

Analysis of AIS Indicates Possible At-Sea Transfers of Southern Bluefin Tuna went Unreported in 2017

Introduction

Transshipment of Southern Bluefin Tuna (SBT) under the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) is regulated by CCSBT *Resolution on Establishing a Program for Transshipment by Large-Scale Fishing Vessels* (LSTLVs). The Resolution includes reporting requirements for both LSTLVs and carrier vessels authorized to transship SBT which include mandatory submission of transshipment declarations for every at-sea transfer. Publicly available information on these at-sea transfers of SBT is provided in CCSBT Secretariat annual reports as well as annual reports from Members that participate in the CCSBT transshipment program and the Regional Observer Programs (ROPs) of both the Indian Ocean Tuna Commission (IOTC) and the International Commission for the Conservation of Atlantic Tuna (ICCAT) from which CCSBT ROP observers are sourced. While an ROP under CCSBT exists, Members whose LSTLVs transshipped SBT in 2017 relied exclusively on ICCAT and IOTC ROP observers to document and report on the at-sea transfers. However, despite the use of CCSBT transshipment declarations, CCSBT Catch Documentation Scheme (CDS) documents and IOTC/ICCAT ROP reports, CCSBT cannot fully ensure that all potential catches and at-sea transfers of SBT are documented and reported. This is especially true as CCSBT has no established means to verify that non-CCSBT authorized vessels operating inside CCSBT Statistical Areas are not catching or transferring SBT. These factors, exacerbated by the Secretariat's complete lack of access to Vessel Monitoring System (VMS) data that could be used to effectively cross-validate reported information, leaves CCSBT in a position where they are unable to address their own expressed *"...grave concern that organized tuna laundering operations have been conducted and a significant amount of catches by IUU vessels have been transshipped under the names of duly licensed fishing vessels..."*.

Results

Global Fishing Watch (GFW) used commercially available Automatic Identification System (AIS) data and machine learning technology to analyze movement patterns of carrier vessels operating in CCSBT Statistical Areas¹ during calendar year 2017. GFW then conducted a comparative analysis of this AIS data with publicly available CCSBT information on reporting of at-sea transfers of SBT to gain a better understanding of carrier vessel activity occurring in Statistical Area waters and detect vessels potentially involved in unreported or unauthorized catches and at-sea transfers of SBT. The analysis included a review of AIS-detected encounters between carrier vessels and those LSTLVs that exhibited movements inside the Statistical Areas consistent with fishing effort. Attempts were made to categorize these encounters based on vessel authorization status by referencing both the CCSBT Record of Carrier Vessels and CCSBT authorized vessel list. **The analysis clearly raises the possibility that at-sea transshipments involving transfers of SBT in 2017 went unreported.**

The resulting analysis appears to indicate CCSBT relies heavily on self-reporting by Members and second-source ROP information obtained through other RFMOs. These reporting protocols adversely impact the effectiveness of CCSBT's management of SBT by providing few opportunities for the Secretariat to verify

¹ CCSBT Statistical Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15

and cross-validate reported data. As a result, there is increased risk that some authorized at-sea transfers of SBT go unreported as well as catch and transshipments of SBT by unauthorized vessels goes unchecked. The analysis and subsequent findings include:

- While a CCSBT ROP exists, Members rely heavily on the ROPs of other RFMOs. Observer reports from both ICCAT and IOTC indicated 90 transshipments occurred between carrier vessels and LSTLVs in 2017 that involved quantities of SBT; a number matched by the Secretariat in their annual reports. This represents the highest number of reported at-sea transfers of SBT since 2014.
- The 90 reported transfers of SBT were conducted by 10 carrier vessels, only three of which were flagged to CCSBT Members. Nearly 78 percent of all reported at-sea transfers of SBT in 2017 were reported to have been received by carrier vessels not flagged to any CCSBT Member. Nearly 36 percent of the total transfers were conducted by a single carrier vessel flagged to Singapore, which is neither a Member nor Cooperating Non-Member of both CCSBT and IOTC. Non-Member flag States carry no obligations to ensure their vessels comply with CCSBT management measures.
- There were anomalies related to the participation of carrier vessels flagged to the Fishing Entity of Taiwan (hereafter called “Taiwan”) in the at-sea transfers of SBT. Taiwan self-reported their LSTLVs were involved in 49 at-sea transfers of SBT in 2017. CCSBT, IOTC and ICCAT documents indicate none of these transfers involved Taiwan’s carrier vessel fleet although 89 encounters were detected on AIS to have occurred between Taiwanese-flagged LSTLVs and carrier vessels.

Analysis of AIS data also indicated:

- A significant amount of carrier vessel and LSTLV activity occurred within CCSBT Statistical Areas in 2017. A total of 240 encounters involving 22 distinct carrier vessels and 130 LSTLVs were detected within these Areas as well as over 1,600 separate loitering events by carrier vessels themselves.
- 20 percent of all encounters were conducted by carrier vessels or LSTLVs which did not appear on CCSBT’s vessel authorization lists. Similarly, nearly 12 percent of the loitering events occurring in CCSBT Statistical Areas that are documented as highly productive SBT fishing grounds were conducted by carrier vessels which did not appear on the CCSBT Record of Carrier Vessels.
- Many encounters occurred between carrier vessels and LSTLVs outside of the Statistical Areas where LSTLVs previously exhibited vessel movements consistent with fishing effort. These encounters cannot be matched to any of the 90 reported at-sea transfers of SBT and, given the location of previous fishing effort by the LSTLVs, represent greater risks of undocumented and/or unreported catches and transfers of SBT.
- Carrier vessels visited, and presumably offloaded quantities of SBT, in a limited number of ports; primarily - Port Louis, Singapore, Cape Town and Kaohsiung City.

This study provides a conservative estimate of potential at-sea transshipment activity that occurred in CCSBT Statistical Areas in 2017. While most at-sea transshipments reported by the ICCAT and IOTC ROPs did not involve transfers of SBT, established reporting protocols, especially those associated with carrier vessels, provide CCSBT few opportunities for independent verification of this fact. Although only ten carrier vessels were reported to have been involved with at-sea transfers of SBT in 2017, analysis of AIS data clearly indicated a much higher level of carrier vessel activity was occurred in the Statistical Areas. At least 78 distinct carrier vessels were observed on AIS to have operated in the Areas in a manner other

than direct and continuous transit. Lack of effective oversight over the collective activities of all carrier vessels operating in the Areas, regardless of CCSBT authorization, increases the risk that harvests and subsequent transfers of SBT can go unreported, especially by those vessels with no authorization.

Conclusion

The report clearly raises the possibility that at-sea transshipments involving transfers of SBT in 2017 went unreported. This may be a result not only of ineffective reporting protocols and processes, but CCSBT reliance on self-reporting by Members with no other independent means of verification. CCSBT should consider enhancing their transshipment Resolution to increase the effectiveness of transshipment monitoring and reporting. Doing so would enhance transparency of carrier vessel and LSTLV activities, including harvests and subsequent at-sea transfers of SBT. Improving CCSBT's ability to cross-verify and validate reported information, regardless of source, will increase opportunities to detect anomalous activity and for relevant authorities to respond and further investigate potential instances of unreported or unauthorized transshipments of SBT.

Recommendations:

- Implement a centralized VMS to allow the CCSBT Secretariat to cross-check and validate reported information and reduce CCSBT reliance on Member self-reporting;
- Require Members to submit annual reports on the activities of carrier vessels they authorize to conduct at-sea transfers of SBT. This reporting requirement should be extended to include an accounting for the activities of all Members' flagged carrier vessels determined to have operated in CCSBT Statistical Areas during the previous year, regardless of CCSBT authorization;
- Prohibit Members from authorizing non-Member flagged carrier vessels to be involved with at-sea transfers of SBT;
- Require near real-time reporting of all at-sea transfers of SBT by both vessels involved, not only to the relevant flag and coastal State authorities, but the CCSBT Secretariat as well;
- Require carrier vessels transmit transshipment declarations for all landings of SBT directly to the CCSBT Secretariat in addition to the competent authorities of the landing State;
- Require carrier observers, regardless of the ROP from which they are sourced, to submit reports on all at-sea transfers involving SBT to all relevant authorities including the CCSBT Secretariat;
- Strengthen ROP data-sharing agreements with other relevant RFMOs, especially ICCAT and IOTC, to ensure full and detailed accounting of every at-sea transfer involving SBT given the heavy reliance CCSBT Members have with utilizing these two non-CCSBT ROPs;
- Encourage IOTC mandate their IOTC ROP annual summary identify the specific carrier vessel, date, and geolocation of each at-sea transfer of SBT as reported by IOTC observers consistent with the data reported by the ICCAT ROP so as to strengthen the overall ability of the CCSBT Secretariat to cross-check and validate all reported at-sea transfers of SBT with other available data sources;
- Consider mandating AIS for all CCSBT Member LSTLV fleets to help identify anomalous fishing effort in productive SBT fishing grounds by LSTLVs not authorized by CCSBT; and
- In the absence of a centralized VMS, consider allowing the Secretariat to access and analyze AIS data to assist in determining locations of LSTLV fishing effort to provide independent cross-checking and validation of reported information.