

20th Annual Meeting of the Indian Ocean Tuna Commission

Time to deliver precautionary tuna fisheries management

La Reunion, 23 to 27 May 2016

1. Summary

This 20th Annual Meeting of the Indian Ocean Tuna Commission (IOTC) takes place at the same time Governments gather at the UN Fish Stocks Agreement (UNFSA) Resumed Review Conference in New York. We note this coincidence given the relevance of key provisions of the UNFSA to the work of IOTC, in particular in relation to the implementation of the precautionary approach, the need to effectively manage fishing capacity and the impacts of fishing beyond those on target species.

Seen in perspective, several proposals to be discussed at this 20th Annual Meeting, which could not be agreed upon in the past, provide a picture of delays and difficulties in making significant progress at IOTC. Greenpeace notes with concern that IOTC parties continue to fail to:

- adopt conservation and management measures which keep fishing capacity and effort within sustainable limits, so as to end the current situation in which tuna companies have few constraints to decide the amount and type of capacity they put on the water;
- take into account the multispecific nature of tuna fisheries and prevent damage in the first place, rather than react to conservation problems when they are identified, notably in relation to associated and dependent species, non-target species and marine ecosystems.

It is Greenpeace's view that draft proposals presented for consideration at this 20th Annual Meeting of the IOTC do not sufficiently address the above mentioned issues. Greenpeace calls on IOTC parties to:

- develop a framework to manage fishing capacity that moves beyond vessel numbers and tonnage and accounts for all elements that contribute to fishing capacity and effort and sets effective rules to keep both capacity and effort within sustainable and precautionary limits;
- address the impacts on Fish Aggregating Devices (FADs), moving beyond the current attempts to support the needs of the most industrialized fishing fleets;
- adopt precautionary target and limit reference points and harvest control rules for all target species, in line with the best available scientific advice;
- decrease fishing mortality on all overfished species managed by IOTC to allow stock recovery. In doing so, take into account the differentiated impacts of the various gear types and fishing strategies on juveniles and associated species;
- adopt measures aimed at reducing fishing gear interactions with non-target species and set mortality limits for threatened species such as some species of sharks;
- improve and strengthen data collection and reporting, monitoring, control and surveillance tools as well as the Commission response to cases of non-compliance.

2. Fishing capacity: stop preventing a strong limitation on the use of dFADs

The way the Commission has been dealing with the proliferation of drifting FADs is a paramount example of its inability to put in place precautionary, rather than reactive, fisheries management measures. For years industrial purse seine fleets have continued to expand their fishing power, not only through new vessel additions to the large-scale tuna fleet, but also by increasingly using a particular type of ever more efficient fishing gear: FADs. In recent years proposals to impose limits on

the use of FADs have been blocked with the excuse that more information was needed. Last year the Commission adopted alarmingly high dFAD limits [1], which may result in further increases in FAD numbers and set a very negative precedent for other tuna RFMOs [2]. Later in 2015 ICCAT agreed on similar limits [3]. The limited number of FAD management plans submitted by CPCs show that some countries have already increased the number of FADs allowed to their own fleets: Korea reported a maximum of 300 sets of beacons per vessel in 2015 [4], and up to 500 sets in 2016 [5]. According to the Maldives the current limit of 550 dFADs allows for significant increases in overall deployments, with the current 102 purse seine vessels of 273 GRT and over in the IOTC record of Active Vessels potentially able to deploy 56,550 buoys or even 113,000 [6]. Halving those limits still represent an unacceptably high limit.

Proposals tabled this year, while representing an improvement, continue to fall very short of what is needed. The Commission must:

- **consider FADs in the context of fishing capacity management.** Fishing capacity cannot be measured or managed through simply having an accurate and up-to-date vessel record. Number and tonnage of fishing vessels provide an overly simplistic and insufficient measure of fishing capacity, which cannot account for increases in fishing capacity through gear modifications and the development and use of new technologies. In 2009, as part of the Kobe process, industrialized tuna fishing nations advocated a freeze of their tuna fishing capacity [7]. In the seven years since, large-scale industrial fishing fleets have clearly increased capacity, notably through larger FAD numbers and associated technology. **The IOTC must address this increased fishing capacity as a matter of urgency and ensure fishing capacity and effort are effectively accounted for and managed.**
- **consider the impacts of FADs on the productivity of tuna fisheries.** While largely unquantified, overfishing and the increase in juvenile tuna catches have resulted in a reduction in the potential yield of some tuna stocks. The loss in yield per recruit due to excess harvesting of juvenile fish is substantial in some cases [8]. The FAO recommends that in fully-utilized fisheries the harvesting of immature fish should be avoided [9].
- **look at the impacts of FADs at the ecosystem level.** While figures are uncertain, there may now be on average two to four times more floating objects in the SE Seychelles, and an even larger figure in the NW Seychelles than there used to be; off the coasts of Somalia the multiplication factor can reach up to 20 or 40 times [10]. Potential impacts include the massive catch of juvenile tunas; reduction of spawning potential; larger uncertainties in stock assessments; potential displacement of tuna schools to low-productivity areas; potential changes in tuna migration patterns; damage to coral reefs from lost or abandoned FADs; or a 2.8 to 6.7 higher bycatch rate of non-tuna species than fishing on free-schools of tuna, among others. The impacts of FADs as a source of marine debris are of increasing concern: recent research shows that 10% of the buoys released in the Indian and Atlantic Oceans end up washed ashore, with between 1,500 and 2,000 lost onshore each year by the French purse seine fleet alone [11]. It is clear little has been done to meet the requirements of UNFSA article 5(f) to minimize pollution, waste and catch by lost or abandoned gear.
- **consider the impacts of FADs on those not using them.** The widespread use of FADs has an impact on those not using them, or using smaller numbers. The proliferation of FADs is creating an environment in which free-school fishing, a cleaner fishing method, is becoming increasingly difficult and smaller purse seine vessels with fewer FADs are at a disadvantage. Data indicates, for example, that it is becoming more and more difficult to catch free-swimming schools of skipjack tuna in the Atlantic and western Indian Oceans [12]. Concerns also exist that more FADs may actually not lead to higher catches overall [13]. Catches per set may decrease as tuna have more floating objects to choose from, which may lead to higher bycatch since sets on smaller schools have a larger proportion of non-target species [14].
- **apply a precautionary approach to fishing.** The lack of constraints to FAD use exemplifies the failure to apply widely the precautionary approach to fisheries and to *be more cautious when information is uncertain, unreliable or inadequate*. The obligation to assess the impact of activities that may cause significant harmful changes to the marine environment, clearly

described in article 206 of the Law of the Sea Convention, has also been ignored for many years in relation to FADs. The *1996 FAO Technical Guidelines on the Precautionary Approach to Capture Fisheries and Species Introductions* cautions that “*technological changes aimed solely at further increasing fishing capacity would not generally be seen as desirable*” and that “*a precautionary approach would encourage careful consideration of the side effects of new fishery technologies before they are introduced*” [9].

Greenpeace believes that it is urgent that the IOTC:

- limits fishing capacity by agreeing on a drastic reduction in the use of FAD buoys. IOTC parties must take into account that the reference level for the fishing capacity of fleets targeting tropical tunas in *IOTC Resolution 12/11* is their fishing capacity in 2006 [15]. We note that available research [16] estimated the total number of FADs for the European fleet to be around 2,100 in 2007. That would provide an average number of FADs of some 45 FADs per vessel. The average was probably lower for other fleets;¹
- limits fishing effort by agreeing on a precautionary limit on FAD sets which limits the mortality of juvenile tuna, particularly of bigeye tuna and yellowfin tuna, to levels prior to the current proliferation of FADs. A precautionary limit on FAD sets would also prevent re-deployment of fishing capacity and effort associated to a FAD time/area closure;
- bans the use of support vessels, which are known to further increase the capacity of purse seiners, as the IATTC has done already [17];
- considers the impacts of FADs as a source of marine debris, particularly their impact on coral reefs and the potential need for a liability scheme.

3. Adopt strong reference points and harvest control rules

Science-based Limit and Target Reference Points (L/TRPs) and Harvest Control Rules (HCRs) are vital components of precautionary fisheries management, required by article 6 of the UNFSA. HCRs represent a pre-agreed plan of action to be taken in response to the results of stock assessments. Having these rules in place should avoid delays in agreeing management actions that inevitably happen in the absence of a pre-agreed plan.

Management Strategy Evaluations (MSE) have been used to test a variety of options for both skipjack and albacore, and the results were endorsed by SC19. Further information will be presented at the 3rd Management and Procedures Dialogue and the Commission meeting. The IOTC will have more than adequate information to agree and adopt HCRs for these species this year and to expedite work on L/TRPs and HCRs for other target species.

Greenpeace supports the proposal on HCRs for skipjack tuna by Maldives and others, recognising that the HCR will be reviewed, and possibly refined or replaced based on new science and management experiences, no later than 2021. We note with concern that despite the fact that MSE was also performed and endorsed for albacore tuna, there are no proposals tabled for reference points and HCRs for this species.

4. Protect sharks and other non-target species

Tuna fisheries interact with a wide range of other marine species and some have a significant negative impact on a range of threatened species of sharks, sea turtles and seabirds. The quality and quantity of data collection by the IOTC can no longer be used as an excuse for inaction.

In particular, despite the dire status of some shark species, we note that compliance with mandatory reporting on sharks data by flag States ranked the lowest in the summary table on the level of compliance prepared by the IOTC Secretariat [18]. The report also observes that “*levels of reporting*

¹ In addition, a substantial amount of fishing capacity will be potentially added to the fishery, including purse seiners, through the implementation of Fleet Development Plans. Therefore, if the limit agreed is to be precautionary, any allowance per vessel must be further reduced to compensate for this.

of bycatch data for seabirds and marine turtles remain very low and, where data are available, are normally incomplete and highly aggregated by species.”

Greenpeace urges the IOTC to

- impose penalties for cases of non-compliance to ensure that States comply with all their data reporting requirements;
- adopt measures to reduce interaction of non-target species with fishing gear, promote live release for those that are captured, and set mortality limits particularly for high risk species such as sharks;
- take immediate steps to strengthen the Resolution 05/05 on shark conservation by requiring that all sharks be landed with fins naturally attached and prohibiting the use of wire leaders and attachment of shark lines beneath buoys.

5. Remove barriers to compliance with IOTC provisions

The quality of data available to IOTC and the level of compliance with different provisions remains an issue of significant concern. The lowest observed level of compliance related to the submission of mandatory statistics on sharks by the flag State (15%), the regional observer scheme (20%), and mandatory statistics by coastal States (24%). Mandatory statistics by flag States is higher but still very poor (43%) [18].

The IOTC must adopt measures that improve and strengthen data collection and reporting, the compliance assessment process, and tools for monitoring, control and surveillance tools. Issues which require action based on observed levels of compliance are:

- strengthening Resolution 12/12 by extending the ban on large scale drifting gillnets to all EEZs given their negative ecological impacts in areas frequented by marine mammals and turtles, as recommended by SC18;
- a ban on at-sea transshipments;
- adopt a requirement for 100% observer coverage on large-scale tropical tuna purse seine fleets, and a representative 20% coverage on longline fleets. Where human onboard observers are not feasible for certain fleets or vessel sizes other alternatives, such as electronic monitoring systems, must be assessed and put in place;
- develop a regional, best-practice satellite based vessels monitoring system (VMS);
- reform the IUU vessel listing and delisting process to meet international best practice standards, include vessels without nationality in the definition of IUU, and ensure flag States cannot veto IUU listing of their own vessels.

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REFERENCES

1. IOTC. Resolution 15/08 procedures on a fish aggregating devices (FADs) management plan, including a limitation on the number of FADs, more detailed specifications of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species. 2015.
2. Greenpeace. Greenpeace warns of proposals that would pave the way for large increases in fishing capacity. Greenpeace briefing. 2015.
3. ICCAT. Recommendation 15-01 by ICCAT on a multi-annual conservation and management program for bigeye and yellowfin tunas. 2015;
4. IOTC Secretariat. Collection of Fish Aggregating Devices Plans. 2015. Report No.: IOTC-2015-CoC12-11[E].
5. IOTC Secretariat. Collection of Drifting Fish Aggregating Devices Management Plans. 2016. Report No.: IOTC-2016-CoC13-11 Add1[E].
6. Maldives. Procedures on a fish aggregation devices (FADs) management plan, including a limitation on the number of FADs, more detailed specifications of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement. 2016. Report No.: IOTC – 2016 – S20 – PropL[E].
7. Anonymous. Report of the Third Joint Meeting of Tuna Regional Fisheries Management Organizations [Internet]. Third Joint Tuna RFMOs Meeting. La Jolla, California; 2011. Available from: <http://bit.ly/1z9FBaZ>.
8. WCPFC. Summary Report of the 10th Session of the WCPFC Scientific Committee. In Majuro, Republic of the Marshall Islands: WCPFC; 2014.
9. FAO. Precautionary approach to capture fisheries and species introductions. FAO Technical Guidelines for Responsible Fisheries. 1996.
10. Dagorn L, Bez N, Fauvel T, Walker E. How much do fish aggregating devices (FADs) modify the floating object environment in the ocean? *Fish Oceanogr.* 2013;22(3):147–53.
11. Maufroy A, Chassot E, Joo R, Kaplan DM. Large-Scale Examination of Spatio-Temporal Patterns of Drifting Fish Aggregating Devices (dFADs) from Tropical Tuna Fisheries of the Indian and Atlantic Oceans. *PLoS One* [Internet]. 2015;10(5):e0128023. Available from: <http://dx.plos.org/10.1371/journal.pone.0128023>
12. Fonteneau A. On the recent steady decline of skipjack caught by purse seiners in free schools sets, in the Eastern Atlantic and Western Indian oceans. *ICCAT SCRS/2014/134.* 2014;1–10.
13. Sempo G, Dagorn L, Robert M, Deneubourg JL. Impact of increasing deployment of artificial floating objects on the spatial distribution of social fish species. *J Appl Ecol.* 2013;50(5):1081–92.
14. Dagorn L, Filmlalter JD, Forget F, Amandè MJ, Hall MA, Williams P, et al. Targeting bigger schools can reduce ecosystem impacts of fisheries. *Can J Fish Aquat Sci.* 2012;69(9):1463–7.
15. IOTC. Resolution 12/11 on the implementation of a limitation of fishing capacity of Contracting Parties and Cooperating Non-Contracting Parties. 2012.
16. Moreno G, Dagorn L, Sancho G, Itano D. Fish behaviour from fishers' knowledge: the case study of tropical tuna around drifting fish aggregating devices (DFADs). *Can J Fish Aquat Sci.* 2007;64(11):1517–28.
17. IATTC. Resolution C99-07 on fish-aggregating devices. 1999.
18. IOTC Secretariat. Summary report on the level of compliance. 2016. Report No.: IOTC-2016-CoC13-03 [E].
19. IOTC Secretariat. Conservation and management measures requiring action by the commission in 2016. 2016. Report No.: IOTC–2016–S20–11[E].