

A Summary of the IOTC Regional Observer Programme During 2021

IOTC

Annual Contractor's Report

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MRAG



Project code:	ZG2485
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Prepared by:	NF, SY, KM, JW
Approved by:	JMC

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Acronyms

ATF	Authorisation to Fish
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CDS	Catch Documents Scheme
CMF	Catch Monitoring Form
CV	Carrier Vessel
EEZ	Exclusive Economic Zone
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
IRCS	International Radio Call Sign
LSTLV	Large Scale Tuna Longline Fishing Vessel
RAV	Record of Authorised Vessels
ROP	Regional Observer Programme
VMS	Vessel Monitoring System

1 Introduction

During the calendar year 2021, the Regional Observer Programme (ROP) monitored a total of 95 transhipments from Large Scale Tuna Longline Fishing Vessels (LSTLVs) within the Indian Ocean Tuna Commission’s (IOTC) Area of Competence.

A further 1,436 transhipments took place which were not monitored due to the suspension of observer deployments owing to the Coronavirus pandemic, where at sea deployments had been suspended since March 2020. These transhipments (unobserved transhipments) proceeded under *force majeure*.

Unobserved transhipment data were recorded in the ROP database. Transhipment declarations submitted to the IOTC Secretariat were made available to the Consortium through the Consortium and Secretariat cloud-based shared folder. These were entered into the ROP database for each deployment request and reports were produced from these. The integrity of the contracted reporting obligations under the ROP were upheld following this procedure. As with observed deployments, regular reports were submitted to the Secretariat summarising transhipments over that period. On occasion, the Consortium would follow up with the vessel operators and vessel captains directly to request missing information or seek clarification over the amounts of product, date/time and location of transhipments.

The total number of at-sea transhipments was higher than the pre-pandemic average of previous years during 2021 at 1,531. This was 84 fewer than 2020, but still 240 more than the average number of transhipments recorded between 2016 and 2019 – the number of deployments have been broadly consistent (Table 1).

Table 1 No. of transhipments and deployments pre- and post-pandemic.

Year	No. of Transhipments	No. of Deployments	Average Deployment Length (days)
2016-2019*	1,288*	65*	41*
2020	1,615	66	64
2021	1,531	60	73

*Pre-pandemic averaged values.

The distribution of transhipments by LSTLV fleets during 2021 was similar to previous years; as shown in Figure 1 for percentage contribution by fleet in 2021.

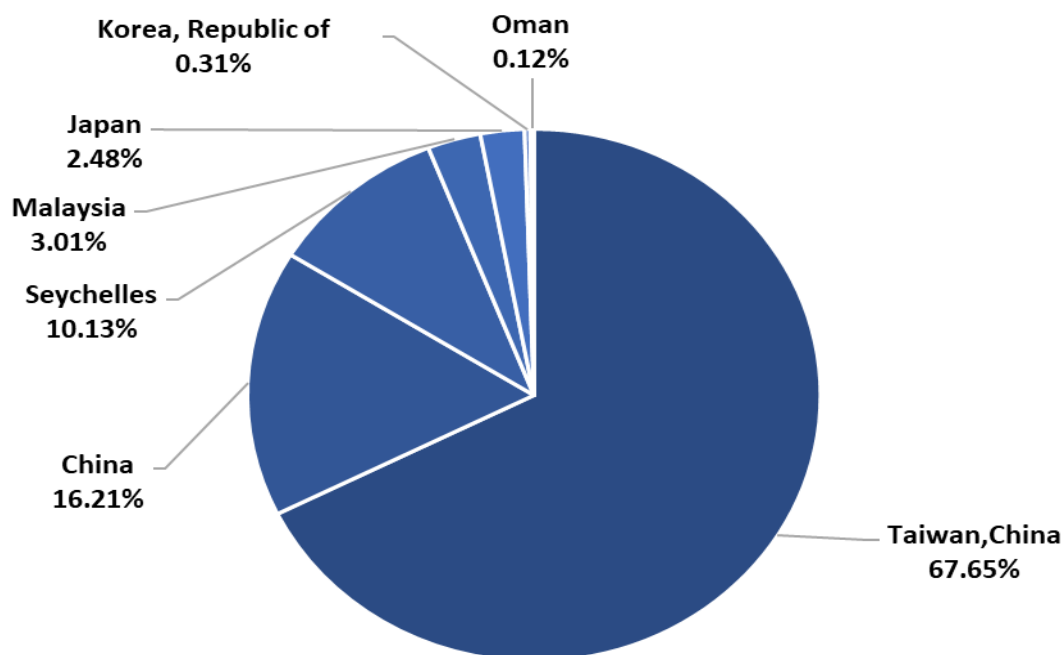


Figure 1 Percentage contribution by fleet to the total number of IOTC transshipments during 2021.

Deployments during 2021 (both observed and unobserved) were broadly similar to previous years by percentage contribution of vessel fleets. These occurred with Carrier Vessels (CVs) predominantly flagged to Panama (33%), followed by Taiwan, Province of China (25%), Malaysia (13%), Republic of Korea (12%), Liberia (8%), Japan (7%), and Singapore (2%). The biggest increase was noted in deployment requests for CVs flagged to Panama (up 4% on 2020) replacing Taiwan, Province of China as the Fleet leader).

A summary of the ROP deployment requests (i.e., the number of CV trips) during 2021 is shown in Figure 2. Sixty deployments were approved during 2021 (request 670/21 to request 730/21). Of these, nine deployments were actively transshipping and monitored by an IOTC ROP observer during 2021 (688/21, 692/21, 693/21, 705/21, 710/21, 714/21, 717/21, 726/21 and 729/21), 48 proceeded as non-observed deployments due to the pandemic and three deployment requests were cancelled (675/21, 695/21 and 724/21). Due to the pandemic and the closure of repatriation ports available to the observers, a number of observers remained deployed for some months, either remaining onboard the same vessel or transferring to another CV.

Two observer deployments continued directly to or from the regulatory area of the International Commission for the Conservation of Atlantic Tunas (ICCAT) without making a port call at the point of crossing. Deployment requests were highest during June-July, peaking with 18 active CVs (both observed and unobserved). Figure 2 shows the annual cycle of deployments in 2021 for both observed and unobserved deployments. Deployments in 2020 and the average of deployments across 2016-2019 have been included as a comparison.

CV activity remained higher in 2021 than 2020 due to vessel operators and vessels adapting to working through the pandemic. This could be a factor of the aggregation of deployment requests, with CVs remaining 'active' for a longer period where they would normally be limited by the duration an observer can be deployed at sea. For instance, pre-pandemic, deployment requests would normally start and end at Singapore, however during 2021 vessels made fewer port calls to Singapore, instead starting and concluding their deployments from their home port. This prolonged the duration of deployments beyond what was typically observed pre-pandemic as shown in Table 1 from 41 days to 73. Transshipment activity through the year remained consistent with previous years, if peaking a little later in August, rather than June-July.

IOTC Secretariat encouraged the recommencement of observed deployments from 2021, where logistically feasible.

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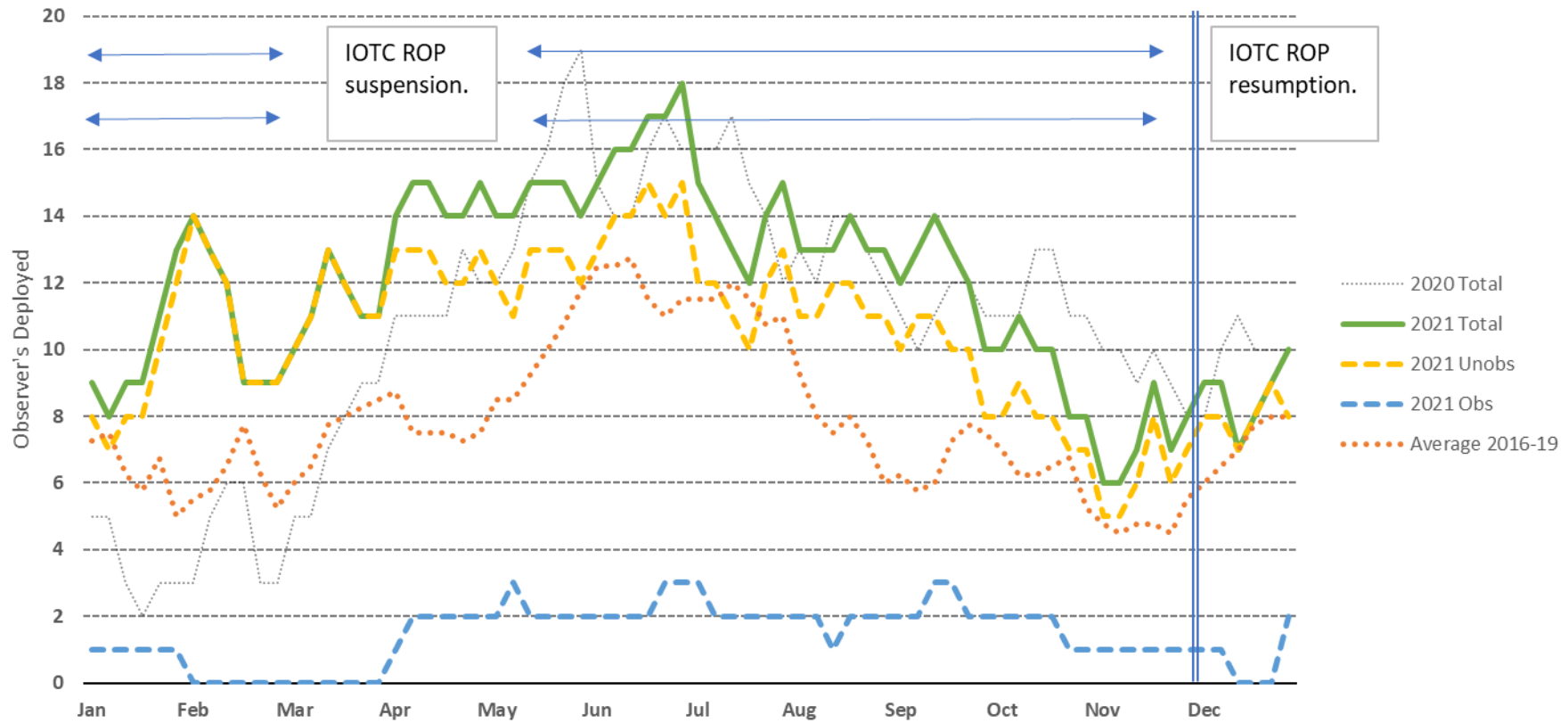


Figure 2 Active deployments showing Observer's deployed and vessels unobserved in the IOTC ROP during 2021. The average number of deployments for 2016-2019 has been shown for comparison.

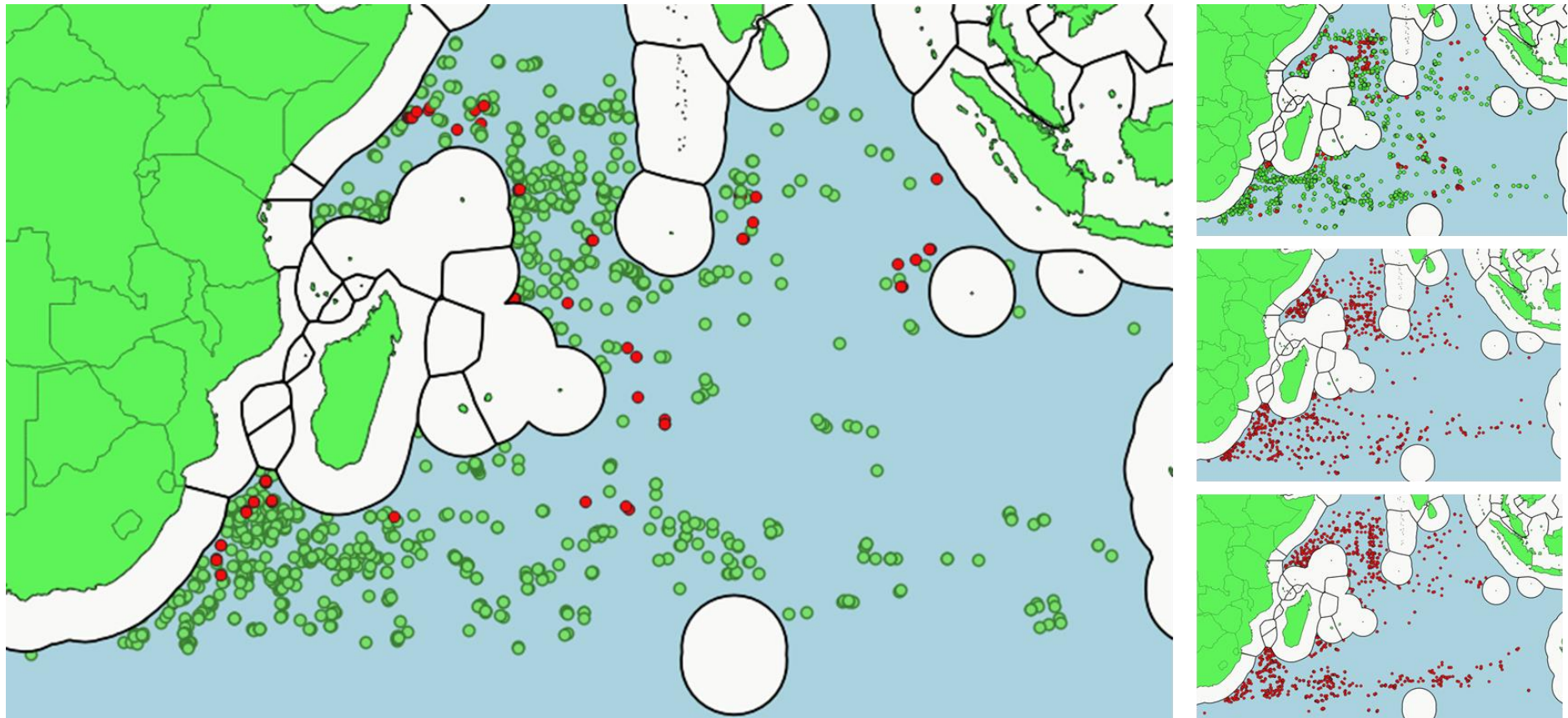


Figure 3 Transshipment locations in 2021 (main image), in 2020 (top right), 2019 (middle right) and 2018 (bottom right).

NB: The spatial distribution of transshipments is similar to previous years with distinctive 'bands' of transshipments at around 12° and 34° south, though with a greater number of transshipments occurring in the western Indian Ocean. Transshipments indicated by red dots were observed under the ROP during 2021. Transshipments indicated by green dots were unobserved, these data have been included in the database from the provided transshipment declarations.

2 Sampling

2.1 Weight estimations

Weight estimation procedures have been previously discussed in the [Review of the IOTC ROP¹](#). The percentage difference between the overall observed weight and the vessel declared weight are shown in Figure 4 and for tuna species only in Figure 5. Note, these figures only apply to the observed transshipments (deployments 688, 692, 693, 705, 710, 714, 717, 726 and 729). Due to the pandemic it is not realistic to compare these results with previous years.

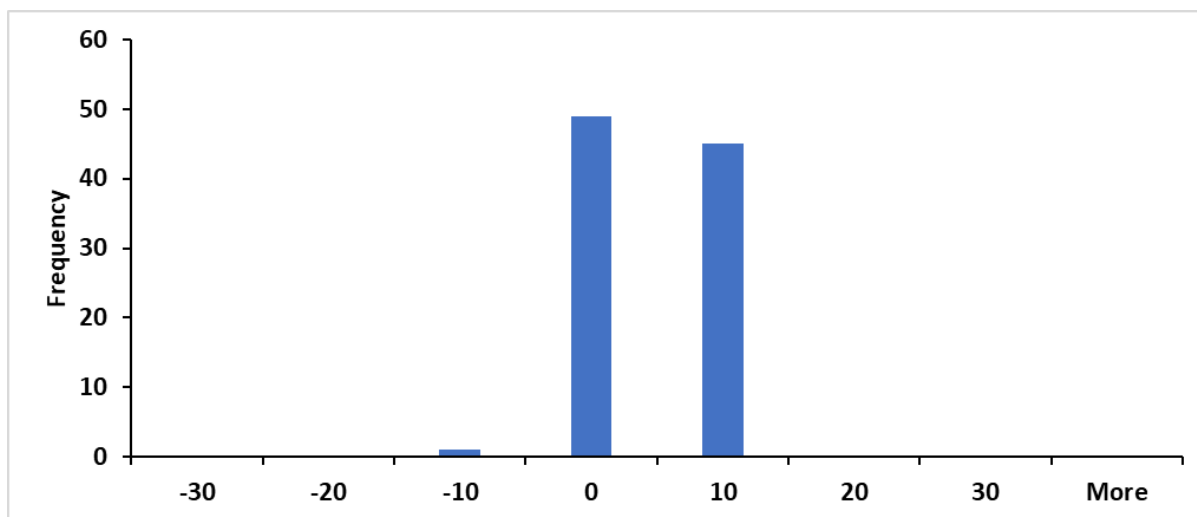


Figure 4 Percentage difference in observed weight compared to vessel declared weight (all species)

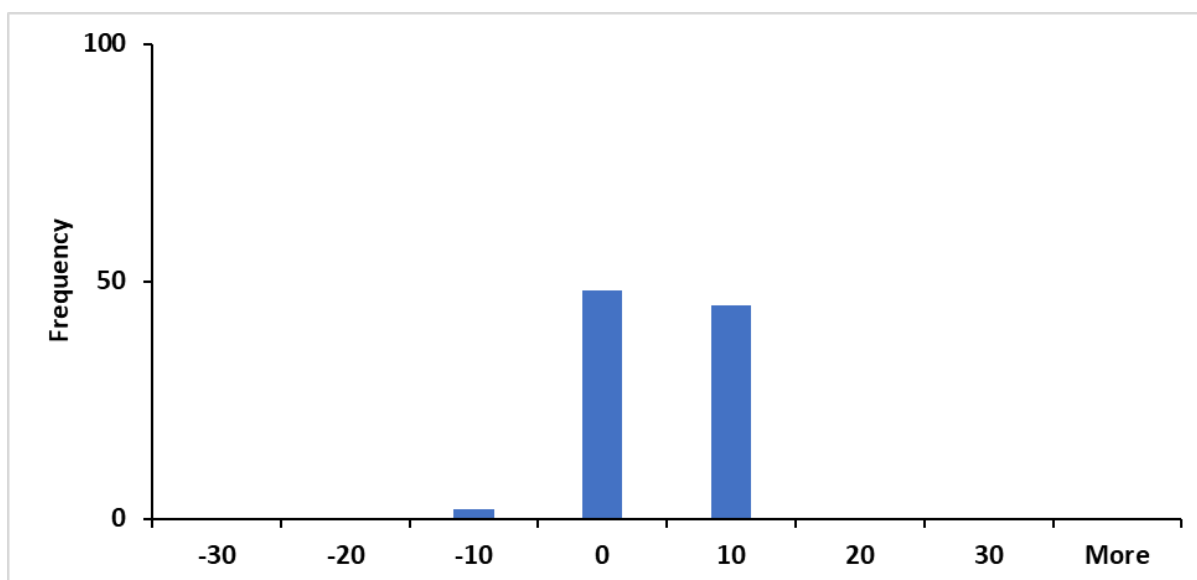


Figure 5 Percentage difference in observed weight compared to vessel declared weight (tuna species only)

Positive differences represent transshipments where the observer's estimate is higher than the vessel's declaration, negative differences are where the observer's estimate is lower.

¹ MRAG and CapFish (2010). Review of the IOTC Regional Observer Programme. CoC48_Add1[E]

For all fish, 99% of estimates were within 10% of the vessel's declaration, with the vessel declaring more than the observer's estimate approximately 1% (1 out of 95 vessels) of the time. A similar trend is seen if only tuna and tuna like species products are considered, with 98% of observer estimates falling within a 10% difference of the vessel's declaration. In these cases, only 2% (2 out of 95) of vessels declared more tuna products transhipped than the observer's estimates. For the main causes in discrepancies between declared and observed weights see previous contractor's reports.

2.2 Species Transhipped

Due to the pandemic only 95 (6%) transhipments were monitored by at-sea observers. For this report the data has been taken from the vessel declared figures. The total quantity of tuna and tuna like species transhipped in 2021 was 61,524t. A breakdown of the species transhipped by product-type is shown in Table 2. Species of less than one tonne transhipped have not been included in the table, and the declared weight values were rounded to the nearest whole tonne. A number of Atlantic species were declared as being transhipped by fishing vessels.

Table 2 Declared quantity (tonnes) of transhipped species by product type during 2021.

Species Group	English Name	Species Name	Total Tonnes Transhipped	Gilled & gutted	Rounded Weight	Dressed weight	Headed various	Other various
IOTC Managed Species								
Temperate and tropical tunas	Albacore	<i>Thunnus alalunga</i>	15,450	69	15,254	57	59	11
	Bigeye tuna	<i>Thunnus obesus</i>	16,740	16,121	0	221	398	0
	Skipjack tuna	<i>Katsuwonus pelamis</i>	60		58	0	2	0
	Southern bluefin tuna	<i>Thunnus maccoyii</i>	1,623	1,623	0	0	0	0
	Yellowfin tuna	<i>Thunnus albacares</i>	11,571	10,656	0	224	691	0
	Black marlin	<i>Makaira indica</i>	370	6	27	258	80	0
	Indo-Pacific blue marlin	<i>Makaira mazara</i>	670	11	23	267	366	4
	Indo-Pacific sailfish	<i>Istiophorus platypterus</i>	134	1	15	60	56	2
	Marlins, sailfishes, etc. nei	<i>Istiophoridae</i>	1	0	0	1	0	0
	Striped marlin	<i>Tetrapturus audax</i>	173	64	3	57	49	0
Swordfish	<i>Xiphias gladius</i>	3905	437	0	2500	902	65	
Neritic tunas and mackerels (seerfishes)	Narrow-barred Spanish mackerel	<i>Scomberomorus commerson</i>	14	0	0	1	13	0
Non-IOTC Managed Species								
Billfish	Atlantic blue marlin	<i>Makaira nigricans</i>	106	8	0	89	9	0

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Species Group	English Name	Species Name	Total Tonnes Transhipped	Gilled & gutted	Rounded Weight	Dressed weight	Headed various	Other various
	Atlantic sailfish	<i>Istiophorus albicans</i>	8	0	0	6	0	2
	Shortbill spearfish	<i>Tetrapturus angustirostris</i>	10	0	0	2	8	0
Neritic tunas and mackerels (seerfishes)	Butterfly kingfish	<i>Gasterochisma melampus</i>	10	0	0	10	0	0
	Wahoo	<i>Acanthocybium solandri</i>	4	0	0	1	3	0
Other Species	Dorado/Mahi Mahi	<i>Coryphaena hippurus</i>	27	0	23	2	2	0
	Escolar	<i>Lepidocybium flavobrunneum</i>	354	0	1	156	197	0
	Oceanic Sunfish	<i>Mola mola</i>	0	0	0	0	0	0
	Oilfish	<i>Ruvettus pretiosus</i>	6,054	62	88	1,955	3,930	18
	Opah	<i>Lampris guttatus</i>	253	0	0	91	162	0
	Other fish Unclassified	N/A	1,678	21	233	591	687	146
	Pomfret	<i>Brama spp.</i>	1	0	0	0	1	0
Sharks	Bigeye thresher	<i>Alopias superciliosus</i>	20	20	0	0	0	0
	Blacktip shark	<i>Carcharhinus limbatus</i>	10	0	0	1	8	1
	Blue shark	<i>Prionace glauca</i>	696	0	0	306	321	19
	Mako sharks	<i>Isurus spp</i>	111	0	0	37	70	4
	Pelagic Sharks nei	<i>Pelagic Sharks nei</i>	9	0	0	0	0	9
	Shortfin mako	<i>Isurus oxyrinchus</i>	173	6	0	49	78	39
	Silky shark	<i>Carcharhinus falciformis</i>	67	0	0	21	34	12
	Various sharks nei	<i>Selachimorpha(Pleurotremata)</i>	1,222	11	0	374	505	332

3 Southern bluefin tuna

Since the adoption of the Resolution on the Implementation of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) Catch Documentation Scheme (CDS) on 1st January 2010, any southern bluefin tuna transhipped must be accompanied by a catch monitoring form (CMF) which is countersigned by the observer to verify they have monitored the transhipment. During 2021 transhipments of southern bluefin tuna were declared on 77 occasions (64 unobserved) on 15 different deployments, with around 1,623 tonnes recorded by the vessels as being transhipped (Table 3). These transhipments represent an increase in the number of transhipments involving southern bluefin tuna, since 2010, but a reduced total quantity transhipped in 2020 by 277 tonnes.

Table 3 Transhipments of southern bluefin tuna (*Thunnus maccoyii*) declared by vessels during 2021.

Deployment No.	CV Name	CV IOTC #	Observer Name	Number of transhipments	Total Declared Weight (t)
661	CHITOSE	15114	Unobserved Deployment	2	10.927
663	SEIBU	16637	Unobserved Deployment	1	17.238
671	SEIYU	8620	Unobserved Deployment	1	0.956
672	HARIMA	17037	Unobserved Deployment	3	2.856
678	SHENG HONG	900080040	Unobserved Deployment	1	0.483
682	YACHIYO	17140	Unobserved Deployment	1	0.974
691	CHITOSE	15114	Unobserved Deployment	16	209.727
693	MEITA MARU	8461	Tony Dimitrov	4	191.982
699	HARIMA	17037	Unobserved Deployment	22	536.721
702	SEIBU	16637	Unobserved Deployment	3	4.064
704	CHEN YU NO. 7	900080046	Unobserved Deployment	1	10.439
708	YACHIYO	17140	Unobserved Deployment	13	308.832
710	TAISEI MARU NO.15	8465	Llewelyn Lewis	4	48.543
714	GENTA MARU	13783	Christian Louw	3	139.858
717	IBUKI	14787	Henry John Heyns	2	139.786

4 Vessel checks

The roles and responsibilities of the observers with regards to at sea vessel checks are outlined in Annex IV of Resolution 19/06 (superseded by Resolution 21/02) and the differences in the procedures for vessel checking were highlighted in the 2013 ROP report ([IOTC-2013-CoC10-04b](#)).

A total of 1,531 transhipments were undertaken by 389 different LSTLVs during 2021. On 9 occasions the LSTLV was boarded for checks. On 1,522 occasions the vessel was not boarded, either due to the absence of an observer onboard or due to precautions taken to not board vessels, minimizing the risk of spreading the Coronavirus. All 95 transhipments monitored did undergo some inspection. Where possible, logbooks and the Authorisation to Fish (ATF) were passed over to the observer on the CV. The number of times individual LSTLVs were checked in 2021 is shown in Figure 6, this is denoted by the blue bars. Red bars denote vessels that also transhipped but were not checked.

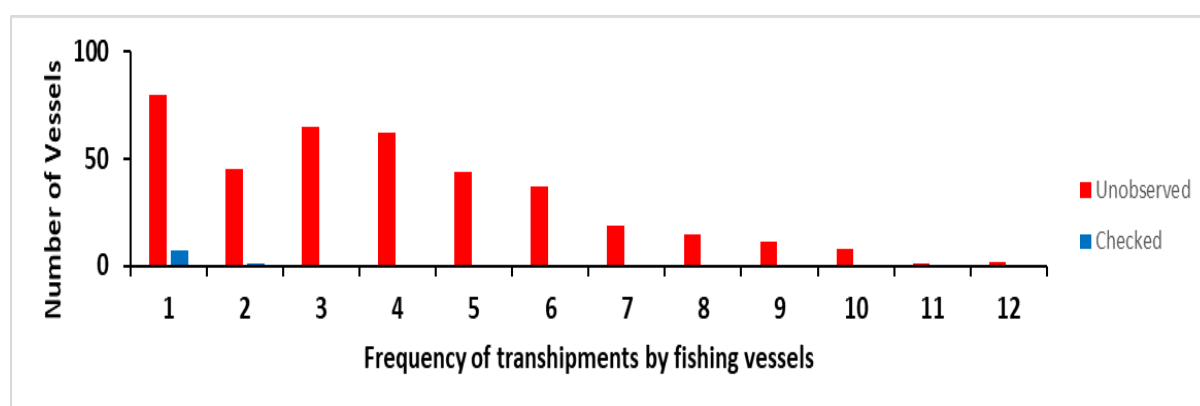


Figure 6 Number of times vessels (LSTLVs) checked in 2021.

A brief summary of the results of the LSTLV checks are given below. Remarks have been made against each regarding the impact of the pandemic checks made by observers. Full details of the reported infractions for 2021 can be found in [IOTC-2022-WPICMM05-04](#)², CPC responses to the infractions have been documented in [IOTC-2022-WPICMM05-04 Add2 Rev1](#)³.

a. Check the validity of the fishing vessel's authorisation or licence to fish tuna and tuna like species in the IOTC area. Flag States are required, under Resolution 19/04, to submit to the IOTC Secretariat, templates of their official Authorisation to Fish (ATF) outside national jurisdictions. The provision of templates assists observers in identifying valid ATFs when conducting vessel checks. The ROP currently has examples of ATFs from all participating fleets.

For each transhipment where an observer was present, an ATF was provided. On two occasions the ATFs shown were found to be out of date at the time of transhipment.

On two occasions the ATF did not match the flag State template provided by the IOTC Secretariat. These were included in the deployment reports and highlighted to the IOTC Secretariat.

The validity of ATFs were not determined under the ROP for unobserved transhipments during 2021. In order to verify the ATF, copies of ATFs would have had to be made available to the Consortium for each transhipping vessel. The Consortium's remit was to capture data provided through transhipment declarations and in the process verify that the vessels were authorised to tranship on the Record of Authorised Vessels (RAV).

² [Report on possible infractions observed under the Regional Observer Programme in 2021 | IOTC](#)

³ [Results of investigation received from the fleets on the possible infractions detected under the Regional Observer Programme \(ROP\) in 2021 REVISED/ENDORSED by WPICMM05 | IOTC](#)

b. Check and note the total quantity of catch on board, and the amount to be transferred to the carrier vessel. This is done through direct interview with the vessel captain or fishing master (using translation sheets where appropriate). Observers do not check the holds for reasons of health and safety. Furthermore, it is outside the remit of the programme.

Validating the total quantity of catch on board was restricted during the pandemic due to the suspension of the programme and because of restrictions on boarding LSTLVs during 2021. Observers were unable to board fishing vessels to interview the vessel captains or fishing masters, however, the questionnaire and translation sheets were passed across for completion by the vessel captain or fishing master.

c. Check the Vessel Monitoring System (VMS) is functioning. The observers were able to verify all VMS units were present and had power where an observer was able to board the LSTLV. Where observers did not board, the observer's camera was provided to the Master of the LSTLV in order to photograph the vessels VMS system. This was done in most cases.

Observers continue to record the type of unit used on each vessel according to a guide completed in 2017. A copy of the guide can be found annexed to the 2018 Contractor's report. ([IOTC-2018-CoC15-04b](#)).

d. Examine the logbook. All LSTLVs that transhipped with an observer present, with the exception of one which did not produce it, also had their logbook examined. A summary of logbooks observed by category is shown in Table 4.

Table 4 Summary of logbook checks made in 2021.

Logbook format	Number
Logbooks Shown	147
Matching the Fleet's template	146
Printed	133
Electronic	12
Unbound (Printed)	2
Unnumbered / Inconsecutively numbered (Printed)	2
Unnumbered (Electronic)	0
Erroneous or missing entries	1

Verifying the contents of logbooks was possible during the pandemic where observers were unable to board. Logbooks, or print outs of the logbook, were either passed over to the observer on the CV or were photographed using the observer's camera passed to the vessel captain or fishing master. For unobserved deployments, verifying the contents and format of logbooks was not possible.

e. Verify whether any of the catch on board resulted from transfers from other vessels, and check on documentation on such transfers. There was no evidence presented to the observers of LSTLVs transhipping fish with other LSTLVs during 2021.

For unobserved deployments this would have been impossible to discern without further external information provided. One such instance was reported to the Consortium and the IOTC Secretariat during deployment 668-20 at the start of 2021. Due to a refrigeration failure and consequent risk of lost product, catch from the LSTLV Jin Sheng No.1 was transhipped to the LSTLV Jin Sheng No.2, before being transhipped to the CV Feng Lu.

f. In the case of an indication that there are possible infractions involving the fishing vessel, immediately report the possible infractions to the carrier vessel master. While the CV vessel master is normally notified of any possible infractions, it is through the observer's final report that the IOTC Secretariat is notified. The IOTC Secretariat will then report the possible infractions to the relevant fleet. Due to a request from the fleets, copies of the verification reports are also offered to the vessel captain so it can be returned to the fleet.

For unobserved transhipments, any indication of infractions in the submitted TDs, such as for errors in vessel identification or transhipment position, were cross-examined and verified directly with the CV

Operators. In all instances these were corrected through the above process, informing the IOTC Secretariat of the outcome.

g. Report the results from these duties on the fishing vessel in the observer's report. The results of the vessel checks undertaken by observers are summarised in their final report and any discrepancies are elaborated on. In addition, a photographic record of all vessel authorisations, VMS units and logbooks as well as external vessel markings is maintained.

For unobserved transshipments, any issues identified in the Transshipment Declarations were verified with the operators and the IOTC Secretariat; and then were included in the unobserved deployment report.

h. Identifying the LSTLV. In addition to the above, observers are also required to verify and record the name of the LSTLV concerned along with its IOTC number, International Radio Call Sign (IRCS) and national registration number, and determine how consistent the markings are with the requirements of Resolution 19/04. The results of these vessel identification checks are shown in Table 5 and indicate the number of occasions where the observer either could not verify the information against that given in the IOTC Record of Authorised Vessels or considered that the documents or markings on the vessel were either not correctly displayed, or were worn or otherwise obscured and so were not legible.

Table 5 Summary of checks on LSTLV identifiers

Identification check	Number of occasions
Authorisation to Fish (ATF)	3
Vessel Monitoring System	0
Fishing Logbook	3
Vessel Markings	4

Validating the quantity of vessel identifiers was able to continue as normal for all observed deployments as this did not require vessel boarding.

5 Other Possible Infractions

None recorded.

6 Observer Training

There are currently 151 observers who have received IOTC training since 2009, some of whom were trained directly through the IOTC whilst others crossed over from ICCAT with prior approval from the IOTC Secretariat. All observers are also trained to monitor CCSBT transshipments. Not all observers who have been trained are currently active and many have left the programme. There are currently 75 observers trained and actively participating on rotation in the IOTC ROP. It is therefore necessary to continue to hold observer courses on a regular basis to replace those who drop out, and to ensure the increasing demand is met. All courses are now run in conjunction with ICCAT, with observers being eligible to work in ICCAT and IOTC as well as monitoring CCSBT transshipments. No additional observers were trained in 2021 due to decreased demand as a result of the suspension of the observer deployments, but 18 more have been trained in 2022 since the restart of the IOTC ROP.

7 Other Issues

7.1 Health and Safety

During 2021 there were no deployments refused by an observer on the grounds of safety.

However, safety issues that have been raised include:

- **Lack of safety drills.** It is the Consortium's recommendation that vessels must include observer participation in safety drills upon boarding the vessel. Two vessels were noted as not performing safety drills whilst the observer was deployed
- **The Coronavirus pandemic.** The pandemic continued to be a significant concern for the welfare of observers and vessel crew during 2021. In discussion with the IOTC Secretariat, the observer deployments in the ROP resumed in December of 2021. This decision was based on the easing of restrictions on international travel, improving availability of flights to dispatch and repatriate observers, observer vaccinations in line with international travel requirements and the application of testing and quarantine facilities prior to observers joining the vessel.

All vessels took steps to increase the level of hygiene on board and the Consortium put in place measures for mitigating the risk to the observer and vessel crews, including the suspension of at-sea boardings, PCR testing and quarantine periods before and after joining or departing the vessel. No ROP observers on deployment presented a positive Covid-19 PCR test. The Consortium would like to thank the vessel operators and their Secretariat for their cooperation during this time.

The Consortium and the IOTC Secretariat continue to closely monitor the state of the global pandemic and availability of international travel in line with deploying observers to vessels.

7.2 Waste disposal

Waste disposal methods vary among CVs and most have operational waste disposal plans in place which includes having an incinerator on board, instructions and containers to separate and store different waste products.

7.3 Vessel cooperation

Cooperation from both LSTLVs and CVs has again generally been good. The Consortium has no issues to raise on difficulties operating with the vessels. As stated above, the Consortium would like to extend their gratitude to the vessel operators for their assistance and cooperation in maintain the reporting objectives of the ROP during the pandemic and suspension of observed transshipments.