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Testing the use of Electronic Monitoring Systems to combat IUU

Results from pilot activities in Fiji and Ghana

Combatting Illegal, Unreported and Unregulated Fishing

Illegal, Unreported and Unregulated (IUU) Fishing is a serious threat to sustainable fisheries, marine ecosystems and the livelihoods of legitimate fishers globally. To address this threat, the Common Oceans ABNJ Tuna Project is exploring new ways to strengthen and harmonize the use of monitoring, control and surveillance (MCS) tools, and combat IUU fishing in tuna fisheries across the marine areas beyond national jurisdiction (ABNJ).

Using Electronic Monitoring Systems as a tool for MCS

One of the MCS tools that the Common Oceans ABNJ Tuna Project has explored extensively, is the use of Electronic Monitoring Systems (EMS) to monitor individual vessel operations at sea. In a typical EMS application, cameras, recording video or still images, are deployed at key points on the vessel to allow a view of the fishing operation, including the composition of the catch. All the data collected is stored in hard drives containing the video footage which can then be retrieved and used

by government officials to review compliance with national and regional regulations, as well as record detailed data on catch and effort.

Advantages of EMS

EMS offers key benefits, in particular regarding the monitoring of compliance during fishing, and can be used to complement existing observer programs and other monitoring tools. An observer at-sea can rarely be protected from possible pressure to mis-report infractions that could lead to sanctions against the vessel operators. Image information, provided that there is an adequate legal framework, could be used to prosecute a case of IUU fishing, or could exonerate a legal operator. However, EMS should not be favoured over on-board observers as it cannot provide the same high resolution scientific information, and should therefore be considered a complement rather than a substitute.



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EMS pilots in Fiji and Ghana

To test the best way to incorporate this new monitoring technology to the MCS toolbox available, two pilot activities were set up under the framework of the Common Oceans ABNJ Tuna Project. One in Ghana, led by partner organization World Wide Fund for Nature (WWF), and one in Fiji - targeting two different types of fishing operations.

In Ghana, EMS equipment was deployed aboard the domestic purse-seine fleet, whereas in Fiji, longline vessels from their domestic fleet were equipped, both using camera and software provided by Satlink DOS. As a result of having to accommodate to the diverse type of vessels and fishing activities, the camera arrangements differed in the two fleets, although both installations required a clear view of the operations and catch composition. The overall aim of the pilots was not to test the technology itself, but to develop an effective implementation process at the national level, so that the information is properly utilized for compliance purposes.



Pilot activity overview

Electronic Monitoring in Fiji

Activity implemented by the *Fiji Fisheries Department* together with the *Fiji Fishing Industry Association* on longline fleet.

- Fijian longline fleet is composed of 89 vessels
- EMS equipment includes 3 cameras recording 24/7 to monitor setting, hauling and environment
- VMS and Sat-modem: geolocalization and health statements
- 38 vessels equipped (50 vessels is target), 310 fishing trips monitored and 150 fishing trips reviewed

Electronic Monitoring in Ghana

Activity implemented by WWF together with the *Ghana Fisheries Commission* and the *International Seafood Sustainability Foundation* on domestic purse seine fleet.

- Ghanaian purse seine fleet is composed of 14 vessels
- EMS equipment includes 6 cameras recording 24/7 to monitor all possible activities aboard
- VMS and Sat-modem: geolocalization and health statements
- Full fleet equipped, 163 fishing trips monitored and 154 fishing trips reviewed

Results and next steps

Both pilot activities will be completed by the preparation of national business plans that identify lessons learned during their implementation, and propose a means of ensuring continuity of the EMS implementation after the Project is completed. The business plan for Ghana has been completed and presented to the government and private sector, who supported the findings and indicated their agreement to contribute to the continuation of the EMS. The business plan for Fiji is still under preparation, but the private sector has already supported the idea of an EMS beyond the life of the Project in 2019.

In summary, experiences and results from the overall Project activities have demonstrated that the transfer of new technologies can be done effectively when there is consideration of the context in which the new technology will be deployed. This includes the strengthening of the national institutions involved, establishing key partnerships, developing the required legal frameworks, and building the human resources necessary for the effective operation of the new technology.



The Common Oceans ABNJ Tuna Project, funded by the Global Environment Facility and implemented by FAO, harnesses the efforts of a large and diverse array of partners, including the five tuna Regional Fisheries Management Organizations, governments, inter-governmental organizations, non-governmental organizations and private sector, to achieve sustainable tuna fisheries and biodiversity conservation in the ABNJ.

For more information:

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