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UK (BIOT) national report

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ABSTRACT

The UK (BIOT) National Report summarises fishing by vessels licensed to fish for tuna and tuna like species in the British Indian Ocean Territory (Chagos Archipelago) Fisheries Conservation and Management Zone (FCMZ) during the 2008 / 2009[1] fishing season. In 2008/09 26 licences were issued to 22 longline vessels. The estimated total catch was 371t comprising 23% yellowfin tuna, 57% bigeye tuna, and 20% other species. 45 licences were issued to 43 Purse seine vessels and their total catch for the 2008/09 season was 14,962t. The catch was dominated by yellowfin tuna 66% (9,927t) with skipjack tuna at 24% (3,596t) and minor catches of bigeye tuna (4% - 617t) and albacore (1% - 822t). It is estimated that a further 25.2t of tuna and tuna like species were landed by recreational fishers on Diego Garcia in 2008. There was no BIOT observer programme during 2008/09. Some data on other species is, however, available in BIOT longline logbooks, and billfish, including swordfish, striped marlin and sailfish together comprise 8% of the total catch, followed by elasmobranchs (7%) and miscellaneous teleost fish (5%). Assessment of changing spatial fleet dynamics due to piracy off Somalia was presented to WPTT in October. Minor changes to BIOTAs systems have been introduced as a result of IOTC SC and Commission recommendations and resolutions and 2008 recommendations made by SC on sharks have been implemented in BIOT since 2006. The Foreign and Commonwealth Office (FCO) has launched a public consultation on the possibility of declaring the whole BIOT FCMZ a marine protected area.

1 For the purposes of this report, the fishing season for the BIOT FCMZ (Chagos Archipelago) is defined as running from the 1st of April through to the 31st of March the following year. This season definition is used because the main historical peaks in the purse seine and longline seasons in the BIOT FCMZ (Chagos Archipelago) occur during the months of December and January.

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1. Introduction

This paper reports only on fishing activity within the British Indian Ocean Territory (BIOT) Fisheries Conservation and Management Zone (FCMZ).The BIOT Authorities do not operate a flag registry, BIOT does not have a fleet of fishing vessels, and there is no commercial port in BIOT. Access is granted to third parties to fish in the BIOT FCMZ under licence, with attached terms and conditions. A small recreational fishery exists on Diego Garcia which catches some tuna and tuna like species. These characteristics set the context in which IOTC resolutions are applied within the BIOT FCMZ. This report summarises fishery statistics relating to vessels licensed to fish for tuna and tuna like species in the BIOT FCMZ during the April 2008 / March 2009 fishing season, and compares them to data for the four previous years.

Four UK flagged vessels were also registered with IOTC to fish during 2008 and caught 2028 tonnes of fish, but they did not fish in the BIOT FCMZ, and are reported to IOTC by the UK Department for Environment Food and Rural Affairs (DEFRA) through the EU.

2. Fishery Statistics: BIOT

Three tuna fisheries operated in the British Indian Ocean Territory (Chagos Archipelago) Fisheries Conservation and Management Zone (FCMZ) during the 2008 / 2009 fishing season: a longline fishery, a purse seine fishery and a recreational fishery.

2.1. BIOT Longline Fishery

In 2008 / 09 26 longline licences were issued to 22 vessels, all greater than 100 GRT and unlike previous years no licenses were issued to vessels in the smaller size class (<100GRT). The estimated total catch was 371t (Table 1) comprising 23% yellowfin tuna, 57% bigeye tuna, and 20% other species (Table 2). Unlike previous years, there was a high level of licence uptake from March 2008 continuing to the present time. Normally during the period February through to May uptake of longline licences is low and it is possible that the change seen in 2008/09 is a result of the fleet moving Eastwards to avoid Somali piracy.

Table 1. BIOT FCMZ longline summary 2004/05 to 2008/09

Year	2004/05	2005/2006	2006/07	2007/08	2008/09
Number of Vessels	33	24	26	41	22
Number of Licences	48	27	34	75	26
Number of Days Fished	664	1207	1147	1508	571
Total Catch (t)	730	916	590.04	1366	371
CPUE (t/day)	1.099	0.759	0.515	0.906	0.649
CPUE (t/1000 hooks) [2]	0.407	0.281	0.196	0.306	0.305

2 Based on an average rate of 2700 hooks set per day

Table 2. BIOT FCMZ longline summary species composition 2004/05 to 2008/09 for all vessels fishing within the zone.

Year	2004/05	2005/2006	2006/07	2007/08	2008/09
Yellowfin tuna	48%	34%	45%	31%	23%
Bigeye tuna	52%	48%	41%	63%	57%
Other species	--	28%	11%	6%	20%
Total Catch (t)	730	916	590	1366	371

2.2. BIOT Purse Seine Fishery

The total catch for the 2008/09 season by purse seiners inside the BIOT FCMZ was 14,962t (See Table 4) with most fishing occurring during December and January. The reported species composition (before correction) was typical for a 'normal' year within the BIOT FCZM when sets are focussed on free schools. In 2008/09 the catch was dominated by yellowfin tuna 66% (9,927t) with skipjack tuna at 24% (3,596t) and minor catches of bigeye tuna (4% - 617t) and albacore (1% - 822t). These catch data are based on radio reports daily to the vessel and verified by logbook data as and when they are available (Table 5). It is only in poor fishing years such as 2006/7 that skipjack predominate and fishing occurs on FADs.

Table 3. BIOT FCMZ Purse Seine summary 2004/05 to 2008/09

Year	2004/05	2005/2006	2006/07	2007/08	2008/09
Number of Vessels	52	54	55	54	43
Number of Licences	56	56	56	57	45
Number of days fished	991	394	27	1294	424
Total Catch (MT)	23535	13865	95	23418	14962
Catch rate (t/day)	23.75	36.19	3.52	18.10	35.28

Table 4. BIOT FCMZ Purse Seine summary species composition 2004/05 to 2008/09

Year	2004/05	2005/2006	2006/07	2007/08	2008/09
Yellowfin tuna	83.80%	77.93%	0.00%	79.09%	66.34%
Skipjack tuna	14.50%	20.95%	97.89%	12.70%	24.03%
Bigeye tuna	1.70%	1.08%	2.11%	7.44%	4.12%
Albacore	0.00%	0.00%	0.00%	07.77%	5.49%
Total catch (t)	23535	13865	95	23418	14962

2.3. BIOT Recreational Fishery Catches

A small recreational (sports) fishery occurs under licence at Diego Garcia. 25.2 tonnes of tuna and tuna like species were caught in 2008 representing 76% of the recreational catch (the remainder are reef associated species). The catch of the principle target tuna species of the industrial fisheries (Yellowfin, bigeye, skipjack) was low (4%, Table 5).

Table 5. Catches of tuna and tuna like species landed from the BIOT recreational fishery during 2008

Month	Estimated catch of tuna and tuna like species (Kg)										TOTAL (kg)		
	Blue Marlin	Dolphinfish	Kawakawa	Rainbow runner	Sailfish	Wahoo	Dogtooth tuna	Skipjack tuna	Yellowfin tuna	Other tuna nei	Tunas	Tuna like spp	All
Jan-08	0.0	42.6	11.3	530.7	0.0	31.8	13.6	8.6	0.0	36.3	58.5	616.4	674.9
Feb-08	0.0	34.9	13.6	190.5	0.0	292.6	27.2	88.9	59.0	0.0	175.1	531.6	706.7
Mar-08	0.0	63.5	0.0	1950.4	0.0	1644.3	75.7	117.9	72.1	0.0	265.8	3658.2	3924.0
Apr-08	0.0	22.7	0.0	1705.5	0.0	1041.0	0.0	36.3	39.0	0.0	75.3	2769.2	2844.5
May-08	0.0	114.3	0.0	2323.8	6.8	1383.9	59.9	57.6	46.3	90.7	254.5	3828.8	4083.2
Jun-08	0.0	118.4	16.8	2533.3	0.0	425.5	80.7	4.1	37.6	45.4	167.8	3094.0	3261.8
Jul-08	0.0	193.2	4.5	2672.6	18.1	86.2	15.0	0.0	26.3	0.0	41.3	2974.7	3015.9
Aug-08	0.0	76.7	3.6	1319.0	0.0	122.5	54.9	0.0	38.1	136.1	229.1	1521.8	1750.9
Sep-08	0.0	99.3	4.5	635.0	0.0	152.0	27.2	0.0	40.8	0.0	68.0	890.9	958.9
Oct-08	0.0	108.0	19.1	1041.0	0.0	337.5	40.8	0.0	83.0	0.0	123.8	1505.5	1629.3
Nov-08	0.0	9.1	12.7	1260.1	4.5	99.8	8.2	3.6	182.8	0.0	194.6	1386.2	1580.8
Dec-08	0.0	24.9	15.9	592.8	0.0	54.4	15.9	0.0	104.3	0.0	120.2	688.1	808.3
Total	**0.0**	**907.6**	**102.1**	**16754.8**	**29.5**	**5671.3**	**419.1**	**317.1**	**729.4**	**308.4**	**1774.0**	**23465.2**	**25239.2**

3. Information on non target species

Table 2 shows that the catch of 'other species' was 20% for longliners (77.5 t). Logbook records show the species composition of the 'other' non target species, summarised in Table 6. Billfish, including swordfish, striped marlin and sailfish together comprise 40% of the 'others' category (8% of the total catch) followed by elasmobranchs (recorded as 'Sharks nei') (35% of 'others') equivalent to 7% of the total catch and miscellaneous teleost fish (23% of others, 5% of total catch).

Observer data over a period of three fishing seasons (from 2000/01 to 2002/03) summarised in the 2008 UK (BIOT) report to the IOTC Science Committee indicated that the miscellaneous marine teleost fish were predominantly long nosed lancet fish. It showed that elasmobranchs consist of similar proportions of rays and sharks. For the rays, stingrays or butterfly rays comprised more than 85% by numbers. Catches of shark were dominated by blue shark (52%), though pelagic thresher (15%) and silky shark (14%) were also caught relatively frequently. Since January 2009 sharks and rays have been separated in longline logbooks in order to provide more detail, but for the period January – March 2009 logbook returns have not consistently provided this separation. More detail will be presented in 2010.

The removal of fins from sharks caught in BIOT was prohibited in 2006 and any sharks caught must be retained whole or released. Targeted shark fishing is not permitted, and wire trace is banned to minimise shark bycatch. All sharks found on board during an inspection must be accounted for in logbooks. During 2008/09 some longline vessels appeared to have higher shark catches than others, and a new processing method has been adopted whereby the fins are partially cut through, but left attached and folded over. This development is being followed closely to ensure that sharks remain a bycatch and that targeting does not occur.

Table 6. A summary of the catch of non target species by longline and purse seine vessels during 2008/09.

	Species						
	Albacore	**Billfish nei**	**Striped marlin**	**Marine fish nei**	**Sailfish**	**Sharks nei**	**Swordfish**
Catches (t)	1.546	0.723	10.389	17.92	2.846	27.307	16.748
% of total LL catch	0.40	0.19	2.70	4.66	0.74	7.10	4.35
% of total LL bycatch	2	0.93	13.41	23.13	3.67	35.24	21.62

No information on bycatch or discards is available from returned purse seine logbooks. In previous years such information was collected from both purse seine and longline vessels during the BIOT Observer Programme in order to verify logbook reporting[3], as has been reported in previous UK reports. During 2008/09 there was no observer programme.

4. Changes to national data collection and processing systems

To improve the level of detail by species group data on skates and rays was separated in the BIOT longline logbook from 1/1/2009.

A vessel monitoring system was introduced during 2009.

Length frequency data collection has been initiated for the recreational fishery on Diego Garcia.

5. Implementation of recommendations of the Scientific Committee

The BIOT Authorities participate actively in the Scientific Committee and the Working Party on Tropical Tunas and contributed to the stock assessments made by that group. A paper was also presented on the impact of the area effectively closed to fishing by Somali piracy[4]. Complete data submissions were provided to IOTC as required. No observer programme was conducted by the BIOT Authorities during 2008/09, and so no new size frequency data or other scientific observations are available this year. The BIOT longline logbook was updated to separate information on sharks and rays from January 2009. The Science Committee also recommended that shark fins should be landed attached to the body, either naturally, or by other means. As noted previously, shark finning has been banned in BIOT since 2006.

[3] Logbooks frequently do not provide the detailed species composition on by-catch and discards that an observer is able to collect. Also logbooks only record the landed catch so do not record observations of depradation or other bycatch that may be cut off the line and discarded. Observer programmes are able to monitor this.

4 IOTC-2009-WPTT-32 Preliminary investigation into the effect of changing spatial fleet dynamics on yellowfin in the Indian Ocean. Charles T. T. Edwards

6. National Research Programmes

Research has been conducted into the assessment of tropical tunas as part of the BIOT Authorities' contribution to the WPTT, reported in October 2009.

7. Consultation on whether to establish a marine protected area in the British Indian Ocean Territory (BIOT)

The Chagos Environment Network have advocated the creation of an MPA encompassing the whole of the BIOT FCMZ. In order to assess whether this is the right option for environmental protection in BIOT the FCO launched a public consultation on 10 November 2009. Details of the consultation are available at:

http://ukinseychelles.fco.gov.uk/resources/en/pdf/mpa-consultation-document

The consultation refers to 3 broad options for a possible MPA framework:

(i) Declare a full no-take marine reserve for the whole of the territorial waters and Environmental Preservation and Protection Zone (EPPZ)/Fisheries Conservation and Management Zone (FCMZ);
(ii) Declare a no-take marine reserve for the whole of the territorial waters and EPPZ/FCMZ with exceptions for certain forms of pelagic fishery (e.g., tuna) in certain zones at certain times of the year.
(iii) Declare a no-take marine reserve for the vulnerable reef systems only.

The final decision is expected in April 2010 following the public consultation, and depending upon the option selected could have significant implications for IOTC.