USING THE STATUS OF THE STOCKS REPORT

ISSF believes that the foundation of our efforts to determine the best course towards tuna sustainability is a science-based, accurate assessment of the current state of tuna stocks in different parts of the world.

This report evaluates the biological health of the 19 tuna stocks that support canned, pouched, and jarred tuna products across the world. It identifies stocks that are overfished or in danger of being overfished, as well as stocks whose main fishing gears have significant bycatch problems or insufficient bycatch monitoring. It also assesses current fishery management actions, providing a clear view not only of the current status of each stock, but the likelihood of future sustainability issues.

The report is a synthesis of the most up-to-date information produced by the scientific bodies of the Regional Fishery Management Organizations (RFMO) that are in charge of assessing and managing these tuna stocks world wide. This synthesis has been reviewed by some of the world's leading fishery scientists that work closely with these RFMOs.

ABOUT THE REPORT

Readers can use the report to answer three key questions about each tuna stock, in each of the oceans where tuna fisheries operate:

- **Is the tuna stock overfished?** The report measures the number of fish that are able to reproduce each year, called the "spawning biomass" and compares it to an estimate of the "biomass at maximum sustainable yield", which is the spawning biomass that results in the highest catches in the long-term (this is a target of fisheries management). When the ratio of those two numbers is smaller than one, the stock is in an "overfished" state.

  Overfishing doesn't mean that the stock is in danger of extinction or collapse – it means that right now, the fish aren't being allowed to grow and reproduce at their most productive level. If a stock is overfished, the report will note any corrective measures being taken by the relevant fisheries management organization.

- **Is it in danger of becoming overfished?** The report measures the "fishing mortality factor", which measures what percentage of the stock is taken by fishing in any given year, and compares it to an estimate of the "fishing mortality that produces maximum sustainable yield", which is the rate of fishing that results in the highest catches in the long-term (a target of fisheries management). When the ratio of those two numbers is greater than 1, the stock is in danger of becoming overfished in the near future.

  If corrective measures are taken to reduce the rate of fishing, the stock will be able to recover and reproduce at their most productive level. If they are not, then the stock will eventually become overfished. If overfishing is taking place, the report will note any corrective measures being taken.

- **Are the methods used to catch the tuna also catching significant numbers of non-targeted species?** The report also measures the environmental impact of fishing in terms of "bycatch" rates. Bycatch is any species caught by the boat that is not the kind of fish the skipper is searching for. All fishing methods result in some bycatch of non-target species. The report

identifies the different bycatch rates and affected species for the different fishing methods used for each stock.

This report provides retailers and tuna brands with a synthesis of the basic background information – by specific tuna species, and by region – that they need to address consumer and advocate concerns about the sustainability of the tuna that they are purchasing.

WHAT DO THE COLORS MEAN?

The color-coding in this year's report indicates not only the severity of the problem, but the likelihood that the problem will continue in the future. The stocks are rated on three main criteria:

- whether they are overfished (the column marked "biomass" in the summary chart on page 4);
- whether overfishing is currently occurring (marked as "F" in the summary chart);
- and their bycatch rates or ecosystem impact (marked as "bycatch" in the summary chart)

Each stock is rated separately on these categories. An orange rating in any of these categories means that there are sustainability concerns (ie: that the tuna stock is being overfished, is currently overfished, the bycatch rate is causing adverse population effects, and/or there is insufficient data to understand the impacts of bycatch) and there are no adequate corrective measures in place. A yellow rating means that there are sustainability concerns, but adequate corrective measures are in place, while a green rating means that there are no sustainability concerns.

In some cases, stocks will receive an overall rating of red. If a stock has a red rating, it means that the stock is overfished, that overfishing is still occurring, and that there are significant bycatch rate associated with the fishing gears used to catch that species of tuna. There are no stocks that are rated "red" in this year's report.

HOW DO THE SCIENTISTS COME UP WITH THESE ESTIMATES?

In order to come up with these estimates, scientists look at the number of fish born each year; the number of fish that are alive, and their aggregate weight (ie: tons of fish); the rate at which fish in the existing population are lost to fishing; the number of mature fish that are able to reproduce; and how vulnerable fish are to certain kinds of fishing gear at different points in the life cycle.

Assessing the health of tuna stocks is not an exact science but conducted with a precautionary approach can provide the best guidance for conservation and management. Insufficient samples, gaps in data, changes in the technology fisheries use to catch fish, and limited data on the life-history and behavior of tuna mean that the results of the stock assessments are often subject to some interpretation. In order to address these inconsistencies, scientists use multiple models and alternate sets of data, which helps to reduce uncertainty, making the final analysis robust for informing fishery managers.

The final stock assessments are reliable sources of data that can be used to make informed decisions about the best way to both ensure productive fisheries and a sustainable future for tuna.