



Recovering Bluefin Tuna Position Statement

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In March 2010 a meeting was held in Doha, Qatar, to determine whether or not international trade of Atlantic bluefin tuna (East Atlantic/Mediterranean stock, abbreviated BFTE) would be banned by a listing on the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) Appendix I. The possible outcomes of the meeting were (1) a listing on Appendix I banning export trade, (2) a listing on Appendix II specifying catch verification requirements at export, or (3) no change. The move to name BFTE as an endangered species, by formally listing it on CITES, arose because the stock has very rapidly been depleted by over-fishing. Not only is the level of the legal catch too high and far in excess of the precautionary principle, but an illegal catch of equal magnitude is suspected (for more information on sustainability status consult the Eastern and Mediterranean bluefin fishery profile at www.fishsource.org).

ICCAT must put in place catch limits that have 90% certainty of rebuilding BFTE above B_{msy} (biomass at maximum sustainable yield) by 2022. Based on available information, we believe in the short-term this means a moratorium on fishing.

Recommendation 1. SFP strongly encourages ICCAT to require advice from its scientific committee (Standing Committee on Research and Statistics or SCRS) on how to achieve long term recovery with management scenarios supported by **no less than 90% certainty** (no higher than 10% uncertainty) that targets will be met for rebuilding biomass to B_{msy} levels in 10 years. ICCAT must commit to adopting and undertaking the management actions associated with the surest recovery scenarios.

At the 21st meeting of ICCAT in Recife, Brazil in November 2009, the ICCAT executive reiterated that SCRS provide advice with an extraordinarily high uncertainty level of 50%. This means ICCAT acknowledges a 50% risk of failure to recover with this plan. Such amount of risk on fisheries management is unacceptable.

The main management decision currently in place for East Atlantic/Mediterranean bluefin tuna (BFTE) is a recovery plan (ICCAT Rec. 08-05) that sets as target a stock recovery to B_{msy} (biomass at maximum sustained yield) levels by 2022. At the terminus of the 21st ICCAT meeting, a proposal was made to amend Reg. 08-05 to increase the probability of recovery by 2023 to **60%**. This would allow 40% uncertainty that catch levels were sufficiently precautionary to allow the stock to rebuild by 2022.

Explanation:

Most fisheries scientists provide advice to managers with a 10% (assumed) risk of failure. To best understand how 40-50% uncertainty affects the quality of the science supporting the Mediterranean bluefin tuna fishery, it is important to know how such risk is addressed by specific fisheries management measures. It is necessary to reckon that fisheries science in general, and all estimations conducted in particular, belong to the field of inferential statistics. Inferential statistics rely upon acknowledging and specifically addressing uncertainty around point estimates. This uncertainty stems from the fact that statements are made about a population that is not measured exhaustively; in other words, to be 100% accurate about bluefin biomass one would have to sample (and weigh) all bluefin tunas



swimming out there freely. On the decision-making side of inferential statistical trials, over time a set of acceptable (and not acceptable) assumptions has developed within the scientific community—about how much uncertainty is too much. The threshold of 'too much uncertainty' is often set at 5% in the biological sciences, this being called the significance level. This means that in order to achieve statistical significance, the computed probability of a given statement being wrong should be, at most, 5%. If it surpasses 5%, the statement 'fails'. In fisheries science the 'allowed' level of uncertainty (the significance level) is often relaxed to 10%. Another relevant matter to note on best practice in fisheries science is that the maximum allowable timeline for recovery for fast reproducing species, like tunas, is ten years, as is law in the US. Therefore the 2022 ICCAT target should really be 2020.

Recommendation 2. SFP strongly encourages ICCAT to provide its scientific committee with the best conditions to perform a **full assessment of bluefin stocks, meaning using the new Kobe2 approach, by September 2010**. We encourage ICCAT to abide by the results to re-set catch levels in conformity with the best, most precautionary advice provided by the scientific committee.

Over the next 12 months ICCAT will hold a Bluefin Tuna Data-Preparatory meeting (June 2010), conduct a new stock assessment (September 2010) and hold an annual meeting. At Recife in November 2009, the ICCAT Chairman issued a statement that the adopted 2010 total allowable catch of 13,500 t for BFTE was "in full conformity with the scientific advice" (Intrafish, 17 November 2009). This was not the case for three reasons. First, the 13,500 t catch level is not at all in conformity with the norms of uncertainty accepted globally by fisheries scientists. Therefore the TAC level recommended for 2010 is not a responsible strategy for managing Mediterranean bluefin tuna. Second, by adopting a TAC and *then* asking its scientific committee to figure out how particularly good or bad that decision was, ICCAT flipped over the normal process for making catch decisions here, from scientist → manager to manager → scientist. Third, stock status was unknown in late 2009 because data were incomplete.

Explanation:

Before the Recife meeting, ICCAT's scientific committee did not formally assess the status of the BFTE stock. Updated catch statistics were not available in 2009 (the last set is from 2008 with next set due in 2010). Further, the scientific committee acknowledged that it did not have reliable estimates of illegal, unregulated and unreported (IUU) fishing activities. IUU fishing is likely to still be occurring at unknown levels, which have been predicted to be as high as equal to the legal catch so present a large unknown to recovery planning.

It is important to understand how catch decisions are made. At official meetings of ICCAT, contracting parties (CP's, being the member countries) vote on management measures put forward by the executive. Scientists working on ICCAT's scientific committee, called the Standing Committee for Research and Statistics (SCRS), specifically serve ICCAT and its members (CP's). This is true for all Regional Fishery Management Organizations (RFMOs) and for tunas and large pelagics globally. At Recife and also in its 2008 Annual Report the SCRS made it clear that it did not have sufficient data to generate a reliable picture of stock status in 2009, but that this could be achieved in 2010 with more complete data and a modeling method known as the Kobe2 approach, a new tool that the ICCAT SCRS has



developed to depict graphically the probabilities of meeting targets by the timeframe.

Recommendation 3. A fishery **moratorium** is a reasonable management measure for the BFTE stock at this time. The pathway to implement an **ecosystem-based management approach** should be devised immediately. Both are likely needed to reduce the certainty of stock failure, and to enable ICCAT to succeed in setting a long-term target for BFTE recovery that is consistent with international best practices in fisheries science.. Mandating the **precautionary principle** in the interim is the minimum ICCAT can do to offset the likelihood of population collapse.

Explanation:

In light of the uncertainty on stock condition, and precisely owing to the precautionary principle, Japan, supported by the United States, proposed a one year moratorium for BFTE at Recife. The moratorium had the support of other CP's. It was blocked, unfortunately in SFP's view, by the European Union and Morocco. One of the few advances made during the Recife meeting were that several CP's reached agreement that an "environmental-based management approach" should be a long-term target for BFTE.

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