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**REPORT FINDS TRANSHIPMENTS IN WESTERN AND CENTRAL PACIFIC
LIKELY UNDERREPORTED**

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Paper submitted by The PEW Charitable Trusts



Report Finds Transshipments in Western and Central Pacific Likely Underreported

Inadequate monitoring can lead to illegal catch entering port

Overview

Every day around the globe, fish caught far from shore are moved from fishing vessels to refrigerated cargo ships, or carrier vessels, that transport them to ports for processing. Data about these transfers—known as transshipments—and the degree to which they are conducted in line with regulatory requirements are often lacking, which can lead to illegal fish products entering the seafood supply chain.

In the western and central Pacific Ocean alone, a 2016 study estimated that over US\$142 million worth of illegal, unregulated, and unreported (IUU) catch is transshipped each year, most of it misreported or not reported by licensed fishing vessels.¹

To gain better insight into transshipment, The Pew Charitable Trusts combined commercially available automatic identification system (AIS) data with machine learning technology to analyse the movements of carrier vessels operating in the waters regulated by the Western and Central Pacific Fisheries Commission (WCPFC) in 2016, the most recent year for which data were available. Researchers then compared this analysis with publicly available information on transshipments and carrier vessels provided by WCPFC members and the Commission's secretariat.

The resulting report, “Transshipment in the Western Pacific: Greater Understanding and Transparency of Carrier Vessel Fleet Dynamics Will Help Reform Transshipment Management,” found that the WCPFC’s management of transshipments in its waters appears to be compromised by discrepancies between required reports of transshipments by carrier vessels and the States that flag them. It appears that some transshipments were not reported, while other anomalies might stem from a lack of standardized responses. The fact that some carrier vessels don’t activate AIS—a satellite system that identifies their position and that is mandated by the International Maritime Organization for all vessels 300 gross tons and over conducting international voyages—makes it harder still for independent organisations to conduct audits and verify carrier vessels’ activities.

The report’s key findings include:

- At least 140 carrier vessels operated in a manner consistent with taking on tuna and other catch from fishing vessels either in port or at sea. But only 25 vessels reported high seas transshipment.² Very little information is available on the remaining vessels’ activities.
- A strong likelihood exists that more at sea transshipment events occurred in 2016 than were reported to the WCPFC.
- Unauthorized carrier vessels operated in WCPFC waters in 2016 and potentially carried out transshipments at sea that included the transfer of WCPFC-managed species.
- Data gaps, anomalies, and non-standardized responses by WCPFC members in their reports on transshipments impede accurate auditing—increasing the risk that transshipments go unreported and unverified.
- The lack of transshipment data-sharing agreements between the WCPFC and other regional fisheries management organizations (RFMOs) on transshipments in overlapping waters increases the likelihood that unreported transshipments occur. These unreported activities may cause RFMOs to miscount species caught in waters they manage, making stock assessments inaccurate.

Transshipment in 2016

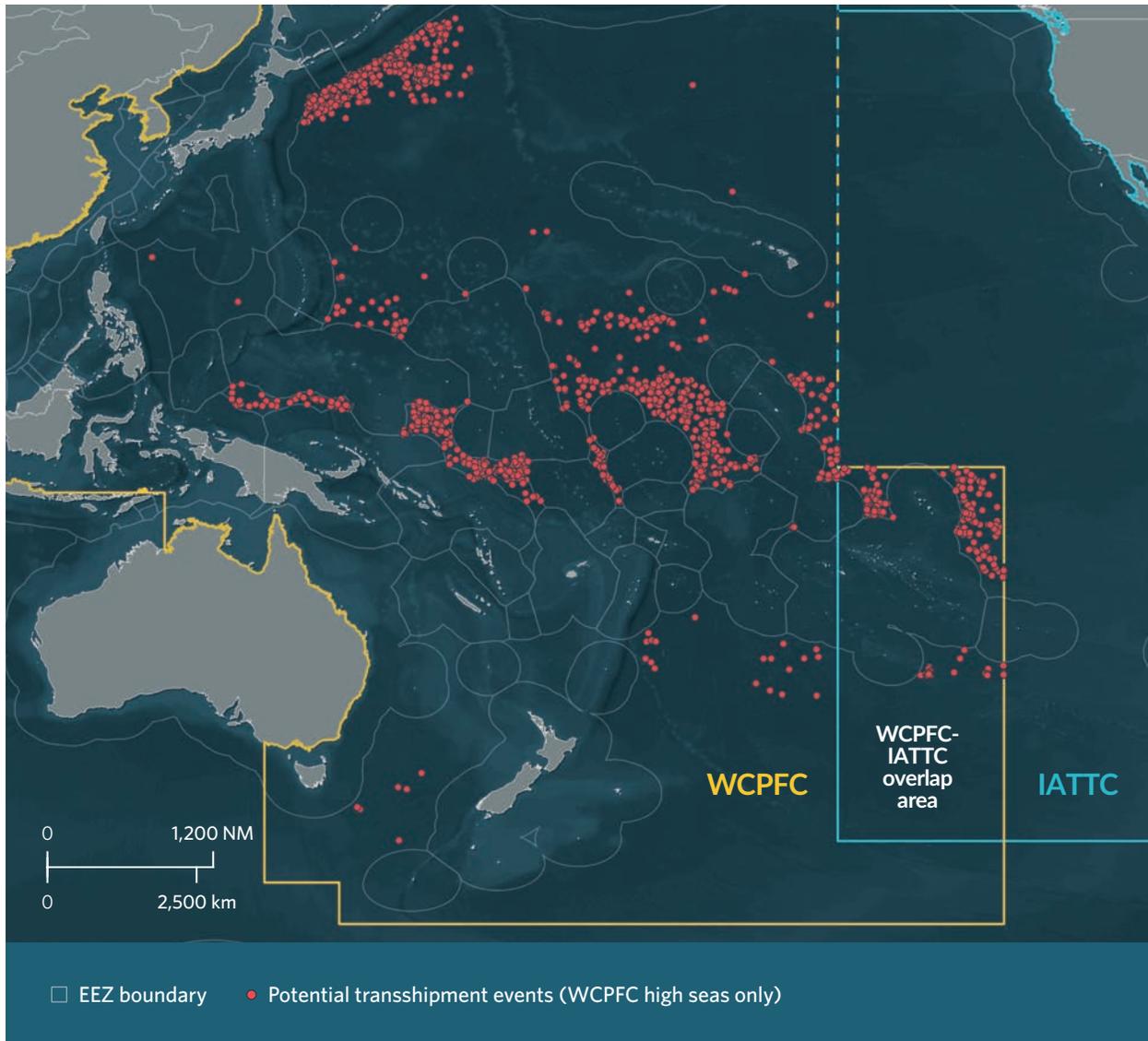
Pew’s analysis of AIS data found that 1,538 transshipments may have occurred on the high seas in the WCPFC Convention area in 2016 (Figure 1), but vessel operators reported only 956 high seas transshipments to the secretariat.³ In addition, over 700 more may have occurred in the exclusive economic zones (EEZs) of WCPFC member countries (Figure 2).

All told, more than 100 carrier vessels flagged to eight WCPFC members may have conducted over 2,200 transshipments at sea in the Convention area. And this count does not include:

- Potential transshipments by an additional 381 authorized carrier vessels not observed on AIS. Most were less than 300 gross tons and therefore not required to use the satellite system.
- Unreported transshipments that may have occurred between two longliners.
- Unreported transshipments that may have occurred during the voyages of 70 authorized carrier vessels during significant gaps in AIS data.
- More than 50 potential transshipments that occurred in archipelagic waters.

Figure 1

Potential Transshipment Events on the High Seas in the Pacific in 2016 Spatial distribution



Note: WCPFC is the Western and Central Pacific Fisheries Commission and IATTC is the Inter-American Tropical Tuna Commission.

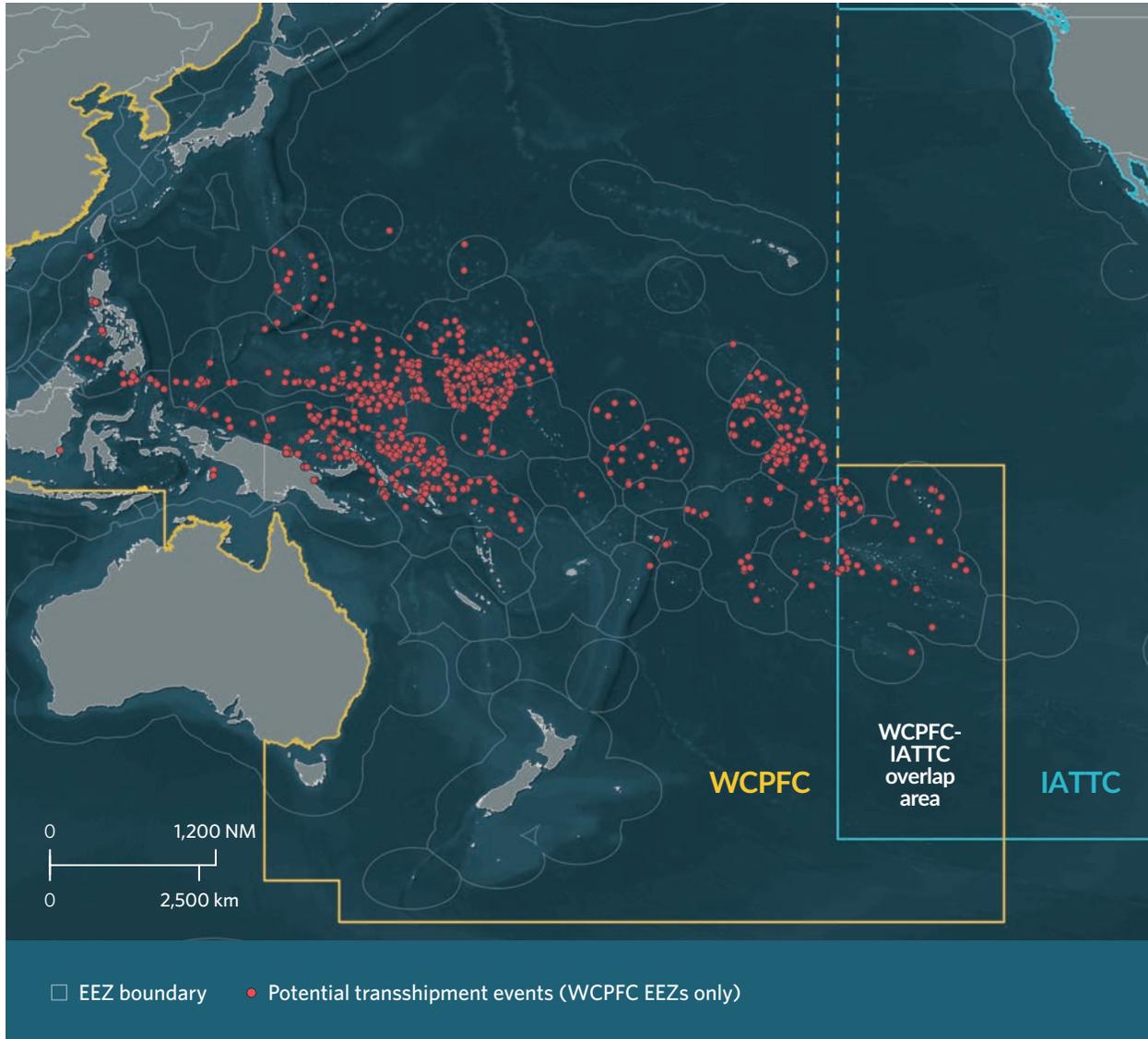
Sources: Events from OceanMind Ltd. (2019); includes material from exactEarth Ltd. (2016); EEZs from marineregions.org

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Figure 2

Potential Transshipment Events in EEZs in 2016

Spatial distribution



Note: WCPFC is the Western and Central Pacific Fisheries Commission and IATTC is the Inter-American Tropical Tuna Commission.

Sources: Events from OceanMind Ltd. (2019); includes material from exactEarth Ltd. (2016); EEZs from marineregions.org

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For a deeper dive into carrier fleet trends by flag State, Pew created heat maps (figures 3 and 4) using AIS data for each of five fleets that reported high seas transshipments in 2016. These maps represent carrier vessel traffic density, highlighting where the fleets' movements were concentrated as they operated in the Pacific.

Figure 3 shows the movements of 86 Panamanian-flagged carrier vessels in the central part of the Convention area, primarily in the EEZs of the Marshall Islands and Federated States of Micronesia. The red areas indicate a high number of vessel visits to Pacific ports—which probably involved transfers of skipjack tuna caught by purse seine fleets, which are required to transship in port and not on the high seas or in an EEZ.

In contrast to the Panamanian-flagged carrier vessels, the movements of 16 carrier vessels flagged to Chinese Taipei were concentrated on the high seas, especially in waters of overlapping RFMO jurisdiction, which suggests that these vessels interacted more with longline fleets than purse seiners and probably transshipped bigeye and yellowfin tuna (Figure 4).

By analysing these heat maps, Pew began to better understand the complex nature of the transshipment industry in the western and central Pacific and the variability of carrier vessel activity patterns by flag State.

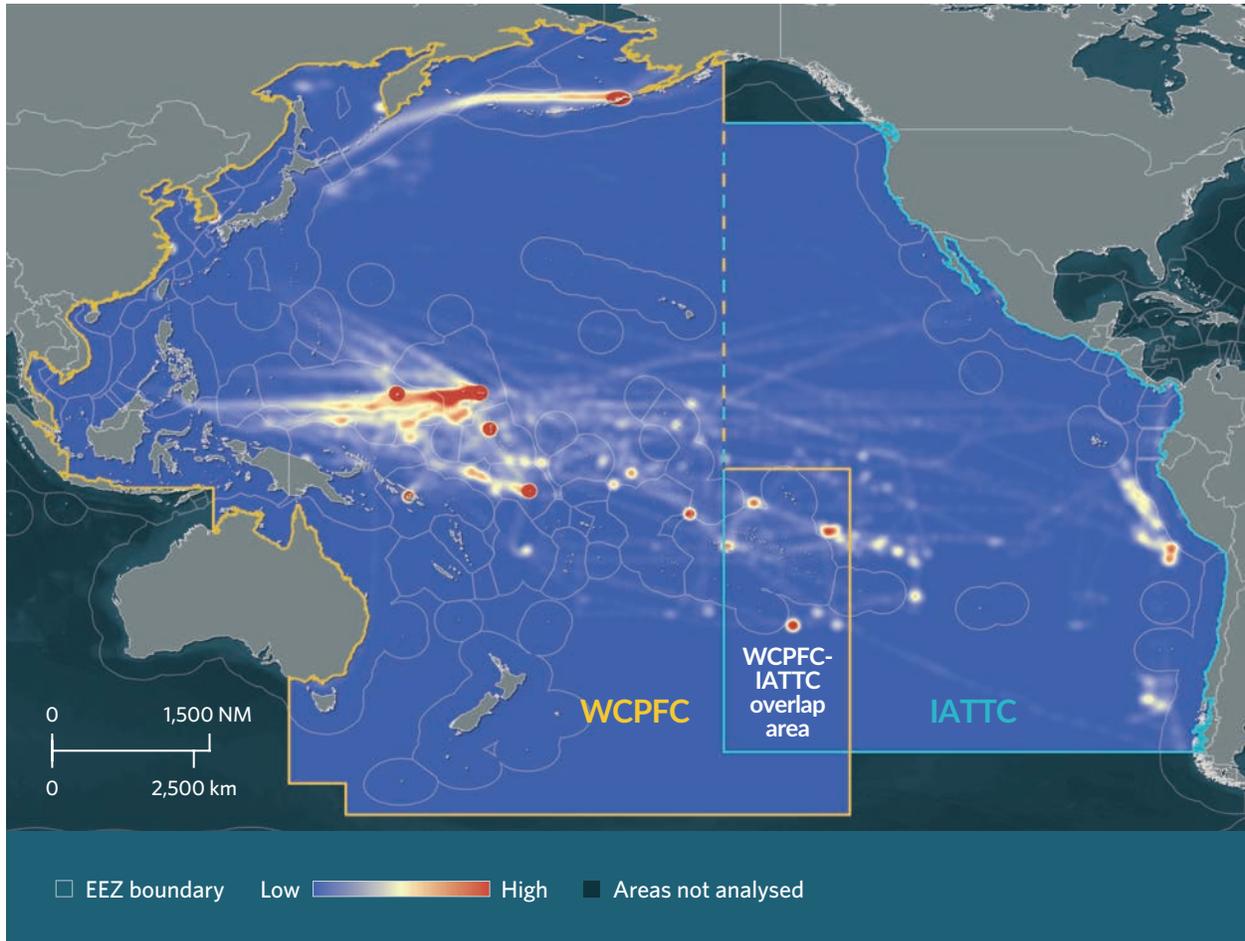


Transshipment is a complex, global endeavor. Here, catch is offloaded at port, its final stop before reaching the marketplace.

Figure 3

Panamanian-Flagged Carrier Vessel Fleet Traffic Map in the Pacific in 2016

Areas shown in red indicate concentrations of carrier vessels' AIS tracks



Note: Map shows 86 of 105 authorized carriers active in the Pacific Ocean. Note: WCPFC is the Western and Central Pacific Fisheries Commission and IATTC is the Inter-American Tropical Tuna Commission.

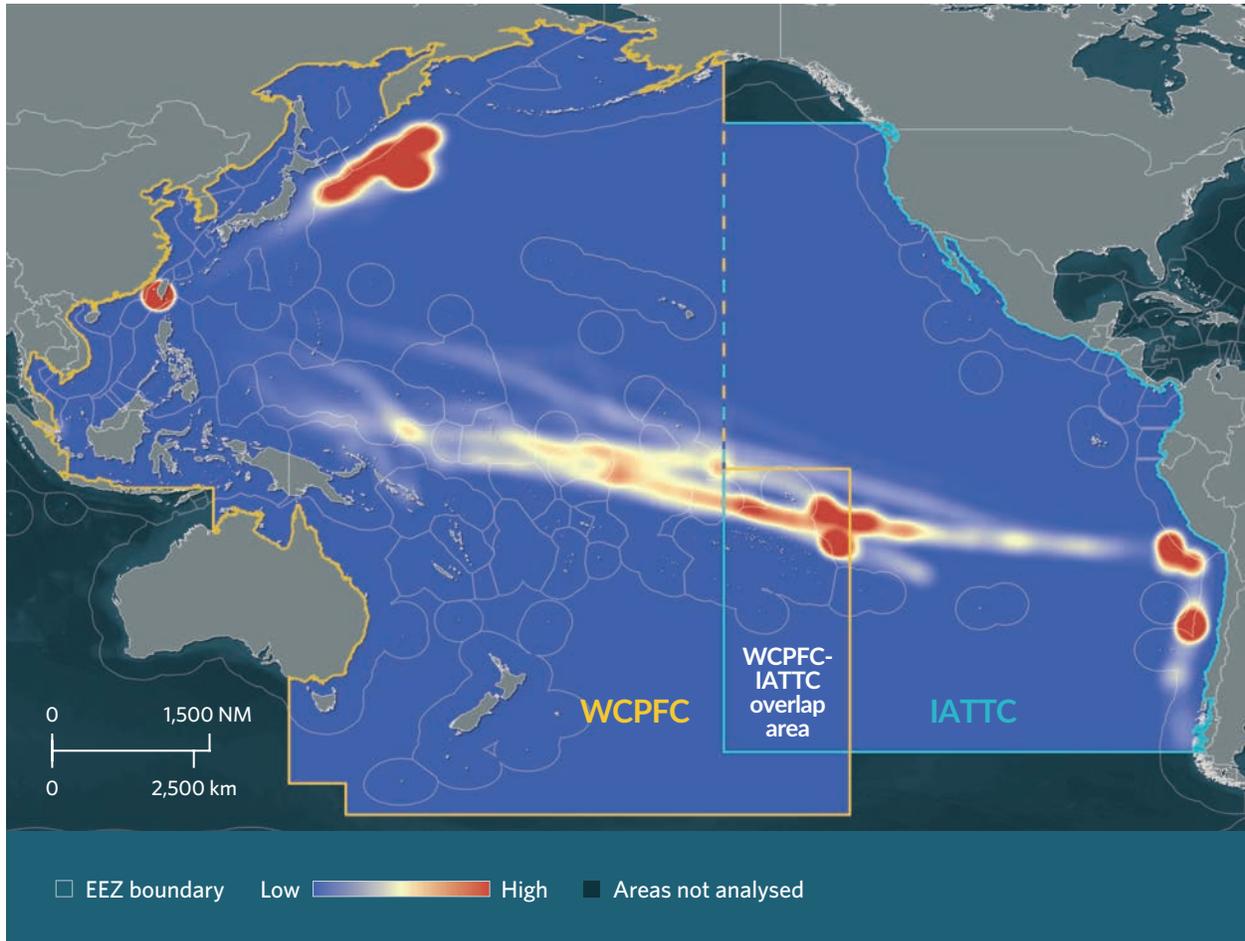
Sources: Tracks from OceanMind Ltd. (2019); includes material from exactEarth Ltd. (2016); EEZs from marineregions.org

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Figure 4

Chinese Taipei-Flagged Carrier Vessel Fleet Traffic Map in the Pacific in 2016

Areas shown in red indicate concentrations of carrier vessels' AIS tracks



Note: Includes 16 of 21 authorized carriers active in the Pacific Ocean. Note: WCPFC is the Western and Central Pacific Fisheries Commission and IATTC is the Inter-American Tropical Tuna Commission.

Sources: Tracks from OceanMind Ltd. (2019); includes material from exactEarth Ltd. (2016); EEZs from marineregions.org

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RFMO overlap area activity in 2016

The report found a high concentration of potential transshipment activity where waters managed by the WCPFC overlap with those managed by the Inter-American Tropical Tuna Commission (IATTC) and the North Pacific Fisheries Commission (NPFC). In fact, over half of all AIS-detected potential high seas transshipments took place in two relatively small regions of overlapping RFMO jurisdiction: on the high seas off Japan and in the IATTC/WCPFC overlap area in the central Pacific.

Figure 5 shows potential transshipments on the high seas off Japan by carrier vessels flagged to WCPFC members, cooperating non-members, and participating territories (collectively known as CCMs) that were authorized by both commissions to conduct this activity. Vessel movements indicated nearly 600 potential high seas transshipments involving 26 carrier vessels in the dually managed waters. But none of the vessels reported transshipments to the WCPFC. It is possible that the vessels took on only species managed by the NPFC.

Figure 6 shows potential high seas transshipments in the IATTC/WCPFC overlap area by WCPFC-authorized carrier vessels flagged to six cooperating non-members. Vessel movements indicate that as many as 216 transshipments involving 22 carrier vessels may have occurred in this relatively small area of the Pacific jointly managed by the two RFMOs.

The high number of potential transshipments in these two regions of overlapping RFMO waters increases the odds that some events and accounting of species may go unreported to the appropriate organization unless both commissions institute strong monitoring and reporting mechanisms.

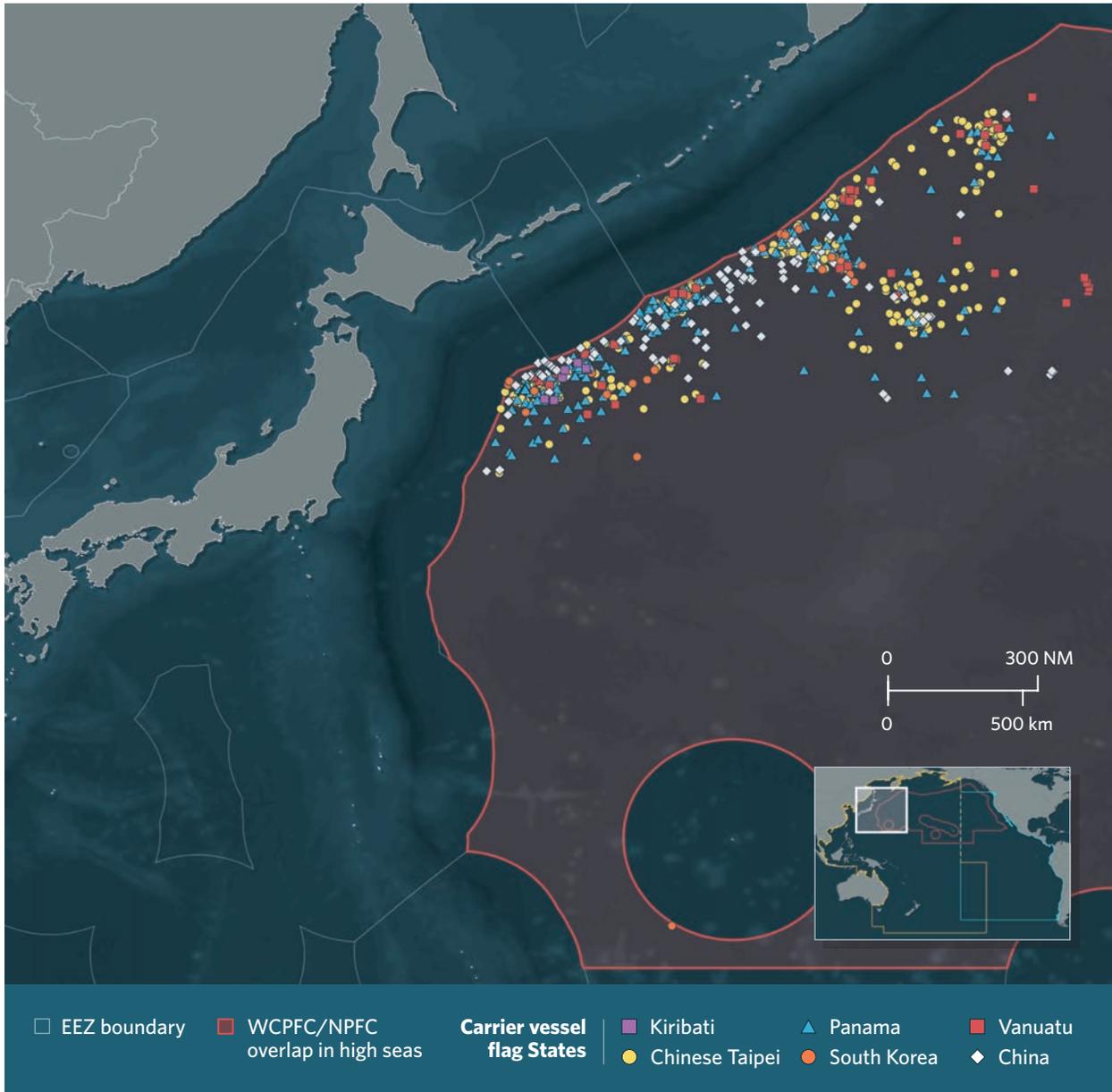


High seas transshipment, such as this, make fishing activities more efficient, but it can occur outside of international regulatory frameworks due to no direct oversight by management authorities

Figure 5

Potential Transshipments in WCPFC/NPFC Overlap Area on High Seas Off Japan

High concentration of events in a relatively small area



Note: WCPFC is the Western and Central Pacific Fisheries Commission and NPFC is the North Pacific Fisheries Commission.

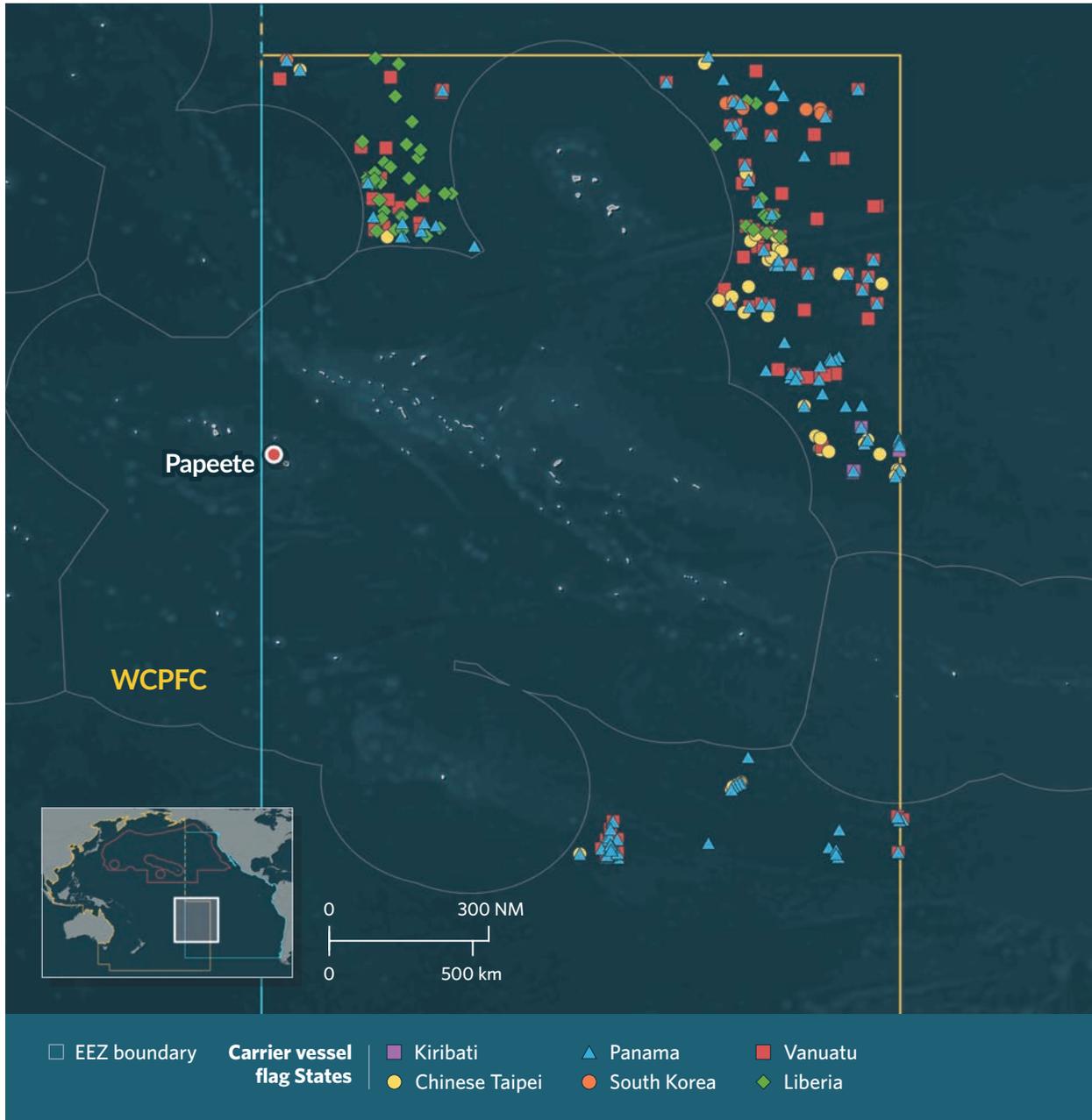
Sources: Events from OceanMind Ltd. (2019); EEZs from marineregions.org

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Figure 6

Potential High Seas Transshipments in the WCPFC/IATTC Overlap Area

High concentration of events in a relatively small area



Sources: Events from OceanMind Ltd. (2019); includes material from exactEarth Ltd. (2016); EEZs from marineregions.org
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Conclusions

The WCPFC's management of transshipment in its Convention area appears to be compromised. Data gaps, anomalies in reporting by vessels and their flag State authorities, and non-standardized responses by WCPFC members in their required reports impede accurate auditing, increasing the risk that transshipment activities go unreported and unverified.

At least five times as many authorized carrier vessels operated in WCPFC waters in 2016 than the 25 that filed transshipment reports. The movements of these other carriers while in WCPFC waters indicate that far more transshipments at sea probably occurred than were reported to the secretariat. This finding is reinforced by insufficient reporting by the flag State CCMs of carrier vessels identified as having operated in the region. Unauthorized vessels identified in these waters potentially also carried out transshipments that included transfers of WCPFC-managed species.

Lastly, the lack of transshipment data-sharing agreements with RFMOs whose waters overlap with the WCPFC's increases the likelihood that unreported transshipments occur, which can result in the RFMOs inaccurately accounting for all species caught in the waters they manage, affecting stock assessments.

To minimize the chance of IUU catch passing through WCPFC members' ports, its regulatory framework should be significantly strengthened and harmonized with that of other RFMOs.

Recommendations

The WCPFC and other RFMOs should quickly address the report's findings to ensure that their management of transshipment is not compromised. To improve its monitoring of this activity, the Commission should consider implementing the reforms outlined in Pew's "**Best Practices for Transshipment.**"

The report represents just a starting point for making vessel operations in the Convention area more transparent. With continued research, analysis, and action, the WCPFC could become a model for effective transshipment management for other regions.

Endnotes

- 1 MRAG Asia Pacific, "Towards the Quantification of Illegal, Unreported and Unregulated (IUU) Fishing in the Pacific Islands Region" (2016), <http://www.ffa.int/files/FFA%20Quantifying%20IUU%20Report%20-%20Final.pdf>. The figure quoted is the sum of estimated losses from illicit transshipment activity in sections 3.2, 3, and 3.4.
- 2 Western and Central Pacific Fisheries Commission, Technical and Compliance Committee, "Annual Report on WCPFC Transshipment Reporting, With an Emphasis on High Seas Activities" (2017), <https://www.wcpfc.int/node/29898>.
- 3 Ibid.

For further information, please visit:
pewtrusts.org/transshipment

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