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**Status and Inter-relations of Tuna
Management bodies in the Indian
Ocean**

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Introduction

Catch rates in the longline fisheries, which first started operating in the Indian Ocean in 1952, had fallen drastically by the end of the sixties. Experts at meetings convened by the South China Sea Programme to assess the status of stocks were by that time using the phrase: "*increase in effort is unlikely to result in any increase in catches*". Concern on the status of tuna stocks in the Indian Ocean thus actually predated the major catch increases which came in the early 1980's.

Unlike the situation found in the other oceans, this expansion has come from both distant water fishing nation (DWFN) and coastal country fisheries (Fig. 1).

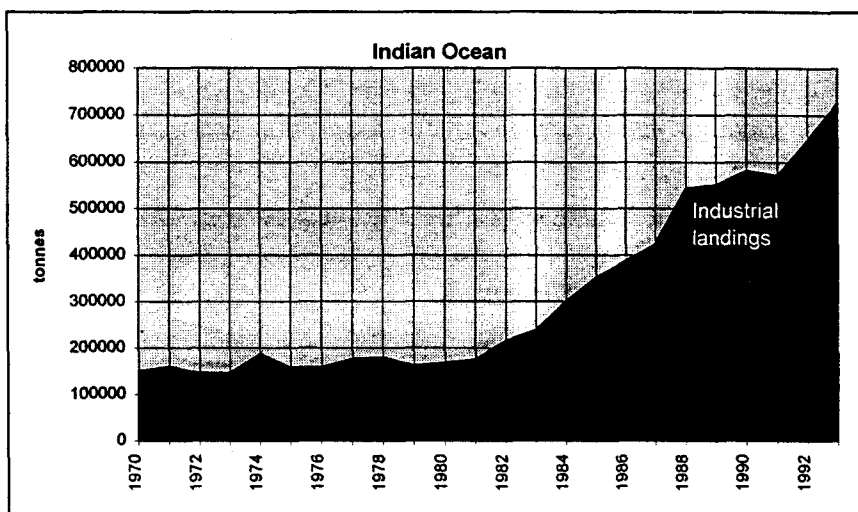


Figure 1: Landings of the major species of tunas and billfish from artisanal and industrial fisheries between 1970 and 1993 (excluding neritic tunas)

Nearly all the catch increase has come from tunas in the western Indian Ocean, essentially from purse seine, longline, baitboat and gillnet catches. The first two gears are mostly operated by DWFN fleets, while the latter gears are from coastal fisheries (Fig. 2). Other than a doubling in longline catches which came between 1990 and 1991, eastern Indian Ocean catches have shown little increase in the last decade, and are less than a third of the Area 51 landings for an area which is practically identical (Table 1).

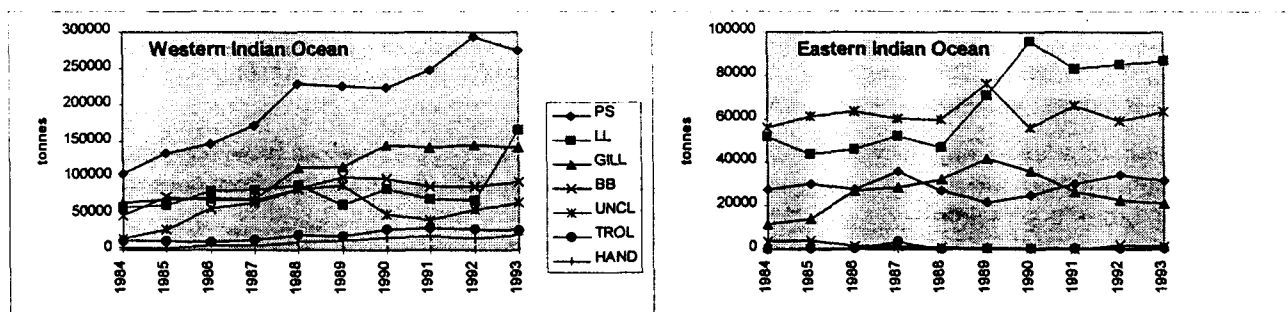


Figure 2: Catch by gear in Areas 51 and 57

Table 1: Surface area of the Indian Ocean ('000 sq. km)

	Area 51	Area 57
High seas	19,820	24,710
EEZ	13,900	7,810
Total	33,720	32,520

IPTP

Concern on the status of tuna stocks led, in 1982, to the creation of IPTP (The Indo-Pacific Tuna Programme - "Tuna Fisheries Development and Management in the Indian Ocean and the Pacific off Southeast Asia"). The programme was initially funded by UNDP but for the last six years has operated through contributions by member states. The IPTP core programme has, since 1982, been complemented by a Trust Fund established by Japan¹.

IPTP was patterned on ICCAT (the International Commission for the Conservation of Atlantic Tunas) and operates by collating and diffusing data on fisheries for tuna and tuna-like species in the Indian Ocean and western Pacific. In the process, the Programme assists member countries in the design and operation of statistical systems and sampling schemes and does some research on the data collected². At regular intervals, the IPTP convenes expert consultations with the objective of presenting research findings and providing advice to governments on the status of stocks. IPTP has no direct management powers but could act through its parent bodies, the Indian Ocean Fishery Commission and the Indo-Pacific Fishery Commission (now the Asia-Pacific Fishery Commission)(Annex I - Flow chart of Indian Ocean bodies dealing with tuna management).

The Area of Competence of IPTP is defined as FAO Statistical Areas 51 and 57 (the western and eastern Indian Ocean, respectively) and "the western Pacific near Southeast Asia"³. The species covered include the tunas, seerfish and billfishes.

Data sets held by IPTP include catch-and-effort data for the industrial fisheries covering the entire time series since the initial entry of the fleets in the Indian Ocean⁴, nominal catch data from 1970 to 1993 (depending on the country) for both coastal states and DWFNs by year, species, gear and FAO Area, fishing craft statistics and some length-frequency data. Some data are also held on tagging experiments conducted in the Indian Ocean and western Pacific. Attempts are currently being made to obtain transshipment statistics and to constitute a register of fishing vessels operating on the high seas⁵.

One of the major objectives of the latter phases of IPTP was to ensure the perpetuation of its functions through the creation of a permanent commission entrusted with management of tuna and tuna-like species in this ocean. Discussions started in 1986 for the creation of the Indian Ocean Tuna Commission (IOTC).

It is unlikely that IOTC can fully take over from IPTP within the current funding phase of the project, which is scheduled to last until March 1996. In fact, the consensus is that IPTP will need

¹ This programme was initially oriented specifically towards the small tunas, but is currently concerned with research, including analysis of tagging data and modelling.

² This is seen as a good way of checking the coherence of the data sets, as well as providing scientific information. Much of the research is conducted in close collaboration with scientists from countries of the region, in order to stimulate and support their efforts.

³ This includes Indonesia, Malaysia, Thailand and Philippines catches but does not include landings from the other countries bordering the South China Sea. As a consequence of disputes which originated with the refusal of U.S. purse seine to provide data on catches in high seas areas, no data are obtained from DWFNs for this area. It would thus be difficult to assess stock status from the data available. IPTP has nevertheless sponsored regularly the "Southeast Asia Tuna Conference", which has served to present research findings.

⁴ 1952 to 1993 for longline, 1982-1993 for purse seine and 1986-1991 for gillnet; data sets are generally by 5° square (some by 1° square), month and species.

⁵ This is partly in response to the Convention on Responsible Fishing on the High Seas, which requires FAO to keep a register of vessels authorised by each country to fish on the high seas. It is also deemed necessary to check flag country data for double- or non-reporting which may occur with longline fleets operating under various license or joint-venture agreements.

to be extended until the end of 1997. IPTP member parties will be asked to approve this bridging phase at a meeting to be held in Colombo next September. In anticipation of being absorbed by IOTC, however, IPTP is handing over its data collection functions for the western Pacific to SEAFDEC.

IOTC

Prior to creating the Commission, the issue of membership of the European Union⁶ in FAO had to be resolved, as had questions relating to contested sovereignty (leading also to multiple votes through direct representation of some of the countries concerned, which are also represented by the EU) for certain small isolated islands in the western Indian Ocean.

The Agreement defining the statutes of the IOTC was approved by the FAO Conference at its Twenty Seventh Session at the end of 1993, opening the Commission to accession by parties qualified to join. The main objectives and functions of the Commission are stated below:

The Commission shall promote cooperation among its Members with a view to ensuring, through appropriate management, the conservation and optimum utilization of stocks covered by this Agreement and encouraging sustainable development of fisheries based on such stocks.

In order to achieve these objectives, the Commission shall have the following functions and responsibilities, in accordance with the principles expressed in the relevant provisions of the United Nations Convention on the Law of the Sea:

- (a) *to keep under review the conditions and trends of the stocks and to gather, analyse and disseminate scientific information, catch and effort statistics and other data relevant to the conservation and management of the stocks and to fisheries based on the stocks covered by this Agreement;*
- (b) *to encourage, recommend, and coordinate research and development activities in respect of the stocks and fisheries covered by this Agreement, and such other activities as the Commission may decide appropriate, including activities connected with transfer of technology, training and enhancement, having due regard to the need to ensure the equitable participation of Members of the Commission in the fisheries and the special interests and needs of Members in the region that are developing countries;*
- (c) *to adopt, in accordance with Article IX and on the basis of scientific evidence, conservation and management measures, to ensure the conservation of the stocks covered by this Agreement and to promote the objective of their optimum utilization throughout the Area;*
- (d) *to keep under review the economic and social aspects of the fisheries based on the stocks covered by this Agreement bearing in mind, in particular, the interests of developing coastal states;*

Membership is open to coastal states of the Indian Ocean, states from outside the region fishing for tuna in this ocean and to regional economic integration organizations of which any State referred to above is a member and to which that State has transferred competence over matters within the purview of this Agreement. Member parties have also to be members of FAO, of the UN or of one of its Specialised Agencies, or of the IAEA⁷.

Sri Lanka, host to IPTP, was the first to accede and Eritrea, the newest state in the Indian Ocean, followed soon after. These states have now been joined by India, Mauritius, Pakistan and the United Kingdom. The Seychelles and Maldives have indicated that they are in the process of acceding.

⁶ The EU exercises negotiating rights on behalf of fishing interests of its member states.

⁷ This creates a problem for the participation of Taiwan (P.C.) which is now the major longline fishing country in the Indian Ocean, with reported catches of 129,000 tonnes in 1993.

The Commission will enter into force when the number of accessions attains ten. This may well happen by the end of 1995, but, before IOTC can fully take over the activities of IPTP, a number of steps will have to be taken. These include the conclusion of a hosting agreement, approval of a budget, apportionment of costs between member parties and appointment of a Secretary and staff.

Sri Lanka, India and Seychelles have offered to host the new Commission. Each of these countries offers relative advantages in terms of cost, quality of communications or proximity to centres of artisanal or industrial fishing (all key elements in the choice of a Headquarters). The decision as to where the headquarters will be located will have to be taken by consensus of the Commission members, however, which could take some time.

The IOTC Agreement specifies that contributions will be composed of an equal basic fee and of a variable fee based on the total catch of tuna and tuna-like species in the area and of the *per capita* income of the party. This is a source of concern for some of the smaller developing countries, but the specifics of this formula are still to be debated.

Decisions taken by a two-thirds majority of Commission members will, under the Agreement, be binding. This is subject to "objection procedures", which will mean that management decisions will in effect have to be taken by consensus.

CCSBT

The only resource management regime in force for tuna and tuna-like species in the Indian Ocean at this time is through the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). This body deals exclusively, as its name suggests, with the one species. Its area of competence extends over the whole distribution range of the species, from the Atlantic to the Pacific. The present membership of CCSBT includes Australia, Japan and New Zealand and stiff quota management measures have been imposed on the fishermen of these countries, despite the fact that some other countries exploit southern bluefin tuna.

The CCSBT has no permanent secretariat, this function circulating between the member countries. Early achievements of this Commission include the stimulation of a shift in fishing effort towards the larger and more valuable fish and the implementation of a real time catch reporting system based on satellite technology.

WIOTO

The Western Indian Ocean Tuna Organisation (WIOTO) was patterned on the South Pacific Forum Fisheries Agency (FFA). Its primary function is the maximisation of the benefits of foreign fishing to the coastal states. Membership is at this time restricted to Seychelles (where the Organisation is based), Comoros and Mauritius, with Madagascar having close association. Funding is through a levy on tuna transshipments by DWFNs.

The activities of this body have to date been limited to discussions and the transfer of information between the member states. Although resource management is enshrined in the WIOTO Convention, it is likely that actions to that effect will be in support of IOTC decisions, as the area of waters under national jurisdiction does not cover a significant part of the distribution range of any of the tuna species (Appendix II - IPTP Statistical Areas 51 and 57, showing the high seas areas, areas under national jurisdiction and the WIOTO zone).

Major activities are thus likely to be in negotiating, monitoring and enforcing⁸ access agreements, including such activities as the processing of logbook data and maintaining a register of fishing vessels. Activities are also anticipated in fisheries economics. Benefits should also accrue to the

⁸ Compliance of purse seine fishermen in the western Indian Ocean appears to be satisfactory at this time, but longline fleets may not act with equal responsibility and the advent of new fleets, which is anticipated, may complicate the situation.

DWFN fishermen as legislation and access agreements will be harmonised, and reporting will be to a single source.

Discussion

Some stocks of tuna and tuna-like species in the Indian Ocean are now at or nearing the point where management is needed. For the southern bluefin tuna, because of its distribution range which extends well outside the Indian Ocean, it would appear reasonable to recognise the priority of the CCSBT in management. For some neritic tuna and seerfish stocks, such as in the Gulfs and Arabian Sea, smaller sub-regional groupings of the countries directly concerned may be better fitted to adopt and enforce management.

For the surface fisheries on juvenile tropical oceanic tunas, marginal drops in catch rates may suffice to force the large, expensive DWFN purse seiners to move to more productive areas. For large fish of the more valuable species, as supplies dwindle, prices rise in compensation. This effect is visible from the prices now obtained on the sashimi market by bigeye and yellowfin tunas, and a similar increase in the price of albacore is to be expected as a sashimi market is developing for this species. The high value of the catch justifies increased fishing effort.

According to the data available, longline effort doubled in the Indian Ocean between 1992 and 1993⁹, practically all the increase coming in Area 51. Many coastal countries of this region now aspire to move to longlining, and this will further add to the fishing effort. There is thus some consensus that management may soon be needed, at least for the longline fisheries. The purse seine fishery could also be regulated, despite current high catch rates, because of the rapid increase in log fishing which has resulted in catches containing large numbers of juvenile bigeye tunas.

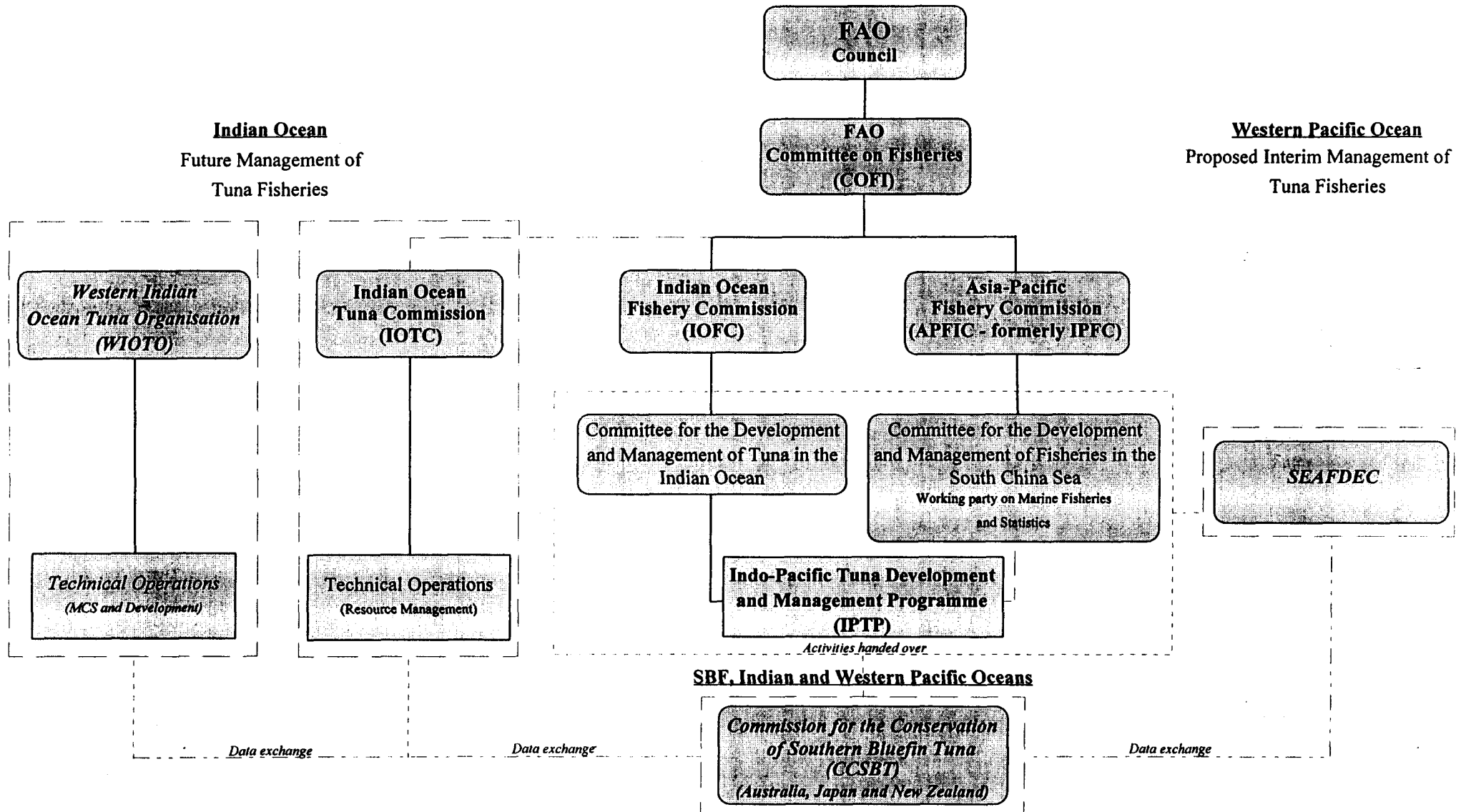
IOTC is based on the principle of Article 64 of UNCLOS. This choice is conditioned by the fact that most of the Indian Ocean is in international waters (Table 1 and Appendix II) such that any management measures must be enforced by each state on its own fishermen.

The decision-making process in IOTC is likely to be slow because of the need to obtain consensus. It will also be difficult to apply any management measures to coastal countries with artisanal fishermen who have in general no alternative activity and where sheer numbers are likely to make enforcement difficult. Finally, the absence of any significant fishery participant from the decision-making process could hinder implementation of management decisions.

There appears little alternative open for resource management in the Indian Ocean, however, and this is clearly perceived by both coastal states and DWFNs. The need should be stressed for each of the bodies involved in tuna management issues in the Indian Ocean to recognise the specific interests of the other agencies so concerned. There appears to be little blurring between the objectives and functions of the bodies at this stage and maintaining good communication between them may help to maximise the benefits which can be attained from these important resources.

⁹ That this occurred in one year could be partly due to an artefact of reporting, but there has been a major shift of longline vessels to the Indian Ocean and it is also thought that there is some non-reporting.

Annex II: Bodies dealing with tuna management in the Indian Ocean and western Pacific



N.B. Non-FAO Bodies are in Italics

Annex II - ITP Statistical Areas 51 and 57, showing the high seas areas, areas under national jurisdiction and the WIOTO zone

