-scale longline vessels flagged to participating countries would be managed by the International Commission for the Conservation of Atlantic Tunas (ICCAT). This RFMO requires that all transshipment of tuna and tuna-like species caught in the area must take place in port, unless they are monitored by the ICCAT Regional Observer Programme for Transshipment, or if the fishing vessel and carrier vessel received prior authorization to carry out at-sea transshipment.¹³ For fishing not covered by ICCAT, further investigation is needed to determine whether or not this activity is legal.

¹³ ICCAT. (n.d.). Recommendation by ICCAT on a Programme for Transshipment. ICCAT. <https://www.iccat.int/Documents/Recs/compendiopf-e/2012-06-e.pdf>.

The high-seas region immediately outside of the Peruvian EEZ comprised about 8 percent of all likely transshipment events on the high seas, and is largely managed by the Inter-American Tropical Tuna Commission. This RFMO also requires that all vessels transship in port, except those designated under the program to monitor transshipments at sea.¹⁴

The high-density region in the Barents Sea, known as the Barents Sea Loophole, is located north of Russia and Norway in the Arctic Ocean and just outside their national jurisdictions. This region is often referred to as a “high-seas pocket,” which is any area of the ocean beyond national jurisdictions, but also completely enclosed by EEZs. This particular high-seas pocket is managed by the North East Atlantic Fisheries Commission and has been subject to considerable illegal fishing in the past, primarily the illegal harvest of Northeast Arctic cod.¹⁵ In 2004, the Joint Norwegian-Russian Fisheries Commission took measures to reduce IUU fishing in this region, including the ban of transshipment involving reefers flying a flag of convenience.¹⁶ Additional analyses will help to elucidate the legality of transshipping events within this region.

The waters of Guinea-Bissau, one of the poorest countries in the world with high levels of IUU fishing,¹⁷ hosted 112 events of likely transshipments within its national waters. Guinea-Bissau does not have a national fleet capable of harvesting fisheries resources in its waters, so industrial fishing is conducted by distant water fleets operating under private or partnership agreements. IUU fishing in these waters accounts for an estimated annual loss of \$338 million,¹⁸ and in 2005, an estimated 33 percent of the industrial fleet included foreign vessels fishing without a license.¹⁹ According to the FAO, European Union vessels may only transship in port, and must notify the Ministry of Fisheries at least 24 hours in advance, though rules around at-sea transshipment for other foreign vessels may vary. As a developing country, Guinea-Bissau may lack the resources to adequately police its waters, and foreign vessels may be intentionally transshipping at sea, out of sight of coastal controls.

While regulations exist for some of these major transshipping hotspots, they are overly reliant on observer programs to effectively monitor at-sea transshipments, and depend on the honesty of vessel and reefer operators to adequately document the transferred catch. Transshipment activities should be strictly regulated, and should only take place in ports where transshipments can be monitored and catch documentation can be verified by coastal and port state control.

¹⁴ Inter-American Tropical Tuna Commission. 2016, July. Implementation of the IATTC Regional Observer Program For Transshipments at Sea. Inter-American Tropical Tuna Commission 90th Meeting. <https://www.iattc.org/Meetings/Meetings2016/June/pdf-files/IATTC-90-06-Transshipment-program.pdf>.

¹⁵ Stokke OS (2010). Barents Sea Fisheries—the IUU Struggle. *Arctic Review* 1(2).

¹⁶ World Wildlife Fund (2008). Illegal Fishing in Arctic Waters. Catch of Today – Gone Tomorrow?

¹⁷ Oceanic Développement & MegaPesca Lda (2009). Ex-post evaluation of the current protocol to the Fisheries Partnership Agreement (FPA) between the European Union and Guinea Bissau and analysis of the impact of the future Protocol on sustainability. Final Report, Final report to the European Commission by Oceanic Développement and MegaPesca Lda, Concarneau, France. 129 p.

¹⁸ Belhabib D & Pauly D (2015). Fisheries in troubled waters: a catch reconstruction for Guinea-Bissau, 1950–2010. Fisheries Centre Working Paper Series, 72.

¹⁹ Agnew D, Walmsley SF, Leotte F, Barnes C, White C & Good S (2010). West Africa regional fisheries project. Estimation of the cost of illegal fishing in West Africa. Final report, MRAG, London. 97 p.

Transshipping on the High Seas vs. National Waters

Of all likely transshipment events, more than 60 percent were detected in national waters, with Russian waters containing a majority of all likely transshipping events (2,516 events) (Figure 3). After Russia, several nations including Kiribati and Guinea-Bissau accounted for 9 percent (271 events) of likely transshipments. This may suggest that small island nations and developing countries that have limited resources or ability to monitor and enforce their national waters may be more vulnerable to at-sea transshipping. In the Southern Ocean, 3 percent (107 events) occurred in the Bransfield Strait, where Antarctic krill are commercially fished under the Commission for the Conservation of Antarctic Marine Living Resources, and Japanese waters contained another 3 percent of the events.

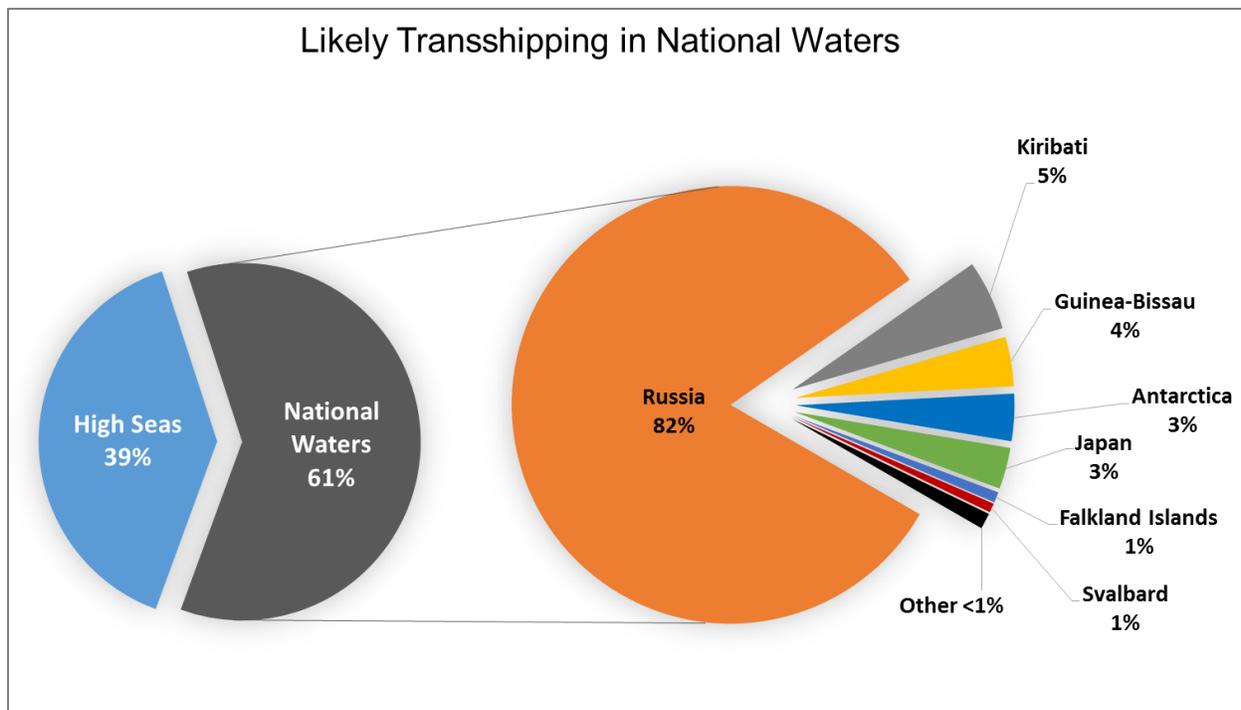


Figure 3: This image shows the proportion of likely transshipments that occurred within national waters between 2012 and 2016.

Figure 4 shows the proportion of likely transshipping that occurred on the high seas, and the average distance of those events to the nearest EEZ. Of the 39 percent of likely transshipping that took place on the high seas, more than 20 percent (418 events) occurred on average less than 30 miles outside of Argentina’s EEZ, just north of the Falkland Islands. More than 8 percent (170 events) of likely transshipping occurred within an average of 82 miles from the Peruvian EEZ and another 8 percent (164 events) of likely transshipping took place an average of 125 miles outside of the Russian EEZ. Twenty-six percent (518 events) of likely high-seas transshipping occurred near the Pacific Islands of French Polynesia, Pitcairn and Kiribati, but were located further from their EEZ boundaries – an average of 150 to over 400 miles away. These findings reveal that certain regions of the high seas, where activities may be under less scrutiny, are more vulnerable to at-sea transshipment, including small island nations and the high seas immediately outside of certain EEZs.

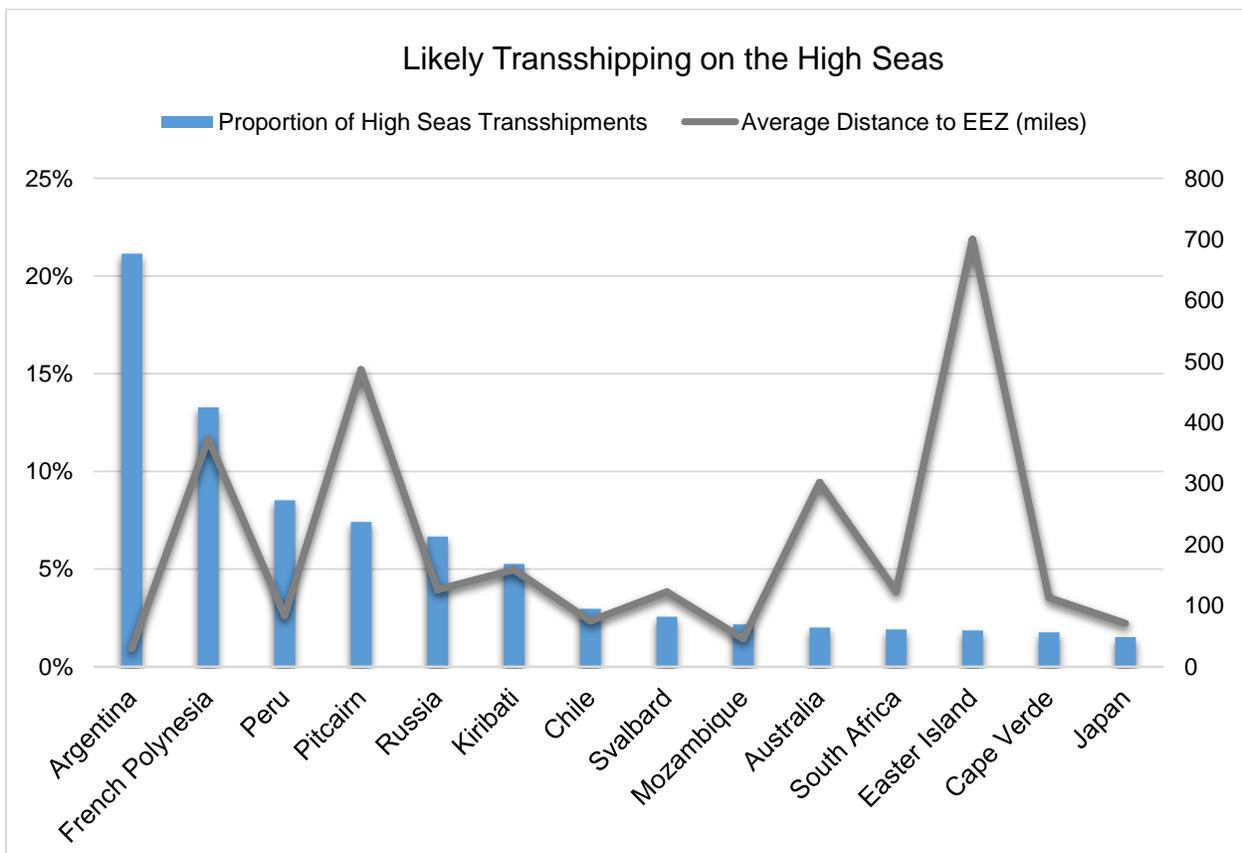


Figure 4: This image shows the proportion of likely transshipments on the high seas and the average distance of those events from the closest EEZ in miles, from 2012 to 2016.

Countries Involved in Likely Transshipping

Table 1 lists the top 10 countries with fishing vessels that likely transshipped at sea in 2016. Oceana used the most up-to-date data from 2016, which includes the most comprehensive dataset in terms of number of vessels. In order to avoid bias by the number of vessels using AIS, this ranking is based on the ratio, by flag state, of the number of likely transshipment events to the number of fishing vessels in Global Fishing Watch, as is reported as “average number of incidents per vessel.” After Russia, two FoC countries, Comoros and Vanuatu, represented the second and third highest-ranked flag states based on the normalized analysis. Fishing that occurs under FoC can allow fishers to evade conservation and management regulations of their own national flag. Many FoC countries lack the resources or the desire to monitor and control vessels flying their flag, allowing vessels engaged in IUU fishing to exploit the waters of developing countries and areas of the high seas managed under a RFMO. Moreover, the use of FoC can mean that workers onboard are receiving lower wages, working in poor conditions without adequate food or clean drinking water, and can be exposed to prolonged periods of work without proper rest.²⁰ Though FoC vessels did not account for a high proportion of likely transshipments in this analysis, the use of FoC to facilitate IUU fishing is well-documented, and if fishing vessels did not use AIS or intentionally turned off their AIS prior to transshipping, then they do not appear in this analysis.

Table 1: Russian vessels account for half of transshipping incidents identified in 2016

Rank	Flag	Flag State	Average number of incidents per vessel**	% of total incidents
1		Russia	2.30	58.85%
2		Comoros*	1.46	0.76%
3		Vanuatu*	0.87	1.84%
4		South Korea	0.17	6.57%
5		Japan	0.16	6.21%
6		Kiribati	0.15	0.08%
7		Papua New Guinea	0.15	0.16%
8		Saint Kitts and Nevis	0.13	0.08%
9		Ukraine	0.13	0.04%
10		Seychelles	0.11	0.20%

* Countries declared as Flags of Convenience by the International Transport Workers' Federation's Fair Practices Committee.²¹
 ** Average number of incidents per vessel was determined by the ratio of the number of likely transshipment events to the number of fishing vessels in the Global Fishing Watch database.

²⁰ International Transport Workers' Federation. <http://www.itfglobal.org/en/transport-sectors/seafarers/in-focus/flags-of-convenience-campaign/>

²¹ Ibid.

Escaping Scrutiny by Increased Time at Sea

Distant water fleets can remain at sea indefinitely, thanks to reefer-supplied fuel, provisions and crew. While there are economic benefits for fishing vessels to stay out at sea for months or years without going into port, this practice can also lead to the laundering of illegally caught fish, as vessels can effectively avoid fishing regulations that would be enforced had they landed their catch in port. Extensive time at sea can also hinder a RFMO’s ability to monitor, control and manage high-seas fisheries. Furthermore, distant water fleets that rely on at-sea transshipment can exploit workers by keeping them isolated at sea for extended periods of time, and can use transshipment for the trafficking of workers.²²

Below are two examples of fishing vessels that remained at sea for more than 500 days between 2015 and 2016. While these vessels were likely authorized to fish and transship at sea, the extensive time at sea raises suspicion. Seafood caught by fishing vessels that rely on transshipment to remain at sea for prolonged periods is harder to track, and those vessels may be abusing human rights and violating labor laws.²³

1. A Korean drift longliner remained at sea for 525 days during 2015 and 2016 (Figure 5). This vessel likely transshipped with a Panamanian reefer more than 10 months after leaving the Port of Busan. This vessel continued to fish for seven more months until it went back to the Port of Busan, almost 18 months later. During this time, there was only one gap in AIS transmission that was greater than 24 hours, so it is unlikely that a port visit was missed by this analysis.



Figure 5: This image shows a Korean fishing vessel that likely transshipped with one reefer while remaining at sea for 525 days in 2015 and 2016.

²² Greenpeace (2016). Turn the Tide. Human Rights Abuses and Illegal Fishing in Thailand’s Overseas Fishing Industry.

²³ EJF (2015). Thailand’s Seafood Slaves. Human Trafficking, Slavery and Murder in Kantang’s Fishing Industry.

2. A Chinese-flagged longliner spent 503 days at sea in 2015 and 2016 (Figure 6). This vessel left the Port of Singapore and journeyed to the Atlantic Ocean where it likely rendezvoused with reefers flagged to Panama, Singapore and Liberia. This vessel then went to port in Cape Town, South Africa more than 16 months after seeing land, where it remained until leaving port again 24 days later. During these two years, this vessel had no gaps in AIS transmissions greater than 24 hours.

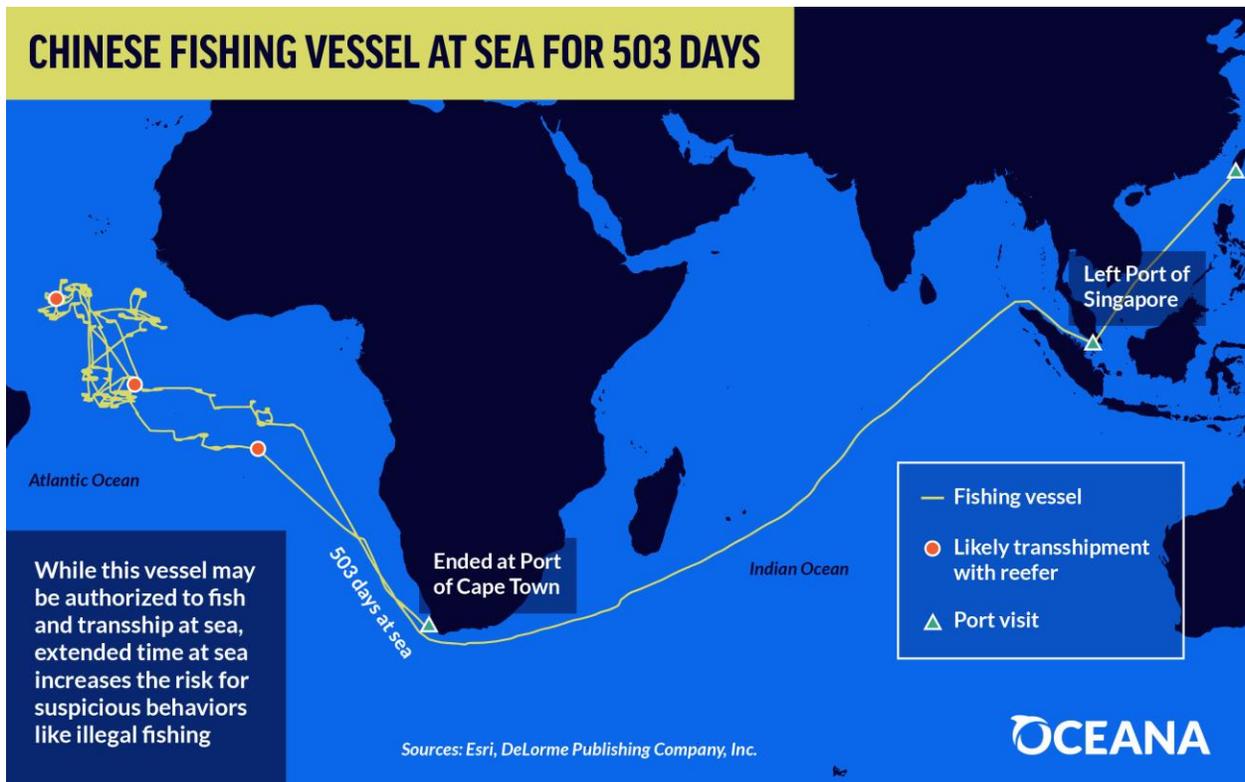


Figure 6: This image shows a Chinese fishing vessel that likely transshipped with three reefers, enabling it to remain at sea for 503 days from 2015 to 2016.

Lack of Traceability and Port State Control

Oceana identified the top 10 ports where reefers that likely transshipped with fishing vessels visited in 2015 (Figure 7). Port of Vladivostok in Russia had the highest number of visits by reefers, and domestic fleets provide this port with the second-highest volume of landings worldwide.²⁴ Ports that lack standards to ensure that only legally caught fish is landed or transshipped are referred to as “ports of convenience,” and can be used preferentially by reefers trying to offload illegally caught fish. The FAO Port State Measures Agreement to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA) was developed to provide a robust set of standards for port states to prevent vessels engaged in IUU fishing from using their ports and landing their catches.²⁵ Currently, three (China, Ivory Coast and Taiwan)²⁶ of the top eight countries that reefers most often frequented have not yet ratified the PSMA, which begs the question: Are these reefers intentionally using ports of convenience to offload illegal catch and take advantage of loopholes in enforcement?

At-sea transshipment and the use of ports of convenience complicate fishery transparency. Ending IUU fishing depends upon governments’ and RFMOs’ abilities to ensure that seafood entering ports and markets is legally caught. In order to do this, catch documentation must be reported to management authorities, providing key details such as where, when and how the fish was caught; key vessel information including the vessel name, flag state, unique vessel identifier and fishing authorizations; species information; and the quantity/weight of the product, among other details. This catch documentation should then follow the fish – tracing the product from the point of catch throughout the supply chain, all the way to the final sale. Full-chain traceability is critical to ensure that all seafood sold is safe, legally caught and honestly labeled.

²⁴ Huntington T, Nimmo F & Macfadyen G (2015). Fish landings at the world’s commercial fishing ports. *Journal of Ocean and Coastal Economics* 2(1).

²⁵ FAO (2010). Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Rome, 100p.

²⁶ FAO. 2017, February. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. FAO. http://www.fao.org/fileadmin/user_upload/legal/docs/037s-e.pdf.

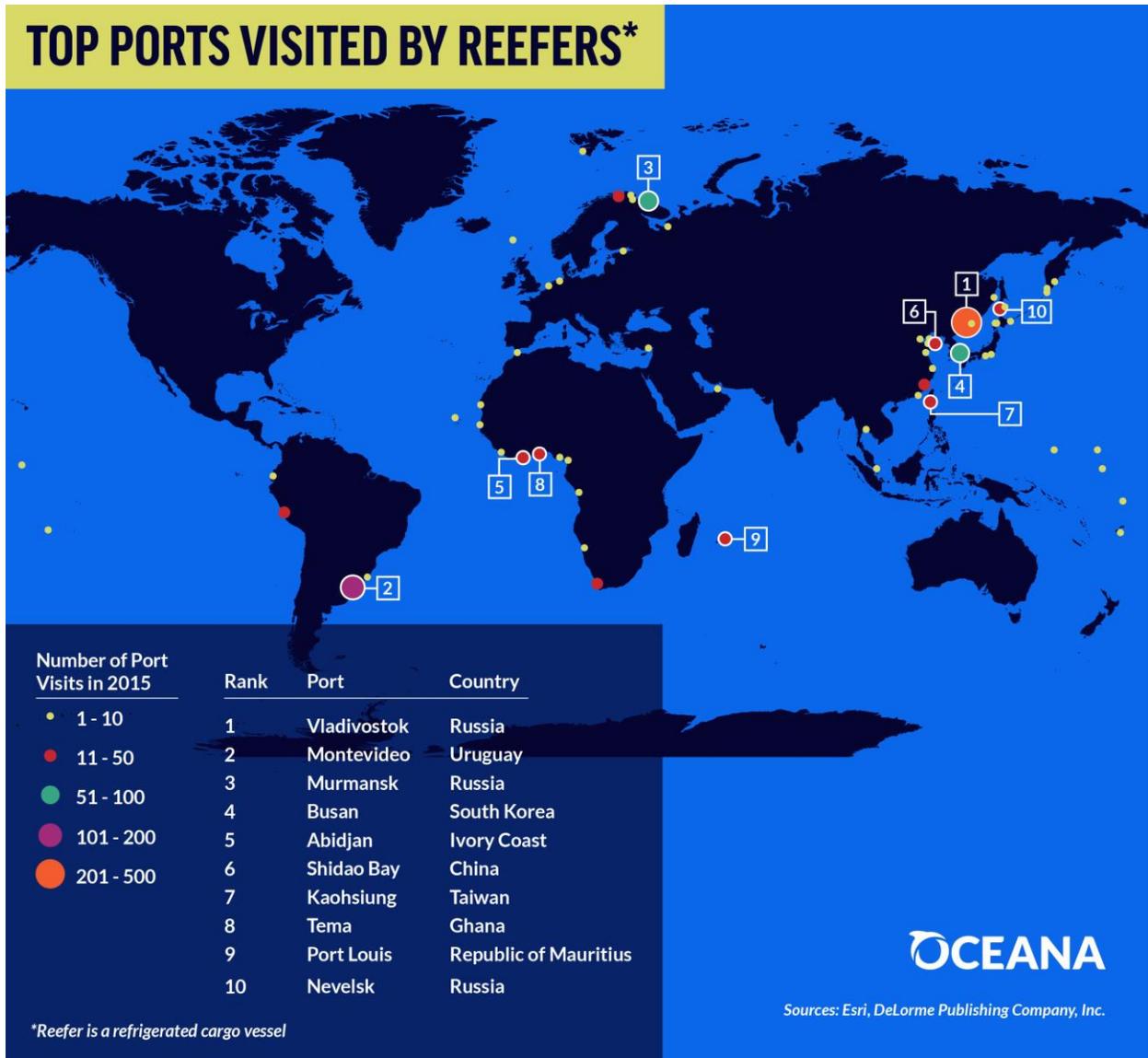


Figure 7: This image shows the top 10 ports visited by refrigerated cargo vessels that were likely involved in transshipments with fishing vessels in 2015.

Policy Recommendations

- **Ban Transshipment at Sea:** A ban on transshipment at sea should be implemented on a global scale, through RFMOs and coastal states' national jurisdictions. Transshipment activities should be strictly regulated and only take place in ports.
- **Mandate Vessel Tracking:** Require all fishing vessels to carry and transmit AIS or other comparable, publicly available tracking systems.
- **Require Unique Identifiers for Fishing Vessels:** Unique vessel identifiers, such as IMO numbers, increase the transparency of the global fishing fleet, as these numbers remain with the vessel through changes in ownership and flags.
- **Adopt Global Catch Documentation Schemes:** Consistent catch reporting will provide regulatory certainty for fishing industry members while facilitating information-sharing and coordinated global efforts to stop IUU fishing.