

AIS Data Reveals Potential Unauthorized Transshipment in IOTC Convention Area

Introduction

Transshipment in the Indian Ocean Tuna Commission (IOTC) Convention Area is regulated by Resolution 18-06 and includes reporting requirements for both fishing, or “donor” vessels, and the carrier vessels they transfer catch to. However, the required transshipment declarations are not made publicly available, so public information on transshipment in the Indian Ocean is limited to annual summary reports produced by the IOTC Secretariat and the IOTC carrier vessel Regional Observer Programme service provider (MRAG/CapFISH). The transshipment declarations also do not capture information on unauthorized transshipments, which may occur outside of the legal framework of the IOTC.

According to the Secretariat’s reports, at-sea transshipment events have increased by 94 percent between 2014 and 2018, and the amount of fish transferred has risen by 54 percent during that same period. Coupled with this steadily increasing activity is the fact that Resolution 18-06 itself “...expresses grave concern that a significant amount of catches by IUU fishing vessels have been transhipped under the names of duly licensed fishing vessels...”.

To gain a better understanding of at-sea transshipment activity occurring in the IOTC Convention Area, as well as attempt to detect instances of potential unauthorized at-sea transshipments, Global Fishing Watch (GFW) used commercially available Satellite Automatic Identification System (AIS) data and machine learning technology to analyze the track histories of carrier vessels operating in the IOTC Convention Area during calendar year 2017 and quantify the number of potential at-sea transshipment events. GFW also attempted to differentiate between authorized and unauthorized transfers by referencing authorized vessels lists published by the IOTC Secretariat and individual fishing authorities.

Results

GFW’s report, which can be found [here](#),¹ included several key findings that should help inform IOTC members as they review the effectiveness of the current transshipment Resolution and consider measures to better detect and deter unauthorized transshipments or transfers of IUU-related catch sourced from IOTC Convention Area waters:

- Of the 88 total carriers listed in the IOTC Record of Authorized Vessels, 53 were detected by GFW transmitting on AIS in the IOTC Convention Area in 2017. While the Secretariat reported that 19 carriers were involved in at-sea transshipments, AIS data indicated 24 of the listed carrier vessels had vessel movements consistent with potential high seas transshipment events.
- AIS data showed that there were at least 18 potential at-sea transshipments in the Convention Area where either one or both vessels involved were not authorized to transship IOTC managed-species. An additional 35 potential at-sea transshipments involved carrier vessels flagged to Taiwan, Province of China (hereafter called “Taiwan”) whose authorization status could not be determined due to a lack of a comprehensive and historical, publicly-available Taiwanese vessel authorization list.
- Nearly all potential at-sea transshipment events that involved unauthorized carrier vessels occurred in the southwest Indian Ocean, south of Madagascar and east of South Africa.

¹ https://globalfishingwatch.org/wp-content/uploads/GFW_IOTC_TransshipmentReview_2017.pdf

- Potential at-sea transshipment events exhibited a strong seasonal trend, peaking in June and July. The peak seemed to be driven by potential transfer events that occurred within the overlapping waters of the IOTC and Commission for the Conservation of Southern Bluefin Tuna (CCSBT) Convention Areas.
- Carrier vessels visited, and presumably offloaded transshipped fish, in a limited number of ports; primarily - Port Louis, Singapore, Kaohsiung City, and Cape Town.

In addition to the 171 vessel encounters observed on AIS that occurred between authorized carrier vessels and other fishing vessels, GFW also examined loitering events by carrier vessels. Loitering events were defined by GFW as those cases where a carrier vessel's movements were consistent with transshipment at-sea, but no other vessel was observed on AIS in the immediate vicinity. These loitering events are an additional indication that an at-sea transshipment event may have occurred.

- A total of 735 loitering events were detected by GFW in the IOTC Convention Area in 2017. 40 of these events were carried out by 13 carrier vessels unauthorized to transship IOTC species.
- An additional 86 loitering events involved carrier vessels flagged to Taiwan, whose authorization status could not be determined due to a lack of a comprehensive and historical, publicly-available Taiwanese vessel authorization list.

Notably, these findings represent a conservative estimate of potential unauthorized at-sea transshipment events. The Secretariat reported that 1,259 at-sea transshipment events were conducted, observed and reported on in 2017, while only 171 transfers between authorized vessels and approximately 600 loitering events by authorized carrier vessels were detected by AIS. The under-detection may be due to several factors, including multiple transshipments occurring simultaneously or sequentially, low uptake and use of AIS by the longline fishing fleets operating in the Indian Ocean, incomplete satellite coverage in the northern portion of the IOTC Convention Area that adversely impacts AIS reporting levels, and the threat of piracy in the northwest Indian Ocean that increased the frequency of vessel masters turning off AIS to avoid being detected by pirates.

Conclusion and Recommendations

The GFW report clearly indicates that there is a strong possibility that unauthorized at-sea transshipment occurred in the IOTC Convention Area in 2017, a trend that may still be ongoing. IOTC members should consider the following enhancements to Resolution 18/06 to increase the effectiveness of the monitoring and control of transshipment activities, improve the transparency of the transfer of IOTC-managed species and increase the ability for authorities to detect and respond to unauthorized transshipments should they occur:

- Require near real-time reporting of all transshipment events by both vessels involved to the relevant flag State, coastal State, port State, and the IOTC Secretariat.
- Require carrier observers to submit independent reports directly to the IOTC Secretariat.
- Establish, or strengthen, data-sharing agreements with both CCSBT and the Southern Indian Ocean Fisheries Agreement (SIOFA) specific to transshipment-related data.
- Remove the ability for NCP-flagged carrier vessels to be listed on the IOTC-authorized vessel record.

- Create a publicly-available current and historical list of all fishing and carrier vessels specifically authorized to transship in the IOTC Convention Area.

The Commission may also consider tasking the IOTC Secretariat to conduct annual reviews of Secretariat-held data and information specific to transshipments to build upon the initial analysis conducted by GFW to ensure the efficacy of IOTC transshipment management and increase the opportunities CPC authorities to detect and deter unauthorized transshipment activities.

Further details and additional recommendations can be found [here](#).²

² <https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2017/11/best-practices-for-transshipment>