

### When economy meets with tuna

*The SciCOFish<sup>1</sup> project has recently added two new staff members, Aaron Berger and Roseti Imo, who are introducing economic perspectives to the biological scientific work that is already being done by SPC on oceanic fisheries. Their main task is to estimate the economic impacts of various fisheries management options proposed to Pacific Island countries.*

#### Providing economic advice on fisheries management

Aaron is based at SPC in Noumea and Roseti at the Pacific Islands Forum Fisheries Agency (FFA) in Honiara, and together they work closely on reinforcing the way in which SPC and FFA collaborate to provide scientific advice to member countries.

It has effectively been a demand from the Pacific Island countries that the usual national or regional tuna fisheries status reports as well as the national briefs provided regularly by SPC in response to specific national requests should relate to economic impacts.

As an example, some countries are interested to know the number and type of vessels they can authorize in their exclusive economic zone, according to the potential catch but also taking into account the impacts of different fishing effort levels on costs and benefits of the fishery.

#### Bioeconomic indicators included in the fishery performance evaluation

The idea is to constitute a modelling platform that predicts changes in the spatial and seasonal distribution of fishing effort in response to tuna stock conditions and management controls. Incorporating fishing cost and market price by size and/or grade information to current stock projections would provide useful metrics for comparing the economic performance of the fishery under alternative management scenarios, such as the extent and duration of fish aggregating device closures and high seas restrictions.

Some useful economic measures include price elasticity, net present value, economic impacts of bycatch, and ways to estimate the performance of the fleet under varying fuel costs. The aim is to automate such calculations for future regional reports and meetings, knowing that the work load will vary considerably from country to country as a result of fleet size and available data.

#### Data: The key to the process

An inventory of fishing cost information available for input into the regional models has been completed. However, this information is dated, with cost estimates determined from patchy data available from some of the fleets in the South Pacific region.

Aaron and Roseti are now developing a new economic survey form for purse-seine vessels, being tested for later distribution to countries in the region that have domestic-based, purse-seine fleets and to distant-water fishing fleets. An additional approach to acquiring the necessary data for analyses, such as the fuel used when fishing each set type, will be to use the existing vessel monitoring system database to estimate distance travelled between sets.

#### For more information:

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<sup>1</sup> SciCOFish = Scientific support for the management of Coastal and Oceanic Fisheries in the Pacific Islands region. For more details, see: <http://www.spc.int/fame/en/projects/scicofish/about-scicofish>

