GREENPEACE **Briefing**

19th Annual Meeting of the Indian Ocean Tuna Commission

Greenpeace warns of proposals that would pave the way for large increases in fishing capacity

Busan, Korea, 27 April to 1 May 2015

1. Summary

Tuna fishing capacity continues to increase globally in the absence of adequate regulations to ensure that it remains within sustainable and precautionary limits, and that fish resources are allocated in an environmentally and socially responsible manner.

At this 19th Annual Meeting of the Indian Ocean Tuna Commission (IOTC), **Greenpeace is extremely concerned about proposals presented on the management of fish aggregating devices (FADs)**[1,2] and believes that these will result in a substantial increase in fishing capacity and exacerbate the impacts of FADs on tuna stocks and marine ecosystems. Limits on FAD numbers contained in these proposals represent a dangerous precedent for other tuna Regional Fisheries Management Organisations (RFMOs) and combined with the implementation of Fleet Development Plans (FDPs) have the potential to put tropical tuna resources managed by the IOTC at very high risk.

The adoption of FAD Management Plans across tuna RFMOS, which deal mainly with FAD-related data collection, and the current fishing industry's emphasis on bycatch mitigation, do not substitute for the need to address increases in fishing capacity and growing catches of juvenile tunas associated with FAD proliferation. Tuna fishing capacity in the Indian Ocean continues to be effectively un-assessed.

IOTC parties must take into account that the reference level for the fishing capacity of fleets targeting tropical tunas in *IOTC Resolution 12/11*[3] is their fishing capacity in 2006.[4] In addition, parties must not ignore the fact that a substantial amount of fishing capacity will be potentially added to the fishery very soon, including purse seiners, through the implementation of FDPs. Therefore, if the limit agreed is to be anything close to precautionary, it should be well below FAD numbers in 2006.

The unabated proliferation in FADs use by purse seine fleets is creating an environment in which free-school fishing, a cleaner fishing method, is becoming increasingly difficult, smaller purse seine vessels with fewer FADs will also be at a disadvantage and the largest and most industrialized vessels will be the best equipped to catch a greater share of the world's tropical tuna catch, including increasing (and massive) amounts of juvenile tunas. What we are seeing is certainly a race for fish and the drive to out-compete smaller and more sustainable operators. This drive must be opposed by the rest of the tuna industry, by those countries which are not home to these larger vessels and by responsible traders, retailers and consumers of tuna products.[5]

1 IOTC–2015–S19–PropJ[E]. *On the management of fishing aggregating devices (FADs)*. Submitted by: European Union, 26 March 2015.

2 IOTC–2015–S19–PropL[E]. *Procedures on a fish aggregating devices (FADs) management plan, including 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.* Submitted by: Mauritius, 27 March 2015.

3 Paragraph 1 of *IOTC Resolution 12/11 on the Implementation of a Limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties*.

4 Moreno et al. 2007 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 per vessel of some 45 FADs per vessel. The amount was probably lower for other fleets.

5 See Greenpeace. *Changing Tuna. How the global tuna industry is in transition to sustainable supply*. March

2. Continuous increase of large-scale tuna fishing capacity since Kobe II

Given that overcapacity and overcapitalization in tuna fisheries have been well-established problems for over two decades, Greenpeace is discouraged by the general failure to effectively manage fishing capacity at tuna RFMOs.[6] In 2009, almost six years ago, as part of the Kobe process, industrialized tuna fishing nations advocated a freeze of their tuna fishing capacity.[7] However, since then large-scale industrial fishing capacity has continued to expand.

At a recent workshop organized by the European Commission, it was estimated that out of 625 large-scale purse seiners thought to be fishing full-time for tropical tuna species globally, 52 have been added to the fleet since 2009. In addition, between 50 and 60 vessels were scheduled for commissioning through to 2015. This would imply that by the end of this year **some 110 large-scale vessels will have been added to the global fleet since 2009**.

In the Indian Ocean, future additions to the fleet are already a grave concern. The 1st IOTC Performance Review already warned about the loophole created by FDPs. Should those plans be implemented and assuming that the countries already fishing in the IO maintain their baseline capacity, ***"the fleets fishing for tuna and tuna-like species in the Indian Ocean by the year 2020, will be more than 250% over the baseline capacities"***.[8]

3. Proliferation of FADs globally and in the Indian Ocean

Industrial purse seine fleets have continued to expand their capacity, not only through new additions to the large-scale tuna fleet, but also by increasingly using a particular type of ever more efficient fishing gear: FADs.

Capacity management of tuna purse seine fleets has been so poor that the actual number of FADs used remains largely unknown. The Pew Environment Group recently estimated that the number of drifting FADs *put into the oceans each year* is in the range of 47,000 – 105,000.[9] The wide range highlights the uncertainties involved. Similarly, Scott and Lopez estimated the figure to be in the order of 91,000. In their estimation the highest average FAD number per vessel was considered to be 180 FADs for some developed countries' fleets, less than one third of the limits proposed for consideration at IOTC 19.[10]

In the Eastern Tropical Pacific the number of FADs deployed has been multiplied by a factor of 3.3 during the period 2005-2012, with an increase from 4,300 FADs released in 2005 to 14,000 FADs released in 2012.[11] In the Atlantic Ocean it has been estimated that the number of FADs has been widely increasing during recent years, potentially reaching 18,000 or more FADs today, and resulting in an estimated 3.7 fold increase since 2004.[12] According to the Western and Central Pacific Fisheries Commission, in the Western and Central Pacific Ocean vessels are using more FADs as fish schools become scarcer.[13]

2011. Available at http://bit.ly/HzdeNu.

6 See *Overcapacity in tuna fisheries: the challenge ahead*. Joint Tuna RFMOs International Workshop on RFMO management of tuna fisheries Brisbane, Australia, 29th June – 1st July, 2010. Available at http://capecffa.cluster010.ovh.net/IMG/pdf/Final_Kobe_Capacity_meeting_18-6-10.pdf.

7 See Third Joint Meeting of the Tuna RFMOs. La Jolla, California. July 11-15, 2011. *Recommendations of the Kobe II process. Extracts of the reports of the Kobe II meeting and workshops*. Available at http://bit.ly/1z9FBaZ.

8 IOTC–2015–PRIOTC02–CM05. *Capacity management*. Prepared by: IOTC Secretariat, 15 January 2015.

9 Basque et al. *Estimating the use of drifting Fish Aggregation Devices (FADs) around the globe.* Pew Environment Group, 2012. http://www.pewtrusts.org/~/media/legacy/uploadedfiles/FADReport1212pdf.pdf.

10 See http://www.europarl.europa.eu/RegData/etudes/note/join/2014/514002/IPOL-PECH_NT%282014%29514002_EN.pdf.

11 Fonteneau et al. *Managing tropical tuna seine fisheries through limiting the number of drifting fish aggregating devices in the Atlantic: food for thought.* SCRS/2014/133 rev.

12 Ibid 10.

13 WCPFC-TCC10-2014-19. *FAD marking and discussion Paper (para 38 of CMM 2013-01).* WCPFC TCC. Tenth

In the **Indian Ocean**, recent research indicates that since the introduction of FADs there are now on average two to four times more floating objects in the SE Seychelles, and an even larger figure in the NW Seychelles; off the coasts of Somalia the multiplication factor can reach up to 20 or 40 times.[14] A 2007 study estimated the number of actively monitored drifting FADs in the western Indian Ocean at approximately 2,100.[15] In the absence of effective IOTC regulations, this number has greatly increased. According to Basque et al. 2012, a conservative estimate for the number of drifting FADs deployed in the Indian Ocean each year is 7,600.[16] Filmalter et al. 2013, assume that up to 7,500 FADs are deployed by 34 purse seiners flagged to Spain, France and Seyshelles each year in the Indian Ocean.[17] According to the IOTC Scientific Committee the number drifting FADs has "*dramatically increased over the past 10 years*" and may reach around 10,000 monitored FADs in 2013, "*for the EU and Seychelles purse seine fleets only"*.[18]

Unfortunately, there is very little information available. So far, FAD Management Plans recently approved by regional fisheries management bodies, would be better described as 'data-collection plans'. Those plans often include confidentiality clauses that don't allow disclosure of the number of FADs used by individual tuna operators, protecting the interests of parts of the industry at the expense of improved science and fishing capacity management. A recent IOTC report on fishing capacity in the IOTC area states that "a *limited amount of data on FADs has been presented […] due to the secrecy that surrounds their deployment.*"[19]

4. Proposals presented at IOTC 19 likely to result in even larger FAD numbers

While concerns have been raised for many years about the impacts associated with the use and proliferation of FADs in purse seine fisheries, proposals presented at this meeting are likely to result in an even bigger increase in FADs in the Indian Ocean, adding considerably more fishing capacity.

The EU proposal supports the creation of "*ad-hoc working group on FADs to assess the consequences of the increasing number and technological developments of FADs in tuna fisheries and their ecosystems",* as recommended by the IOTC SC, which is absolutely to be welcomed. Equally, the Mauritius proposal introduces provisions "*for marking and monitoring of the FADs, more detailed specifications for reporting from FAD sets, and the development of improved FAD designs*", which Greenpeace also welcomes.

But at the same time, proposed limits on the number of FADs deployed each year of **550 FADs or 800/400 monitored buoys per vessel** must be rejected**.** A simple search in the IOTC record of active vessels[20] for purse seiners with a tonnage greater or equal than 273 tonnes[21] rendered a list of 91 purse seiners. **With a limit of 550 FADs per year, those 91 purse seiners could deploy over 50,000 FADs**

Regular Session. 25 - 30 September 2014. Pohnpei, Federated States of Micronesia.

14 Dagorn, L et al. How much do fish aggregating devices (FADs) modify the floating environment in the ocean? Fish. Oeanogr. 22:3, 147-153, 2013. http://onlinelibrary.wiley.com/doi/10.1111/fog.12014/abstract.

15 The study was based on interviews with 34 Spanish and French captains representing 75% of the EU fleet at the time (45 purse seiners). Moreno, Gala et al. Fish behaviour from fishers' knowledge: the case study of tropical tuna around drifting fish aggregating devices (DFADs). Can. J. Fish. Aquat. Sci. 64: 1517-1528 (2007).

16 Ibid 9.

17 Filmalter et al. Looking behind the curtain: quantifying massive shark mortality in fish aggregating devices. Front. Ecol. Environ. 2013; doi:10.1890/130045.

18 "*This figure does not include the FADs deployed by purse seine vessels of other fleets, such as Rep. of Korea (4 vessels), Sri Lanka (8 vessels) and Mauritius (6 vessels which entered the fleet in 2014)*." IOTC–2014–SC17–R[E]. Report of the Seventeenth Session of the IOTC Scientific Committee. Seychelles, 8–12 December 2014.

19 Moreno, G; Herrera, M. Estimation of fishing capacity by tuna fishing fleets in the Indian Ocean. IOTC–2013–SC16–INF04.

20 See http://iotc.org/vessels/current.

21 The threshold of 273 tonnes GRT was used in ISSF Technical Report 2012-01 to estimate the number of large-scale fishing vessels fishing full time for tropical tuna species.

a year in the Indian Ocean alone, a considerable increase to the current estimates. Drifting FADs deployed by vessels below the 273 tonnes threshold would add to this figure. If this precedent were to be followed by other tuna RFMOs, the estimated 678 large-scale purse seiners fishing full time for tropical tunas globally[22] could deploy over 370,000 FADs globally, 4 times the amount estimated by Scott and Lopez, which is already a cause of serious concern.

Last year, IOTC parties rejected a proposal by Mauritius to limit the number of instrumented buoys to 200 per vessel per year, a number already of great concern to Greenpeace. The proposal was rejected on the grounds that there was no available science to support that number. It is then a fair question to ask: where is the science that shows that a limit of 550, 800 or 400 FADs per vessel will pose no risk to tuna resources and ecosystems? It should also be reminded that Mauritius presented at IOTC 18 a revised version of such proposal suggesting a freeze in the number of FADs.[23] That was also rejected by parties to this Commission.

This issue highlights the broader concern that States have forgotten their obligations under many international arrangements, notably the UN Fish Stocks Agreement, to apply widely the precautionary approach to fisheries and to *be more cautious when information is uncertain, unreliable or inadequate*, as it is the case with FAD use and impacts. 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.

5. Cumulative impacts of FADs

FADs are changing the floating landscape of our oceans at a global scale and are considerably increasing the ability of some purse seine fleets to catch fish. It is not the purpose of this briefing to review their impacts which include, among others, the massive catch of juvenile tunas with consequent diminished yields from tropical tuna fisheries; reduction of spawning potential; large uncertainties introduced into the stock assessment process; 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.

It is important to note **that an increase in the use of FADs has an impact on those not using them, or using smaller numbers.** 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.[24] Concerns also exist that **more FADs may actually not lead to higher catches overall**. Recent research suggests that the total tuna catch may be reduced when the number of floating objects is too high, and above a certain number of floating objects catch may not increase.[25] Catches per set may decrease as tuna have more floating objects to choose from.[26] At the same time, the level of bycatch could increase since sets on smaller schools have a larger proportion of non-target species.[27]

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22 Victor R. Restreppo and Francesca Forrestal. A Snapshot of the Tropical Tuna Purse Seine Large-Scale Fishing Fleets at the End of 2011. ISSF Technical Report 2012-01. January 10, 2012. The 678 large-scale purse seiners referred above correspond to IATTC purse seine classes 5 and 6, this is, above 273 tonnes GRT or 335 m3 fish hold volume.

23 "*The maximum number for each individual purse seine vessel shall correspond to the average of DFADs or DFADs' beacon deployed by the purse seiner and its supply vessel(s) (if any) during the years 2013 and 2014 as declared to the Commission according to the Resolutions 12/08 and 13/08.*" IOTC–2014–S18–PropL Rev_1[E].

24 Fonteneau, Alain. On the recent steady decline of skipjack caught by purse seiners in free schools sets in the eastern Atlantic and western Indian Oceans. SCRS/2014/134.

25 Sempo et al. Impact of increasing deployment of artificial floating objects on the spatial distribution of social fish species. Journal of Applied Ecology 2013, 50, 1081-1092. http://archimer.ifremer.fr/doc/00151/26275/24439.pdf.

26 Ibid 24.

27 Dagorn et al. Targeting bigger schools can reduce ecosystem impacts of fisheries. Can. J. Fish. Aquat. Sci. 69:

The large catches of juvenile tunas, which reduce the long-term maximum sustainable catch levels, are also having impacts beyond purse seine operators and should these impacts continue into the future they may impact upon the longer term viability of longline fisheries.[28]

6. Locking developing States into a capital intensive business model

Larger industrial fleets operating with very high FAD numbers and ever more efficient technology, increasingly including echo-sounders, are leaving very little space for other fishers that fish with less capital intensive or lower impact fishing methods.

There is growing evidence showing that vessels and fleets that rely more heavily on the use of FADs are typically larger and have a higher registered tonnage.[29] Therefore, higher FAD limits would benefit those fleets that are financially stronger, composed of vessels large enough to handle a large number of FADs and with increasingly sophisticated technology, or using support vessels which also add to unaccounted fishing capacity. The obvious result is that when developing their own fleets, developing countries will be locked into a very particular business model which is unlikely to meet the needs of these countries.

In addition, the large increase in FAD numbers that we have seen since the adoption of *IOTC Resolution 03/01 on the limitation of fishing capacity of contracting parties and cooperating non-contracting parties*, could be seen as a way to circumvent the exceptions granted to developing countries through FDPs. While the intention behind these plans was to recognize the rights and needs of developing States to build up their fleets while keeping the fishing capacity of developed countries to existing levels,[30] the reality is that large-scale industrial fleets from developed countries have continued to largely increase their fishing capacity through larger FAD numbers.

7. Failing to implement the precautionary approach

The world's fisheries need to be conducted in a manner that ensures a low risk of depletion of fish stocks, or, in those cases where populations have been already overexploited, a high probability of recovery in the shortest time frame possible. They must also be managed to ensure that the structure of tuna populations and the integrity of the ecosystem is preserved.

The high uncertainty around the precise impacts of FADs and the incomplete information about their use, should be compensated by necessary restrictions in fishing activities. If FADs are to be allowed, limits on their use should be such that there is some level of certainty that their use won't jeopardize the sustainable exploitation of tuna resources and expected fishing capacity increases should be taken into account (ie, through FDPs). Rather, proposals presented to IOTC 19 on the management of FADs suggest limits per vessel which are well above what most vessels in the IOTC fleets are already using, thus allowing a substantial increase in FAD numbers, and in addition it provides for such a limit to be maintained "*until any subsequent amendment or superseding Resolution is adopted by the Commission*". This would very likely lock such a limit into place, as achieving consensus over the much-needed capacity reduction of the region's industrial fishing sector will be a huge challenge.

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1463-1467 (2012).

28 Leroy et al. *A critique of the ecosystem impacts of drifting and anchored FADs use by purse-seine tuna fisheries in the Western and Central Pacific Ocean.* Aquat. Liv. Resour. EDP Sciences, IFREMER, IRD, 2012.

29 Parker et al. *Fuel performance and carbon footprint of the global purse seine fleet.* Journal of Cleaner Production, 2014.

30 "*In relation to the foregoing, the Commission took note of the interests of the developing coastal States, in particular small island developing States and territories within the IOTC Convention Area whose economies depend largely on fisheries"*. Paragraph of Resolution 03/01.