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A framework to evaluate the economic hardship implications of high-seas transshipment activities in the Western Central Pacific Ocean – Summary Report

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A framework to evaluate the economic hardship implications of high-seas transshipment activities in the Western and Central Pacific Ocean

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Summary of the full report

The WCPFC and the WCPF Convention aim to restrict transshipment at sea. The Conservation and Management Measure (CMM) 2009–06 specifies that longliners and other vessels are not allowed to tranship on the high seas, unless "it is impracticable for certain vessels . . . to operate without being able to tranship on the high seas". Accordingly, WCPFC Members are mandated by CMM 2009–06 to determine if in-port transshipment is impracticable for their relevant vessels and to submit a plan describing the measures being taken to promote transshipment in port.

To establish when transshipment in port is impracticable, the WCPFC has developed a two-part test. First, there must be "significant economic hardship" due to the restriction on high seas transshipment. Second, the ship must alter its historical method of operation in a way that is "significant and substantial" to comply with the prohibition on transshipment over the high seas. Despite these regulations, Cooperating Non-Members and Participating Territories (CCMs) seem to be failing to carry out their responsibilities, and transshipments on the high seas for vessels other than purse seiners has been the norm based on historical practices and claims of the prohibitive costs of transshipping in port.

This study investigates the economic implications of transshipment activity in the WCPFC high seas areas using analysis of vessel tracks reported via the automated identification system (AIS). Based on FFA analysis, we assume that the key component for economic hardship is based on the cost of fuel and that fuel consumption is directly correlated to distances travelled. Arguments based on historical operational practices are harder to

scrutinise as they require a largely qualitative analysis of activity records over many years, and we recommend their investigation for future work.

We found 4,666 potential transshipments between carrier and fishing vessels between May 1, 2020 and November 4, 2023 in the WCPFC high seas regions within 20° of the equator (Figure 1). Of these, 1,048 lasted longer than five hours and formed the basis of this analysis. They involved 375 longliners and 27 carrier vessels. The fishing and carrier vessels were flagged to Panama, South Korea, China, Taiwan, Japan, and Vanuatu. Our network analysis suggests the existence of distinct relationships between fishing and carrier vessels, with more connections between carriers from the same flag states than between differing flag states. In particular, eight carrier vessels are involved in 73% of all transshipments in our dataset and can, therefore, be considered central to the activity in the western and central Pacific Ocean.

Targeted analysis of 50 transshipment events resulted in a generalisation of fishing vessel behaviour into three characteristic journey patterns (Figure 2):

1. Fishing in EEZs of a WCPFC member state, then transshipping on the high seas;
2. Fishing exclusively, or predominantly, on the high seas, but transiting across member states' EEZs and passing suitable ports; and
3. Fishing in remote high seas areas, rarely entering EEZs, and transshipping with passing carrier vessels.

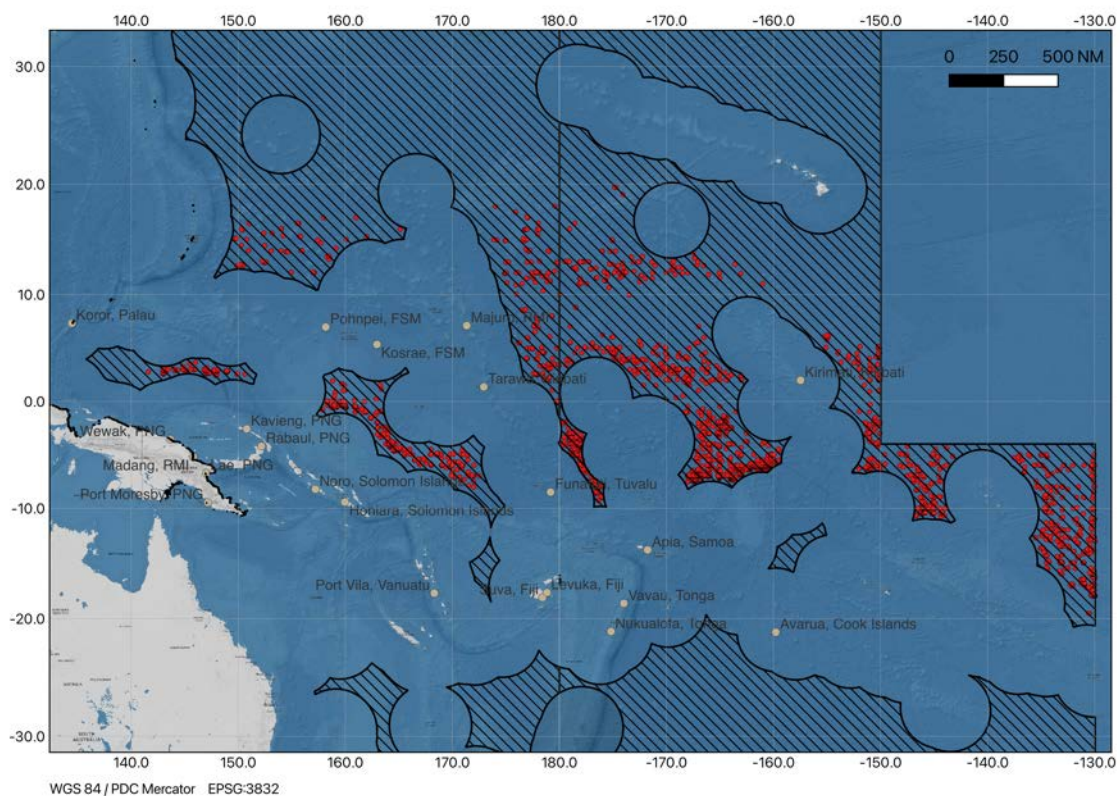


Figure 1: Transshipment events in the high seas areas of the WCPFC convention area between 20° N and S of the equator. Transshipment ports are shown as grey dots with city and country labels.

We argue that the impracticability exemption was initially conceived to support vessels historically operating according to the third journey pattern.

Our finding of numerous events fitting patterns one and two indicate questionable application of the impracticability exemption for in-port transshipment.

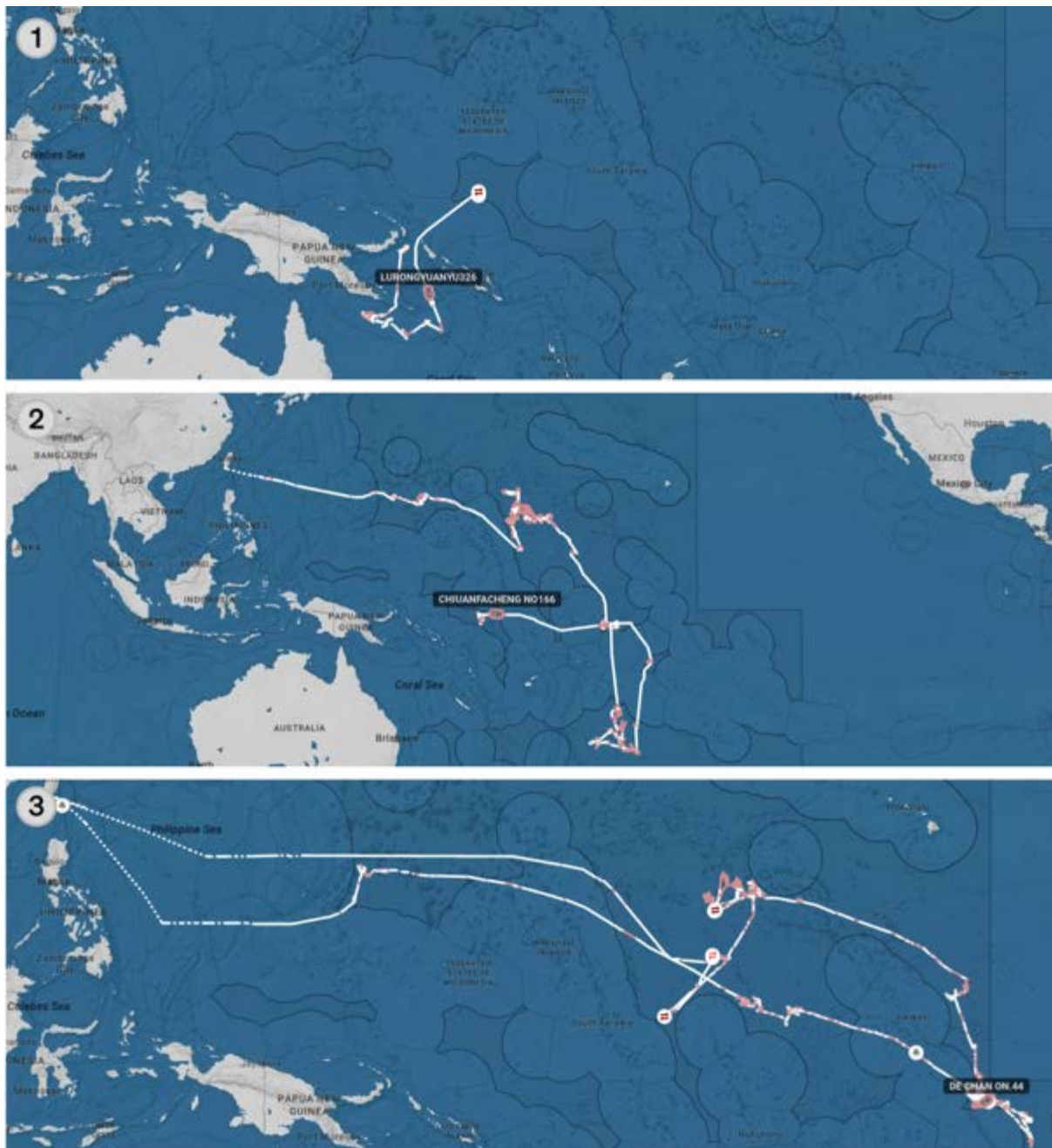


Figure 2: Fishing vessel journey patterns identified in this study. (1) A fishing vessel that operates primarily in the EEZ of a WCPFC member state and transits to a high seas pocket for transshipment. (2) A fishing vessel that operates in the high seas and transits through WCPFC member states' EEZs. (3) Fishing vessel operating in truly remote high seas areas, rarely entering EEZs.

We developed metrics that can be assessed procedurally using computer code to derive general patterns from this dataset that potential policy changes may address (Figure 3). These metrics allow for comparing the distance a vessel travelled to reach the high-seas transshipment location with the shortest distance to a suitable transshipment port.

The automated calculation of distances related to fishing and transshipment activities provides a number of insights that would be hard to gain using manual inspection:

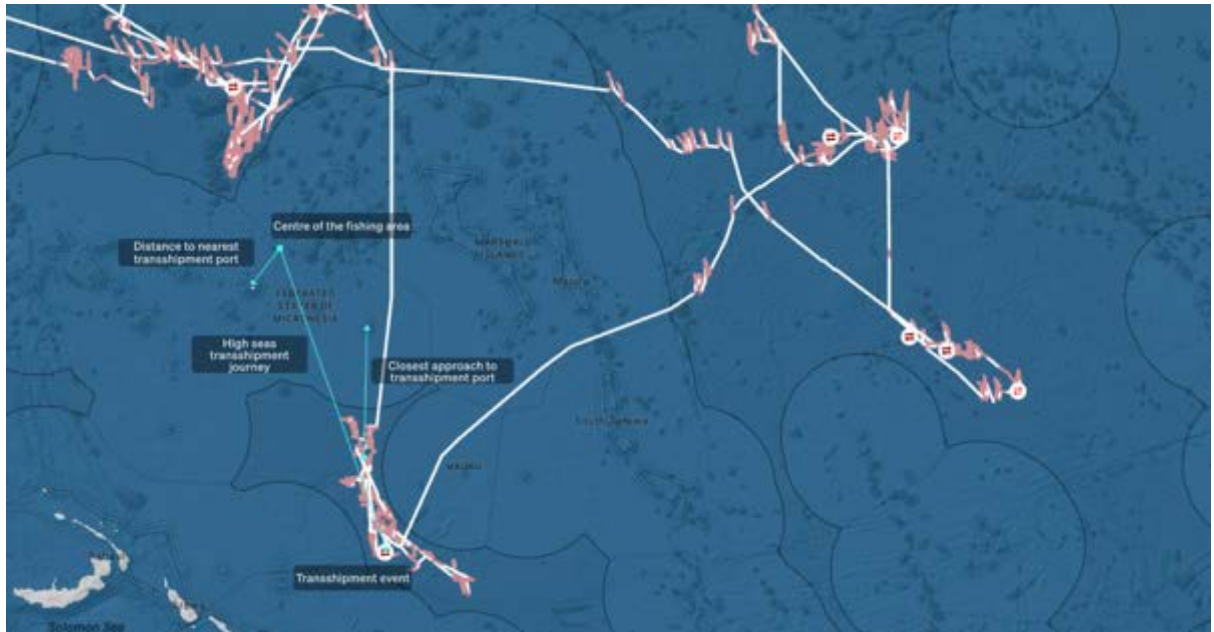


Figure 3: Illustration of the journey metrics for an example transshipment event

The automated calculation of distances related to fishing and transshipment activities provides a number of insights that would be hard to gain using manual inspection:

- High-seas transshipments involving vessels that fished in relative proximity to ports in PNG (Rabaul, Port Moresby and Kavieng), the Solomon Islands (Noro), and Tonga (Nukualofa) often travel excessively for transshipment (Table 1).
- Eleven carrier vessels, including three central carriers, often received fish that could have been offloaded in port with less or equal travel-related expenditure.
- 27 longliner vessels made multiple journeys that were more than twice as expensive to reach a carrier vessel on the high seas compared to travelling from the central fishing area to a transshipment port.

Port closest to fishing area	Median distance to nearest transshipment port (NM)	Median distance to high-seas transshipment (NM)	No. transshipments	Distance ratio
Rabaul, PNG	156	514	14	3.30
Noro, Solomon Islands	231	696	39	3.01
Port Moresby, PNG	287	783	6	2.73
Kavieng, PNG	407	929	8	2.28
Nukualofa, Tonga	1366	1621	5	1.19
Kosrae, FSM	354	382	2	1.08
Funafuti, Tuvalu	343	367	70	1.07
Tarawa, Kiribati	476	480	69	1.01
Vavau, Tonga	1536	1360	9	0.89

Majuro, RMI	724	499	65	0.69
Apia, Samoa	584	235	86	0.40
Kirimati, Kiribati	824	328	424	0.40
Pohnpei, FSM	513	188	17	0.37
Wewak, PNG	410	103	7	0.25
Honiara, Solomon Islands	434	94	15	0.22

Table 1: Median journey metrics by nearest transshipment port. A distance ratio greater than one indicates that this port potentially loses out on port calls by fishing vessels that choose to travel greater distances to reach carriers on the high seas

The approach we developed in this work to contribute to the assessment of the economic implications of transshipment can be applied in practice to individual vessels with a high-seas transshipment event (Table 2). We present step-by-step instructions for practitioners to determine the distance metrics and recommend that this proposed method is applied by WCPFC member states and evaluated for suitability.

Distance ratio	Interpretation
Greater than 1.2	In-port transshipment may have been more economical than high-seas transshipment.
0.8 - 1.2	High seas transshipment and in-port transshipment were similarly economical; according to best practice, the vessel should have transhipped in port.
Less than 0.8	High seas transshipment was likely more economical than in-port transshipment.

Table 2: Proposed interpretation of the distance ratios of individual transshipment events with respect to travel related expenses.

We present this approach as a proof of concept for developing a framework to evaluate the impracticability of high-seas transshipments. We fully expect that feedback based on practitioners' experience and discussions with experts and stakeholders will result in modifications and refinements of the method and interpretation of results.

In summary, our findings suggest repeated port avoidance by many vessels licensed to fish in the waters of some FFA members. This suggests that decisions to favour high-seas transshipment over port calls are made for groups of vessels. If true, this practice would be against the transshipment CMM (CMM 2009–06). This challenges any notion that the WCPFC CCM involved in high seas transshipment carries out the expected due diligence, as CMM 2009–06 mandates to determine if in-port transshipment is impracticable for a certain vessel.

This study does not investigate the costs and charges incurred by vessels and their cargo in ports. Port-related costs are not directly specified in the CMM but are inherent to the economic hardship argument. While we consider port charges to be a minor component of

vessel economics concerning impracticability, ports in the region may consider incentivising the entry of longliners by offering a reduced tariff structure. Such reductions can counter-arguments from vessel operators regarding the cost of in-port transshipment

We note that the transshipment notification procedure is only required for catch-related transfers. This leaves a loophole in the regulations, allowing vessels to circumvent the requirement for a justification of impracticability. Fishing vessels which have shared beneficial ownership with carrier vessels and across the industry may expend additional fuel to avoid calls to ports implementing Port State Measures (PSM), and this provides an opportunity to move unreported fish to their carrier without WCPFC notification.

Such activities could be complex to detect by flag or port states with lower maritime control and surveillance capacity, and some ports that need to implement PSM outside the Pacific may not verify the nature of those transfers.

Oversight of high-seas transshipments are addressed in the Indian Ocean Tuna Commission (IOTC), International Convention for the Conservation of Atlantic Tunas (ICCAT), Inter-American Tropical Tuna Commission (IATTC) and to a certain extent the Secretariat of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) with independent regional observer programmes. As such, it is recommended that if vessels choose to fish in areas of the high seas that justify the impracticability exemption in terms of economic hardship and historical method of operation, they should operate under an observer programme similar to those their vessels comply with in all other tuna RFMOs, or come to tranship at any port in the region.

We recommend that the Transshipment Intersessional Working Group consider our findings in its review of the measure and further revisions to the transshipment CMM to WCPFC21, addressing the issues we discussed.

Note

Access to the full report and attachments at the MIMRA Website:

<http://gofile.me/4ALNG/Gnyt6irwQ>

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