

# UK (British Indian Ocean Territory) National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2019

J. Moir Clark, C.C. Mees<sup>1</sup> and J. Pearce<sup>1</sup>

1. MRAG Ltd 18 Queen Street, London W1J 5PN, UK for the BIOT Administration

#### INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

In accordance with IOTC Resolution 15/02, final	YES
scientific data for the previous year was provided	
to the IOTC Secretariat by 30 June of the current	30/05/2018
year, for all fleets other than longline [e.g. for a	
National Report submitted to the IOTC Secretariat	
in 2019, final data for the 2018 calendar year must	
be provided to the Secretariat by 30 June 2019)	
In accordance with IOTC Resolution 15/02,	NO
provisional <b>longline data</b> for the previous year was	
provided to the IOTC Secretariat by 30 June of the	
current year [e.g. for a National Report submitted	
to the IOTC Secretariat in 2018, preliminary data	
for the 2017 calendar year was provided to the	
IOTC Secretariat by 30 June 2018).	
<b>REMINDER:</b> Final longline data for the previous	
year is due to the IOTC Secretariat by 30 Dec of the	
current year [e.g. for a National Report submitted	
to the IOTC Secretariat in 2018, final data for the	
2017 calendar year must be provided to the	
Secretariat by 30 December 2018).	

If no, please indicate the reason(s) and intended actions:

The UK British Indian Ocean Territory (BIOT) Administration does not operate a flag registry, BIOT does not have a fleet of commercial fishing vessels, and there is no commercial port in BIOT. The waters of the Territory are a no-take Marine Protected Area (MPA) to commercial fishing. An MPA exclusion zone covering Diego Garcia and its territorial waters exists where pelagic and demersal recreational fisheries are permitted. The recreational fishery catches some tuna and tuna like species.



#### **Executive Summary**

The United Kingdom (BIOT) waters are a no take Marine Protected Area (MPA) to commercial fishing. Diego Garcia and its territorial waters are excluded from the MPA and include a recreational fishery. UK (BIOT) does not operate a flag registry and has no commercial tuna fleet or fishing port. The UK(BIOT) National Report summarises fishing in its recreational fishery in 2018 and provides details of research activities undertaken to date within the MPA.

The recreational fishery landed 11.3 tonnes of tuna and tuna like species on Diego Garcia in 2018. Principle target tuna species of the industrial fisheries (yellowfin and skipjack tunas, no bigeye were caught) contributed 39.8% of the total catch of tuna and tuna like species of the recreational fishery. Recognising that yellowfin tuna are currently overfished and subject to overfishing in the Indian Ocean and that Resolution 19/01 seeks to address this, UK(BIOT) have been taking action to reduce the number of yellowfin tuna caught in the BIOT recreational fishery and encouraging their liverelease. Length frequency data were recorded for a sample of 464 yellowfin tuna from this fishery. The mean length was 79.95cm. Sharks caught in the recreational fishery are released alive.

IUU fishing remains one of the greatest threats to the BIOT ecosystem but a range of other threats exist including invasive and pest species, climate change, coastal change, disease, and pollution, included discarded fishing gear such as Fish Aggregating Devices. During 2018 the BIOT Environment Officer continued to take forward the BIOT Interim Conservation Management Framework which has been replaced with a set of current conservation priorities. In 2018/19 Recommendations of the Scientific Committee and those translated into Resolutions of the Commission have been implemented as appropriate by the BIOT Authorities and are reported.

#### **Contents**

	Execu	tive Summary	2
	Conte	nts	2
1.		kground/General	
2.	Flee	et structure	3
3.	Cato	ch and effort (by species and gear)	3
4.	Rec	reational fishery	3
5.	Eco	system and bycatch issues	4
	5.1	Sharks	4
	5.2	Seabirds	4
	5.3	Marine Turtles	5
	5.4	Other ecologically related species (e.g. marine mammals, whale sharks)	5
6.	Nati	ional data collection and processing systems	5
	6.1.	Logsheet data collection and verification (including date commenced and status of implementation)	5
	6.2.	Vessel Monitoring System (including date commenced and status of implementation)	5
	6.3. covera	Observer programme (including date commenced and status; number of observer, include percentage age by gear type)	5
	6.4.	Port sampling programme [including date commenced and status of implementation]	5
	6.5.	Unloading/Transhipment [including date commenced and status of implementation]	5
7.	Nati	ional research programs	5
8.	Imp	plementation of Scientific Committee Recommendations and Resolutions of the IOTC relevant to the SC	12

#### 1. BACKGROUND/GENERAL FISHERY INFORMATION

The waters of the British Indian Ocean Territory (BIOT) are a no-take Marine Protected Area (MPA) to commercial fishing. An MPA exclusion zone covering Diego Garcia and its territorial waters exists where pelagic and demersal recreational fisheries are permitted. The recreational fishery catches some tuna and tuna like species. Permitted recreational fisheries also include visiting yachts that fish outside the exclusion zone within the waters of the MPA, but not within Strict Nature Reserves. Such fishing must be for consumption within three days. Yachts must apply for a permit to moor in designated areas.

The UK (BIOT) Administration (BIOTA) does not operate a flag registry, BIOT does not have a fleet of commercial fishing vessels, and there is no commercial port in BIOT.

#### 2. FLEET STRUCTURE

N/A: As stated above, UK (BIOT) does not have a flag registry or fleet of commercial fishing vessels. The recreational fishery is described in Section 4.

#### 3. CATCH AND EFFORT (BY SPECIES AND GEAR)

N/A: As stated above, UK (BIOT) does not have a flag registry or a fleet of commercial fishing vessels.

#### 4. RECREATIONAL FISHERY

A small recreational fishery occurs in Diego Garcia. A total of 11.3 tonnes of tuna and tuna like species were caught in 2018 representing 46.96 % of the recreational catch (the remainder are reef associated species). The principle commercial tuna species (yellowfin, and skipjack tunas, no bigeye were landed) contributed 39.80% of the total catch of tuna and tuna like species of the recreational fishery (Recognising that yellowfin tuna are currently overfished and subject to overfishing in the Indian Ocean and that Resolution 19/01 seeks to address this, UK(BIOT) have been taking action to reduce the number of yellowfin tuna caught in the BIOT recreational fishery and encouraging their live-release.

#### Table 1).

Recognising that yellowfin tuna are currently overfished and subject to overfishing in the Indian Ocean and that Resolution 19/01 seeks to address this, UK(BIOT) have been taking action to reduce the number of yellowfin tuna caught in the BIOT recreational fishery and encouraging their live-release.

Table 1: Catches of tuna and tuna like species landed from the UK (BIOT) recreational fishery during the period 2014-2018.

	during the period 2017-2010.												
Year		Estimated catch of tuna and tuna like species (kg)							TOTAL (kg)				
Species	Blue marlin	Dolphinfish	Kawakawa	Rainbow runner	Sailfish	Wahoo	Dogtooth tuna	Skipjack tuna	Yellowfin tuna	Other tuna nei	Tunas	Tuna like spp	IIA
2014	0	97	444	126	0	7259	290	106	1670	0	2067	7926	9992
2015	0	27	977	152	73	9005	197	179	1741	0	2118	10233	12351
2016	0	73	1033	169	0	4076	203	251	2075	0	2529	5350	7879
2017	0	70	1525	288	0	7899	569	107	2425	0	3401	9783	13184
2018	0	94	1189	153	0	5163	189	176	4313	0	4678	6599	11277

Length data have been collected for yellowfin tuna (*T. albacares*) from the recreational fishery since June 2009. A total of 464 fish were measured in 2018. The mean length of the *T. albacares* sampled was 79.95cm. For

comparison, observer programmes on purse seiners (2005/6) and longliners (2003/4) operating in BIOT recorded mean lengths of 98cm (n=378) and 123cm (n=2385) respectively and the mean length in the recreational fishery in 2017 was 74.95cm.

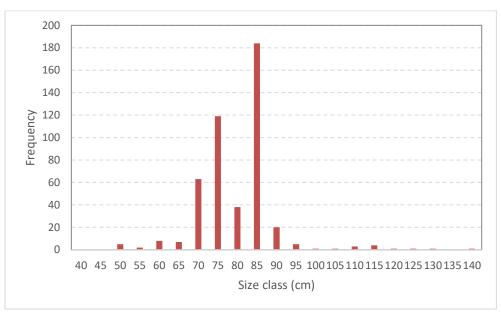


Figure 1: Yellowfin tuna length frequency plot using data from the recreational fishery in 2018 (n=464)

#### 5. ECOSYSTEM AND BYCATCH ISSUES

The BIOT zone, excluding territorial waters around Diego Garcia, is a no-take MPA closed to commercial fishing. The recreational fishery on Diego Garcia is monitored. Beyond the blanket protection of all species through the declaration of the MPA, there are currently no separate national plans of action in place for individual species or species groups. However, in its recreational fishery, all sharks and billfish caught must be released alive and fishers are encouraged to release yellowfin tuna.

The current ecosystem threats relate to illegal unreported and unregulated fishing of which a number of events were detected by the BIOT Patrol Vessel in 2018 and are reported separately to the Compliance Committee. Controlling IUU is a core element of the current conservation priorities (see <a href="https://biot.gov.io/environment/">https://biot.gov.io/environment/</a>).

Other threats to the ecosystem that have been identified include invasive and pest species (e.g. introduced by visiting vessels), climate change (including weather changes; coral bleaching and mortality, sea level rise, likely increasing rates of erosion or inundation events; and oceanic chemical composition change), coastal change, disease (particularly of corals), and pollution. The latter includes lost and abandoned fishing gear including fish aggregating devices (FADs) which can have harmful impacts on species and habitats within BIOT, research has been undertaken on their potential impacts (MRAG 2019a) and how currents and oceanic conditions may influence their movement throughout BIOT. Consequently, these also form a core element of the current conservation priorities.

#### 5.1 Sharks

Sharks must be released alive when caught in BIOT's recreational fishery. Sharks continue to be caught illegally by IUU vessels in BIOT waters.

Research, including tagging of sharks in BIOT waters is ongoing through the Bertarelli Programme on Marine Science which includes scientific research expeditions in BIOT (see Table 2).

#### 5.2 Seabirds

Seabird bycatch does not occur in the recreational fishery and has not been observed in IUU fisheries.

#### **5.3** Marine Turtles

No turtle bycatch / interaction was reported in the BIOT recreational fishery in 2018. The BIOT area includes undisturbed and recovering populations of hawksbill and green turtles. Island sweeps are conducted as part of the normal monitoring programme, where part or entire islands are inspected, turtle nesting tracks are regularly encountered and recorded. Field work continued in 2018 (See Table 2)

#### 5.4 Other ecologically related species (e.g. marine mammals, whale sharks)

No incidental mortality / annual catches on other ecologically related species such as marine mammals and whale sharks has been observed in the recreational fishery.

#### 6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

#### 6.1. Logsheet data collection and verification (including date commenced and status of implementation)

Logbook data collection for the recreational fishery is completed by the vessel charterer for each trip conducted. The system was introduced in 2006 and provides 100% coverage of all boat based recreational fishing activity. Prior to that a system of logbooks to be completed by fishers was utilised but proved less effective and did not achieve 100% coverage. A similar fisher-based system was introduced in 2016 for shore based recreational fishers, although they tend not to catch tuna and tuna like species.

#### 6.2. Vessel Monitoring System (including date commenced and status of implementation)

As there are no vessels flagged by the BIOT Authorities and no commercial vessels are licensed to fish inside the BIOT MPA, the BIOT VMS is currently not operational.

## 6.3. Observer programme (including date commenced and status; number of observers, include percentage coverage by gear type)

Length frequency data collection was initiated for the recreational fishery on Diego Garcia in June 2009.

## 6.4. Port sampling programme [including date commenced and status of implementation]

NA. BIOT has no commercial port

#### 6.5. Unloading/Transhipment [including date commenced and status of implementation]

As BIOT has no commercial ports there is no unloading or transhipment allowed. Transhipment by foreign fishing vessels is not permitted anywhere within BIOT waters.

#### 7. NATIONAL RESEARCH PROGRAMS

The BIOT Administration supports and encourages high-quality scientific expedition research applications from all scientists, particularly anyone from the Indian Ocean region and those which provide opportunities for members of the Chagossian community to be involved. Applications where regional and / or international organisations collaborate together on projects are also strongly encouraged. Scientific research will contribute to the delivery of the current conservation priorities and tell BIOTA something new about the environment of the Territory. All research applications are reviewed for approval by BIOTA.

Currently research is conducted through a series of expeditions funded under the Bertarelli Programme in Marine Science (BPMS, see Table 2). Some activities that were initiated under the Interim Conservation Management Framework (reported on in previous National Reports), which has since been replaced, are





continuing in one form or another through this programme. Research under the BPMS particularly links to the current conservation priorities through 'Key Species' research.

Outputs of research conducted in BIOT can be accessed through the Chagos Information Portal (ChIP, <a href="https://chagosinformationportal.org/">https://chagosinformationportal.org/</a>) and the BIOT website <a href="https://biot.gov.io/">https://biot.gov.io/</a> where details of expeditions up those conducted in 2019 (see Table 2) are currently available <a href="https://biot.gov.io/science/2019-science-expeditions/">https://biot.gov.io/science/2019-science-expeditions/</a>.



Table 2. Summary table of national research programs: BPMS Scientific Expeditions to the British Indian Ocean Territory during 2019

Project title	Period	Institutions involved	Objectives	Outcomes (results, publications, future work)
Seabird research BPMS expedition 9	8th January to 13th February 2019	ZSL/Exeter University	Overall objective: To undertake research to assess the importance of the BIOT MPA for seabirds. Specific objectives 1. To document the year round biology and foraging ecology of breeding RFBs at Barton Point Nature Reserve and RFBs and BBs at Danger Island. 2. To document the distribution of non-breeding RFBs from Barton Point Nature Reserve on DG. 3. To establish the status and distribution of breeding seabirds on Danger Island.	<ol> <li>Deployed 33 sets of short term trackers on Red Footed Boodies and 15 on Brown Boobies.</li> <li>Collected the first ever tracks of seabirds in the western islands of BIOT, including the first seabird to leave the MPA while foraging.</li> <li>species of breeding seabirds, five species of non-breeding seabirds, and evidence of Coconut Crabs, Green Turtles and breeding Junglefowl recorded on Danger Island.</li> <li>Additional tagging activities successfully carried out on Diego Garcia, including the recovery of 13 long-term trackers from breeding and non-breeding Red Footed Boobies.</li> </ol>
Tuna tagging from DG BPMS expedition 10	22th January- 5th February 2019	ZSL/Stanford University	Overall objective:  To trial the use of the Morale, Welfare and Recreational (MWR) fishing vessels as tagging research platforms  Specific objectives  1. Analyse available recreational fisheries datasets to quantify seasonal patterns in the catch composition.  2. Establish a protocol for the deployment and reporting of mark recapture floy tags on yellowfin tuna (Thunnus albacares) and billfish within the DG recreational fishery.  3. Deploy up to 10 satellite tags on yellowfin tuna and billfish (if encountered) to quantify off-shore movement behaviour.  4. Collect tissue (fin, muscle and blood) and water samples for isotopic and DNA analyses to provide information on the trophic ecology and habitat use of species within BIOT and on the patterns of connectivity of elasmobranchs and teleosts across the Indian Ocean.	Demonstrated that MWR vessels are capable of providing a platform for science activity in the lagoon of Diego Garcia.  Using Dogtooth tuna (Gymnosarda unicolor) as a proxy to establish a protocol for the deployment and reporting of mark recapture floy tags within the recreational fishery.  Morphometric data and muscle tissue samples were collected on 83 fish of various species.



Project title	Period	Institutions involved	Objectives	Outcomes (results, publications, future work)
Reef 1 BPMS expedition 11	2nd March – 21st March 2019	AIMS/ZSL/Exeter University/Lancaster University/Stanford University, ZSL. Imperial College/Oxford University/University of Victoria	<ul> <li>5. Train the Environment Officer in tagging methods and the taking and storing of DNA and isotope samples.</li> <li>6. Communicate our work to the personnel on Diego Garcia and ensure findings are made available to the Indian Ocean Tuna Commission and embedded within the UK Blue Belt Programme.</li> <li>Overall objective: Assessing the composition and structure of reef fish communities in BIOT pre and post bleaching event and to explore their relationship with reef resilience and the value of the MPA.</li> <li>Specific objectives:</li> <li>1.Reef fish surveys</li> <li>2.Sampling and studying of fish otoliths and gut contents to assess nutrient flows</li> <li>3.Retrieving plates to study recruitment rates</li> <li>4.Retrieval and processing of ARMS devices</li> <li>5 Deployment of BEAMS instruments to measure reef productivity</li> </ul>	Following the mass coral bleaching of 2015/2016, most reefs across the region displayed lower coral cover than several years prior (Figure 1). However, there were strong signs of coral recovery on some reefs. Recent growth and proliferation of acroporid corals was observed at several sites amidst dead coral skeletons presumably from the prior bleaching event (Figure 2). Benthic surveys of coral cover and measurements of reef growth were performed during this expedition and will inform on rates of coral recovery across the region.
VAVA II	13th March – 27th March	ZSL/Swansea University/Stanford University/Oxford University	Overall objective: Multi-disciplinary trip combining core programme activities with new methods and research sites and funder engagement.  Specific objectives:  1. Service the acoustic array and tag new sharks and tuna 2. Collect instruments deployed in Reef 1 3. Continue work on ARMS devices from Reef 1 4. Ring and take biometric from red-footed boobies nesting on all islands 5. Turtle surveys on all islands on all atolls and deploy camera traps 6. Record new seagrass sites with BRUVS and surveys 7. Map mangrove on Moresby and assess condition 8. Make invertebrate collections on islands that have had none previously	<ol> <li>Counts made of all seabirds encountered on eight islands</li> <li>42 nesting red footed boobies tagged</li> <li>Sea turtle nesting tracks and body pits counted on 50 islands</li> <li>Three hawksbill turtles satellite tagged in Turtle Cove on Diego Garcia</li> <li>All acoustic receivers in the array serviced for another year</li> <li>66 animals from five marine species (manta, grey reef, silvertip sharks, and dogtooth and yellowfin tuna) electronically satellite tagged</li> <li>A tagged silvertip shark re-caught for the first time showing growth of 32 cm in three years</li> <li>882,000 new detections downloaded from the deep-water acoustic receivers</li> <li>New seagrass sites recorded on the Great Chagos Bank</li> <li>Moresby mangrove mapped and surveyed for the first time sinc 2010 when it was discovered</li> <li>Helicopter surveys of vegetation and beach morphology conducted on 44 islands</li> </ol>



Project title	Period	Institutions involved	Objectives	Outcomes (results, publications, future work)
Reef 2 BPMS expedition 12	9th April – 30th April 2019	Bangor University, Oxford University, University College of London, and Woods	9.Do sea cucumber survey in Salomon lagoon  Overall objective: This expedition seeks to undertake a survey of reef condition across the archipelago following impacts caused by the 2015-2017 warming events causing bleaching and mortality.	<ol> <li>Plastics surveys conducted on seven islands in three atolls including sand cores taken for analysis of microplastics</li> <li>More than 300 specimens of terrestrial invertebrate collected from surveys of six islands, four of which had no previous records at all with at least two new species records for BIOT</li> <li>Survey of sea cucumbers in Salomon lagoon showed increase in numbers from previous counts in 2009 and 2013</li> <li>First ever sound recordings of reefs in Peros Banhos and Salomon atolls made</li> <li>The severity of impact of recent back-to-back warming events on BIOT reefs and modest signs of recovery in the absence of synergistic and cumulative impacts from local anthropogenic activity convey an importan message - to strengthen the global response to climate change by reaching</li> </ol>
		Hole Oceanographic Institution	Specific objectives:  1.Measuring coral cover and recruitment at repeat sites 2.Replacing temperature loggers 3.Video transects to assess benthic communities 4.Creating a 3-d digital record of reef structure 5.Assessing coral disease 6.Sampling and studying zooplankton 7.Deploying calcification rate recording plates 8.Deploying ARMS to monitor cryptic biodiversityDrone surveys of reef associated megafauna	and sustaining net zero global CO2 emissions. Coral reefs are projected to decline by a further 70–90% at 1.5°C with even greater losses (>99%) at 2°C, and therefore current global policies are unlikely to be sufficient to protect coral reefs from climate change.
Joint birds and turtles BPMS expedition 13	18th June – 11th July 2018	ZSL/Swansea University/Deakin University	Overall objective: To undertake research to assess the importance of the BIOT MPA for seabirds and turtles.  Specific objectives:  1. Status, distribution and trends of breeding seabirds in BIOT 2. Establishment of long-term monitoring protocols for breeding seabirds in BIOT 3. Spatial and temporal use of MPA by RFBs and BBs during breeding season	The preliminary findings from the seabird research team indicate that (i) breeding red-footed boobies were foraging further to the east and conducting multi-day trips compared to the same period in 2018, (ii) the island supports a significant multi-species seabird breeding colony, and (iii) acoustic recording devises can potentially detect shearwater colonies. Preliminary findings from the sea turtle team include (i) southwesterly migration outside of BIOT by green turtle satellite tagged on Nelson's Island, and (ii) high variability in inter-annual nesting activities on Diego Garcia and Nelson's Island



Project title	Period	Institutions involved	Objectives	Outcomes (results, publications, future work)
BIOT plastics BPMS expedition 14	2nd July – 16th July	ZSL/ Exeter University	4.At-sea distribution of RFBs outside of breeding season 5.Understanding turtle movements using satellite tags on nesting green turtles on Danger Island 6.Understand immature turtle movements of turtles by Danger Island 7.Collect data to inform estimates of nesting populations of green turtles on DG and DI 8.Data collected to inform understanding of immature turtle behaviour using UAV monitoring surveys  Overall objective: Study effects of plastics on turtles, reduce SUP use on DG, make recommendations on suitable recycling options  Specific objectives:  1. Key stakeholder interviews 2. Focus groups and presentations 3. Attitude survey pilot (x50) 4. Analysis of beach waste pile 5. Sand cores for microplastics analysis and temperature loggers at nest sites 6. Marine debris transects and plots on turtle nesting beaches in DG and Egmont atoll 7. Take group of volunteers to Egmont for 2 day beach clean	Analysis of beach waste showed that 80% of ocean borne plastics fall into 3 categories: single use plastic bottles, polystyrene and flip flops.  42 pilot surveys with a diverse group of respondents from military and contractor backgrounds were conducted. This sample will help develop a final attitude survey that will be distributed widely across the DG population later this year.  Sand cores have been sent for analysis, nest site temperature loggers we retrieved and new ones deployed in DG.  Led an expedition to Egmont Atoll with volunteers, 50 x 200 litre capacity bags were filled with beach waste. Surface plastics on beaches were mapped using the Marine Debris Tracker app and logged on global database. Turtle nest site surveys undertaken.
Tuna tagging from DG BPMS expedition 15	Sept 2019	ZSL/Stanford University	Overall objective: To continue the use of the Morale, Welfare and Recreational (MWR) fishing vessels as tagging research platforms  Specific objectives  1. As for exped #10	Awaiting report
Turtle survey and tagging BPMS expedition 16	Nov – Dec 2019	Swansea University	Overall objective:  Repeat BPMS 8 - turtle tagging trip to tag nesting green turtles in DG/juvenile hawksbills.	Awaiting report



Project title	Period	Institutions involved	Objectives	Outcomes (results, publications, future work)
			Specific objectives:  1. To increase understanding of sea turtle movements within and outside of BIOT by attachment of satellite tags to nesting hawksbill turtles.  2. To increase understanding of the immature turtle population in Diego Garcia lagoon through (a) the mark (flipper tagging) and recapture monitoring programme commenced in 1996 and through (b) tagging of turtles with Fastloc-GPS satellite tags.  3. To improve our knowledge of the turtle population in Diego Garcia lagoon by commencing a UAV (quadcopter drone) monitoring survey of the lagoon including seagrass survey.	
Deep reefs and seamounts BPMS expedition 17	Nov/Dec 2019	ZSL	Overall objective:  To study seamounts and mesophotic reefs as hotspots of biodiversity and sources of recovery for damaged shallow reefs  Specific objectives  To study the oceanography, mesophotic coral reef ecology and animal behaviour by using:  • moored oceanographic instrumentation • ship-based oceanographic instrumentation • surveys using a remotely-operated vehicle (ROV) • multibeam acoustic surveys	



## 8. IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATIONS AND RESOLUTIONS OF THE IOTC RELEVANT TO THE SC.

**Table 9.** Scientific requirements contained in Resolutions of the Commission, adopted between 2011 and 2019.

Res. No.	Resolution	Scientific requirement	CPC progress
15/01	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–10	Not applicable as BIOT has no flag registry or fleet of vessels.
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)	Paragraphs 1–7	BIOT submits all mandatory statistical reports, including null reports
18/05	On management measures for the conservation of the billfishes: striped marlin, black marlin, blue marlin and Indo-Pacific sailfish	Paragraphs 7-9	Not applicable as BIOT has no flag registry or fleet of vessels.
13/04	On the conservation of cetaceans	Paragraphs 7– 9	Not applicable as BIOT has no flag registry. Cetaceans are not associated with the recreational fishery
13/05	On the conservation of whale sharks (Rhincodon typus)	Paragraphs 7– 9	Not applicable as BIOT has no flag registry. Whale sharks are not associated with the recreational fishery
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	Not applicable as BIOT has no flag registry and releases all sharks alive from the recreational fishery.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	BIOT releases all sharks alive from the recreational fishery
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	Not applicable as BIOT does not have a flag registry.
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	Parts relating to flag vessels are not applicable as BIOT does not have a flag registry. Nesting sites in BIOT are monitored on island visits.
11/04	On a regional observer scheme	Paragraph 9	Not applicable as BIOT does not have a flag registry.
17/05	On the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 6, 9, 11	No sharks are retained in BIOT. Sharks caught in the recreational fishery are released alive.  Sharks caught by IUU fishing vessels are reported in communications to the Compliance Committee.
18/02	On management measures for the conservation of blue shark caught in association with IOTC fisheries	Paragraphs 2-5	Not applicable as BIOT does not have a flag registry.
18/07	On measures applicable in case of non-fulfilment of reporting obligations in the IOTC	Paragraphs 1, 4	As set out in this report, BIOT does not operate a flag registry, nor have a fleet of commercial fishing vessels, but a small recreational fishery exists on Diego Garcia that catches tuna and tuna like species. BIOT consistently fulfils all reporting obligations in a timely manner in respect of this fishery. Sharks caught in the recreational fishery are released alive. In 2016 steps were taken to improve data collection for catches taken by shore-based fishers, though it is not anticipated this will include significant catches of tuna or tuna like species. Reference to this information will be included in the Annual Report of Implementation.
19/01	On an interim plan for rebuilding the Indian Ocean yellowfin tuna stock in the IOTC Area of Competence	Paragraphs 8 - 12	N/a (For 'all other gears', that would include recreational fishing in Diego Garcia, the measure only applies to catches>5000 t in 2014). Nevertheless, from 2017 BIOT has encouraged the live release of all yellowfin tuna caught in its recreational fishery.
19/02	Procedures on a fish aggregating devices (FADs) management plan.	Paragraph 4	N/A. Reduced FAD numbers may benefit BIOT.
		•	



## 9. LITERATURE CITED

MRAG (2019a) Review of FAD papers from the 2nd Joint Tuna RFMO FAD WG Final Report June 2019. MRAG (2019b) Ocean Currents in structuring FAD and ALDFG beaching in BIOT.