REPORT FROM THE WPB ON THE

DATA SITUATION FOR B ILLFISH

The main problems identified at the previous meeting of the WPB continued to affect the quality of the data available for these species, such as:

- An important level of **aggregation in the reporting of catches**. Reporting from several fisheries, in particular artisanal fisheries continue to be as aggregates such as "Billfish" or "Tuna and tuna-like species". In part, this is due to the fact that these species are an incidental catch for most fisheries.
- **Underreporting of discarded catches**. As many of these species have relatively low commercial value, fish caught are discarded at sea and not reported in the logbooks. In some cases, catches are retained but are sold at local markets and never recorded in the statistics.
- **Incorrect identification of the species** in the catch. Some species are difficult to identify and this leads to reporting of catches under the incorrect name, underreporting or reporting under aggregates.
- **Lack of representative size-frequency data** for most of the catches of billfish. In the particular situation of swordfish, this is aggravated since it is a main target of vessels from Taiwan, China[1]. Taiwanese authorities have not submitted the available SF data despite continuous requests.

There have been improvements in various areas:

- Complete revision of the Nominal Catches (NC) database: catches of billfish species added to the IOTC DB especially for early years (1950-70) from a number of different sources, especially the FAO nominal catch database.
- Review of Indonesian longline catch series: New information was obtained on the development of this fishery, and consideration of this new data led to major changes in the estimates, especially for recent years (1995-2000).
- The collection of size frequency (SF) data on tuna and billfish species through the IOTC sampling programmes in Penang and Phuket continued throughout 2001,
- More accurate estimates of catches of IUU fresh tuna vessels, landed in Penang and Phuket was obtained from the IOTC sampling programmes.
- Improvement in the reporting from Sri Lanka in 1999. Sri Lanka reported the catches of billfish by species, rather than as a single aggregate as happened in earlier years. The Secretariat is in contact with Sri Lankan officials and a review of the complete data series is currently underway.
- The information collected by the IOTC sampling programmes in Thailand and Malaysia from small fresh-tuna longliners has been useful in improving the estimation of catches from non-reporting vessels and has provided good information on the size-frequency composition of the catch of this fleet.

RECOMMENDATIONS CONCERNING DATA

1) Taiwanese data: The major statistical deficiencies for swordfish and billfishes are due to the lack of cooperation of Taiwan Province of China, as this major fleet has not been reporting its fishery data according the minimal IOTC requirements, for instance, as size data are lacking and catch-and-effort data questionable. The validation of these data should be based on a detailed review of set-by-set data. There is an absolute need to obtain size data as well as information on gear configuration and time of setting used by the Taiwanese fishery.

The WPB strongly recommends that all possible direct or indirect actions be taken which could allow to reduce or to solve as soon as possible these major statistical uncertainties which severely hamper all present and future stock assessments.

2) Marlins and sailfishes: there is a critical lack of statistical data for this group of fishes. It is absolutely necessary to better estimate catches and discards by species and by gear, by size and sex.

3) Purse seine landings: It is strongly recommended that past and future catches of marlins taken as by-catches by purse seiners be estimated. The yearly landing of marlins by tropical purse seiners should be estimated, based on a analysis of the observer data, and landing data of this fleet should be well followed in the future (preferably by species and by size). It is also recommended to develop permanent observer programmes on these fleets, at least at a small scale, in order to better estimate by-catches of billfishes.

4) Sex ratio by size: It is necessary to sample the size of swordfish and marlins as a function of their sex simultaneously. Biochemical sex identification is being developed which might permit sampling at landing sites

[1] This terminology refers to Taiwan province of China

5) OFCF project: The WPB strongly support the Japanese OFCF statistical project and recommends that priority should be given to sampling in countries which have substantial catches of swordfish and billfishes which are not properly monitored.

6) Written **statistical reports** should be obtained from scientists from each fishing country on all fisheries, even when this country cannot participate in Working Groups. The IOTC Secretariat should request these reports before WPB meetings.

7) Billfishes length measurements: Length data should be reported to the IOTC in a standard format to facilitate comparison of data from different countries. When these lengths are collected in a non-standard way, they should be converted to the standard form of reporting using well-described methods. The basic data used to establish these conversions should be kept by IOTC. The WPB strongly recommends that size measurements should be always taken in straight length, never in round length (this is because the condition factors and shapes of fishes are highly variable at a given size between time and area strata).