

GREENPEACE

Briefing

Bold measures needed to protect declining tuna stocks

**BRIEFING TO: Western & Central Pacific Fisheries Commission – Scientific Committee
Third Regular Session: Honolulu, USA - August 13-24th 2007**

The member states and participants involved in the Scientific Committee of the Western and Central Pacific Fisheries Commission (WCPFC) are tasked with providing the best scientific advice on the conservation and management of remaining tuna stocks. These parties must therefore acknowledge the continuing decline in the bigeye and yellowfin stocks. They must also recognise the need for a radical change to the current management paradigm which is based upon the fundamentally flawed and largely discredited concept of maximum sustainable yield (MSY).

There is widespread perception that Regional Fisheries Management Organisations (RFMOs) have failed to achieve sustainable management of tuna stocks. This ineffective management is due in part to consensus driven decision making processes which favour those countries with the biggest commercial interest in the fisheries. This translates into ineffective implementation of the management measures required to ensure that these fisheries remain both sustainable and profitable. A critical element of the sustainability equation is the protection and conservation of the rich biodiversity of our oceans beyond the target species themselves.

Reliance on MSY as a target of sustainability is a large contributing factor to the stock management problems. In reality, considerable unknowns and uncertainties are attached to data on fishing operations, stock modelling, stock projections and fish mortality estimations. This means that using MSY as a management target, coupled with a tendency to ignore scientific advice, constitutes an extremely high risk management strategy which can result in a gross underestimation of stock exploitation levels.

A case in point are the WCPO stocks of bigeye and yellowfin tuna. Since 2001, regional scientists have warned that these tuna stocks are under pressure. Yet to date, no concrete measures have been agreed and implemented to counter the decline of these two stocks, for which scientists agree that “**overfishing is occurring**”. In addition, Greenpeace contends that the high level of “unknowns” in the data used in scientific modelling and projections is compromised further by the high levels of illegal, unreported and unregulated (IUU) fishing occurring in the region. This means that the exploitation of bigeye and yellowfin stocks are far higher than the exploitation levels used as inputs for the management models used in these fisheries.

Given the uncertainties outlined above, Greenpeace is concerned that the measures proposed to address the unsustainability of this fishery fall far short of what is necessary to ensure that the current situation is checked and reversed. The proposed

reduction in fishing mortality of 25% for bigeye and 10% for yellowfin are far below the reductions required in the application of a precautionary management paradigm.

In 2006 for a period of seven weeks, Greenpeace undertook a joint surveillance exercise with the governments of the Federated States of Micronesia and Kiribati. With fisheries officers from these States, we boarded and inspected fishing vessels inside their respective Exclusive Economic Zones (EEZs). We observed a range of irregular and unreported practices including:

- 80% of the vessels boarded had VMS problems and had failed to notify the licensing coastal state that they were fishing inside their waters, or send catch reports.
- One vessel was boarded which had been at sea for up to two years without submitting any verifiable records on the actual tonnage of tuna harvested during this period
- The strong indication that transshipping at sea is prevalent, with ships inspected having less than 200 tons on board when they had been at sea for over a year.

This evidence provides clear examples of how the exclusion of IUU impacts from scientific assessment and modelling processes creates a distorted perception of the state of the fishery that does not match-up with the reality. With 7,000 or more vessels fishing in the Pacific, the problem of “stolen fish” could be an extremely large one and likely to significantly undermine any management programmes.

With these considerations in mind, Greenpeace therefore recommends:

- 1. An immediate 50% reduction in tuna fishing effort across the entire WCPO sector based on the average 2001-2004 levels, with a particular focus on purse seine fishing effort to account for the high levels of unknowns and uncertainties in the dataset.**
- 2. Implementation of the ecosystem approach to the management of tuna resources within tightly defined precautionary limits. As part of the ongoing management regime, research must be undertaken to reduce the uncertainty and indeterminacy attached to the key parameters/assumptions used as inputs for the management models. This should include an explicit evaluation of the scale and extent of IUU fishing.**
- 3. As part of an holistic ecosystem approach, a no-take marine reserve must be immediately established in the enclosed high seas areas bounded by Pacific Island states to both conserve their rich biodiversity and as a fisheries management measure with clear targets and timelines for implementation.**

Time to say goodbye to MSY

The United Nations Law of the Sea (UNCLOS) requires coastal States to maintain or restore populations of harvested species at levels that can produce Maximum Sustainable Yields (MSY). This same formulation is also found in the World Summit on Sustainable Development's Johannesburg Plan of Implementation, which calls on States to achieve these levels no later than 2015. MSY is also referred to several times in the UN Fish Stocks Agreement and is often found in many official government fisheries plans around the world both as targets and as quantified output levels that fisheries should/can withstand.¹

While widely referred to in natural resource management measures, MSY is a concept that borrows heavily from economics. It assumes that a given natural resource biomass has the potential, at its optimum level, to generate maximum production surpluses (yields) which can be harvested without reducing the overall biomass' productivity. It assumes a utopian steady state of production within certain parameters - much as capital held in a bank account produces steady and predictable levels of interest, which can be withdrawn and spent without eroding the amount of capital.

As P. A. Larkin, , pointed out in his insightful critique published some 30 years ago, at its most reductionist, MSY assumes that all species produce an annual surplus and that if you take just that surplus you can go on harvesting it forever and ever. Larkin demonstrated that despite the mathematical sophistication of the single species population modeling that underpins MSY and the scientific fisheries management systems it has spawned, MSY is incapable of capturing either the complexity of single species populations and their dynamics or the greater complexity of inter-species relationships in a fully functioning marine ecosystem. He went on to demonstrate how the pursuit of MSY leads to the loss of considerable genetic diversity within single species populations and inevitably reduces bio-diversity within ecosystems.

Greenpeace agrees that the pursuit of MSY runs counter to the ecosystem approach to fisheries management. Moreover, the faith it places in the ability of science to determine sustainable catch levels has encouraged highly destructive industrial methods of harvesting, wholly incompatible with biodiversity conservation and long-term sustainability.

Greenpeace believes that MSY is, at best, a flawed and simplistic concept that has done much more harm than good to marine conservation and fisheries productivity. In the interests of conservation and sustainable use it should be avoided because of its inherent dangers. The alternative to MSY is the application of the ecosystem approach to fisheries management with, as its fundamental building block, a network of marine protected areas including no-take marine reserves, which will allow for the restoration of fully functioning, complex and diverse natural marine systems that can become reference points for measuring fishery impacts and productivity.

¹ One of the most recent and explicit commitments to MSY came from EU Fisheries Commissioner Joe Borg in a speech given at Tokyo University on June 4, 2007 when he said the EU intended to move in that direction based on the Johannesburg Plan of Implementation (Borg).