

A comparative study on international organizations for tuna fisheries

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Abstract

Owing to establishment of five international organizations for tuna fisheries, tuna fishing on the high seas is consequentially transformed from a time of free competition to a time of cooperative competition on the platforms created by those international organizations. The paper explores the openness, allocation schemes of fishing quotas, and financial schemes of five international organizations for tuna fisheries. It is concluded: (1) that the rules concerning utilization and conversation of tuna stocks elaborated fundamentally by the developed fishing states are not entirely consistent with the principles of international customary law, of 1982 UN Convention on the Law of the Sea, and of international environmental law, (2) that each organization is open, but openness of the ICCAT and the IOTC is much higher than that of the CCSBT, the IATTC, and the WCPFC, (3) that excessively high membership fee, quota allocation or fishing capacity limitation correlated unduly to historical catch and so-called contributions to scientific research, and financial contributions correlated low proportionally to annual average catch in a short-term, etc are prejudices to the fishing interests enjoyed by developing distant fishing nations, coastal states and archipelagic states, and (4) that the principles of “Polluter pays” and “Common but Differentiated Responsibilities” should be followed in amending and developing the founding Conventions, financial rules, and relevant conservation and management measures of international organizations for tuna fisheries.

Keywords: tuna fishery, highly migratory species, freedom of fishing on the high seas, regional fisheries organization, international fisheries law, international sea law, international environmental law

1. Introduction

The tuna and tuna-like fishes are economically important species because tuna fishery products are popular commodities with high nutritional quality and international market value. It is reported that world tuna and tuna-like fish production in 2014 reaches 7660 thousand tons, and accounts for 8.2% of world capture production, but their estimated value amounts to 17772 million US Dollars, and contributes 14.2% of

estimated value of world capture fisheries (FAO, 2016).

Unfortunately, about 30 percent of the highly migratory tuna and tuna-like species are considered overexploited or depleted because of progress in fishing technology and long-term unregulated fishing (Maguire et al., 2006).. In order to manage and conserve these valuable highly migratory species, five international organizations for tuna fisheries have been established from 1950 to 2004, i.e. Inter-American Tropical Tuna Commission (IATTC), International Commission for the Conservation of Atlantic Tunas (ICCAT), Commission for the Conservation of Southern Bluefin Tuna (CCSBT), and Western and Central Pacific Fisheries Commission (WCPFC).

The paper will explore the creation of tuna fisheries organizations first, then evaluate openness of five organizations, issue of quota allocation and issue of financial schemes, and present some recommendations to modernize the relevant Conventions, financial rules and conservation and management measures.

2. Background to creation of tuna fishery organizations

It is well known that the President of the United States issued two Proclamations on September 28, 1945. No. 2667 is about Continental Shelf and No. 2668 is on the fisheries management beyond three nautical miles.

Proclamation No. 2667 asserts that “*the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just.*”(Harry S. Truman, 1945a)

Proclamation No. 2668 states that it is proper to establish conservation zones in which fishing activities shall be subject to the regulation and control of the United States or as provided in the agreements between the United States and other States. It further declares that the right of any State to establish conservation zones off its shores is conceded, provided that corresponding recognition is given to any fishing interests of nationals of the United States which may exist in such areas (Harry S. Truman, 1945b).

These two Proclamations partly triggered the unilateral expansion of national jurisdiction over the sea worldwide (Charles B. Selak, 1950), the UNCLOS I to adopt four Geneva Conventions on the Law of the Sea in 1958, further the UNCLOS III to adopt 1982 United Nations Convention on the law of the Sea (S.N. Nandan, 1987), and the United Nations General Assembly to adopt 1995 UN Fish Stocks Agreement (Balton, David A. and Holly R. Koehler, 2006).

As the result of 1982 UNLOSC (UN Convention on the Law of the Sea), the world oceans are divided into the different maritime zones with different legal status (Lewism Alexander, 1983).. And during the period of shaping modern international sea order, five international organizations for tuna fisheries are created by some states. The IATTC was created in 1950 by only two states, United States and Costa Rica (Robin L. Allen, 2000), and the ICCAT was established by seven states in 1969 with the founding Convention adopted by 17 states (Alain Fonteneau, 2008). Australia, Japan, and New Zealand jointly created the CCSBT in 1994 (Alastair Cameron, 2007), the IOTC was established by 10 states in 1996 within the framework of the FAO (IOTC, 2009), and the WCPFC was established by 13states in 2004 with 25 participants in developing its founding convention (Secretariat of the WCPFC, 2006).

It is evident that five organizations are founded from 1950-2004 by very different number of states respectively and at very different political, economical, biological backgrounds. But they all assert management power over tuna fisheries in a vast part of oceans, including high seas, EEZs and even territorial seas of coastal states, and

struggle for the extremely similar objectives: to permit maximum sustainable catch or to ensure long-term conservation and sustainable use/optimum utilisation of the tuna stocks through quite similar measures.

3. Openness of organizations for tuna fisheries

Maintaining the enough openness of tuna fishery organizations is very essential to achieve regional fisheries cooperation and to realise the biological, economic and social objectives because of biological characteristics of tuna fish, the vast Convention areas, and freedom of fishing as one of principles of international law.

Table 1 is developed to compare the openness of five organizations for tuna fisheries.

Table 1 Openness of five international organizations for tuna fisheries				
	Qualified Signatories	Conditions of Accession	Procedures for acceptance	No. of Members today
IATTC-1949	USA & Costa Rica (Art.V)	any fishing nations in the Area.(Art.V)	ratified and instruments of ratification exchanged as soon as possible;unanimous vote	
IATTC-Antigua Convention 2003*	Parties to 1949 Convention;area-bordering States; conference participating and fishing States and EU in past 4 years. (Art. XXVII)	Qualified signatories;(Art. 28) cooperating non-members (IUU fishing); members invited specially	Special provisions for fishing entity; (Art.XXVIII) consensus of all Parties.(Art.IX)	21 members; four Cooperating Non Members:Bolivia, Honduras, Indonesia and Liberia.
ICCAT-1966	Members of UN or of any Specialized Agency of UN. (Art.XIV)	any States at any time		49 State parties+EU; 4 Cooperating Non-Contracting Parties: Bolivia,Chinese Taipei,Suriname,Guyana.
CCSBT-1993	Australia,Japan & New Zealand. (Art.17)	any fishing nations of SBT; Coastal States of SBT fishery. (Art. 18)	encourage accession by any State. (Art 13.)	3 members:Australia,Japan,& New Zealand
ECCSBT by 2001 Resolution * *		3 parties of CCSBT; fishing entity, EU fishing SBT in past 3 years.	unanimous vote;(Art.7) other additional measures; (Art.8) Decisions of ECCSBT need endorsement of CCSBT.	8 members:Australia, EU,Fishing Entity of Taiwan, Indonesia, Japan, Republic of Korea, New Zealand and South Africa.One cooperating Non-Members: Philippines.
IOTC-1993	Members and Associate Members of FAO,Coastal States,fishing nations & EU ; Non-FAO member but member of UN, Specialized Agencies or IAEA admitted by 2/3 majority of members. (Art.IV)			32 Parties; 4 Cooperating Non-Contracting Parties
WCPFC-2000	25 States partipating conference. (Art.34)	Qualified signatories; entity; EU; invited specially(Art.35)	by consensus (Art.20)	26 Members;7 Participating Territories; 7 Cooperating Non-members
*IATTC Convention 1949 is modernized through 2003 Antigua Convention developed by 13 parties to 1949 Convention and other nations and entity fishing in the Convention area and entering into force on 27 August 2010.				
**ECCSBT was created by CCSBT in 2001 to accommodate other states or entity utilizing southern bluefin tuna in previous three calendar years.				

It reveals that five tuna fishery organizations are all open, that any country utilizing tuna fish stock is entitled to attain the membership for the Commission(s) concerned, and that establishment of tuna fishery organizations does not break the principle of fishing freedom on the high seas. But openness of the ICCAT and the IOTC is evidently much higher than the other three organizations in theory because of relatively looser conditions of accession and procedures for acceptance.

In practice, five organizations all require that a new entrant must have fishing

history in the previous years as a cooperating non-member/party before it is accepted through a voting procedure by the existing members. This definitely means that doing illegal unreported, unregulated (IUU) fishing is a precondition for attaining membership. Further if a new entrant catches more through IUU fishing, it may be allocated more quota according to the quota allocation scheme. So requirement for cooperating non-member/party to an applicant for membership seems absurd, reduces the openness of regional fishery organization, and are not compatible with the principle of freedom of fishing on the high seas enshrined in the 1982 UNLOSC.

Actually, the doctrine of IUU fishing promotes establishment and consolidation of regional fisheries organizations, and consequently makes tuna fishing on the high seas transform from a time of free competition to a time of cooperative competition, rather than denies fishing right of any country's national. Fundamentally speaking, fishing right is from the God, rather than from any national government or regional fishery organization.

4. Issue of quota allocation

Development of quota allocation scheme is an extremely important issue for each member and cooperating non-member/party because no one can realize its fishing right or so-called opportunity/possibility without holding fishing quota allocated. So it is reasonable to define the basic principles to be followed or factors/criteria to be considered in developing quota allocation schemes through the founding Conventions. Actually, only the founding Conventions for the CCSBT and WCPFC provide for the relevant provisions, while the IOTC Agreement and the Conventions for the IATTC and ICCAT do not. But the ICCAT sets out some relatively detailed criteria for the allocation of fishing possibility by its Resolution 01-25.

Art. 8.4 of the CCSBT Convention, Art. 10.3 of the WCPFC Convention, and Res. 01-25 of the ICCAT set out respectively six, ten and 27 points in allocating fishing quota. Those points may be summarized very briefly as follows: (1) biological characteristics of stock, stock status, maximum sustainable yield or optimum utilization; (2) historical catches; (3) scientific contribution to stock conservation, collection and provision of accurate data; (4) needs of developing states esp. small island developing countries and territories and possessions, subsistence fishery; (5) ability to apply conservation and management measures, record of compliance; (6) fishery contribution to national food security/needs, domestic consumption, income from exports, and employment; (7) fishing right on the high seas; and (8) interest of coastal states etc.

A well-defined fishing quota allocation scheme must be justified biologically and legally to ensure that fishing participants observe the relevant rules faithfully. But it seems very hard, even impossible to justify the existing quota allocation schemes or fishing capacity restriction.

First, subjective separation or designation of tuna stocks and lack of reliable and enough historical fishing data partly lead to unwillingness to accept determination of quota allocation for fishermen.

Second, there is a conflict definitely between provision of accurate data to be used in stock assessment and keeping of commercial secret because fishing is always competitive. It is understandable for fishing operators not to always get ready to provide fishing data accurate enough for tuna stock assessment.

Third, the relevant historical catch data are not collected and treated separately by catches in the EEZ and on the high seas. This actually implies confusion between tuna

fishing on the high sea and that in the EEZs of coastal states and probably has an adverse impact on acceptance of quota allocation scheme. Much worse, that the more historical catch means more fishing quota is not in a line with the basic principles of environmental law because more historical catch generally suggests doing the IUU fishing in a relatively long time and destroying tuna stocks partly as a result of long lifespan of tuna fish. Further how to judge international and national legality and biological effect of tuna fattening farming seems another big problem. As a matter of fact, correlating historical catch with quota allocation is not fair to the new entrants.

Fourth, Art. 241 of 1982 UNLOSC states categorically that: “*Marine scientific research activities shall not constitute the legal basis for any claim to any part of the marine environment or its resources.*” Therefore, connection-making between so-called scientific contribution and quota allocation is not compatible evidently with this provision.

Fifth, correlating ability to apply management measures or record of compliance with quota allocation signifies quota allocation as a punishment tool, rather than clarifies the fishing right, and is hardly acceptable.

Actually tuna fisheries on the high seas and the EEZs, even territorial seas are quite different from national fisheries in many aspects. For example, fishing capacity may be effectively reduced through a national funded buyback programme. But it seems impossible for tuna fisheries because of the combination of international and national fisheries. So it is natural that quota management for tuna fisheries as an output control approach does not function as well as it does in a national fishery. It is no surprise to observe that the ICCAT’s performance to date does not meet its objectives fundamentally (Glenn Hurry et al., 2009).

5. Financial schemes

Developing a relatively fair financial scheme and timely paying contributions to the annual budget are important for the Commission to keep normal operation.

The existing financial schemes adopted by each Commission are different, but the Member’s contribution to the Commission’s annual budget is basically composed of two components: membership fee, and contribution with respect to the member’s annual catches. An exception is that the IATTC introduces a peculiar component: international trade-based contributions.

Table 2 is designed to compare the financial schemes for the five international organizations for tuna fisheries.

Table 2 The Financial Schemes for the Five International Organizations for Tuna Fisheries				
References	Membership fee	Catch-based contributions	International trade-based contributions for IATTC	No. of groups/(No. of members + CNMs/CNCPs)
1993 CCSBT Art.11.2	30% budget equally	70% budget in proportion to nominal catches of SBT		ECCSBT:8 members+1 CNM
1949 IATTC 2003 Antigua Convention Art.XV Resolution C-12-04	10% budget equally, 10% operational component weighted by GNI	70% weighted by GNI;annual average of catches in three most recent years,50% catches in overlapping area of IATTC and WCPFC.	10% weighted by GNI;50% tuna loins exported and imported respectively	grouped by GNI 7/(21+4CNMs)
1966 ICCAT Art.X Financial Regulations	USD 1000 for ICCAT membership; USD 1000 for each Panel membership	remaining budget divided by very complicated scheme: weighted by GNP and harvest,total round weight of catch and net weight of canned products		grouped by GNP per capita and tuna harvest 4/(50+4 CNCP)
1993 IOTC Art.XIII 1997 Financial Regulations	10% budget equally;40 %budget weighted by GNP per caput, 3 groups:factor=H8,M2,L0;	10% budget equally fishing target species; 40% budget in proportion to average catches weighted by coefficient of developmtn; 2 groups:OECD members & EC= 1, others=0.2		grouped by GNP 3 & 2 (32+4 CNCP)
2000 WCPFC Art.18 2013 Financial Regulations	10% equal base fee; 20% national wealth component weighted by GNI per capita, USD 0.05 ceiling for small island developing States;	70% by 3-year average catches,dicount factor 0.4 for developing states and territories' catches in their EEZ, and 50% catches in overlapping area of IATTC and WCPFC		grouped by small island developing states or not; 2 (26 +7 CNMs)
Note: CNM for cooperating non-members; CNCP for cooperating non-contracting party, entity or fishing entity, OCED for Organisation for Economic Co-operation and Development; H8 for high income members with factor of 8, M2 for middle income members with factor of 2, L0 for low income with factor of 0.				

The drawback of existing financial schemes is easily perceived. The proportion of membership fee is excessively high and proportion of catch-based contributions is relatively low. The membership fee of the IOTC surprisingly accounts for 50% of a member's total contributions. Although the developing states, especially the small island developing states, are entitled to enjoy discount or a ceiling because of their weak ability to pay, it is hard to hide such evident disadvantages. The financial scheme providing for excessive membership fee is not fair to a new entrant without relatively more historical catches and reduces openness of the organizations.

Justifying a financial scheme seems difficult. My opinion is that it should make membership fee as low as possible to promote openness of organization, follow some basic principles of environmental law like *Polluter Pays Principle*, *Common but Differentiated Responsibilities*, and etc., and take into account of the member's ability to pay.

The *Polluter Pays Principle* means that the costs of environmental damage or resource depletion should be borne by polluters or users (Clare Coffey and Jodi Newcombe 2001). Principle 7 of *1992 Rio Declaration* states that "In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities." Undoubtedly, these principles should be followed and those fishing states with a long tuna fishing history should assume the primary responsibility in conserving tuna and tuna-like fish stock because of their big contributions to severe depletion of fish stocks.

Direct application of these two principles in tuna fisheries management suggests that the fishing states with more total catches in a long fishing history should pay

relatively more contributions to the Commission's budget partly because of long lifespan of tuna and tuna-like fishes. So it is not logical that the catch-based component is only correlated with annual average catches under the current financial schemes.

The international trade-based component used only by the IATTC gives a new perspective and seems acceptable because international trade of tuna and tuna products is one of major reasons for overfishing indeed. Further the existing financial scheme of the IATTC is much fairer and more rational compared to the ICCAT and IOTC's financial schemes because 25 members and cooperating non-members are technically divided into 7 groups by GNI category. 54 parties and CNCPs to the ICCAT are divided into four groups by GNP per capita and fishing catch.

The ICCAT designed the most complicated financial schemes with uniquely dual membership fee respectively for ICCAT membership and its species-based panel membership and the IOTC's scheme sets out 10% budget is correlated with fishing target species. Such intricate financial schemes are detrimental to openness of organizations. In addition, the fact that catch-based contribution is correlated with catches weight rather than with their value seems not compatible very well with polluter pays principle.

6. Conclusion

Fishing industry, environmentalists and fisheries policy makers have seen many changes from creation of the IATTC in 1950, the very first regional fisheries organization for tuna fisheries, to the present. The fishing vessels and methods, fish preservation technology, national and international laws relating to ocean and fisheries, principles and concepts of environmental law, and especially tuna stocks status have all displayed noticeable changes.

But one of the main objectives of fisheries management is not changed. That is to conserve the tuna stocks and to pursue sustainable fisheries. In fact, the preamble of 1993 IOTC Agreement gives much more fully and acceptable statements about the reasons for establishing the tuna organizations: "*desirability of promoting the peaceful uses of the seas and oceans, and equitable and efficient utilization and conservation of their living resources, realization of a just and equitable international economic order, with due regard to the special interests and needs of developing countries, desiring to cooperate with a view to ensuring the conservation of tuna and tuna-like species in the Indian Ocean and promoting their optimum utilization, and the sustainable development of the fisheries*".

International fisheries cooperation cannot be realized faithfully unless the tuna organizations have enough openness and relevant rules, schemes and conservation measures are seen to be fair. Equity is always central to success of sustainable tuna fisheries.

It is recommended that the Commissions of tuna fisheries reduce conditions of accession and formalities, develop much fairer quota allocation schemes and financial schemes, consider inherent weaknesses of output control approach, respect national jurisdiction over fisheries in the EEZ and freedom of fishing right on the high seas, follow principles of international environmental law in developing conservation and management measures, and especially care about those poor fishermen on the stormy seas rather than tuna fish only.

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