SUMMARY OF INFORMATION AVAILABLE ON FADs SUBMITTED TO THE ICCAT SECRETARIAT

Paul de Bruyn[1]

SUMMARY

Due to the increase of FAD fishing in the Atlantic Ocean, the commission has drafted a number of recommendations in order to obtain more detailed information on FADs in the Atlantic Ocean. The submission of both FAD management plans as well as information regarding the type and number of FADs deployed have become mandatory as prescribed in Rec [11-01] and Rec [13-01]. The submitted information is presented in summarised tables in this document.

RÉSUMÉ

En raison de l'augmentation de la pêche sous DCP dans l'océan Atlantique, la Commission a élaboré un certain nombre de recommandations afin d'obtenir des informations plus détaillées sur les DCP dans l'océan Atlantique. La soumission des plans de gestion des DCP ainsi que des informations sur le type et le nombre de DCP déployés est devenue obligatoire en vertu de la Rec. 11-01 et de la Rec. 13-01. Les informations communiquées sont présentées dans des tableaux récapitulés dans le présent document.

RESUMEN

Debido al incremento de la pesca con DCP en el océano Atlántico, la Comisión ha redactado varias recomendaciones para obtener más información detallada sobre los DPC en el océano Atlántico. La presentación de los planes de ordenación de los DCP y de información sobre el tipo y número de DCP plantados es obligatoria tal y como se establece la Rec. 11-01 y la Rec. 13-01. La información presentada se resume en las tablas de este documento.

KEYWORDS

FADs, Data submissions

1. Background

Tuna purse seiner Fish Aggregating Device (FAD) fishery started around 1990 when various purse-seiner fleets began to attach buoys to natural floating objects to facilitate localization and retrieval, and to deploy artificial floating objects with buoys. This change in the fishing practices let to a rapid increase of the purse seiner tropical tuna catches due to an increase of fishing efficiency of the fleet (Delgado de Molina *et al*. 2014). Due to concern regarding these changes in fishing operations in the region, the commission, in 2011 drafted a recommendation (Rec 11-01) to improve the information available on the FADs being deployed. The commission later revisited this issue in 2013, requesting additional information as specified in Rec 13-01.

In Rec 11-01 "*Recommendation By ICCAT on A Multi-Annual Conservation And Management Program for Bigeye and Yellowfin Tunas*" it is stated that by 1 July of each year, CPCs with purse seine and baitboat vessels fishing for bigeye and yellowfin tunas in association with objects that could affect fish aggregation, including FADs, shall submit to the Executive Secretary, Management Plans for the use of such aggregating devices by vessels flying their flag.

The elaboration of the plan in ANNEX 2 of the recommendation explicitly states:

> *The FAD Management Plan for a CPC purse seine fleet must include at least:*
> *a) Number of FAD to be deployed per purse seine and per FAD type*
> *b) FAD design characteristics (a description)*
> *c) FAD markings and identifiers*

As such, since 2012, CPCs have submitted this information when applicable.

With regard to the information requested in Rec. 13-01, it is noted that as of 2014, the following information is required for the SCRS:

Paragraph 2

> c) *The following information is submitted every year to the Executive Secretary, to be made available to the SCRS:*
>
> > *ii. the number of FADs actually deployed on a quarterly basis, by FAD type, indicating the presence or absence of a beacon associated to the FAD,*

This data has been submitted since 2014.

2. Results and data received

In **Table 1**, the information currently provided by CPCs for the 2011-2014 period, is summarised. In several cases the minimum information as requested by the Recommendation has not been provided although some of the additional information suggested in Annex 2 has been included. In **Table 2**, the data submitted by CPCs using the data submission form ST08-FadsDep as required by Rec 13-01 are presented.

References

Delgado de Molina A., Ariz J., Murua H. and Santana J. C. 2015. Spanish Fish Aggregating Device Management Plan. Preliminary data. Col. Vol. Sci. Pap. ICCAT, 71(1): 515-524.

Table 1.Summary table on FAD management plans submitted to the ICCAT Executive Secretary.

Country	Year submitted	Number of FADS	FAD materials	Deployment/Removal	Management measures addressed	All obligatory information provided?
Ghana	2012	Over 1500	• Woven bamboo • Radio beacons	Each vessel on average employs approximately 30-40 payaols and are often changed when left for over 4-6 months at sea	• Non-use of FADS between Jan and Feb 2013 (ICCAT Rec 11-01). • Monitoring of types and numbers are on-going at sea and quayside where officers note their construction at port. • Forestry Commission is also actively involved in the indiscriminate felling of tree including the bamboo which is manly use in the construction of FADs.	No. Plan does not actively address the number of FADs that may be deployed or FAD identifiers
Belize (Belize management plan for the regulation of fish aggregating devices)	2012/2014		• A radar reflector must be attached to the raft section at least 2 meters above the water line • The FAD must have a portion that remains above the water line at all time (the raft section). The raft section must be painted with reflective paint and large enough to be clearly detectable from a distance of 1 kilometer (km) • FAD resources must be attached to the raft section (or each other) in a way that, as far as		Belize management plan for the regulation of fish aggregating devices (FAD) • Area/Time closure in relation with the protection of juveniles as contained in Recommendation 11-01 • 100% YFT, BET and SKJ catch retention • Each Belize flagged purse seine fishing vessel will deploy a total of 100 deployed drifting FADs. Belize flagged purse seine fishing vessels will not deploy anchored FADs on the high seas and will be subject to the regulation of other States when fishing in their jurisdictions. • Deployed drifting FADs must be clearly marked with the name of the vessel that has deployed it, the date of deployment and the FAD number. • All deployed man-made FADs must meet the minimum criteria outlined in the management plan. • Requirements for deploying FADS outlined in management plan. • Consistent with ICCAT Recommendation 11-01, all Belize flagged purse seine fishing vessels operating on the high seas from 1 January 2013 will be subject to 100% observer coverage under their Regional Observer Program. Observers will monitor all FAD retrievals.	Yes

			possible, prevents part of the FAD from becoming separated from each other.		• FAD register • The Belize Fisheries Department will review lost FAD information and may grant approval to deploy a replacement FAD depending on the situations	
EU France	2012/2014		About 90% of purse seine sets made on encountered objects equipped with beacons		EU France FAD management plan • Improved knowledge of fishing on FADs - Identification and marking of FADs, Registry and tracking of tags, Recording of fishing activity on FADs. • Limit on use/number of FADs, limit the annual purchases of tags associated with the FADs to an average of 200 tags per vessel, No fishing vessel may at any time have more than 150 smart tags. • Tags are identified and tracked by satellite. • Reduction of the potential impacts of FADs on the ecosystem - Mitigation of catch on juveniles, small tunas and bycatch species associated with FADs, eco-friendly FADs, Conservation measures for sharks. • Confidentiality of data supplied by operators	Yes
EU Spain (Plan de gestión de dispositivos de concentración de peces (dcps))	2012/2013 (indicated no change in 2014)				• Identification of FADs • Inventory of FADs • Registration of specific FAD activities • Logbook information on activity regarding FADs and FAD fishing • Monitoring and tracking of FADs • Measures to prevent loss of FADs • Measures to mitigate the capture of juveniles and bycatch species • Specific closures on FAD fisheries (Rec 11-01) • Confidentiality of data supplied by operators	No. The plan does not address the number of FADs deployed per vessel nor does it explicitly describe the FAD design, although it does provide a definition of general FAD types.
Curacao	2012				• Identification of FADs • FAD inventory updated quarterly • Specific activity register • Logbook entries regarding FADs • FAD monitoring with ID numbers attached to FADs	No. The plan does not address the number of FADs deployed per vessel nor does it explicitly describe the FAD design, although

					• Measures to avoid loss of FADs • Measures to mitigate catch of juveniles and non-target species • Specific closures on FAD fisheries (Rec 11-01) • Control and monitoring measures • Confidentiality of data supplied by operators	it does provide a definition of general FAD types.
Panama	2012/2014				• Identification of FADs • FAD inventory updated quarterly • Specific activity register • Logbook entries regarding FADs • FAD monitoring • Measures to avoid loss of FADs • Specific closures on FAD fisheries (Rec 11-01) • Control and monitoring measures • Confidentiality of data supplied by operators	No. The plan does not address the number of FADs deployed per vessel nor does it explicitly describe the FAD design, although it does provide a definition of general FAD types.
Côte d'Ivoire	2012/2013	The seiner Solevant, deployed about 70 drifting FADs in Ivorian EEZ. EU vessels also employ FADS in Ivorian waters.	Raft made of bamboo covered with a net. On the raft is a GPS. The submerged part consists of a piece 1 m wide and 40 m long fixed with palm leaves and stems and made fluorescent to attract fish. They are drifting FADs. FADS are fitted with transmitters that transmit unique identifiers.		The activities to be carried as part of the implementation plan are: • Describe the different types of FADs • Check the conformity of catch reports from activities on FADs; • Perform analysis on impact of FAD use on the sustainable management of resources; • Analyze the environmental impact of FADs; • Analyze the relationship between the use of FADs and catch sizes in the short, medium and long term; • Describe the FAD design and materials; • Define the institutional and legal framework for the use of FADs • Define the specifications and requirements for the construction of FADs Define a policy: • Policy for the Reduction of bycatch and FAD use • Consideration of interaction with other gear types • Declaration on "Ownership of the FADs."	Yes

Table 2. Information on number of FADs deployed by type, per year and quarter

CPC	*Year*	*Quarter*	*FAD type*	*No. deployed with beacons*	*No. deployed without beacons*
Curaçao	2013	1	FADA	367	
Curaçao	2013	2	FADA	346	
Curaçao	2013	3	FADA	610	
Curaçao	2013	4	FADA	373	
Curaçao	2014	1	FADA	273	
Curaçao	2014	2	FADA	526	
Curaçao	2014	3	FADA	520	
Curaçao	2014	4	FADA	374	
EU.France	2011	1	FADN - FADA	681	
EU.France	2011	2	FADN - FADA	803	
EU.France	2011	3	FADN - FADA	642	
EU.France	2011	4	FADN - FADA	743	
EU.France	2012	1	FADN - FADA	879	
EU.France	2012	2	FADN - FADA	876	
EU.France	2012	3	FADN - FADA	813	
EU.France	2012	4	FADN - FADA	752	
EU.France	2013	1	FADN - FADA	760	
EU.France	2013	2	FADN - FADA	773	
EU.France	2013	3	FADN - FADA	891	
EU.France	2013	4	FADN - FADA	869	
EU.ESP	2013	1	FADN		10
EU.ESP	2013	1	FADA	4076	
EU.ESP	2013	2	FADN		6
EU.ESP	2013	2	FADA	5314	
EU.ESP	2013	3	FADN		8
EU.ESP	2013	3	FADA	5571	
EU.ESP	2013	4	FADN		17
EU.ESP	2013	4	FADA	4972	
Panama	2013	1	FADA	30	
Panama	2013	2	FADA	141	
Panama	2013	3	FADA	106	
Panama	2013	4	FADA	37	
Sta. Lucia	2013	?	FAA	6	
EU.España	2014	1	FADA	4332	
EU.España	2014	1	FADN	0	
EU.España	2014	1	Unk	682	
EU.España	2014	2	FADA	4423	
EU.España	2014	2	FADN	15	
EU.España	2014	2	Unk	662	
EU.España	2014	3	FADA	4791	
EU.España	2014	3	FADN	10	
EU.España	2014	3	Unk	571	

EU.España	2014	4	FADA	3834	
EU.España	2014	4	FADN	1	
EU.España	2014	4	Unk	263	
EU.France	2014	1	FADA	511	
EU.France	2014	2	FADA	737	
EU.France	2014	3	FADA	557	
EU.France	2014	4	FADA	698	
Ghana	2014	1	FADA	2250	
Ghana	2014	2	FADA	2000	
Ghana	2014	3	FADA	2500	
Ghana	2014	4	FADA	2350	
Panama	2014	1	FADA	62	
Panama	2014	2	FADA	57	
Panama	2014	3	FADA	104	
Panama	2014	4	FADA	65	
UK.SHN*	2014	1	FAA	0	1

*The FAD for the UK.OT is deployed inshore for the aggregation of baitfish, which are caught with hand held ringed nets. It is not intended to aggregate tropical tuna, and no tuna fisheries operate in concert with it.