



Improved fisheries management needed to maintain tuna stocks

Stricter management of fisheries is needed to prevent overexploitation and decline of tuna and their mackerel relatives, according to an international study. The researchers say fisheries managers are risking the long-term sustainability of tunas and their relatives by treating as target levels for fishing what should be in fact upper limits, contributing to global declines and the threatened status of some species.

Internationally, fishing for most migratory stocks is regulated and managed by regional fisheries management organisations (RFMOs), most of which have the power to set limits for fish catches. RFMOs are important in regulating fishing of widespread, migratory species such as tuna. The EU plays an active role in six RFMOs focused on tuna fishing¹. For over a decade, the UN's Food and Agriculture Organization has recommended that RFMOs treat one widely recognised reference point for fish catches – the maximum sustainable yield (MSY) – as an absolute upper limit which must not be exceeded.

However, many tuna RFMOs have not implemented specific safe targets and unsafe limits, and have instead treated MSY as a target. The value of the MSY is supposed to provide a theoretical limit for the amount of fish that can be caught before the population is unable to replenish itself through breeding and growth. In reality it is difficult to estimate MSY accurately² and therefore regarding MSY as a target level can lead to fisheries catching more than can be replenished. It is well known that tuna populations are declining as a result of overfishing. However, some species are more seriously affected than others. The study charts population decline (or growth) of 26 related species - 17 species of tuna and 9 species of mackerel and Spanish mackerel between 1954 and 2006, based on the available stock assessments. Some funding for the study was received through the EU METAOCEANS project³.

Overall, global stocks of these 26 populations, with overall catches in 2008 of over 9.5 million tonnes, have decreased by more than half (52%) since the development of large industrial fisheries. This figure is largely influenced by Western Pacific skipjack, the most abundant population in the family. Discounting the abundant and more resilient West Pacific skipjack tuna population, global biomass has fallen by over 60%. Tropical species appear to have been more resilient in general, declining less steeply than temperate species, such as the Albacore and bluefin tunas. For example, a recent evaluation by the International Union for Conservation of Nature (IUCN) recently led to Southern and Atlantic bluefin tunas being added to the Threatened category of the IUCN Red List.

When the researchers summarised the global exploitation status of these 26 populations according to pre-established management targets, West and East Atlantic bluefin tuna and Southern bluefin tuna were some of the most overexploited, meaning they are being fished above the level of MSY. It is thought that the longer life spans, shorter breeding seasons and more restricted breeding areas of the temperate species make them more vulnerable to overfishing. Continued losses of tuna and mackerel may have unknown effects on marine ecosystems. As well as revising management strategies to work appropriately within MSY limits, the researchers suggest that the Convention on International Trade in Endangered Species (CITES)⁴ and other conservation tools should work alongside existing fisheries management frameworks to ensure sustainable fishing.

1. http://ec.europa.eu/fisheries/cfp/international/rfmo/index_en.htm
2. www.fao.org/docrep/005/y3427e/y3427e07.htm
3. METAOCEANS (Elucidating the structure and functioning of marine ecosystems through synthesis and comparative analysis) was supported by the European Commission through the Sixth Framework Programme. www.azti.es/proyectos/metaoceans-elucidating-the-structure-and-functioning-of-marine-ecosystems-through-synthesis-and-comparative-analysis.html
4. See: www.cites.org

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