

Observer safety and new technologies discussed at the 18th Regional Observer Coordinators Workshop

Tropical Pacific region tuna fisheries observers, just like the fishers they work alongside, work hard at a job that they believe in. They live and work on-board commercial fishing boats and collect data on what is being caught and how it is being caught. Their work helps to safeguard the globally significant resources of Pacific region tuna fisheries by ensuring that they are fished sustainably.

The Western and Central Pacific Ocean (WCPO) is home to the world's largest tuna fishery and produces around 60% of the global tuna catch. There are now more than 820 active observers working across 15 observer programmes in Pacific Island countries and territories (PICTs). They act as the eyes and ears of the regulatory bodies that protect the globally significant tuna stocks of the Pacific Ocean.

In February 2018, the Forum Fisheries Agency (FFA) and the Pacific Community (SPC) held the 18th Regional Observer Coordinators Workshop (ROCW18) in Pohnpei, Federated States of Micronesia. The forum provided an opportunity for Pacific Island Regional Fisheries Observer (PIRFO) managers and coordinators to meet and discuss technical improvements, improved cooperation and to provide technical recommendations to improve regional harmonisation. Recommendations developed at the workshop will help to direct policy development throughout the Pacific Islands region.

The ROCW18 theme was *Observer Programme best practices with enhancement of observer safety and electronic monitoring and reporting*.

Observer's dual data collection and monitoring role can isolate them from the captain and crew, their only company, sometimes for months at a time, when they are on the high seas. The Western and Central Pacific Fisheries Commission (WCPFC) has identified instances of observers being assaulted, prevented from doing their job, asked not to report an incident, or denied food, water and safety gear. There have been six observers lost in the Pacific Islands region over recent years due to accidents, undisclosed medical issues that were exacerbated by working at sea and even suicide. One observer was allegedly killed by crew members, and one death remains a mystery. These incidents have all occurred since observers were given the role of monitoring the closure of fish aggregating devices, catch retention and other compliance issues.

Since the beginning of 2017, observers are all meant to be equipped with an emergency beacon and two-way communication device in order to stay in touch with their agency. This is an important first step; however, the accidental loss of an observer in 2017 resulted in the implementation of a regional regulation on observer safety with obligations in relation to search and rescue and the treatment of observers

who are placed on the fishing vessels. ROCW18 recommended further requirements on this regulation to include the need for better coordination between fisheries observer programmes and search and rescue agencies.

Along with observer safety, there is currently a regional investigation into the recommendations that deal with allegations that are made by the captain and crew of a vessel of observers' behaviour. To contribute to this investigation, ROCW18 recommended a set of minimum requirements for an observer programme's code of conduct as well as formalising any allegations made by a vessel's crew members through a compulsory report on observer. This is in order to improve transparency in processes that are available for reporting observer conduct, whether it is good or bad, including processes resulting from alleged observer misconduct (i.e. investigations and subsequent outcomes).

Science-based management of tuna fisheries requires a steady flow of good data. Managers need to understand how tuna populations are changing and responding to environmental pressures and industrial fishing. The data collected by observers help scientists create a picture that is



Observer's dual data collection and monitoring role can isolate them from the crew; a situation that can become problematic when fishing trips on the high seas last for months (image: Thomas Auger).

as complete as possible on which to base management decisions. The ROCW18 recommended improvements in data flow and communication of reported critical incidents. Also of significant is that debriefing evaluations are included in the database to verify the accuracy of all data – for the users – that is collected by an observer on their trip.

Observers record everything that's brought on to a fishing boat, as well as the fate of everything that leaves it. As well as tallying target catches of tuna, they also monitor bycatch and discards. Discards are everything else that is caught and released or tossed overboard because it is the wrong kind of fish, or too small – or not even a fish at all. As well as fish, discards can include seabirds, turtles and other marine mammals.

However, observers do not simply identify, count and measure the tuna, bycatch and discards that are caught. They also record the location of the catch, weather conditions and the activity of the vessel at any time; describe the fishing gear and new technology that is being used; and collect biological data of the fish. This information helps scientists to monitor the abundance of tuna and bycatch species and helps fisheries managers to judge the way fish populations are responding to their regulations, changing environmental conditions and intense industrial scale fishing.

Over the past several years, the role, information being collected and workload of an observer has increased. Their value in collecting independent, unbiased and accurate information on fishing operations has been recognised and rewarded with an increasing list of monitoring duties. The increased workload has caused a role shift towards collecting data to support the monitoring of fishers' compliance with regional regulations, which has been to the detriment of some of the observers' more 'traditional' roles of collecting biological information. The ROCW18 noted this and recommended a shift back towards collecting biological data, which is important for assessing the status of fish stocks.

New technologies for electronic-reporting (e-reporting) and electronic-monitoring (e-monitoring) are being implemented to help with validating and strengthening the work that is already being done by observers.

E-reporting allows for the electronic entry and transmission of observer reports, ensuring real-time reporting of critical information through satellite transmissions or mobile networks. Tablets and mobile devices are gradually replacing paper workbooks, which makes the flow of data more efficient.

E-monitoring uses on-board cameras and sensors on equipment to collect data in order to verify and strengthen the data collected by observers. These systems include several still and/or video cameras and sensors that are installed on a fishing vessel to record activities and data on board, including catch, location, course, images, and speed of the vessel. There are huge opportunities to make the most of e-monitoring as a complement and to expand the coverage of human observers. E-monitoring can be placed on smaller vessels that have limited capacity to accommodate a human observer. E-monitoring can simultaneously monitor different areas of a vessel, and can operate consistently at all hours of the day.

The ROCW18 discussed the impact of new technologies on observers. They recognised that integrating e-reporting and e-monitoring into the observer programme will help to improve data collection and flow to fisheries scientists and managers. Furthermore, the ROCW18 also recommended that clear definitions, standardised collection protocols and defined verification processes of e-monitoring be made in order to avoid conflicts in the perception of the roles of e-monitoring and observers. They also recommended a comprehensive analysis to identify the potential impacts on observers, data management and the PIRFO once an e-monitoring framework has been defined. To do this, the ROCW18 recommended that paired trips using both methods should be made on longliners and the data be analysed to determine the statistically sound coverage levels required by scientists and managers.

The regional Monitoring, Control and Surveillance Working Group at FFA in the Solomon Islands subsequently endorsed the outcomes of ROCW18 in March. In May, these recommendations will be discussed by the 17 PICTs of the 106th Forum Fisheries Committee and may support the initiatives of these nations in managing fish stocks of the region.

From little things, big things grow.

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