

Getting to the point on Pacific tuna fisheries: Scientists call for reference points to replace the current gridlock

Scientists attending the annual meeting of the Western and Central Pacific Fisheries Commission (WCPFC), held in December 2012 in Manila, indicated that the viability of the western and central Pacific tuna fishery is at risk, due to the failure of WCPFC to reach decisions on management as a result of competing political and economic goals.

The western and central Pacific tuna fishery is the world's largest, with total catches worth USD 5.5 billion in 2011. Recent analyses by scientists from SPC's Oceanic Fisheries Programme (OFP) show that overfishing of bigeye tuna is already occurring, while the albacore tuna catch has risen rapidly to levels that threaten the profitability of Pacific Island fisheries. While not all tuna are at risk, stocks of all four main tuna species have fallen to historically low levels. Many Pacific Island countries rely on tuna fisheries for employment, food security and income, and a continuing increase in fishing effort will negatively impact these countries.

Management decisions at WCPFC are reached through a consensus-based system. Unfortunately, the competing interests and values of WCPFC members produce gridlock and watered-down decisions that favour short-term economic interests at the expense of long-term productivity and sustainability.

To address this problem, WCPFC organised a special two-day management workshop that aimed to identify desirable stock levels for tuna and support sustainable management decisions. SPC scientists provided advice on and support to this process, which resulted in a range of candidate long-term objectives for WCPFC fisheries.

Long-term objectives for Pacific tuna fisheries need to be based on both economic outcomes (such as revenue, employment and stable sources of fish for processing) and environmental outcomes (such as the sustainability of fish stocks and reduction of bycatch and interaction with species such as sharks and turtles). These objec-

tives will help WCPFC members identify desirable stock levels for tuna species, and support sustainable management decisions.

These outcome-based objectives can be formalised into a system of management "reference points". The adoption of reference points and harvest control rules that define the allowable level of fishing would enable fisheries managers to act swiftly and efficiently to ensure tuna stocks provide a sustainable, consistent supply of tuna to markets. The WCPFC workshop represents the first step in a long process toward achieving these goals. OFP will continue to support its members and WCPFC in the further development of sustainable management approaches for these stocks.

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A limit reference point is the minimum allowable stock size or maximum level of fishing effort. Exceeding the limit reference point will endanger the resource; it is a danger signal, and reaching this point should be avoided.

A target reference point is the specific fishery stock size or level of fishing effort that ensures a fishery provides optimum benefits. The target reference points are established by investigating the biological, ecological, social and economic factors that affect a fishery, and constitute "where we want to be".

A harvest control rule is a pre-agreed upon action to be taken by fisheries managers to achieve a target reference point. For example, "If the albacore fishery reaches 40% of its unfished state, then the level of fishing must be reduced by 20%".