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ROP-BFT

ICCAT

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Implementation Report

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Submitted by

MRAG

In association with

COFREPECHE

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Acronyms

BCD	Bluefin (tuna) catch document
CFL	Curved fork length
CPC	Contracting and Cooperating Non-contracting Parties (ICCAT)
EU	European Union
GBYP	ICCAT Atlantic wide research programme for Bluefin Tuna
ICD	ICCAT caging declaration
ITD	ICCAT transfer declaration
JFO	Joint Fishing Operation
LD1	Length 1st dorsal spine
MoU	Memorandum of Understanding
PNC	Potential Non-compliance (event)
ROP-BFT	Regional Observer Programme for Bluefin Tuna
SCRS	Standing Committee on Research and Statistics
SFL	Straight fork length
SoC	ICCAT Standards of Conduct and Behaviour for Observers

Executive Summary

The service provider for implementing year ten (April 2019 / March 2020) of the ICCAT ROP-BFT comprises of a consortium led by MRAG based in London and COFREPECHE in Paris assisted by regional partners located around the Mediterranean. This is the tenth year that the Consortium has been awarded the contract to implement the ROP-BFT and experience gained in previous years has been used to enhance systems in place for recruitment, training and deployment of observers and overall performance of the Programme.

The ROP-BFT allows the Commission to assess compliance with the regulatory framework. This report summarises the 179 deployments on authorised purse seiners during the 2019 fishing season, as well as the 31 farm and trap deployments completed to date since the start of the current contract. In addition, 31 outstanding farm and trap deployments are included from the previous season. 100% observer coverage has been achieved on authorised purse seiners, farms and traps within the remit of the programme, which included monitoring all fishing, transfer, caging and harvesting activities.

This report describes the key issues faced in assessing compliance with the regulatory framework during implementation of year ten of the ROP-BFT divided into operational and technical categories and focuses on issues that affect the observer role during deployments.

Estimating tuna transfers from video records: The key technical issue across all deployment types (on purse seiners and farms) has been the inability to consistently estimate the amount of tuna transferred from video records. This was mainly a result of poor-quality video records and / or viewing facilities (on vessels) or video availability immediately following the transfer operation. However, the introduction this year of voluntary transfers (an optional additional transfer that may be performed in the event of a non-compliant initial transfer. If the voluntary transfer is successful, the ITD can be signed and no PNC issued) has improved this and reduced the number of potential non-compliances (PNCs) issued. It can also be very difficult for an observer to determine if video footage has been tampered with when cuts in the video are hidden by cross fades. This problem is most likely when observers are not provided the video of the transfer immediately.

Improved consultation between CPCs, Secretariat, SCRS and ROP-BFT Consortium: A meeting was held between CPCs, the Secretariat, SCRS and the Consortium in April 2019 prior to the commencement of the fishing season, during which constructive feedback was provided to enable improvements to be made to the Programme. The Consortium would propose that such meetings continue to be held prior to each fishing season.

1 Introduction

This was the tenth year that the Consortium (Service Provider) has been awarded the contract for the provision of services to implement the ROP-BFT (Programme). The Consortium adapted their approach incorporating lessons learned through implementing the Programme during previous years. The report covers key activities conducted in preparation for the Programme and deployments under the contract for services to implement the ROP-BFT 2018/2019.

The principle role of the Service Provider remains to implement the main clauses of the regulatory framework[1] relevant to the ROP-BFT through the implementation of a framework equipped to recruit, train and deploy observers in the Mediterranean Sea and manage and submit the observer deployment outputs within 20 days of the completion of a period of observation. Technical components of the Programme cover monitoring the fishing, transfer and caging phases of the bluefin tuna harvest. Harvesting is ongoing at the time of writing for this year and is expected to continue throughout the first quarter of 2020.

The two key observer roles during the 2019 fishing season have been in place since the 2013 season; the reporting of potential non-compliance events (PNCs) and signing relevant documents when observer and vessel estimates were within 10% of each other and the video record was fully compliant with Annex 8 of Recommendation 18-02. There were some modifications made to the roles this season. The introduction of voluntary transfers subsequent to a non-compliant video record reduced the number of potential non-compliances reported, and the number of relevant transfer documents which were left unsigned. In addition, in response to feedback from CPCs, real-time reporting of some PNCs was reduced, with a number of PNCs, notably those regarding incorrectly completed logbooks, being included in the final deployment outputs only.

The fishing season was longer than in previous years. A single Moroccan vessel commenced operations from 1st May. Fishing activities commenced in the eastern Mediterranean from mid-May and observers disembarked by 2nd July. Vessels fishing in the Adriatic disembarked observers on 7th July.

This was followed by caging operations which extended into September. Due to a change in Recommendation 18-02, multi-farm operations ceased on 21st June and a single observer was deployed per farm after that date.

Harvesting operations were performed at a small number of farms specialising in fresh exports. The main harvesting season has started and is expected to continue through to early February. As such, this report covers purse seine and caging deployments, as well as those harvest deployments which were not covered in the previous report.

The structure of the report is presented in Table 1.

[1] ICCAT Recommendations. 18-02, Annex 6 sets out the specific observer tasks for recording fishing, transfer and farming activities.

Table 1: Report Content.

Implementation Activity	Section	Main Content
Programme Development and Implementation	2	Outline of development activities Summary of observer coverage on purse seiners and farms
Methodologies used for estimating the amount of tuna	3	Techniques used by operators and observers Transfer video record availability and coverage
Potential Non-Compliance Events	4	Summary of PNCs
Programme outputs	5	Submitting deployment outputs Submission of data covering ROP-BFT 2011-2019 to the SCRS
Scientific monitoring activities	6	Scope of biological sampling
Summary of Key Outcomes of ROP-BFT 2019	7	Quantifying tuna through the use of Video records Stereoscopic systems
Recommendations	8	Suite of recommendations distinguishing those which are the responsibility of the Service Provider and those of ICCAT: Improving general operational framework Improving monitoring tasks and observer duties
Conclusions	9	Main findings based on lesson learned and steps required to improve future implementation

2 Programme Development and Activities

2.1 Programme Development

Ongoing programme development comprised of the following components:

- Consultation with the ICCAT Secretariat, CPCs and SCRS on operational and technical requirements;
- Production of an updated Programme Manual and training material for approval incorporating lessons learned during implementation;
- Complete observer recruitment;
- Procure and distribute observer equipment that required replacement and purchase additional sets;
- Deliver training prior to the purse seine season;
- Continue to make more programme material such as manuals and data forms available in more languages; and
- Implement a pilot scheme for otolith collection from tagged fish (6.3).

2.2 Operational

2.2.1 Deployments on Purse Seiners

During the 2019 ROP-BFT, observers were deployed on 182 purse seine vessels (Table 2). Four observers were deployed onto Norwegian vessels, of which three are still deployed and therefore excluded from the current analysis.

Two deployments on Italian vessels were cancelled and no observers embarked. Observers initially deployed on two vessels were removed mid-season and replaced.

Observers were mobilised to 31 ports in the Mediterranean Sea, two in Norway and subsequently embarked on vessels specified in the official observer requests.

Observers were assigned vessels on the basis of nationality and language skills so as to adhere to the requirements of the programme. All deployments were performed without incurring any delays caused by the Consortium or observers.

Two notable incidents during the season are elaborated on in Annex 1 and Annex 2.

The deployments by flag State / CPC are set out in Table 2. In total, 4,833 observer sea days were completed on 179 purse seine vessels. This represents an increase of 876 observer sea days relative to 2018.

Table 2: Observer coverage on purse seiners monitoring fishing and transfer operations.

Flag State/CPC	Vessels (n)	Obs. Sea Days*(n)
Albania	1	12
Algeria	22	669
Croatia (EU)	16	683
Cyprus (EU)	1	15
Egypt	1	45
France (EU)	22	388
Italy (EU)	17	349
Libya	15	438
Malta (EU)	1	15
Morocco	2	76
Norway	1	41
Spain (EU)	6	105
Syria	1	5
Tunisia	44	672
Turkey	29	1,320
Total	**179**	**4,833**

* Sea days are defined as the time between the observer embarking and disembarking in port.

2.2.2 Deployments on Farms

The farm deployments by flag State / CPC are set out in Table 3. In total, 1,301 observer days were completed on 31 farm deployments.

Table 3: Observer coverage on farms and traps monitoring caging and harvest operations during the current contract.

Farm State/CPC	Deployments (n)	Obs. days (n)
Croatia (EU)	7	203
Italy (EU)	2	32
Malta (EU)	6	337
Morocco	2	125
Portugal (EU)	1	88
Spain (EU)	7	310
Tunisia	1	69
Turkey	5	137
Total	**31**	**1,301**

Those farm deployments which occurred during the previous contract but were not completed by the time of the previous report are summarised in Table 4.

Table 4 Observer coverage on farms and traps between the previous report and commencement of the current contract

Farm State/CPC	Deployments (n)	Obs. days (n)
Croatia (EU)	4	191
Malta (EU)	7	459
Spain (EU)	8	468
Tunisia	1	96
Turkey	11	778
Total	**31**	**1,992**

3 Methodology for Quantifying Amount of Tuna

3.1 By Operators

3.1.1 On Purse Seiners

Three principle techniques were employed by vessels and remain unchanged from previous years:

- Those vessels equipped with acoustic fish finders were able to obtain an approximate estimate of the amount of tuna. However, anecdotal information reported by observers suggests that these were mainly deemed as indicative and vessels would rely on the following two techniques for a more accurate estimation;
- Visual estimation provided by divers from either the purse seiner or dive vessels supporting transfer operations; or
- Visual estimation from video records covering transfers between the seine and towing cage.

The scope of potential non-compliance reporting has increased as the Recommendation has evolved.. As a result, observers were required to report those instances where the quality or coverage of the video record was insufficient to estimate the quantity of tuna (in conformity with Recommendation 18-02, Annex 8) or if there was a greater than 10% difference between the observer and vessel estimation. Additionally, in these situations the observer would not sign the ITD.

Recommendation 18-02 (article 92) introduced the option of a single voluntary transfer in cases where ‘the video record is of insufficient quality or clarity to make such estimations’. In the event of a successful voluntary transfer, the observer was authorised to sign the ITD and no PNC was reported.

3.1.2 On Farms

Caging

Similarly, farms relied on video records of transfer operations between towing and farm cages to quantify the amount of tuna. In general, farms repeated transfers if the quality of the initial video record was insufficient to allow an accurate estimate of tuna. These repeated transfers were performed in cooperation with national competent authorities and ROP-BFT observers and in the spirit of the regulatory framework. Cagings were also able to use voluntary transfers.

All farm National Authorities have used stereoscopic camera systems at caging.

Article 85 of Recommendation 18-02 states observers should be provided with ‘access to stereoscopic camera footages at the time of caging that enables the measuring of length and estimating the corresponding weight’. This was not required under the current contract but will be applied for future caging seasons. The Consortium will develop appropriate sampling protocols and observer training, subject to ICCAT approval.

3.2 By Observers

On purse seiner operations

Observers relied on the standard video records of transfers to estimate the amount of tuna transferred. Estimates of incidental mortalities could be made if dead tuna became apparent as the purse seine net was hauled onboard after the fishing operation and then upon

completion of the transfer operation.

Of the 401 transfers conducted, the numbers of fish were estimated on 377 occasions (94%) and the ITD signed on 395 of those occasions, a similar proportion to last season (Table 5). Thirty voluntary transfers were also performed during the fishing season (Table 6). This rate of estimation is consistent with the trends of the last number of years, with the rate of estimation above 90% since 2013. This continued high level of observer estimation can be attributed to the introduction of minimum video standards for transfers prior to the 2013 season.

Table 5 Observer estimations of quantity of BFT from at sea transfers.

Flag State	Number of Transfers (n)	Video record of transfer taken (n)	ITD Signed	Count of BFT estimations from video record	
				By number (n)	By Weight (n)
Albania	2	2	2	2	-
Algeria	9	9	9	8	-
Croatia (EU)	97	97	97	95	-
Cyprus (EU)	0	0	0	0	-
France (EU)	18	18	18	16	-
Italy (EU)	30	30	30	25	-
Libya	23	22	21	23	-
Malta (EU)	0	0	0	0	-
Morocco	3	3	3	3	-
Spain (EU)	35	35	35	35	-
Syria	1	1	1	1	-
Tunisia	17	17	17	17	-
Turkey	162	158	158	148	-
Total	**401**	**396**	**395**	**377**	**0**

Table 6 Voluntary transfers performed, by Flag State

Flag State	Number of voluntary transfers
Albania	2
France (EU)	3
Italy (EU)	14
Libya	1
Spain (EU)	6
Tunisia	2
Turkey	2

Observers have commented that estimating the weight of fish remains impossible for the following reasons:

- Broad range of size variability between tuna;
- Quality of the video image;
- Density of fish obstructed the view of individual fish; and
- Lack of size reference tool combined with depth of field of the image.

Observers were able to estimate the number of fish in over 94% of cases for the recorded transfer operations. In cases where they were not, the factors that prevented a reliable estimate of the amount of tuna included:

- The density of tuna obscured individual fish and therefore prevented an accurate count; and
- Densely packed fish moving in both directions during the transfer.

Availability of video records

The original video record is retained by the towing vessel and accompanies the tuna to the receiving farm. The practice of providing video records to observers has improved considerably, with most observers receiving copies of the videos for review in a timely fashion.

The best option remains to provide observers with a copy of the original video record immediately following transfer. This ensures there is sufficient time and better conditions to review the video several times.

Caging

A summary of observer estimations of quantity of tuna during caging operations is set out in Table 7. The same problems noted for transfers between purse seiners and towing cages at sea were also relevant to caging operations. Observers were able to estimate by number for 91% of transfers, which resulted in 73% of ITDs being signed. This indicates a greater number of ITDs being signed compared to the previous season (41%), which can be attributed to improved quality of transfer videos and the use of voluntary transfers.

During one Croatian deployment, four 'inter-farm transfers' were recorded to represent four farms being merged into one on 14th June as part of a revision of the EU farming plan. There was no physical transfer of fish, and therefore no video records to view, but upon ICCAT's request the eBCDs were signed by the observer in the caging section.

The Moroccan cagings included 26 cagings from traps. The Italian cagings were all from traps.

Table 7: Observer estimations of quantity of BFT during caging.

Farm State/CPC	No. Caging Ops (n)	Stereoscopic Video System (n)	ITD / ICD Signed	Count of BFT estimations from video record	
				By number (n)	By Weight (n)
Croatia (EU)	22	18	20	18	-
Italy (EU)	6	6	6	6	-
Malta (EU)	70	70	34	69	-
Morocco	44	44	44	44	-
Portugal (EU)	3	3	2	2	-
Spain (EU)	39	39	22	27	-
Tunisia	12	12	11	11	-
Turkey	12	12	12	12	-
Total	**208**	**204**	**151**	**189**	**0**

Harvests

During harvest operations, observers conduct monitoring activities either from the killing platform, carrier / processing vessel or on the farm premises for fresh exports or a combination, depending on where the most accurate count of tuna and weight can be recorded. In all instances of harvesting, facilities both at farms and on the carrier / processing vessels permit an accurate count of tuna removed and individual or average weight for fish harvested.

4 Potential Non-Compliance Events

Observers record and report PNCs under the codes listed in Table 8 below. In the event that something happens that does not fit to a code then it will be listed as other and a description of the event recorded. For data management purposes PNC codes are divided by operation type. As such there exist certain multiple PNC codes for the same type of event but occurring in a different type of operation. The PNC codes remained the same as those used in the previous season.

Article 93 of Recommendation 18-02 requires observers to indicate his/her presence on transfer declarations and BCDs in the event the observer does not sign. Additionally, the reason for refusal to sign, including reference to the specific rule which has not been respected, must be indicated on the unsigned document. The list of PNC codes has been updated accordingly to indicate the rules relevant to each PNC.

Table 8 Potential Non-Compliance event description and code

Potential Non-Compliance [PNC] Event and Codes Fishing Season		
PNC Event	**Reference**	**Code**
Relative to YOUR fishing vessel		
Specific events:		
Observer access to satellite navigation, radar screens or electronic communication facilities denied	Rec. 18-02; Annex 6 – Para 11b.	FACD
Observer obstructed, intimidated, interfered with, bribed or attempted to bribe in the performance of his/her duties	Rec. 18-02; Annex 6 – Para 11.	FOBS
Unauthorised transhipment in port (dead tuna)	Rec. 18-02; Para 77 / 78	FTRP
Transhipment at-sea involving **your vessel** (dead tuna)	Rec. 18-02; Para 77	FTRS
Fishing outside designated season	Rec. 18-02; Para 29	FFOS
Fish below minimum size retained, transferred or landed	Rec. 18-02; Para 34	FUNT
Observer prevented from taking size measurements, biological samples or examining tags	Rec. 18-02; Para 85	FOBP
Problems with the official documentation (Logbook, eBCD, ITD..):		
No electronic BFT Catch document (**eBCD**) produced	Rec. 11-20	FBDA
Dead tuna incorrectly recorded in the **vessel logbook and/or eBCD**	Rec. 18-02; Annex 11	FMOR
Information in the **eBCD** is incorrect or inconsistent (operation dates, vessel/cage details, number and weight of fish transferred)	Rec. 18-13; Annex 1	FBIN
No **logbook** entry made for that day (as per requirements of Annex 2 of Rec. 18-02)	Rec. 18-02; Para 63 / Annex 2	FLBN
No **logbook** entry for a fishing operation (successful or not) before 0900 the following day	Rec. 18-02; Para 66	FLBF
Incomplete and/or incorrect **logbook** information	Rec. 18-02; Para 63 / Annex 2	FLBI
ICCAT Transfer declaration (ITD) not completed in accordance with Para. 89 and Annex 4 of Rec. 18-02.	Rec. 18-02; Para 89 Annex 4	FITN
Problems with the transfer:		
Tuna **transferred** to vessel(s) not on **ICCAT record of authorized vessels** or to a cage without a unique identifiable number	Rec. 18-02; Para 49 / 86	FTNN
Transfer conducted before receiving **transfer authorisation**	Rec. 18-02; Para 87	FTRA
Pre-transfer notification not sent (or not sent prior to transfer)	Rec. 18-02; Para 86	FTRN
Problems with the video during a Transfer: (for a control transfer add the letter "C" before the PNC code). Note, the vessel may conduct one additional voluntary transfer after the initial transfer. If video record on second transfer is acceptable, no PNCs should be submitted for the first transfer and the ITD can be signed		
Transfer not monitored by video	Rec. 18-02; Para 91	TNVT
The electronic storage device not provided to the observer as soon as possible after **transfer** operation	Rec. 18-02; Para 92 Annex 8 i	TVRO
Video record of **transfer** did not show opening and/or closure of door at the start and/or the end of **transfer**	Rec. 18-02; Para 92 Annex 8 vi	TODT
Video record of **transfer** did not show date and/or time continuously	Rec. 18-02; Para 92 Annex 8 v	TDDT

Video record of **transfer** was not continuous or did not cover the entire transfer operation	Rec. 18-02; Para 92 Annex 8 vii	TLTO
Video record of **transfer** did not show the receiving and donor cage to see if they already held / still hold tuna before and after the **transfer** operation	Rec. 18-02; Para 92 Annex 8 vi	TVDS
Video record of **transfer** did not show Transfer Authorisation number at beginning or end of the video	Rec. 18-02; Para 92 Annex 8 iv	TRAT
Independent observer estimate of **transfer** amount was not possible due to video quality or clarity	Rec. 18-02; Para 92 Annex 8 viii	TTNP
Observer estimate for the **transfer** more than 10% different than vessel's	Rec. 18-02; Para 92	TOGO
Copy of video record of **transfer** not provided to the observer	Rec. 18-02; Para 92 Annex 8 iii	TTTO
No **unique identifiable cage number** on a cage	Rec. 18-02; Para 86	TCNU
Logbook not completed in line with requirements of Annex 2 of Rec. 18-02 following transfer operation	Rec. 18-02; Para 63; Para 89c / Annex 2	TLBI
Problems with the video during a Release:		
Release not monitored by video	Rec. 18-02; Para 88 Annex 10	RNVR
Tuna not **released** following a release order	Rec. 18-02; Para 88	RRLI
Video of tuna **release** from farming cage to the sea not provided to the observer.	Rec. 18-02; Para 88 Annex 10	RVOR
Relative to OTHER vessel(s) / aerial support		
Aerial support used during searching operations (e.g. drone, plane)	Rec. 18-02; Para 48	FAER
Vessel not on **ICCAT record of authorized vessels** involved in fishing operations	Rec. 18-02; Para 53	FVSF
Transhipment at-sea (dead tuna) – between **other vessels**	Rec. 18-02; Para 77	FVTS
Potential Non-Compliance [PNC] Event and Codes Farm & Trap Deployments		
Specific Events		
Observer obstructed, intimidated, interfered with, bribed or attempted to bribe in the performance of his/her duties	Rec. 18-02; Annex 6 – Para 11d.	COBS
Landing in non-designated port (Fishing)	Rec. 18-02; Para 71	CLDP
Unauthorised transhipment in port (including transhipment in unauthorised port)	Rec. 18-02; Para 77 / 78	CTRP
Vessel not on **ICCAT record of authorized vessels** involved in operations	Rec. 18-02; Para 53	CVSH
Observer prevented from taking size measurements, biological samples or examining tags	Rec. 18-02; Para 85	COBP
Problems with the official documentation (eBCD, ICD):		
ICCAT Caging Declaration (**ICD**) not completed	Rec. 06-07; Para 2b	CNCR
Electronic BFT Catch document (**eBCD**) not produced or incomplete following caging.	Rec. 18-13; Annex 1	CBDA
Observer observations of caging operation do not agree with those in the **eBCD** (for example, different dates, cage numbers, numbers of tuna).	Rec. 18-13; Annex 1 Rec. 18-02; Para 85	CBDX
A **group BCD** reference number was allocated to fish from more than one JFO, or from more than one vessel not in the same JFO	Rec. 18-13; Para 6	CJCD
A **group BCD** reference number was allocated to caging operation > 1 day	Rec. 18-13; Para 6	COCD
A **group BCD** reference number was allocated to more than one farm cage	Rec. 18-13; Para 6	CCCD

Information in the electronic BFT Catch document **(eBCD**) not completed following a harvest (Harvest) / Harvested fish not allocated to an **eBCD**	Rec. 18-13; Annex 1	HBDA
Observer observations of harvested tuna do not agree with those in the **eBCD** (for example, date, cage, number harvested).	Rec. 18-13; Annex 1 Rec. 18-02; Para 85	HBCW
Problems with the caging:		
Tuna **caged** before authorisation received	Rec. 18-02; Para 95	CDPA
Fish below minimum size **caged**	Rec. 18-02; Para 34	CUND
Transport cage anchored within 0.5 nm of farming facilities prior to start of caging operations	Rec. 18-02; Para 94	CQAF
Fish caged without eBCD and/or ICD	Rec. 18-02; Para 96	CQBI
Caging not covered by stereoscopical video	Rec. 18-02; Para 99	CQSV
Tuna caged are not separated by JFO	Rec. 18-13; Para 5	CQJF
Tuna caged are not separated by flag of the catching vessel (outside of JFO)	Rec. 18-13; Para 5	CQUF
Carried over tuna from previous year/s not placed in separate cages	Rec. 18-13; Para 8	CQUY
Unauthorised **caging** after 22nd of August, or any caging after 7th of September	Rec. 18-02; Para 95	CLAT
Internal transfer of bluefin tuna between farm cages not authorized or not in presence of CPC control authorities	Rec. 18-02; Para 100	CIAC
Independent observer estimate of amount **caged** was not possible due to video quality	Rec. 18-02; Annex 8 viii	CCNP
Observer estimate more than 10% different than farm's (**caging**)	Rec. 18-02; Para 98	CODO
An accurate copy of the video record of the caging was not provided to the observer on the farm	Rec. 18-02; Para 92 Annex 8 iii	CNTO
BFT caged by a vessel(s) not on **ICCAT record of authorized vessels**	Rec. 18-02; Para 53	CDNI
Farm / transport cage without a unique identifiable number	Rec. 18-02; Para 86	CNAC
Problems with the video during a caging: (for a control caging add the letter "C" before the PNC code) **Note, the vessel may conduct one additional voluntary transfer after the initial transfer. If video record on second transfer is acceptable, no PNCs should be submitted for the first transfer and the ICD can be signed**		
Caging not monitored by video	Rec. 18-02; Para 97	CNVD
The electronic storage device containing the original **caging** video record was not provided to the regional observer as soon as possible after the operation	Rec. 18-02; Para 92 Annex 8 i	CFVA
Video record of **caging** did not show opening and/or closing of the door at the start and/or end of the operation	Rec. 18-02; Para 92 Annex 8 vi	CODN
Video record of the **caging** did not show date and/or time continuously	Rec. 18-02; Para 92 Annex 8 v	CDDT
Video record of **caging** was not continuous or did not cover the entire operation	Rec. 18-02; Para 92 Annex 8 vii	CFTO
Video record did not show the receiving and donor cage to see if they already held / still hold tuna before and after the **caging** operation.	Rec. 18-02; Para 92 Annex 8 vi	CVDS
Video record of transfers did not show **Caging Authorisation** number at beginning or end of each video	Rec. 18-02; Para 92 Annex 8 iv	CTNM
Problems with the release:		
Tuna not **released** following a release order	Rec. 18-02; Para 95	CDRO
Problems with the video during a Release:		
Release not monitored by video	Rec. 18-02; Annex 10	RMVI

Copy of the video record of the **release** not provided to the observer	Rec. 18-02; Annex 10	RODV
Problems during a Harvest deployment:		
Observer obstructed, intimidated, interfered with, bribed or attempted to bribe in the **performance of his/her duties**	Rec. 18-02; Annex 6 – Para 11d.	HOBP
Observer observations of number and weight of harvested tuna inconsistent with that in the **eBCD**.	Rec 18-13; Annex 1 Rec. 18-02; Para 85	HMSH
Internal transfer of bluefin tuna between farm cages not authorized or not in presence of CPC control authorities	Rec. 18-02; Para 100	HIAC
No traceability, for **internal transfers** of tuna within a farm	Rec. 18-02; Para 103	HITV
Farm cage without a **unique identifiable cage number**	Rec. 18-02; Para 86	HNAC
Vessel(s) not on ICCAT **record of authorized vessels** involved in operations.	Rec. 18-02; Para 49	HDNI
Fish below minimum size **harvested**	Rec. 18-02; Para 34	HUND
Simultaneous harvest occurred with a single observer	Rec. 18-02; Annex 6 b	HSSO

The majority of PNCs during the fishing season (81%) were logbook related, with most of those relating to logbooks not being completed that day (FLBN) or having incorrect/incomplete details recorded (FLBI). The majority of PNCs issued due to problems with transfer videos resulted from estimates being impossible due to video quality/clarity (TTNP). Similarly, the majority of PNCs issued for farms resulted from video quality/clarity precluding observer estimates (CCNP). PNCs issued are summarised in Table 9 and Table 10. Table 11 compares the proportion of PNCs with the proportion of transfers as a proxy for activities most likely to incur a PNC.

As agreed at the meeting with ICCAT and CPCs prior to the season, some PNCs were not reported in real time, being deemed administrative PNCs for which real time reporting was not necessary. Such administrative PNCs usually concerned small irregularities in logbook completion.

For purse seine deployments, 59 PNCs were not submitted in real time but were only included in the final report outputs. 47 PNCs, most of which were due to issues with the transfer video and consequent non-signing of the ITD, were submitted in real time. Two PNCs were issued in real time but were subsequently rescinded; in one case the eBCD was not shown to the observer and in the other a video record of a transfer was not provided for the observer to retain (although it was possible for estimates to be made from a video record kept on the vessel). In each case, the PNC was rescinded when the required item was provided.

For farms, 30 PNCs were issued in real time, whilst only 2 were deemed administrative and not requiring real time submission. This contrast to purse seine deployments is due to the logbook requirements on purse seiners which are not required on farms.

Table 9 Potential Non-Compliance Events reported during the 2019 purse seine fishing season.

	FBDA	FBIN	FITN	FLBF	FLBI	FLBN	FMOR	FTRS	TCNU	TLBI	TLTO	TOGO	TRAT	TTNP	TVRO	Total
ALB							1									1
CYP					1											1
DZA		3			5											8
ESP				1												1
FRA			1													1
HRV	1				6	1							1			9
ITA		1			1							1	1			4
LBY		5				7	1									13
NOR					1											1
SYR					1											1
TUN		2		1	2			1								6
TUR				16	18	23	4		1	1	1			15	3	82
Total	1	11	1	18	35	31	6	1	1	1	1	1	2	15	3	

Table 10 Potential Non-Compliance events reported on farms during the current contract (April 2019 – present).

	CBDX	CCNP	CFTO	CLAT	CODN	CODO	CVDS	CVSH	Total
ESP		13				3			16
HRV	1								1
MAR		4	1						5
MLT				1	1	2	2	2	6
TUN	1	2							3
TUR								1	1
Total	2	19	1	1	1	5	2	3	

Table 11 Comparison of transfers with PNCs by Flag State

Flag State	% of transfers	% of PNCs
Albania	0.5	0.8
Algeria	2.2	6.3
Croatia (EU)	24.2	7.0
Cyprus (EU)	0.0	0.8
Egypt	1.0	0.0
France (EU)	4.5	0.8
Italy (EU)	7.5	3.1
Libya	5.7	10.2
Malta (EU)	0.0	0.0
Morocco	0.7	0.0
Norway	0.0	0.8
Spain (EU)	8.7	0.8
Syria	0.2	0.8
Tunisia	4.2	4.7
Turkey	40.4	64.1

5 Submission of Deployment Outputs

Article 7d) of Annex 6 Rec. 18-02 requires that observer deployment reports are submitted to the Secretariat within 20 calendar days from the end of the period of observation. Figure 1 shows conformity with the submission deadline during the current and previous years reflecting continued development of the Programme. In 2019, 100% of reports were submitted within 20 days, and is the second consecutive year in which this has been the case.

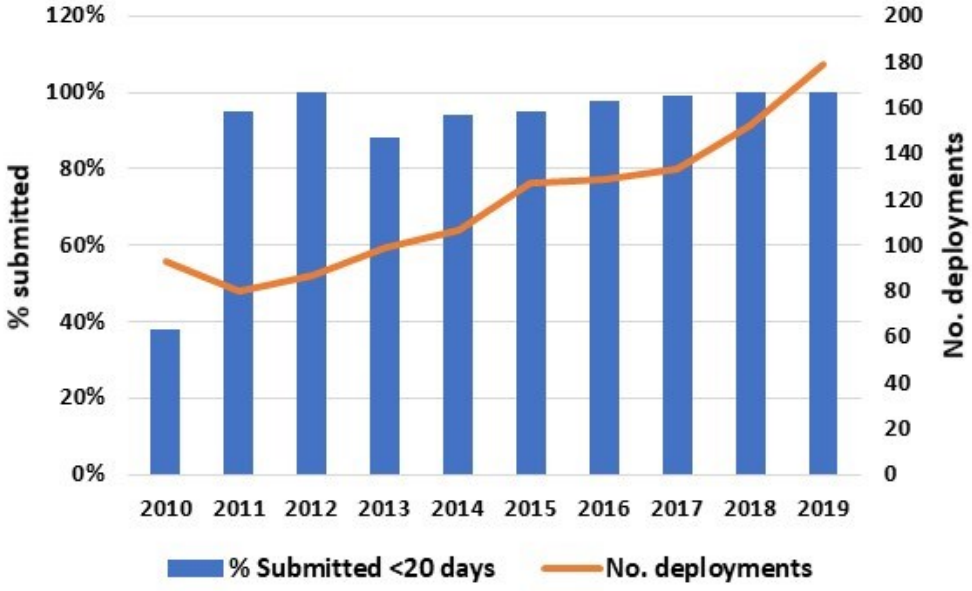

Figure 1 Proportion of outputs submitted and number of deployments 2010-2019

6 Scientific Monitoring and Activities

6.1 Length & weight sampling

Observers were instructed to perform length and weight sampling on all accessible bluefin tuna which had died during capture and transfer phases of the purse seine operation. A total of 439 individuals had length measurements taken with CFL, taken from 82% of measured fish.74 individuals had length measurements taken with SFL. Weights were recorded for 47 fish.

6.2 Genetic Sampling

Genetic samples were not requested for this season.

6.3 Tagging

The GBYP outlined the research necessary for improving the scientific advice that the Committee provides to the Commission which includes a tagging and programme. ROP observers have been provided with material publicising the tagging programme, its importance and the implications for sampling during harvest operations 2018/2019. Observers were also requested by GBYP to retain the heads of tagged tuna for subsequent collection and otolith analysis, although no tags were recovered during the season.

7 Summary and Key Outcomes

The following section provides a brief overview of the range of components covered by observer deployments and identifies the key outcomes and lesson(s) learned. Potential solutions required to deliver improvements are also introduced. The key issues are consistent with those reported last year.

Table 12: Summary of key outcomes and lessons learned.

Activity	Key Outcome	Lessons learned	Potential Solution
Video Tampering	It can be very difficult for an observer to determine if video footage has been tampered with cuts in the video are hidden by cross fades, this problem is most likely to occur when observers are not provided the video of the transfer directly.	Despite the introduction of minimum standards for video this still remains a weak point in the overall control of operations.	Observers are provided with the original video immediately and a full chain of custody is ensured for the video recording. If the original video record is not provided immediately, this constitutes a PNC. A number of PNCs were issued for this over the latest fishing season.
Electronic Logbook Issues	A large number of PNCs reported pertaining to logbook issues.	Knowledge of the logbook recording requirements could be improved among vessel masters. Furthermore, operating knowledge of the electronic logbook could be considerably improved in some cases. This includes most notably, navigation of the system, finding relevant records (most notably transfer authorisations), and reporting relevant details (most notably JFO records). In some cases, the layout of electronic logbooks did not permit the vessel masters to include all required information.	Improved instruction from CPC authorities to vessel masters prior to the season. Sending basic familiarisation manuals to observer coordinators prior to training so they are able to identify and record the relevant records in an electronic logbook. Logbooks have been an issue in previous years, and remain so. Provision of logbook samples by each CPC in good time for observer training would increase the Consortium's ability to fully prepare observers.
Editing electronic logbooks	Logbooks are often edited after the fact and it became apparent that observers were not informed of these changes on occasion, particularly regarding JFO records.	Improved operating system awareness is required by both the vessel and observer.	Improved instruction from CPC authorities to vessel masters prior to the season. Sending basic familiarisation manuals to observer coordinators prior to training so they are able to identify and record the relevant records in an electronic logbook.

Activity	Key Outcome	Lessons learned	Potential Solution
eBCDs (caging)	eBCDs for caging operations often take up to two months or more to produce by the farm.	Despite the potential for changes to the farm estimates to be made post stereoscopical results, farms still wait for results from the CPC authorities before providing the eBCD and associated estimates to the observer for verification and validation. This can be a particular problem when eBCDs are issued after the observer's deployment has ended.	Ensure observer coverage for caging deployments is flexible enough to ensure the observer remains on farm until the eBCDs are produced for verification and validation.
ITDs	Observers are sometimes not provided with the ICD/ITD to verify following caging or transfers during fishing.	Due to the delay which can occur in estimating the quantity and weight of tuna transferred, delays in issuing paperwork are often experienced. This has resulted in several observers not being shown the ICD/ITD to verify. In this case a PNC is issued at the end of the deployment if an ICD/ITD still has not been presented.	Continue with current procedure. Ensure farms understand consequences of not issuing ICD/ITDs to the observer by the end of deployment (at the latest).
eBCD system and flexibility	As delays are often experienced in the production of eBCD documents following caging, it is required that observer deployments, particularly during cagings, are flexible to ensure the observer is able to remain on the farm until such documentation is provided. However, on occasion, due to unforeseen circumstances, the observer may have to leave the farm early, thereby leaving several eBCDs un verified and/or validated.	The eBCD system does not allow retrospective verification / validation of eBCDs if the observer leaves the farm prior to their completion. This creates extra administrative issues for other stakeholders.	Ensure observer coverage for caging deployments is flexible enough to ensure the observer remains on farm until the eBCDs are produced for verification and validation. In the event an early departure is unavoidable, develop a clear procedure / set of guidelines on eBCD verification/validation which are understood and agreed upon by all stakeholders.

8 Recommendations

The Consortium has sought to continually improve and develop the Programme since its implementation through consultation with CPCs and the Secretariat on all technical and operational components. Recommendations for future improvements are presented below, clearly identifying the party responsible for implementing them. They cover both the general operational framework of the Programme and specific technical improvements associated with observer monitoring tasks and duties.

8.1 Consultation with CPCs

During previous years the Consortium found the consultation with CPCs and the Secretariat on operational and technical components of the Programme informative for improving the Programme and also for communicating and receiving direction on specific areas of data collection and reporting. This approach was reintroduced this season and should be continued.

8.2 Verifying quantity of tuna

When caging recommences next season, observers should be provided with access to stereoscopical camera footage and analysis in accordance with Recommendation 18-02.

8.3 Logbooks

Given the considerable number of PNCs associated with logbooks it is recommended that increased guidance be given to vessel masters by CPC authorities regarding the logbook requirements and detailed instruction regarding how to complete it. Areas that featured particularly were the incorrect application of the JFO allocation key and the requirement that the logbook be completed on a daily basis regardless of whether a fishing or transfer operation took place that day or not.

8.4 Caging/transfer documentation (eBCDs)

Considerable delays in production of caging paperwork (electronic and hard copies) meant that verification / validation often occurred considerable after the operation. This is thought to be due to the farm awaiting results of the stereoscopical analysis of the transfer. This situation was uniquely exacerbated in some cases this season due to the changeover from Rec 17-07 allowing multi-farm deployments, to 18-02 which forbids them. This changeover occurred whilst a number of caging deployments were active and resulted in observers losing access permissions for eBCDs before the eBCDs had been provided.

As the observer compares their figures with the standard video, and that farms may potentially edit transfer amounts after the fact, it would be desirable for the farm to provide initial estimates as soon as possible to allow the observer to verify/validate the eBCD as required as soon as possible after the operation, and ensure any PNCs are raised immediately afterwards.

This has also been identified as an issue in previous years.

8.5 CPC authorisations

Observer validation for cagings and specific harvests where the cage number for the caging varies from the cage number for the harvest require CPC authorisations. In the case of some cagings, CPC authorisations did not include the transfer authorisation number and as such the video record could not meet the requirements of para 92 and annex 8 of Rec. 18-02. It is suggested that specific CPCs are reminded of the requirements for caging video records.

For some harvests following intra farm transfers and BCD compensations, CPC authorisation detailing specifics of the transfer and / or BCD compensation are required as per guidance from ICCAT's panel 2. However, observers are often not presented with these details. It is recommended that specific authorisations detailing the cages and BCDs involved are issued when relevant to allow the observer to accurately verify and validate the information in the eBCD.

8.6 Vessel communications

A number of vessels do not have reliable internet access, which results in delays to mid-deployment reporting and reporting of PNCs. Operators should be encouraged to provide internet access to observers on all fishing vessels.

9 Conclusions

As in year nine it was the case that observers could again consistently estimate the amount of fish transferred by number. The key problem remains the estimation of amount of tuna by weight using standard video equipment, which should be alleviated during cagings by providing access to stereoscopical cameras to observers.

To conclude, overall the ROP-BFT provides outputs which permit the Commission to assess compliance with the regulatory framework.

Annex 1

On 18th June, one vessel crossed into Greek waters (36°58.813 N; 27°18.557 E), whilst en-route to the port of Cesme in Turkey after the completion of fishing operations, and was approached by a Greek coast guard vessel.

A crew member changed their flag to the Greek flag. The coast guard asked the captain to identify himself, the crew and the vessel details (Name, Flag, IMO) over the radio. This was soon followed by a request for the vessel to go into the port of Kos, which the captain refused. The captain also asked for help from the Turkish coast guard, who declined as they were unable to cross the border. It was at this point the observer realised the purse seiner was in Greek waters.

The Greek coastguard vessel then attempted to stop the purse seiner by actions including firing approximately twenty bullets into the air. At this point, the captain stopped the purse seiner and the observer informed the Consortium of the situation.

Later that day, another Greek coastguard arrived and the purse seiner was boarded by approximately a dozen armed men, who grouped the crew including the observer together on the bridge with their hands raised in the air. The boarders took control of the vessel and brought it to the port of Kos.

Once in port, Greek authorities confiscated documents including the vessel logbook, administrative papers and passports of all on board including that of the observer, as well as the observer's mission letter and ICCAT ROP identity card. The crew were then held at a coast guard post until 12:00 on 19th June. The observer was held in a room with the crew and the captain was held separately. They all spent the night without water or food.

The same day, the Greek authorities continued their investigations but found nothing suspect on-board. All the vessel's administrative papers were checked and the Captain was asked to produce the following documents:

- Certificate of Registration;
- Tonnage Certificate;
- Seaworthiness Certificate;
- Authorisation to embark an independent Greek engineer specializing in the control of the engine, in order to give them the authorization to leave the port.

The first two documents were already present on the vessel but only in Arabic. An official translation in English was asked for, then provided by the operator the next day. On 24th June, a document from the purse seiners flag state was provided to confirm the vessel's exemption from requiring the requested seaworthiness certificate, as well as authorisation to embark an independent Greek agent to perform engine tests.

From the 19th to the 25th all the crew, the captain and the observer stayed on board the vessel. On 25th June, after the engine tests performed by the independent Greek agent, the purse seiner was authorised to leave the port of Kos and continue on to Turkey.

Annex 2

On the evening of 13th June, the Consortium was informed by an observer that their vessel, as well as some others nearby, had approached to within seven miles of the Syrian coast, and an unidentified number of warships were warning the purse seiner by radio to stay away from the area. ICCAT and the Ministry of the vessel's flag state were notified the following morning when the Consortium had received the message. The notification included a request to check the vessel VMS records to confirm its location. Via liaison with Ministry and the operator, the vessel departed Syrian waters soon after. Whilst the Consortium has not itself received the VMS tracks, it was confirmed by ICCAT after the incident that the vessel concerned did indeed enter Syrian waters, whilst a number of other vessels approached but did not cross the border.