

ROP-BFT

ICCAT

ZI1946

Implementation Report

October 2018

Submitted by

MRAG

In association with



MRAG Ltd is an independent fisheries and aquatic resource consulting company dedicated to the sustainable use of natural resources through sound, integrated management practices and policies.

Established in 1986, MRAG has successfully completed projects in more than 60 countries. Our in-house experts have a wide variety of technical expertise and practical experience across all aspects of aquatic resource management, policy and planning, allowing us to take a multi-disciplinary approach to every project. Our capability to service an extensive array of resource management needs is further extended through our network of associations with internationally acclaimed experts in academic institutions and private organisations worldwide.

MRAG Ltd

18 Queen Street
London
W1J 5PN
United Kingdom

T: +44 (0) 20 7255 7755
F: +44 (0) 20 7499 5388
W: www.mrag.co.uk
E: enquiry@mrag.co.uk

Project code:	ZI1946
Version:	01
Prepared by:	SY, PN & AB
Approved by:	JP

Table of Contents

Table of Contents.....	i
List of Tables.....	ii
Acronyms	iii
Executive Summary.....	1
1 Introduction.....	2
2 Programme Development and Activities.....	4
2.1 Programme Development	4
2.2 Operational.....	4
2.2.1 Deployments on Purse Seiners.....	4
2.2.2 Deployments on Farms	7
3 Methodology for Quantifying Amount of Tuna	8
3.1 By Operators.....	8
3.1.1 On Purse Seiners	8
3.1.2 On Farms	8
3.2 By Observers	8
4 Potential Non-Compliance Events	11
5 Submission of Deployment Outputs.....	17
6 Scientific Monitoring and Activities.....	18
6.1 Length & weight sampling.....	18
6.2 Genetic Sampling	18
6.3 Tagging.....	18
6.4 Scar tissue sampling.....	18
7 Summary and Key Outcomes.....	19
8 Recommendations.....	22
8.1 Consultation with CPCs.....	22
8.2 Verifying quantity of tuna	22
8.3 Logbooks	22
8.4 Caging documentation (eBCDs and ICDs).....	22
8.5 CPC authorisations	22
9 Conclusions	24

List of Tables

Table 1: Report Content.....	3
Table 2: Observer coverage on purse seiners monitoring fishing and transfer operations.....	6
Table 3: Observer coverage on farms and traps monitoring caging and harvest operations during the current contract.	7
Table 4 Observer estimations of quantity of BFT from at sea transfers.....	9
Table 5: Observer estimations of quantity of BFT during caging.	10
Table 6 Potential Non-Compliance event description and code	11
Table 7: Potential Non-Compliance Events reported during the 2018 fishing season.	15
Table 8: Potential Non-Compliance events reported on farms during the current contract (April 2018 – March 2019).....	16
Table 9: Submission of deployment outputs by implementation year.....	17
Table 10: Summary of key outcomes and lessons learned.	19

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 seven (April 2018 / March 2019) 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 ninth 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. During year nine of the ROP-BFT 182 observers have been trained, equipped and mobilised for 152 purse seine deployments, as well as 40 completed and 13 current deployments on farms to date, achieving 100% observer coverage 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 three 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) was 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. Some operators repeated transfers during caging operations because the initial video record was unsuitable for providing a means of accurately estimating the amount of tuna. Therefore, further research / investigation is required to recommend a minimum standard of camera and viewing equipment for at sea conditions. Such an investigation should also produce recommendations on procedures that should be followed by operators so that the video record covers the entire transfer process and produce a video record that could be provided to the observer immediately following the transfer to ensure they have sufficient time to review the footage during their deployment. 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: During 2017 no meeting was held between CPCs, the Secretariat, SCRS and the Consortium. In previous years, meetings were held which proved to be constructive in improving the Programme and the Consortium would propose that they be continued prior to the next fishing season.

1 Introduction

This was the eighth 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 framework¹ 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 covered monitoring activities of fishing, transfer and caging phases to date. Harvesting is ongoing at the time of writing for this year and continues throughout the first quarter of 2019.

There were no key changes to the observer role during the 2018 fishing season with the two key roles remaining those introduced during the 2013 season; the reporting of potential non-compliance events (PNCs) and observers not signing relevant documents unless observer and operator estimations had less than a 10% difference in estimates and a video record fully compliant with Annex 8 of Recommendation 17-07.

Fishing activities were conducted for one month between mid-May and mid-June. However, a number of vessels flagged to Libya and Algeria did not complete their deployments until July or August. Although fishing was completed within the season, the Libyan vessels came into port late due to waiting for bad weather to clear to allow control transfers. Four Algerian vessels sheltered in port at Licata, Italy due to poor weather before returning to Algeria for the end of deployment.

This was followed by caging operations which extended as far as September in some cases where environmental conditions hindered transfers at farms.

Harvesting operations were performed at a small number of farms specialising in fresh exports. The main harvesting season has started and will continue through to early February. As such this report only focuses on the fishing and caging operations to date.

The structure of the report summarises the implementation process before moving to operational components covering observer deployments on purse seiners and farms, the observations carried out to satisfy the requirements and reporting to ICCAT. The report concludes with a summary of the key outcomes and lessons learned, plus potential solutions for introducing improvements to the programme.

Each component of the report is presented in Table 1.

¹ ICCAT Recommendations. 17-07, 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 2011-2018 to the SCRS
Scientific monitoring activities	6	Scope of biological sampling
Summary of Key Outcomes of ROP-BFT 2018	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

A review of data management and reporting obligations was performed prior to the operational (training and deployment) phase of the Programme. Inputs were provided by the SCRS at the point of submission of the 2014 consolidated database (Section 5) regarding overall data outputs of the programme which were taken in to consideration in the review of the data management system. This review found the existing systems to be adequate for purpose with changes relating to the new regulatory requirements for control transfers at sea and at farms.

Systems for quality management were developed further with automated data checks further enhanced within the data management system.

Overall the programme development comprised of the following components:

- Consultation with the ICCAT Secretariat, 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 genetic sampling (6.2).

2.2 Operational

2.2.1 Deployments on Purse Seiners

During the 2018 ROP-BFT, observers were deployed on 152 purse seine vessels (Table 2). Observers were mobilised to 31 ports in the Mediterranean Sea and two in Norway, and 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.

Observers initially deployed on two vessels were removed mid-season and replaced.

On 05/06/2018 an observer disembarked the vessel in Valletta, Malta, citing illness and poor living conditions on-board. The observer received medical treatment in Valletta and was medically repatriated. Due to the claims of poor on-board conditions, a health inspection of the vessel was arranged with the Maltese Port Authorities. The vessel passed, and it was subsequently determined the medical issues were independent of the conditions onboard. A replacement observer, embarked on 08/06/2018 and resumed the deployment.

Another observer was obstructed and intimidated by the crew, especially the captain, of the vessel when attempting to record a number of mortalities incurred during a fishing operation on 26/05/2018. The captain attempted to intimidate and bargain with the observer to avoid declaring the dead tuna, or to declare a lower number than the observer had counted. In addition, the following day the observer was unable to obtain an accurate count of the fish from the transfer video due to the large number of fish swimming back and forth between the

net and the cage, and was therefore unable to sign the ITD. The observer was again intimidated in an effort to get the ITD signed. This included aggressive phone calls from the company director to the observer from 27/05/2018. With Consortium approval, the ITD was signed in order to defuse the situation. Around this time, the observer requested removal from the vessel. A fisheries inspector arrived on 28/05/2018. However, rather than removing the observer from the vessel immediately, as expected, the inspector attempted to involve the observer in an investigation and a group discussion with the crew, which the observer declined, and was then disembarked from the fishing vessel to the patrol vessel. However, the inspector still attempted to pressure the observer into giving a formal statement, although it had been agreed the formal statement would be made upon debriefing and sent on. The inspector also spoke to the observer in a derogatory fashion. On 29/05/2018, the observer commenced their journey home. A replacement observer embarked the vessel on 29/05/2018.

The deployments by flag State / CPC are set out in Table 2. In total, 3,957 observer sea days were completed on 152 purse seine vessels. This represents an increase of 9 observer sea days relative to 2017.

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

Flag State/CPC	Vessels (n)	Obs. Sea Days*(n)
Albania	1	31
Algeria	14	485
Croatia (EU)	15	315
Cyprus (EU)	1	28
Egypt	1	29
France (EU)	20	395
Italy (EU)	15	320
Libya	14	538
Malta (EU)	1	28
Morocco	2	54
Norway	2	64
Spain (EU)	6	74
Syria	1	13
Tunisia	37	905
Turkey	22	678
Total	152	3957

* 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, 1,785 observer days were completed on 40 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)	3	91
Italy (EU)	1	31
Malta (EU)	11	554
Morocco	4	135
Portugal (EU)	4	96
Spain (EU)	9	532
Tunisia	1	14
Turkey	7	332
Total	40	1785

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 continued to incorporate increased requirements introduced by Recommendation 12-03, 13-07, 14-04 and carried forward by 17-07. 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 17-07, Annex 8) or if there was a greater than 10% difference between the observer and vessel estimation. Additionally, in these situations the observer was not authorized to sign the ITD.

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.

All farm National Authorities have used stereoscopic camera systems at caging and the Secretariat has forwarded the results to the Consortium.

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 306 transfers conducted, the quantity of tuna was estimated by number on 302 occasions (99%) with the ITD signed on 300 of those occasions (98% of all transfers compared to 89% of transfers in 2017). Estimates of weight were not possible. 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. A breakdown by flag State is shown below in Table 4.

Table 4 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	3	3	3	3	-
Algeria	9	9	9	9	-
Croatia (EU)	68	68	68	68	-
Cyprus (EU)	0	0	0	0	-
France (EU)	30	30	30	30	-
Italy (EU)	34	34	34	34	-
Libya	25	25	23	25	-
Malta (EU)	0	0	0	0	-
Morocco	4	4	4	4	-
Norway	0	0	0	0	-
Spain (EU)	17	17	16	16	-
Syria	1	1	1	1	-
Tunisia	17	17	17	16	-
Turkey	98	98	95	96	-
Total	306	306	300	302	0

Observers commented that estimating the weight of fish remains impossible due to 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 98% of cases for 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 5. 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 87% of transfers, which resulted in 41% of ITDs being signed.

Table 5: 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)	15	15	11	15	-
Italy (EU)	9	9	0	9	-
Malta (EU)	80	80	17	79	-
Morocco	1	1	0	1	
Portugal (EU)	3	3	2	2	
Spain (EU)	36	36	19	19	-
Tunisia	4	4	0	2	-
Turkey	19	19	19	19	-
Total	167	167	68	146	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 6 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.

Table 6 Potential Non-Compliance event description and code

Potential Non-Compliance [PNC] Event and Codes Fishing Season	
PNC Event	Code
Relative to YOUR fishing vessel	
Specific events:	
Observer access to communication facilities denied	FACD
Observer prevented from carrying out duties (insults, threats,...)	FOBS
Transshipment in unauthorised port (dead tuna)	FTRP
Transshipment at-sea involving your vessel (dead tuna)	FTRS
Landing in unauthorised port (dead tuna)	FLDP
Fishing outside designated season	FFOS
Fish below minimum size or weight captured or transferred (dead tuna)	FUNT
Vessel outside JFO involved directly in a fishing operation or a transfer	FOIX
Problems with the official documentation (Logbook, eBCD, ITD,...):	
No electronic BFT Catch document (eBCD) produced	FBDA
Dead tuna not adequately recorded in the vessel logbook and/or eBCD	FMOR
No logbook entry made for that day	FLBN
No logbook entry for a fishing operation (successful or not)	FLBF
Incomplete <u>and/or</u> incorrect logbook entry made for that day	FLBI
ICCAT transfer declaration (ITD) not completed and/or not signed by the observer	FITN
Problems with the transfer:	
Tuna transferred to a vessel(s) and or to a cage without an ICCAT number/identification	FTNN
Transfer conducted before receiving Authorisation	FTRA
Pre-transfer notification not sent (or not sent prior to transfer)	FTRN
Problems with the video during a Transfer: (for a control transfer add the letter "C" before the PNC code)	
Transfer not monitored by video	TNVT
Video recording device not provided to the observer as soon as possible after transfer	TVRO
Video record of transfer did not show opening <u>and/or</u> closure of door at the start or the end of transfer	TODT
Video record of transfer did not show date <u>and/or</u> time continuously	TDDT
Video record of transfer did not show 100% of the operation (cut, gap,...)	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	TVDS
Video record of transfer did not show Transfer Authorisation number at beginning or end of the video	TRAT
Independent observer estimate of transfer amount was not possible due to video quality	TTNP
Observer estimate for the transfer more than 10% different than vessel's	TOGO
Accurate copy of the video record of the transfer not transmitted to the observer on the fishing vessel	TTTO
Problems with the video during a Release:	
Less than the correct amount of tuna released	RINR
Video record of release did not show 100% of the operation (cut, gap,...)	RIVR
Release not monitored by video	RNVR
Tuna not released following a release order	RRLI
Video of released tuna not provided to the observer immediately after release	RVOR
Relative to OTHER vessel(s) / aerial support	
Aerial support used during searching operations (drone, plane,...)	FAER
Vessel without an ICCAT number involved in fishing operations	FVSF
Transshipment at-sea (dead tuna) – between other vessels	FVTS

Potential Non-Compliance [PNC] Event and Codes Farm & Trap Deployments	
PNC Event	Code
Specific Events	
Observer prevented from carrying out duties	COBS
Landing in unauthorised port	CLDP
Transshipment in unauthorised port	CTRP
Vessel without an ICCAT number involved in operations	HVSH
Observer prevented from taking size measurements, biological samples or examining tag/s	HOBP
Problems with the official documentation (eBCD, ITD,ICD...):	
Caging / Transfer Declaration (ICD / ITD) not completed	CNCR
Electronic BFT Catch document (eBCD) not completed - (Caging)	CBDA
A group BCD reference number was allocated to fish from more than one JFO	CJCD
A group BCD reference number was allocated to caging operation > 1 day	COCD
A group BCD reference number was allocated to more than one farm cage	CCCD
Electronic BFT Catch document (eBCD) not produced completely (Harvest) / Harvested fish not allocated to an eBCD	HBDA
Details in the eBCD inaccurate (e.g., date, cage number)	HBCW
Problems with the transfer/caging:	
Tuna caged before authorisation received	CDPA
Fish below minimum size caged	CUND
Dead tuna not adequately recorded by the farm	CMRA
Dead tuna during the towing operation not recorded in the ITD	CPUD
Fish not separated by JFO	CQJF
Fish not separated by flag of the catching vessel	CQUF
Fish not separated by year [of catching]	CQUY
Unauthorised caging after 15th August	CLAT
Independent observer estimate of amount caged was not possible due to video quality	CCNP
Observer estimate more than 10% different than farm's (caging)	CODO
An accurate copy of the video record of transfer not transmitted to the observer on the farm	CNTO
BFT caged by a vessel(s) without an ICCAT authorisation number	CDNI
Farm / transport cage without identifiable and different reference number	CNAC
Problems with the video during a transfer/caging: (for a control caging add the letter "C" before the PNC code)	
Caging not monitored by video	CNVD
Video recording device not provided to the observer as soon as possible after operation	CFVA
Video record of transfer did not show opening of door at the start of transfer - (Caging)	CODN
Video record of transfer did not show date continuously - (Caging)	CDDT
Video record of transfer did not show time continuously - (Caging)	CDTT
Video record did not show 100% of transfer (Caging).	CFTO
Video record of transfer did not show closing of door at the end of the transfer- (Caging).	CCDN
Video record did not show the receiving and donor cage to see if they already held / still hold tuna before and after the transfer operation (Caging).	CVDS

Video record of transfers did not show Transfer Authorisation number at beginning or end of each video (Caging).	CTNM
Problems with the transfer/caging:	
Tuna not released following a release order	CDRO
Less than the correct amount of tuna released	CWNA
Problems with the video during a Release:	
Release not monitored by video	RMVI
Video recording device of released tuna not provided to the observer as soon as possible after release	RODV
Problems with a Harvest:	
Observer weight and/or number estimate for harvested tuna 10% different to the farm's	HMSH

As seen in Table 7 the greatest number of PNCs reported during the purse seine season were sent under the 'Other' category (20%). Of these 65 reports, 75% related to issues with the vessel logbook. In addition, 17% of PNCs were directly linked to the logbook code (FLBN). These generally related to vessels failing to keep logbook records immediately prior to observer embarkation. There was also a relative increase in PNCs recorded as FITN (18%) indicating ITDs uncompleted and/or unsigned by the observer compared to the previous year.

As in previous years the most prevalent PNC reported at farms and traps was the lack of an estimation due to video quality (20%), (Table 8) although this was reduced in comparison to previous years. In the vast majority of these cases this was due to the water quality and beyond the control of the farm. The other most prevalent PNCs reported at farms were for uncompleted ICDs/ITDs (18%) and observer estimates differing from those of the farm by more than 10% (13%).

Table 7: Potential Non-Compliance Events reported during the 2018 fishing season.

	ALB	CYP	DZA	EGY	ESP	FRA	HRV	ITA	LBY	MAR	MLT	NOR	TUN	TUR	TOTAL
Other	0	0	17	0	1	1	3	3	16	0	0	0	12	12	65
CNCR	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
FBDA	0	0	0	0	0	2	0	0	1	0	0	0	0	0	3
FITN	0	0	0	0	2	16	1	1	0	0	0	0	1	40	61
FLBF	0	0	0	0	3	2	0	0	0	0	0	0	0	6	11
FLBI	0	2	12	0	6	5	6	5	11	0	1	2	3	2	55
FLBN	0	0	0	0	0	2	2	2	0	0	0	2	0	2	10
FMOR	0	0	1	0	0	1	8	1	0	0	0	2	1	4	18
FOBS	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
FTRS	0	0	0	0	0	0	1	1	0	0	0	0	0	1	3
FVSF	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
FVTS	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
HBCW	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
HVSH	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TDDT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TLTO	0	0	0	0	1	1	0	0	3	0	0	0	0	23	28
TNVT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TODT	0	0	0	0	0	1	0	0	1	0	0	0	0	11	13
TOGO	0	0	0	0	0	1	0	0	0	0	0	0	0	4	5
TRAT	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
TTNP	0	0	0	0	0	1	2	1	1	0	0	0	0	17	22
TTTO	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
TVDS	0	0	0	0	0	0	0	0	1	0	0	0	0	9	10
TVRO	0	0	0	0	0	0	0	0	1	1	0	0	1	6	9
	0	2	30	1	14	34	24	20	36	1	1	6	18	143	330

Table 8: Potential Non-Compliance events reported on farms during the current contract (April 2018 – March 2019).

	Croatia (EU)	Italy (EU)	Malta (EU)	Morocco	Portugal (EU)	Spain (EU)	Tunisia	Turkey	TOTAL
Other	0	1	9	1	0	1	2	0	14
HBCW	0	0	0	0	0	1	0	0	1
CFVA	0	0	0	0	0	9	1	0	10
CCNP	1	0	0	1	0	17	0	5	24
CTNM	0	0	0	0	0	1	0	0	1
CDTT	0	0	0	0	0	1	0	0	1
CVDS	0	0	0	0	0	4	0	0	4
CNCR	0	0	20	0	0	2	0	0	22
CCDN	1	0	0	0	1	0	0	0	2
CNAC	0	0	0	0	1	0	0	11	12
CODO	0	0	16	0	0	0	0	0	16
CLAT	0	0	1	0	0	1	1	0	3
CFTO	0	0	0	0	0	0	1	0	1
FITN	0	8	0	0	0	0	0	0	8
RIVR	0	2	0	0	0	0	0	0	2
	2	11	46	2	2	37	5	16	121

5 Submission of Deployment Outputs

Article 7d) of Annex 4 Rec. 17-07 requires that observer deployment reports are submitted to the Secretariat within 20 calendar days from the end of the period of observation. Table 9 shows conformity with the submission deadline during the current and previous years reflecting continued development of the Programme. In 2018, 100% of reports were submitted within 20 days.

Table 9: Submission of deployment outputs by implementation year.

Year	Submission date (days)	No. of Deployments (n)	% of Deployments
2010	≤ 20	36	38
	>20	57	62
2011	≤ 20	76	95
	>20	4	5
2012	≤ 20	87	100
	>20	0	0
2013	≤ 20	87	88
	>20	12	12
2014	≤ 20	100	94
	>20	7	6
2015	≤ 20	120	95
	>20	7	5
2016	≤ 20	126	98
	>20	3	2
2017	≤ 20	132	99
	>20	1	1
2018	≤ 20	152	100
	>20	0	0

The Consortium has previously submitted a consolidated database containing all data from year's two to five of the Programme. Year one has been excluded from this database with the agreement of the Secretariat given the differences in the data collection framework for that year compared to the other years of the programme. The data from years six, seven and eight are maintained in a separate but compatible database to these data. Data from the ninth year, representing the latest contract, is maintained in another separate but compatible database.

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 480 individuals had length measurements taken with CFL, taken from 95% of measured fish. Of these 228 also had their weight independently taken. A total of 25 individuals had SFL, CFL and weight recorded. The Consortium received guidance that SFL should be recorded preferentially, ideally with CFL. Observers only record LD1 when it is not possible to take any other measurements.

6.2 Genetic Sampling

For this season it was requested by the Secretariat that the ROP continue implementing a pilot programme collecting fin clip or muscle tissue samples as part of the GBYP, which was first implemented in 2017. For the purse seine season, the pilot included the entire Spanish, Turkish, Moroccan and Syrian fleets as well as 80% of the French fleet. Samples were taken following the protocol issued by GBYP and were delivered directly to the research institutes involved in Spain and Turkey following disembarkation.

Genetic samples have also been collected on farms in Turkey and Spain since May 2017.

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.

No tags were recovered by ROP observers during the 2018 fishing season.

6.4 Scar tissue sampling

The SCRS/GBYP coordination group has requested ROP observers collect data that indicates bluefin tuna and smalltooth cookiecutter shark (*Isistius brasiliensis*) interactions. This activity has been conducted during the previous number of harvest seasons and will continue in to the coming 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 10: 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.
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).	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.
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.
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 stereoscopic results, farms still wait for results from the CPC authorities before providing the eBCD and associated estimates to the observer for verification and validation.	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.

Activity	Key Outcome	Lessons learned	Potential Solution
ITDs	Observers are sometimes not provided with the ICD/ITD to verify following caging.	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 unverified 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.
eBCDs (harvest)	Incidental mortalities across different days are on occasion, pooled into one harvest by the farm. As such, the date of harvest of some of the tuna is incorrect.	Following correspondence with ICCAT, such eBCDs cannot be signed and a PNC must be sent as the date of the harvest on the eBCD is incorrect.	Continue with current procedure. Ensure farms understand consequences of incorrect dates in the harvest information of eBCDs.
Caging authorisation	Caging authorisations sent to some farms did not include an authorisation number. As such, no authorisation number was included in the caging video following requirements of Rec. 17-07 para 81 and Annex 8.	This is due to some CPCs not issuing an authorisation number with the caging authorisation. Instead, the authorisation itself and ICD/ITD number is shown. As such, the ICD and eBCD are signed, if everything else meets the requirements, with a PNC sent to the CPC.	Continue with current procedure. Ensure farms understand consequences of lack of authorisation number in the video dates in the harvest information of eBCDs.

Activity	Key Outcome	Lessons learned	Potential Solution
Intra farm transfers	Observers often not informed of intra farm transfers that may have occurred.	Information on the cages in the harvest section of the eBCD will differ from that in the caging section. It is understood that the observer may still sign the eBCD provided all other information is correct, and proof of authorisation of intra farm transfer from the CPC authorities is provided to the observer.	Continue with current procedure of signing BCDs provided proof of authorisation is provided. Ensure farms understand that proof of authorisation is required for the observer to sign a BCD for a harvest where the cage information differs between the caging and harvest sections.
Towing vessels	A farm released tuna from a cage that had been towed 20nm offshore (i.e., well outside the farm limits), the towing vessel did not have a CPC observer onboard.	Rec 17-07 clearly requires a CPC observer on 100% of towing vessels. However, there appears to be some misunderstanding of the requirement in cases of towing vessels outside of the fishing vessel as these are usually designated as farm support vessels.	Ensure the farms understand that towing vessels in all cases must have a CPC observer onboard, regardless of the distance involved or the time of the year.

8 Recommendations

The Consortium has sought to continually improve and develop the Programme over the past nine years of implementation through consultation and direction with and from CPCs and the Secretariat on all technical and operational components. Recommendations for future improvements are presented below, clearly identifying the party responsible for introducing the improvements covering 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. Reintroduction of this approach expanded to include as many CPCs as feasible would be welcome in the future.

8.2 Verifying quantity of tuna

Equipment used by operators proven to provide reliable estimates of tuna by number and weight throughout the fishery, i.e. transfers at sea and at caging should be provided to observers in order to validate and verify control documents. This action will maintain the integrity of the programme.

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 and in the period immediately preceding observer disembarkation.

8.4 Caging documentation (eBCDs and ICDs)

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 stereoscopic analysis of the transfer.

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 81 and annex 8 of Rec. 17-07. 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.

9 Conclusions

As in year eight it was the case that observers could again consistently estimate the amount of fish transferred by number (99% of at sea transfers, 87% at caging). The key problem remains the estimation of amount of tuna by weight using standard video equipment.

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