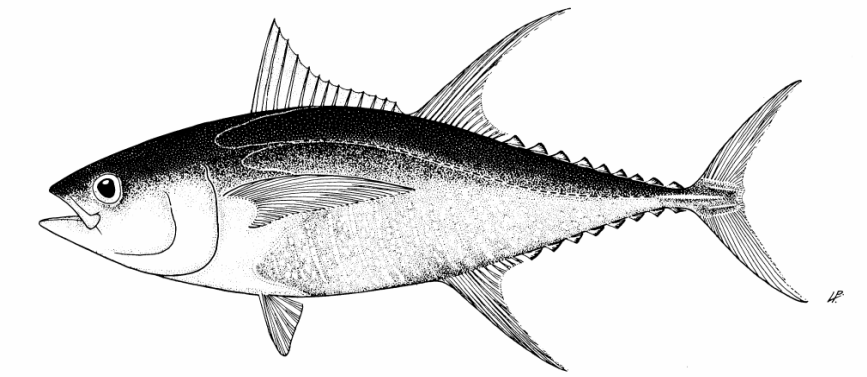
WCPFC–SC1 **GN IP–6**

1st Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission
WCPFC–SC1
Noumea, New Caledonia
8–19 August 2005

Project on the Management of Tuna Fishing Capacity: Conservation and Socio-economics : Proposal – Methodological Workshop on the management of tuna fishing capacity on the basis of stock status, data envelopment analysis and industry survey



Food and Agriculture Organization of the United Nations (FAO). Rome, Italy.

August 2005

FAO Project
on the Management of Tuna Fishing Capacity:
Conservation and Socio-economics

in collaboration with
Tuna Agencies and Programs and tuna fishing industry

Proposal

METHODOLOGICAL WORKSHOP ON THE MANAGEMENT OF TUNA FISHING CAPACITY ON THE BASIS OF STOCK STATUS, DATA ENVELOPMENT ANALYSIS AND INDUSTRY SURVEYS

Background Information

Tuna stocks have been traditionally managed on the basis of information from the stock assessments undertaken by scientists. As a result of these assessments, desired values of population parameters or their reference points including those of fishing mortality are being routinely estimated for each stock.

If the fisheries management is to include that of fishing capacity, a desired magnitude of or desired change to fishing capacity needs to be estimated. This has been done recently for very few tuna fisheries on the basis of Data Envelopment Analysis (DEA). This analysis is used to estimate the output of fishing capacity and capacity utilization. It calculates a frontier or maximum landings curve, as determined by the best-practice vessels, given the state of technology, environment and stocks (fixed inputs) and provided that fishing effort (variable input) is fully utilized under normal operating conditions.

The tuna fisheries for which DEA has been performed are limited to few purse seine fisheries, but they do not include other important tuna fisheries (like those using longlines and pole-and-lines) operating even on the same tuna stocks. Presently, DEA is not performed routinely like stock assessments and requires input data different to those for stock assessments, which are presently not available for most tuna fisheries. Industry surveys of tuna fishing capacity utilization have not been performed either to any significant extent, if at all.

Because the assessment of stock status is routinely carried out for, at least, principal market tuna species, it might be more practical, if feasible, to determine the desired magnitude of or desired change to fishing capacity on the basis of information from these assessments rather than from DEA or industry surveys of tuna fishing capacity utilization. Fishing effort is considered to be proportional to fishing mortality, but the relationship between fishing effort and fishing capacity is more complicated. Because of that, quantitative methods need to be developed and/or

established to determine the desired magnitude of or desired change to fishing capacity on the basis of the status of tuna stocks, taking into account the multi-species and multi-gear nature of tuna fisheries. This nature of tuna fisheries significantly complicates analyses and provision of advice for the management of tuna fishing capacity.

Therefore, the 2nd Meeting of the Technical Advisory Committee (2nd TAC) of the FAO Project on the "Management of Fishing Capacity: Conservation and Socio-economics" (held in Madrid (Spain) from 15 to 18 March 2004) recommended that the Project in collaboration with the Tuna Agencies and Programs should organize a Workshop to develop quantitative methods to determine the desired magnitude of or desired change to fishing capacity on the basis of the status of stocks. Subsequently, as a result of informal discussions among some Members of TAC, it was proposed to extend the scope of the Workshop as outlined in the Objectives section below.

Subsequently, a preliminary proposal of the Workshop was prepared by the FAO Project and presented and discussed at the 5th Meeting of the Secretariats of Tuna Agencies and Programs (Rome, 11 March 2005). The Meeting generally agreed that it could be a good idea to extend studies on fishing capacity to combine economic and biological considerations. They considered that the outcome of the Workshop would be very relevant for the work of their institutions and their member countries, technically assisting their fisheries managers in undertaking decisions on the management of tuna fishing capacity.

Objectives

A. To develop quantitative methods to determine the desired magnitude of or desired change to fishing capacity on the basis of the status of stocks, taking into account the multi-species and multi-gear nature of tuna fisheries.
B. To determine the feasibility of (i) routinely collecting input data for the Data Envelopment Analysis (DEA) and (ii) performing industry surveys of tuna fishing capacity utilization.
C. To review the factors affecting fishing capacity (number of vessels, their physical characteristics, etc.) that could be regulated by fisheries authorities.
D. To review the existing measures for managing tuna fishing capacity and possibly, to identify additional options for such measures in the context of the outcome of addressing objectives A to C.

Agenda

See an enclosure.

Venue

Headquarters of Inter-American Tropical Tuna Commission (IATTC) in La Jolla, CA, USA.

Dates

May 8 (Mon.) to 12 (Fri.), 2006.

Papers to Be Prepared

Papers addressing and proposing how to fulfil Objectives A to D will be prepared and distributed to the participants of the Workshop in the middle of April 2006.

Specifically regarding Objective A, the Tuna Agencies and Programs will carry out and document one or several case studies, using their real data and their methodologies. The paper(s) addressing Objective B will be prepared by one or few experts on DEA and industry surveys of tuna fishing capacity utilization. Objectives C and D will addressed possibly jointly in several papers prepared by FAO, the Tuna Agencies and Programs and the tuna fishing industry. Some Tuna Agencies and Programs may address them in their case study papers associated with Objective A, particularly if their proposals relate to these case studies and/or do not merit separate papers. For further details, see the attached Provisional List of the Papers to Be Presented.

Participants

- Chairman: Dr Robin Allen, Director, IATTC
- Convenor: Dr Jacek Majkowski, Fishery Resources Officer, Marine Resources Service, Fishery Resources Division, Fisheries Department, FAO
- Other participants
    - Members of TAC
    - Some other stock assessment experts
    - Some other DEA experts
    - Some staff of FAO including the Project.

  (in total about 20 participants)

Funds and Logistic Arrangements for the Workshop

The Project has not yet secured sufficient funds to organize the Workshop. They are needed particularly for the preparation of the Papers mentioned above and for travel expenses of the experts attending the Workshop. Therefore, cash and in-kind

contributions for the organization of the Workshop are sought by the Project. In particular, participants of the Workshop are encouraged to request their employers to finance their travel to the Workshop and their lodging expenses.

IATTC has kindly offered to host the Workshop. The Forum Fisheries Agency (FFA), IATTC, the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC), the Japan Federation of Tuna Fisherman's Association (Japan Tuna), the Secretariat of the Pacific Community (SPC) and the World Tuna Purse-Seine Organization (WTPO) have already confirmed their willingness to support the Workshop or are expected to do it soon, offering to prepare various papers for their presentation at the Workshop, to finance the participation of their experts in the Workshop and to possibly provide some funds for the organization of the Workshop. All these institutions are regarded by the Project as co-sponsors of the Workshop and their contributions to the Workshop will be fully acknowledged.

Provisional Agenda

Monday

1. Opening.
2. Introduction of participants.
3. Adoption of provisional agenda and list of papers.
4. Logistic arrangements for the Workshop.
5. Statement from and Report of the Workshop: content and logistic arrangements for their preparation.
6. Overview of the Project implementation.
7. Development of quantitative methods to determine the desired magnitude of or desired change to fishing capacity on the basis of the status of stocks, taking into account the multi-species and multi-gear nature of tuna fisheries.

Tuesday

7. Continued.
8. Feasibility of (i) routinely collecting input data for the Data Envelopment Analysis (DEA) and (ii) performing industry surveys of tuna fishing capacity utilization.

Wednesday

9. Review of factors affecting fishing capacity (number of vessels, their physical characteristics, etc.) that could be regulated by fisheries authorities.
10. Review of existing measures for managing tuna fishing capacity and possibly, identification of additional options for such measures in the context of the outcome of addressing Agenda Items 7 to 9.
11. Statement from the Workshop: discussion of content

Thursday

12. Future research related to the management of tuna fishing capacity: formulation of proposals.
13. Recommendations
14. Statement from the Workshop: review of its 1st draft
15. Other matters.

Friday morning

16. Statement from the Workshop: review of its 2nd draft

Work in small groups
Finalisation of the Report and Statement of the Workshop.
Discussions of the subjects mentioned above, if required.

Friday afternoon

17. Adoption of the Statement from and Report of the Workshop.

Provisional List of the Papers

Agenda Item 2:

- Provisional list of participants.

Agenda Item 3:

- Provisional agenda
- Provisional list of papers.

Agenda Item 6:

- A short paper to be prepared by Jacek Majkowski.

Agenda Item 7:

- Case studies to be prepared by CCSBT, IATTC (confirmed – see below), IOTC (confirmed) , ICCAT (confirmed), SPC (confirmed – see below) and WCPFC including:
    - "Estimates of large-scale purse seine and longline fishing capacity in the western and central Pacific based on stock assessments of target species" by SPC
    - "Estimated target fleet size for the tuna fleet in the eastern Pacific Ocean, based on stock assessments of target species" by Pablo Arenas

Agenda Item 8:

- A paper to be prepared by Chris Reid and Dale Squires (confirmed).

Agenda Item 9 and 10:

- Papers to be prepared by Rebecca Metzner, FAO (confirmed – see below), Peter Miyake, Japan Tuna (confirmed), Julio Moron, WTPO (confirmed) and Dale Squires, NMF (confirmed – see below).
    - "Managing to Address Overcapacity in Tuna Fisheries: *Options, challenges, and potential implications"* by Rebecca Metzner (FAO).
    - A paper on vessel buy back schemes by Dale Squires (NMFS).

Agenda Item 12:

Future research related to the management of tuna fishing capacity: formulation of proposals.

- "Measurement of the Global Fishing Capacity of Large-Scale Tuna Purse Seiners" by Ignacio de Leiva Moreno and Jacek Majkowski.