To The Executive Secretary,
Indian Ocean Tuna Commission,
P.O. Box 1011
Victoria, Mahe -SEYCHELLES

RE: Kenya submission to WGFAD02 - Comparing different drifting FAD management options

As one of the main nations advocating for improved management of drifting Fish Aggregating Devices (dFADs), Kenya submits this summary of options available to help sustainably manage tuna stocks and the broader ecosystem damage currently caused by dFADs in the Indian Ocean. The intention of deployment, relative abundance, supported fleets and impact potential of anchored FADs (aFADs) are not comparable, so this paper focuses only on drifting FADs (dFADs) deployed and used by industrial purse seine fisheries.

FAD time/area closures
All tropical tuna RFMOs, except the IOTC, implement a time/area closure to manage the impacts of dFADs. These are the simplest means of managing the impacts of purse seine fleets catching high proportions (often more than 95%) of juvenile yellowfin (YFT) and bigeye (BET) tunas when using dFADs. Although juvenile tropical tunas typically show a high rate of natural mortality, the additional fishing mortality caused by dFAD fishing, and the numbers of individual fish killed per tonne of harvest when capturing small juveniles around dFADs, are of concern to these stocks sustainability. We believe the IOTC should implement an oceanwide temporal dFAD closure over a suitably long period to maximise the recruitment and stock protection benefits this can enable. Limiting the closure to a specific area of the Indian Ocean should only be considered if rigorous science can suitably define the area in which the closure should be applied. Even in such an instance, the area should be expanded beyond its minimum to apply the precautionary approach to fisheries management.

FAD following and purchase limits
The IOTC currently limits the number of dFADs that a purse seine vessel can follow "at any time", how many can be annually purchased, and how many can be in stock at any time[1]. The management focus on how many dFADs a vessel can "follow" at "any time", **not on how many dFADs can actually be deployed**, greatly reduces its potential positive impact. This is especially true while vessels can remotely activate or deactivate their dFAD's operational bouys while at sea. In contrast to the intent of the measure, each vessel can practically maintain a much larger array of dFADs than the proposed limit, but it can avoid exceeding the current Resolution limit by only "following" the closest or most effective dFADs "at any time". As a consequence, this measure also does not effectively manage ghost fishing, pollution, IUU or habitat damage concerns related to the deployment and loss or abandonment of dFADs. Limitations on the number of dFADs that can be purchased or in stock aim to help address these issues, but adherence to those limits is not yet suitably or transparently verified. The current lack of transparency in purse seine fleet operations, and the lack of requirements to appropriately label all dFAD components, also means that stranded or abandoned dFADs cannot be retraced to their owners. Requiring effective labelling of all dFAD components and explicitly limiting the number of dFADs that can be deployed and owned by any vessel will greatly improve management.

FAD set limits
These have been suggested and trialled in other RFMOs, but they were more complicated and difficult to monitor and manage than other management options. This is unsurprising, since monitoring of "FAD Sets" requires higher resolution data than monitoring the number of dFADs deployed, purchased or in stock. The IOTC may therefore learn from experiences elsewhere, recognise regional capacity limitations and avoid spending time considering this more complicated management option. Limiting the number of dFADs which can be deployed and owned will reduce how many FAD Sets can be made anyway.

Biodegradable FADs

No modern dFAD design typically used by industrial purse seine fleets globally is completely biodegradable, even when ignoring plastic operational buoys that enable satellite transmissions. Most purse seine fleets continue to use sections of old netting and other non-biodegradable materials in their dFAD designs. Low implementation of biodegradable dFAD materials is concerning when considering that over 90% of deployed dFADs are abandoned and lost in other regions, while robust estimates of dFAD loss in the Indian Ocean are not yet available. The pollution and ecosystem damage caused by lost or abandoned dFADs is a real concern, especially when also considering the large expense of clean up costs[2].

Non-entangling FADs

Similar to "biodegradable FADs", the actual application of "non-entangling" dFAD designs remains low. The current IOTC Strategic Science Plan[3] requires the Scientific Committee and its working parties inform the Commission's needs to manage fish stocks under the IOTC mandate, and any adverse impacts on the ecosystems in which the fisheries operate. However, the IOTC is not currently achieving the intended ecosystem approach to fisheries management for dFADs. Many dFAD designs promoted as "non-enatangling" or less entangling still use netting and other meshed materials which have been scientifically shown to cause large scale ghost fishing impacts upon sharks[4], turtles[5], porpoises and many other species[6]. Some of the promoted designs tie this netting into "sausages" or have other similar suggestions, but the netting unravels and becomes an entanglement risk as the dFAD degrades at sea or collides with a reef or other habitat.

FAD bans

When other management options fail to control the overfishing, juvenile harvests, pollution, ghost fishing and habitat damage caused by dFADs, the only alternative approach may be to ban the use of dFADs until there is an effective mechanism available to sustainably manage their use. This has not yet happened in any tropical tuna RFMOs, but there is a precedent and process for applying a FAD ban available from the protocols and monitoring used during FAD closures.

Noting all of the above, Kenya suggests that the IOTC urgently implements a temporal dFAD Closure of sufficient duration to mitigate the juvenile harvests and other impacts currently caused by dFADs in the Indian Ocean. This closure should be complemented by effective and precautionary management of the number of dFADs that can be annually deployed, not only "followed at any one time", by any and each vessel. Overcomplicating fisheries monitoring and management by pursuing FAD set limits should be avoided, while more stringent rules and limits should also explicitly be applied to supply vessels. All dFAD components should be suitably marked to enable tracing back to the deploying vessel at any time of the dFADs entire life, and each dFAD should count to a vessel's recurring deployment limit until it is recollected and suitably disposed of. We suggest that, except for the operational buoy, all dFADs deployed in the Indian Ocean should be 100% biodegradable, with all other designs being removed from the water while a polluter pays mechanism is implemented by the IOTC as a matter of urgent priority.

References

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