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FOR CONSERVATION AND SUSTAINABLE USE OF TUNAS

Why Do We Have to Control the Global Fishing Capacity?

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- ▶ *A moratorium should be imposed on the entry of additional large-scale tuna vessels into the fisheries until an efficient, equitable and transparent management system of fishing capacity is achieved.*
- ▶ *Within the constraints of capacity limits, the regional tuna fishery management organizations should have a system for allowing the transfer of fishing capacity.*
- ▶ *Any country or fishing entity that has expanded or is expanding its tuna fishing capacity should strengthen its management of fishing capacity as recommended above.*
- ▶ *The regional tuna fishery management organizations should collect information on the numbers, capacities and vessel characteristics for tuna vessels other than purse seiners and longliners (such as pole-and-line vessels and trollers) to determine if excess of capacity exists for these fleets.*
- ▶ *Rights-based management of tuna fisheries should be considered, where appropriate, as a long-term solution for the management of excess fishing capacity.*
- ▶ *Mechanisms for managing tuna fishing capacity should include monitoring, surveillance and control systems.*

1. Importance of management of fishing capacity.

During the last several years, a consensus has been reached that the only solution for tuna management, which allows sustainable use of the world resources available, is to control the fishing capacity on a global basis. FAO Technical Advisory Committee for management of tuna fishing capacity (FAO TAC), which met in 2004, recognized the excess of fishing capacity and made the recommendations mentioned above (in the frame). These are the most recent and important steps which show where the tuna management should be oriented from now on. Since the idea of fishing capacity is relatively new, this article provides a historical background, conceptual explanation, and an analysis of how and where tuna management will propagate as a result.

2. What is the 'Fishing Capacity'?

Unfortunately, the term 'fishing capacity' is often misunderstood, even by the fisheries scientists. Fishing capacity is the potential of catching tunas. Therefore, the term not only includes the vessel's carrying capacity or number and/or size of fishing vessels but socio-economic aspects as well. For example, the fishing capacity of a fishing fleet may decline by fish price, and soaring labor cost while increase by improvements in fishing gears and efficiency. However, these elements are very difficult to analyze and quantify.

3. Current status of world tuna resources

With the recent establishment of the Western Central Pacific Fisheries Commission (WCPFC), all the tuna stocks of the world are now under the management of Regional Fisheries Management

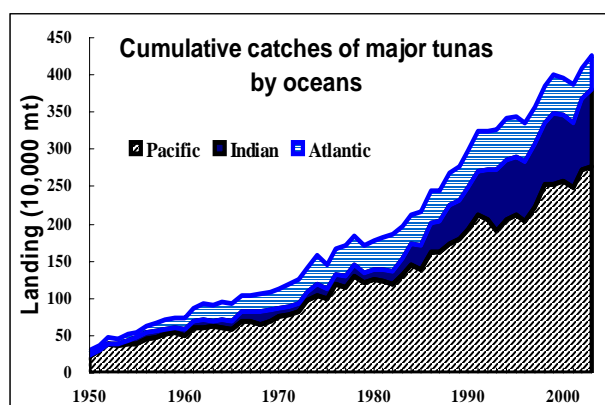


Fig. 1. Cumulative landings of major tuna species, by oceans.

Organizations (RFMOs). These RFMOs are closely monitoring all the tuna stocks under their responsibility and evaluating their status. According to these analyses, almost all the tuna stocks are exploited very near to the maximum sustainable yields, with a few stocks being over-exploited, while skipjack stocks are still under-exploited

Fig. 1 indicates a continuous increase in catch throughout. However, if the current catch is close to the MSY, we should not expect an increase in the catch without the risk of over-fishing. The stock analysis also indicated that in most cases, the current level of the catches can be made with less fishing efforts, i.e. the same catches can be made with less money and also can be maintained with less smaller fishing fleet.

4. Options of fisheries managements.

For the stocks which are exploited at or close to the MSY, and those which have been over-exploited, generally some type of management measures are introduced by the RFMOs. Those include: total allowable catches (TAC); catch quota (allocations of TAC); and/or control of efforts. The control of efforts may include limitation of number of fishing vessels, total days of fishing, etc. The area-time closure also results in reduction of effort. These measures in catch or effort are most direct means for fishing restriction, but may not be most efficient and effective. For the fishing industry, it is economically difficult to curtail fishing. The fishing efforts which have been shut out of the restricted fishery have to find other places to go, either engage in illegal fishing, or move to fishing on other unrestricted stocks. It should be remembered that the industrialized large scale tuna fishing vessels are very mobile and can fish in any part of the world oceans.

The additional effort on a stock, that is shifted from a restricted fishing stock, would likely cause

an excess in fishing for this new stock. Therefore, any conservation efforts on individual stocks at an ocean level may be difficult and often give an adverse effect on other stocks and/or other oceans. The only solution for such a situation would be the management of the world tuna fishing capacity at a proper level.

5. Importance of the control of fishing capacity.

Recognizing such a situation as explained above, being very much concerned with the increasing Illegal, Unregulated and Unreported (IUU) fishing fleet, in late 1990s, the FAO made extensive studies of fishing capacity through working groups, and at the end adopted the International Plan of Action (IPOA) for fishing capacity and IPOA for IUU. The IPOA-Fishing Capacity warned the risk of over capacity and suggested development of national and international management plans of action for fishing capacity. Accordingly, a few countries like Japan, have started serious reduction of fleet size (longliners in this case) but many industrial and developing coastal states actually increased the fishing fleets significantly.

As the progress along the IPOA-Fishing capacity had been very slow, in 2002, FAO's Japan-funded project "management of tuna fishing capacity; conservation and socio-economics" was formulated and the FAO TAC was started with several world experts and RFMOs. The group has met twice so far and the report has been published. The report of the second TAC meeting (Madrid, March, 2004) combined all the studies on an excessive fishing capacity and is very informative.

6. The world fishing capacity is in excess!!

Fig. 2, the world major tuna catches by major gears, indicates well the recent trends in fishing capacity. For almost all gears, the catches are increasing, suggesting increasing trends in fishing capacity. In fact, since IPOA was adopted in 1999, the large scale purse seiners increased by at least 30% and possibly much more, resulting in a large increase in tuna catches. Numbers of large-size longliners and pole-and-line vessels have been kept stabilized or reduced by various effort to combat IUU activities. However, small-scale longliners have significantly increased. In addition, others include many fishing gears used by the coastal states, such as gill nets, handlines, and unknown gears and their catches have been increasing.

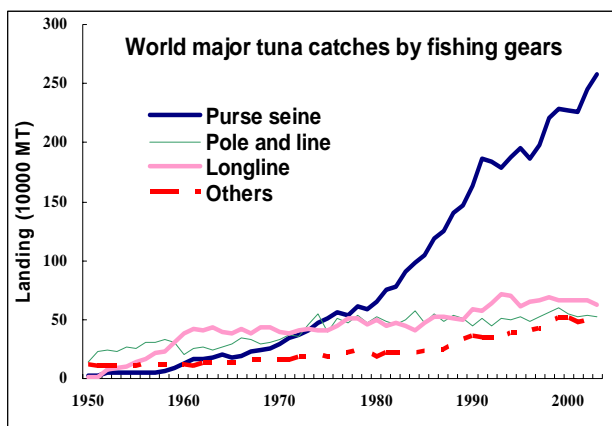


Fig.2. Landings of world major tuna, by fishing gears

Fig. 3 gives examples of evaluation of the excess of purse seine fishing capacity (taken from the paper by C. Reid, Kirkley, J.E, Squires, D. and Ye, J, included in the report of the Second TAC, March, 2004). In all the cases that the report showed, the purse seine could have caught significantly more than the real catches. Also in the same report, Miyake reported that the large-scale longliners' annual mean catch is less than the economical break point and hence the fishing capacity is expected greater than the stocks available. These are the basis of the FAO TAC recommendations given at the beginning of this article (in frame).

Despite these 2004 recommendations by the TAC, the increase in purse seine fleet is still continuing. More money (even including that of some longline industries) is being spent on the construction of the seiners, which are then registered with coastal states. Furthermore, many purse seiners that used to be owned by developed countries have changed their flags to the coastal states, while the replacements are made in the original countries. Thus, total purse seine fishing capacity is rapidly increasing. In addition, the efficiency of seiners have been increasing yearly by using more powerful sonar, adoption of Fish Aggregating Devices (FADs) and other technical developments.

The increase of the small-size (less than 24 meters in total length) longliners is also causing large increase in overall fishing capacity. This is related to the introduction of world-wide positive lists for tuna vessels, i.e. tuna caught by fishing vessels which are not registered with the RFMOs cannot be traded. The list applies only to the vessels over 24 meters in length and hence the longliners just under this limit have been constructed and entered into the fishing significantly. Together with the current soaring fuel

cost, such small coastal longliners operate very efficiently and often outside of the regulatory measures adopted by the RFMOs. Under such circumstances, some RFMOs are considering to apply a lower size limit for the boats to be registered in the list.

7. Future directions and problems

The FAO TAC is holding another meeting in May, 2006, in La Jolla, California to review the recent developments. As mentioned above, many countries are ignoring these recommendations for freezing fishing capacity, but keep increasing the fishing capacity. Particularly the fishing vessels registered at coastal developing states are rapidly increasing without the reduction of fleet of developed countries.

The other major problem is that the FAO TAC had studied mostly large-sized vessels only, due to the lack of information on small coastal fisheries. Therefore, the recommendations are

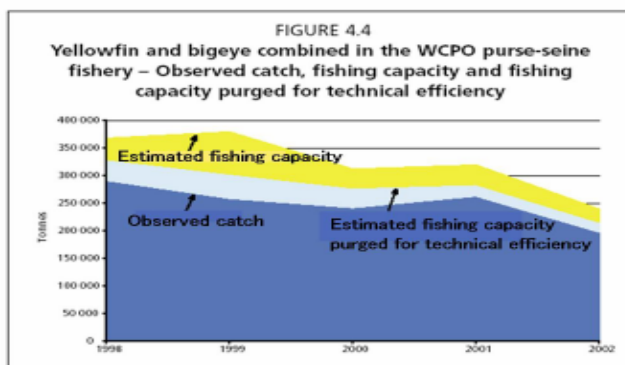
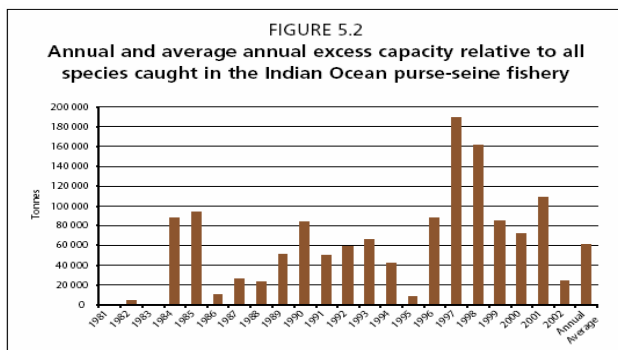
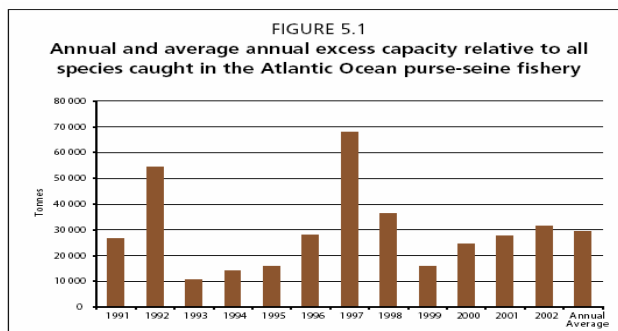


Fig. 3. Examples of excess of fishing capacity evaluated by FAO TAC relative to tuna resources available.

also for such large vessels but in future, the increasing small scale tuna fisheries would become more and more serious. However, many developing coastal states may not have enough administrative and economical structure for evaluating and managing their fleets. Therefore, building up the management capability by the aid of developed countries would be very important.

Another foreseen problem is that the large-size longliners (that catch large fish) are declining due to economical difficulties, while purse seiners

(that catch smaller fish) are significantly increasing (in terms of number and efficiency). This has and will further change the fishing pattern (age specific fishing mortality), i.e. a much greater number of small fish are caught and thus reduce significantly the yield per recruit as well as the level of MSY itself. This is already occurring in many oceans, particularly for bluefin and bigeye tunas. Therefore, the management for surface and longline fisheries interactively might be required in future.

Chinese Taipei's Vessel Scrapping

Chinese Taipei To Scrap 160 Large-scale Tuna Longliners To Reduce Its Over-fishing Capacity

OPRT sent a mission to Chinese Taipei from February 28 to March 4, 2006, to monitor the current situation of scrapping of the large-scale tuna longliners, and confirmed the scrapping in progress.

In compliance with the recommendation by the International Commission for the Conservation of Atlantic Tunas (ICCAT) last November, Chinese Taipei started a program to scrap its 160 vessels, which will be completed by the end of 2006.

ICCAT specifically expressed concern over the overfished status of bigeye tuna in the Atlantic Ocean. To date, 42 vessels have been scrapped.

All the vessels subject to the scrapping program are required to terminate fishing by April 30, 2006, and to return to Chinese Taipei by the date designated by the government.



Tuna longliners gathered at Kaohsiung Port for scrapping



Scrapping in progress

OPRT Activities

1) Seminar on tuna farming

On February 24, OPRT held a seminar on tuna farming in Tokyo in response to the consumers' concern over the rapid increase of farmed tuna imported to the Japanese market in recent years. Producers, traders, administrators and other speakers explained about the current status of tuna farming. Consumers expressed a concern about the safety of farmed tuna and the impact to the resource management caused by rapid expansion of the farmed products. Japan is the de-facto sole market of farmed tuna, importing more than 30.000 tons of farmed tuna in 2004.

2) Publication of guidelines to reduce sea turtle mortality in fishing operations

OPRT published a 17-page booklet containing guidelines based on the FAO's Technical Guidelines, photos of sea turtles etc. and distributed it to tuna longline fishers and the fisheries bodies in Japan. The booklet is designed to encourage fishers to take adequate positive measures in order to ensure compatibility of sea turtle conservation and fishery sustainability. A poster was also distributed to encourage fishers to take measures following the guidelines.