

Progress on FAD research conducted on behalf of the tRFMOs

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Tuna RFMOs and their stakeholders have, in recent years invested considerable resources in FAD research. Much of it has been presented in support of the work of the FAD working group existing in some of the Commissions (IATTC 2016, ICCAT 2017a, IOTC 2017), to the joint tRFMO meeting on FADs (ICCAT 2017b) and to the scientific committees of the Commissions. In some cases, research on FADs is regarded as one of the fundamental issues to be tackled by the strategic research plans of tRFMOs (ICCAT 2014, IOTC 2016).

Much of the research is done in collaboration with industry and NGOs. Industry and NGOs have contributed with knowledge and operational resources, such as access to their vessels and time spent by their scientists, crews and technicians in the research. The European Union has provided a large portion of the funds spent in support of this research.

Research spans a wide range of topics and can be classified in a few research themes (Table 1). Most projects have goals that span more than one research theme and their scope extends to more than one tRFMO. Research often includes research institutions in partnership with fishing companies and with participation of the scientists from the Commission's secretariats.

A preliminary list of FAD related research projects has been developed but needs contributions from all participants at this meeting to be made more comprehensive. Such a list can be a tool for tRFMOs and FAD working groups to promote collaboration and reduce duplication.

Research has not necessarily always kept pace with the demands of managers to make decisions about FADs. As an example, ICCAT has adopted seasonal spatial closures to reduce the impact of FADs on tropical tunas that were not designed on the basis of scientific research. Invariably, the SCRS of ICCAT has reported that such closures have either not achieved the desired objectives set by the Commission; or that it is not possible to evaluate their benefits because the available data is not appropriate for such evaluation (ICCAT 2018).

One of the clear benefits of this research has been the joint engagement of scientists and industry in tackling challenging management questions. As a result, industry have sometimes used the results of research to implement "best practices" ahead of the adoption of recommendations by the Commissions.

One clear conclusion from the joint meeting of tRFMOs on FADS (ICCAT 2017b), however, was that research on FADs is of benefit to all rFMOs and therefore that there is a need for "Coordination and collaboration on research plans on FADs across t-RFMOs". The joint tRFMO technical working group on FADs has a clear role in ensuring and promoting this coordination. This group, however, cannot be the only mechanism for such coordination as competition for funding can always lead to duplication of efforts and differences in research priorities placed by Commissions may not always lead to the most efficient investment of scarce resources. There is therefore a need for the leaders of the Kobe process representing each Commission to acknowledge the benefits of long-term investing of Commission resources in joint-research on FADs.

TABLE 1. Potential classification of research themes with corresponding examples of projects and tRFMOs where research is done.

FAD research theme	Example project	Leading Institution	Collaborators	tRFMO
FAD terminology harmonization	RECOLAPE	AZTI	IRD, IEO	Global
Materials, design and construction techniques	dFAD construction in the WCPO	SPC		WCPFC
Technology	BAI	AZTI	IRD, IEO	ICCAT, IOTC
Marking and monitoring	PNA FAD tracking	SPC		WCPFC
FAD contribution to fishing mortality of target species	Shallow vs deep FAD performance	ISSF	NIRSA company, IATTC secretariat	IATTC
Ecology of FAD-associated communities	CECOFAD2	IRD	AZTI, IEO, CEFAS, MRAG	ICCAT, IOTC
Mitigation of Environmental effects	FAD-WATCH	AZTI	OPAGAC, ICS, SFA, IDC	IOTC
Evaluation of FAD management	AOTTP	ICCAT secretariat	CRODT, CRO-CI, FSSD, INDP, IEO, IMROP, CIPA, DGPA Gabon, DP São Tomé e Príncipe	ICCAT
Legal aspects				

References

- IATTC 2016. Report of the coordinator. Inter-American tropical tuna commission ad hoc working group on FADs. 12p.
- ICCAT 2014. 2015-2020 SCRS science strategic plan. 21p.
- ICCAT 2017a. Report of the 3rd meeting of the ad hoc working group on FADs 27 p.
- ICCAT 2017b. Chair report of the 1st joint tuna RFMO FAD working group meeting. 250 p.
- ICCAT 2018. Report of the Standing Committee on Research and Statistics.
- IOTC 2016. Working party on neritic tunas program of work (2017–2021) 25 p.
- IOTC 2017. Report of the IOTC ad hoc Working Group on FADs. 21 p.