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Sustainable Tuna Fisheries: Indonesia Perspective

R. Panji Raditya Poernomo*

World Fisheries encounter serious deficiency problems recently. FAO reported that overfishing cases is increasingly in numbers on international scale. However, there is a dispute as to whether world fish stock is now decreasing or not. Despite such issue is still debatable, fishery management has to be undertaken more seriously and comprehensively. Especially in the case of tuna as its world capture figure is declining in recent years. Therefore, this paper will present the status of tuna fishery in Indonesia, including issues related to tuna fishery. Moreover, this paper will also highlight law, regulations, RFMO's resolutions and the policy of Indonesia to achieve sustainable fishery and responsible fishing in general as well as tuna fishery species in particular.

Keywords: *sustainable fisheries, tuna fishery, fishery stock, responsible fishing*

I. Introduction

The world fishery is facing endangered scarcity. Reported by FAO (2010) that give indications of increasing overfishing on an international scale where are evident. In the period of 1970 to 2008 areas under exploited to moderately exploited condition decreased from 40 to 15 percent. While during the same period of time over exploited condition increased from 10 to 32 percent¹ (Figure 1). At the same time at regional level the condition of the fishing ground indicate "fully and over exploited" tendency. In Western and Central Pacific and in Eastern Indian Ocean where most of the Indonesian Fishing fleet are operating is in moderately exploited condition.²

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¹ FAO, *The State of World Fisheries and Aquaculture*, FAO, Rome, 2010, p. 35.

² Budy Wiryawan, Akhmad Solihin and Irfan Yulianto, "Kawasan Konservasi Perairan Sebagai Alat Pengelolaan Perikanan Tangkap," p. 2 in Tri Wiji Nurani, *Buku II New Paradigm in Marine Fisheries: Pemanfaatan dan pengelolaan sumberdaya perikanan laut berkelanjutan*, (Bogor: Dept. Pemanfaatan Sumberdaya Perikanan IPB,

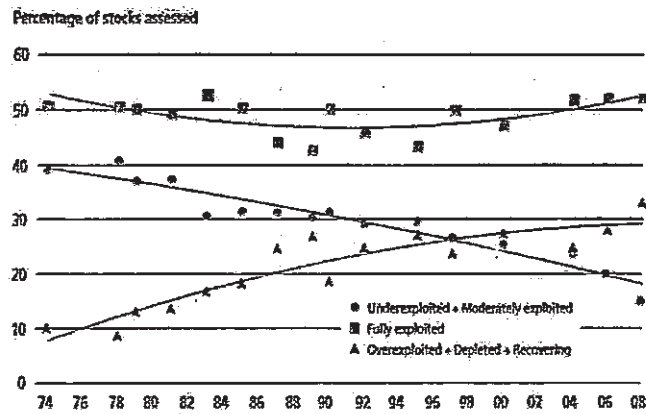


Figure 1. Global Trends in the State of World Marine Stocks since 1974 (Source: FAO, 2010)

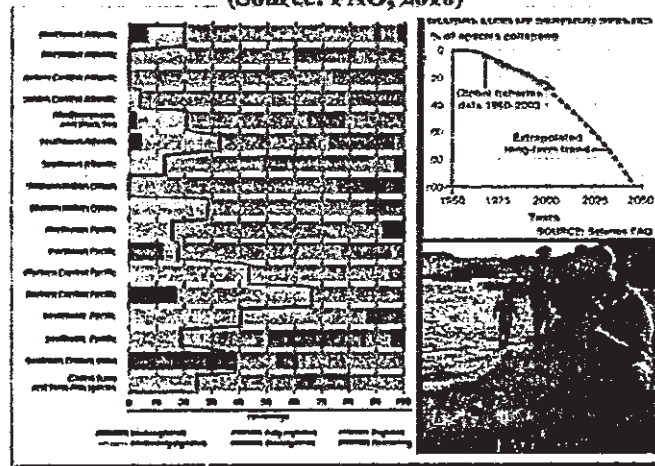


Figure 2. World Fisheries Condition and Projection 2050.

The a.m. data clearly showed that the world fish stock is decreasing. This is affirm by the latest survey result disclosing that many fish stocks experienced decreasing all the time since caught for the first time.³ More over, Worm et. al. disclosed that in 2048 the global fish-

2011).

³ Myers, R., and Boris Worm, "Rapid Worldwide Depletion of Predatory Fish Communities". *Nature*, vol. 423, 2003, p. 280.

ery will collapse.⁴ However, two years later Warm's opinion was opposed by Branch, because of ignoring several factors, one of which is international and national regulations in realizing the world sustainable fishery.⁵

Disregard the disputes of the expertise mentioned above fishery management must receive the common attention. In view that world capture fishing showed an ever increasing contribution to the world fishery production. Based on FAO report, world marine fish production fluctuate between 77 and 86 million tons, the highest being 86,8 million tons in the year 2000 and decreasing to 79,9 million tons in 2009.⁶ As such the world capture fishery is potential showing a declining figure.

On the other hand, even the tuna and tuna like species i.e. tuna, bonito and bill fish experience increasing, especially tuna in particular was declining up to 2008 with the total catch being 6.3 million tons⁷ (Figure 2). Further FAO disclosed that out of 23 species of tuna 60 percent area fully exploited, 35 percent over exploited or depleted and only few are under exploited (in particular skipjack).⁸ Based on the previous situation for the long run it is necessary to take a management policy on tuna which is sustainable. In view that tuna fishery is facing three issues: (a) pressure in relation to the development of the fishing fleet; (b) IUU (Illegal, Unreported and Unregulated) fishing practice; and (c) the impact of the use of FAD (Fish Aggregate Device) and Tuna farm.⁹

⁴ Boris Worm, Edward B. Barbier, Nicla Beaumont, J. Emmett Duffy, Carl Folke, Benjamin S. Halpern, Jeremy B.C. Jackson, Heike K. Lotze., Fiorenza Micheli., Stephen, R. Palumbi, Eric Sala, Kimberley A. Selkoe, John J. Stachowicz., Reg Watson, "Impact of Biodiversity Loss on Ocean Ecosystem Services", *Science*, vol 314, 2006, p 787.

⁵ Trevor A. Branch, "Not all fisheries will be collapsed in 2048," *Marine Policy*, vol 32, 2008, pp 38.

⁶ FAO, *Op. Cit.*, p.3.

⁷ *Ibid*, p.35.

⁸ *Ibid*.

⁹ Purwito Martosubroto, "Toward Sustainable Fisheries: Issues and Challenges", Paper ASEAN Tuna Working Group, 2011, p.2-3.

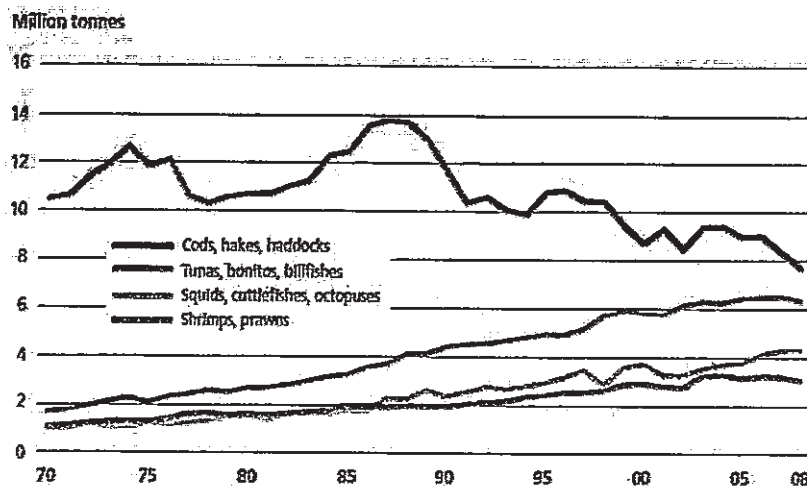


Figure 3. Fishing trend based on important species group (Source: FAO, 2010)

What about tuna fishing in Indonesia? This paper will present the status of tuna fishery in Indonesia, including issues related to tuna fishery. Besides, this paper will also highlight law, regulations, RFMO's resolutions and the policy of Indonesia to achieve sustainable fishery and responsible fishing in general as well as tuna fishery species in particular.

II. Sustainable Fisheries

The term "Sustainable Fisheries" derived from the concept of "sustainable development" which is popularized Bruntland Report at the WCED meeting in 1987. In that report sustainable development is defined as a development that fulfill the present need without ignoring or reducing the ability of the next generation to get their needs. By clarifying the meaning of sustainable development and explaining the implication there of Bruntland commission, this commission further identified seven important objectives for the policy development and environment. The seven objectives covers : (1). rethinking the meaning of development; (2) changing the quality of growth this is emphasizing on the development rather than just on growth; (3) fulfill the basic need for employment, foods, energy, water and sanitation; (4) guarantee the accomplishment of sustainable in a certain growth population;

(5) conservation and to enhance resources; (6) changing the direction of technology and the management of risk; and (7) to harmonize the environment and economic consideration in taking decision.

To follow up our common future publication on Our Common Future, many efforts have been taken to develop guidance and principles of sustainable development. It is necessary because without guidance and principle it is irresponsible to determine whether a certain policy or activity can be called sustainable nor if an initiative is consistent with sustainable development. The objective of the above development environment is to enhance quality of life also to support principles of sustainable life. Those principles are as follows: (1) to respect and to look after life community; (2) to improve quality of human being; (3) to sustain life power and earth diversity (4) to refrain from non renewable resources; (5) to put efforts for not exceeding the capacity of the earth; (6) to change the attitude and life style of each individually; (7) to support the creativity of the society to maintain their own environment; (8) to set up national framework to harmonize efforts to sustainable development; (9) to create global cooperation (Supardi 2003).

As mentioned in the sustainable development there are three main components, e.i. social, economy and environment (figure 3). Every components is linked in a system which is moved by power and objectives. The social sector aims at the enhancement of relationship between people, the achievement of the aspiration of each individual and group, and strengthening value. The economical sector is to see the development of the human resource in particular through step up consumption of goods and services. The environment sector is focused to protect ecological system integrity (Munasinghe, 2002).

Figure 4 indicates how to bundle the "sustainomics" frame and the basic of relation trans-discipline knowledge will support the comprehensive guest and trade off balance and synergy which can occur in sustainable between social respect, economy and environment. If this is balance is ignored therefore, there will be destructed resources and other environment problems.



Figure 4. Sustainable development to support the frame of trans-disciplin (Munasinghe, 2002).

However, management of the resources is a dynamic effort. This is in line with the perspectives of the stakeholders that are always developing. As implication of the perspective development adjustment or change can happen to the objective, strategy and activity to manage the resources. That is why based on the concepts sustainable development the utilization of the resources must take into consideration other dimensions in order to be comprehensive.

At the beginning, management of the resources intended only to be directed to preserve resources. This is based on conservation paradigm which has since long been pioneered by biological scientists. In this paradigm the continuation of the resources means long-term conservation and as such an activity may be called continually if they are capable of protecting the resources from being extinct. And as such this concept give some attention to the objective of human in carrying out that utilization activity.

As the further development in the 1950's the domination of the conservation paradigm got opposition from other paradigm which is called rationalization paradigm. This paradigm is focusing on continues resources which is rational in the economic sense and based their arguments on gaining maximum profit from the fishery resources support principles of sustainable life.

Both paradigms gained criticism from a new paradigm which is called social and community paradigm. This paradigm has been developed by “sustainable Fishery System “. In this new paradigm continues resources can be reached through community approach. This means continues resources are tried paying main attention to continuous society as a community system.

And as such sustainable development is not only aimed for the interest of resources as resources itself or economic profit as rents, but more than that is for sustainable community which is supported by sustainable institution which cover quality sustainable from regulation policy and organization to support the achievement sustainable ecology, economy and community (Adrianto, 2004). The new paradigm sustainable development stated by Charles (2001) includes the following aspects. First, sustainable ecology as raising sustainable stock /biomass until exceeding its support capacity, and enhancing capacity and quality ecosystem is the main focus. Second, sustainable socioeconomic by way of paying attention to sustainable prosperity of stakeholder at individual level. Maintaining or achieving higher level of welfare of the community forms sustainable attention. Third, sustainable community is means sustainable prosperity from society perception. Fourth, sustainable institution is connected with maintaining a healthy sustainable in financial and administration as pre conditions those three sustainable development. (Figure 5).

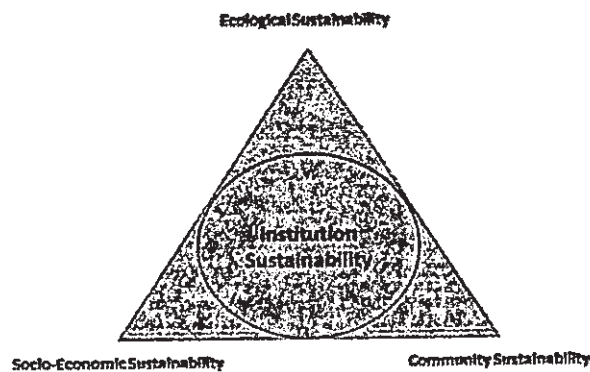


Figure 5. National Development Triangle (Charles, 2001).

III. Indonesia Tuna Fishery Condition

National fishing activities is divided by eleven fisheries management areas. Figures shows that some of those fisheries management area (WPP) are indicated overfishing. Red colour is means overfishing and yellow colour is fully exploited. Those above mentioned fisheries management area can be desribed as follows:

1. Malaca Strait and Andaman sea (WPP 571). There are many demersal fishes
2. (snapper, shrimps) and from big to small size of pelagic fishes (tuna, tuna-like, shark, marlin, mackerel, hairtail) also small part of big pelagic close to Andaman sea. However, the utility of demersal and shrimps are already exceed the carrying capacity. This area is overfishing and it is caused by illegal fishing activities and lack of controll and monitor in this area.
3. West Sumatra of Indian Ocean and Sunda Strait (WPP 572) and Southern Java of Indian Ocean untill Nusa Tenggara (WPP 573). There are many big and small pelagic fishes. This area are indicated fully exploited.
4. Karimata Strait, Natuna Sea and South China Sea (WPP 711). There are many demersals and shrimps also small pelagic fishes. This small pelagic is under overfishing whereas the demersal species is already fully exploited.
5. Java Sea in (WPP 712). There are many fishermen use variety tools to fish in this area. The small pelagic of this area, is overfishing condition whereas demersal and shrimps are fully exploited.
6. Makassar, the bay of Bone, Flores sea and Bali sea (WPP 713). There are many pelagic small and big fishes in this area. But for shrimps are overfishing and other demersal fishes are fully exploited.
7. Banda sea and the bay of Tolo (WPP 714). There are many big and small pelagic. This area is under moderat condition with green colour because there is not enough data, so there is not yet confirmation of the status.
8. Aru sea, Arafura sea and Timor sea (WPP 715). There are many small pelagic fish and there is in moderat condition whereas demersal species and shrimps are overfishing.

9. Maluku sea, the bay of Tomini and Ceram sea (WPP 716). There are many demersal and small pelagic fishes in moderat condition whereas a big pelagic is fully exploited.
10. Sulawesi sea and Halmahera sea (WPP 717) and Samudera Pacific (WPP 718). The big pelagic fishes in this area, are under overfishing condition.

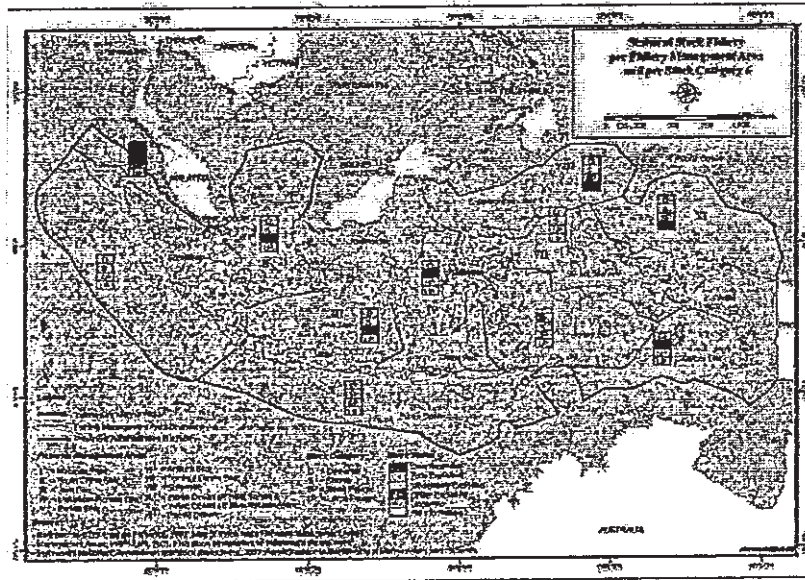


Figure 6. Status of Fisheries Managment Areas/Zones

According to the national commission of fishery stock assessment in 2000, this maximum sustainable yield of Indonesia fisheries reached 6,4 million ton per year. Therefore, the total catch is allowed up to 80 percent from the maximum sustainable yield (MSY) or about 5,12 million ton per year. But until the year of 2010, the level of utility already reached 5,06 million ton or about 79 percent from MSY (KKP, 2010). This means an opportunity to increase production of capture fishes at national level only one percent from the total allowable catch (TAC). The report of each fisheries management areas (WPP) also shows that almost all area are overfishing and fully exploited.

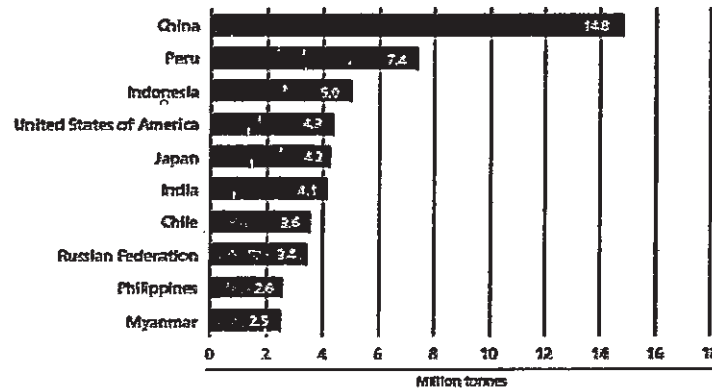


Figure 7. 10 Countries of the biggest fisheries production in 2010
(Source: FAO, 2010)

Production of catching fisheries reached 5.285.020 ton in 2009 which is consist of sea product 4.789.410 ton and general 495.610 ton. Compare to 2008 the year of the production is increased by 1,71 percent and under period 2005-2009 these has been increased with the average of 2,23 percent per year. The position of Indonesia’s fishery product is in 3rd in figure 7.

Meanwhile, the potential of Indonesia tuna’s product from eleven fishery management areas are estimated to reach 1.145,4 ton per year in 2009, tuna production has reached 541.303 ton with mainly skipjack species (338.034 ton) or 62,45 percent of the total tuna production. Whereas the lowest production is Southern Bluefin Tuna (641) or 0,12 percent of the total tuna production (Table 1). The total tuna fishing vessels has been fluctuating whereas in the year 2009 declined compare to 2007. In 2008 the total tuna vessel showed 294.989 ton (Table 2).

Table 1. Indonesian Tuna Production

Tuna Species	2004	2005	2006	2007	2008	2009
Albacore	29.135	33.790	0.293	34.335	36.538	25.621
Yellowfin Tuna	94.904	110.163	94.406	103.655	102.765	114.163
Southern Bluefin Tuna	665	1.831	747	1.079	891	641
Bigeye Tuna	52.292	37.360	43.958	52.489	53.979	62.844
Skipjack	233.319	252.232	277.388	301.531	296.769	338.034
Total	410.315	435.276	436.792	493.089	490.942	541.303

Source: Director of Fisheries Resource Management-MMAF (2011)

Table 2. The Total of Indonesian Tuna Fishing Vessel

Equipment	2004	2005	2006	2007	2008	2009
Long Line	5.656	5.226	9.290	8.983	10.239	10.345
Purse Seine	13.714	17.198	20.211	22.741	22.338	18.423
Pole and Line	5.032	3.872	6.861	15.765	16.486	12.727
Hand Line	33.018	22.863	30.250	53.768	56.580	67.444
Other	225.231	229.067	227.132	237.921	202.020	186.050
Total	282.651	278.226	293.744	339.178	307.663	294.989

Source: Director of Fisheries Resource Management-MMAF (2011)

IV. Law and Policy

In order to achieve sustainable fishery management including highly migratory species (tuna species), Indonesia government issues some laws and regulation as follows:

A. Law Number 17/1985 Concerning Ratification of UNCLOS 1982

The law of Republic of Indonesia Number 17 of 1985 concerning ratification of United Nations Conventions on The Law of the Sea.

All fisherman and tuna operators should understand and implement the ratification of UNCLOS 1982 especially for fisheries conservation and utilization of the living resources. These articles are related to sustainable fisheries management.

1. Article 61 Conservation of the living resources:¹⁰

- a. The coastal State shall determine the allowable catch of the living resources in its exclusive economic zone. Indonesia as coastal state should utilize the resources optimally in EEZ.
- b. The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by-over exploitation. As appropriate, the coastal State and competent international organizations, whether sub regional, regional or global, shall co-operate to this end.
- c. Such measures shall also be designed to maintain or restore

¹⁰ United Nations, "The Law of Sea: The official text of the united nations convention on the law of the sea", United Nations Publication, p. 20-21.

populations of harvested species at level which can produce at the maximum sustainability yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether sub regional, regional or global.

- d. In taking such measures the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.
- e. Available scientific information, catch and fishing efforts statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations, whether sub regional, regional or global, where appropriate and with participation by all States concerned, including States whose nationals are allowed to fish in the exclusive economic zone.

2. Article 62 Utilization of the living resources.

The coastal State shall promote the objective of optimum utilization of the living resources in the exclusive economic zone without prejudice to article 61.

3. According to Article 116 Right to fish on the high seas, all States have the right for their nationals to engage in fishing on the high seas subject to:

- a. Their treaty obligations;
- b. The rights and duties as well as the interests of coastal States provided for, inter alia, in article 63, paragraph 2, and articles 64 to 67; and
- c. The provisions of this section.

B. Law no. 5/1983 Concerning the Exclusive Economic Zone of Indonesia

The Economic Exclusive Zone (EEZ) is a new regime in the international maritime law that was invented to protect the coastal state from the hazard of excessive utilization of the biological resources adjacent to its coast from fishing activities based on the high seas regime. Because EEZ's character is *sui generis* beside the national law of the state, the international law is also legally binding.

The same thing happened with Law no. 5/1983 art 4 (1) stating that Indonesia has the sovereign right to do exploration and exploitation, management and conservation of the biological resources and non biological one from the sea bottom and land underneath as well as the water above it and also other activities for economic exploration and exploitation the a.m. zone e.i. water power generation, current and wind. On top of that Indonesia has also jurisdiction relating to:

- a. Constructing and using artificial islands, installation and other buildings.
- b. Scientific research on the sea
- c. Protecting and preserving sea environment
- d. Other rights and obligations based on conventions on the law of the sea that are valid.

However, everything relating to the bottom of the sea and the land below it, sovereign right and other Indonesian rights, jurisdiction and obligations mentioned before will be implemented according to the Indonesian law on the continental shelf, agreement between Indonesia and neighboring countries and other international is also valid. This is attested by art 4 (3), that in EEZ Indonesia, the freedom of navigation and to fly internationally and also to lay cables and pipes undersea recognize in accordance with international maritime law which is valid.

C. Law Number 31/2004 Concerning Fishery

The law Number 31/2004 includes regulations on the management of fishery on the high sea. So far the regulation of the management of fishery which are stipulated in law no. 9/1985 only valid for the Indonesian fishing area e.i. (a) the Indonesian waters (b) rivers, lakes, basin swamp and other flooding within the area of the Republic Indonesia and (c) Indonesia EEZ.

The a.m. decree is still used in law no. 31/2004 art 5 (1) stating that the Indonesia fishery management area for capture fishing as well as for farming includes:

1. (a) The Indonesian waters, (b) the Indonesian Exclusive Economic Zone and (c) rivers, lakes, basin, swamps and other flooding, which are potential to be used as aquaculture sites in the area of the Republic of Indonesia. Besides regulated on the management in the fisheries management areas which has the legal status as sovereignty and sovereign right, the Indonesian government also declare fisheries management beyond fisheries management areas. This announced is in article 5 (2) which stated that management of fishery beyond the fisheries management areas as stated is article 5 (1) is done based on the international law and regulation, requirement and standard that has been received as a general rule. According to article 5 (2) the meaning of "management of fishery beyond the fisheries management areas of the Republic of Indonesia is the management of fishery in the high sea. As such the awareness of creating of sustainable and responsible fishery on the global scale was already the attention and concern of the government of the Republic of Indonesia.
2. Concern about global fishery management is also reflected by international cooperation as a message from the law no.31/2004. On art 10 (1) is stated that for the sake of international cooperation the government (a) can publish regularly things that relate to conservation and management steps on fishing resources. (b) cooperating with neighbouring countries or other countries. In the framework of conservation and management of fishing resources on the high sea, closed high sea or semi closed one and pocked area and (c) warning and sub meeting evidence to the flag state of the vessel that are suspected to cause handicap to the conservation and management of the fishery resources. As such in the frame work of international cooperation the Indonesian government must improve the fishery statistic data as a scientific proof available as required internationally.

Further, in the context of the international cooperation Indonesia can become member of an organization. As a legal base this is provided in art 10 (2) stating that the government will participate as an active

member with regional or international organization in the frame work of cooperation on fishery management.

D. Government Regulation Number 15/1984 on the Management of Biological Resources In the Economic Exclusive Zone.

The government Regulation Number 15/1984 is a derivation on the implementation of law no. 5/1983. In short it includes the following issues:

First. Utilization. According to art 2, the biological resources in the EEZ of Indonesia should be benefited to develop venture in the field of fishing in Indonesia. At the implementation the government is intending to support several moderation in orders to enhance capacity to benefit biological resources in our EEZ, person or Indonesian enterprise this is doing business in fishery can have cooperation with foreign people or enterprise in the form of a joint venture or any other cooperation according to the existing law and regulation. Besides for the local fishermen this regulation no. 15/1984 is also mentioned to regulate access foreigners to utilize biological resources at the Indonesian EEZ. Art 3 stated that foreign people or entrepreneur will be given the opportunity to catch fish in the Indonesian EEZ as long as the Indonesian people or enterprise are not capable of fully utilizing the total allowable catch (TAC) based on this governmental regulation.

Second, Conservation. According to art. 4 to achieve the sustainable fishery the Minister of Agriculture TAC in accordance with the species or group of species of the biological fish resources in a part or the whole Indonesia EEZ. The decision on the TAC is based on the data on the result of the result of research, survey and also the evolution of the result of the catch activity. Besides the Minister of Agriculture decides the allocation number of fishing vessels and their respective fishing gears taking into account the TAC. Implementing the utilization of the biological resources at the Indonesian EEZ, nobody is allowed to catch fish using explosive, poison, electivity and other hazardous material an equipment (art 6).

Third. Licence. According to art 7 people or enterprise that will operate in capture fishery in the Indonesian EEZ must first get fishing licence from the Indonesian government. The granting of licence to Indonesian people or enterprise is in accordance with the regulation

which is valid for Indonesian fishing venture (art 8). To grant licence to foreign people or enterprise in the Indonesian EEZ can be done after having been reached.

Agreement between the government of Indonesia with the government of the foreign people or enterprise. Licence will be given if the nationality of the fishing vessel that will be used the same as the nationality of the foreign people and enterprise mentioned (article 9).

Apart from the above mentioned legislations, there are some ministry regulations which are arranged Indonesia capture fisheries and aquacultures . These regulations can be seen at Table 3.

Table 3. Minister Regulations Concerning Catch-Fisheries and Aquacultures

No.	Minister Regulations	Concerning
A. Fisheries Catching		
1.	PER.16/MEN/2006	Fishery Port
2.	PER.05/MEN/2007	Fishing Vessel Monitoring System
3.	PER.05/MEN/2008	Captures Fisheries Business
4.	PER.08/MEN/2008	The use of Gill Net at Indonesia Exclusive Economic Zone
5.	PER.01/MEN/2009	Fisheries Management Areas/ Zones
6.	PER.03/MEN/2009	Capture Fisheries and/or Collecting at High seas
7.	PER.11/MEN/2009	The use of Fish Net at Indonesia Exclusive Economic Zone
8.	PER.12/MEN/2009	Alterations of the Minister Regulation No PER.05/MEN/2008 concerning Capture Fisheries
9.	PER.27/MEN/2009	Registration and Marking for Fishing Vessels
10.	PER.28/MEN/2009	Certification of Capture Fisheries
11.	PER.30/MEN/2009	Authority Transferring for Marines and Fisheries Licensing Permit for Investment to BKPM
12.	PER.07/MEN/2010	Letter of Fishing Vessel Operation
13.	KEP.40/MEN/2003	Fishing company for small to medium and large scale in Marines and Fisheries
14.	KEP.30/MEN/2008	Installation and Utility for Fish Aggregate Device
15.	KEP.50/MEN/2008	Productivity of Fishing Vessel
16.	KEP.06/MEN/2010	Capture Fisheries Equipments at Fisheries Management Areas/ Zones
17.	PER.18/MEN/2010	Log Book For Fishing Vessel

There are mainly two big task to realize sustainable fisheries management. Firstly, documentation. This is as follows :

- a. Statistic data
- b. Logbook for fishing vessel
- c. Observer on board
- d. Monitoring

Secondly, In pursuing sustainable fishery management in high seas, the government needs to enhance international cooperation with RFMOs. This is the main RFMOs as follows:

- a. IOTC
- b. CCSBT
- c. WCPFC

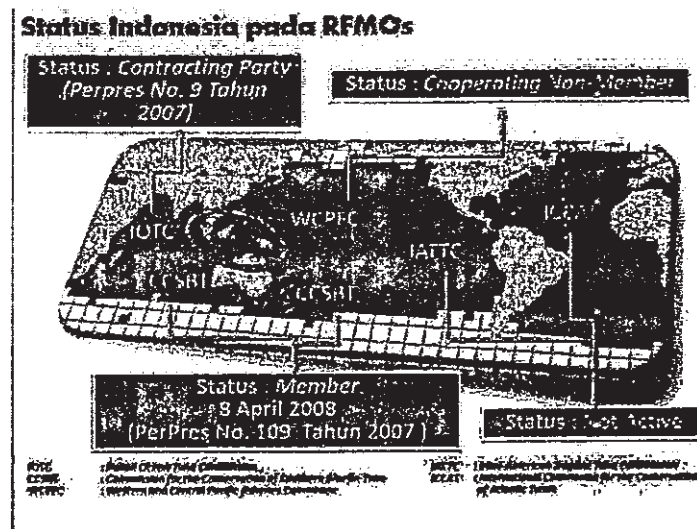


Figure 8. Indonesia Status in RFMOs

There are some benefits to joint member with RFMOs such as :

- a. Indonesia as a distant fishing nation and a coastal state should be a member with regional and international organization especially for economic and trade interest.
- b. Since the ratification of UNCLOS on December 31 1985 into law no.17 / 1985 on the international law of the sea, it is also adopt UN Compliance Agreement 1993, ratification of UN Fish

Stock Agreement also adopt principal of FAO Code of Conduct For Responsible Fishing in order to ensure sustainable fisheries resources.

- c. Participate in combating IUU fishing.
- d. Participate in negotiating on catch qouta.
- e. Participate in providing fishery observer personnel on board.

There are number of RFMOs which their fisheries management area are closed to and bordered with Indonesia. Firstly, Indian Ocean Tuna Commission (IOTC). The aim is to support and to coperate among states members to ensure protection and optimalization of highly migratory species according to The Agreement for the Establishment of the Indian Ocean Tuna Commission (IOTC Convention). Indonesia become a full member of IOTC in 2007. The convention area is in no 51 and 57. (Figure 9).

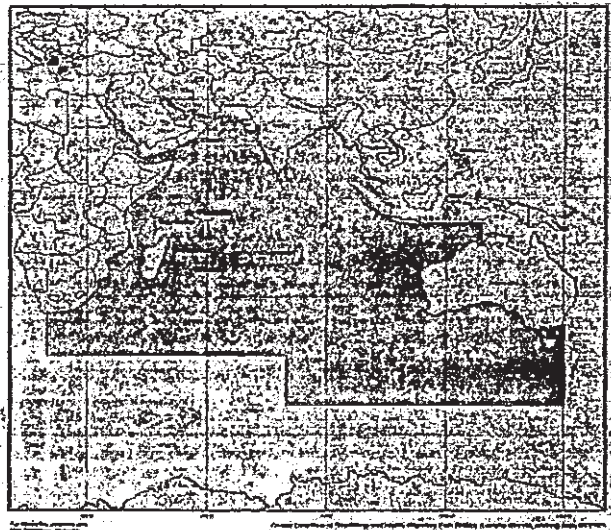


Figure 9. Convention Area of IOTC

There some duties for member states to be fulfilled. This is as follows:

- a. Participate in maintain sustainable tuna fisheries and conservation under IOTC's regulations and the resolutions in the convention area.
- b. Participate in deciding and voting on catch quota.
- c. Participate in cooperating, data exchanges, data collection (the best

data scientific effidence), research, total allowable catch (TAC), monitoring, controlling and surveillance (MSC), law enforcement in combatting IUU fishing.

According to the annual meeting IOTC in the year of 2009-2010 all member countries decided to adopt observer program for the convention area of IOTC. This program to enhance data collection of fishing vessels and to make an assessment on fishery resources utility appropriately. This program observer program is valid for all fishing vessel operating in high seas and started since the beggining of July 2010

Second, Commission for the Conservation of Southern Bluefin Tuna (CCSBT). Indonesia is a full member of CCSBT in 2007. The establishment of CCSBT is based on some reasons and facts as follows:

- a. declining stocks of southern bluefin tuna (SBT) since the beginning of 1960's untill 90 percent.
- b. to ensure, protect and optimalization of this species at Pasific Ocean as the convention area.
- c. decreasing in stock of SBT and the ristriction of reducing the catch in the middle 1980's.

The establishment of CCSBT is under Convention for the Conservation of the Southern Bluefin Tuna (CCSBT Convention) and based in Canberra. This convention is effectively valid since 20 May 1994. The convention area covers 30°S – 50°S and the spawning ground area is in Souther of Java island, Indonesia (Figure 10). At the previous annual meeting of CCSBT, 2011, at Bali, Indonesia, Indonesia received catch quota of 685 ton for 2012.

Meanwhile, the allocation of TAC among the members and non-members can be seen at Table 4. Previously, Indonesia received nominal catch quota 750 ton with catching allocation of 651 ton.

Third, Western and Central Pacific Fisheries Commission (WCPFC). The aim of WCPFC is to ensure protection and sustainable utility of highly migratory fish stocks trough effective fishery management.

According to the attachment one of UNCLOS 1982, highly migratory fish stocks include Albacore tuna, Bluefin tuna, Bigeye tuna, Skipjack tuna, Yelowfin tuna, Blackfin tuna, Little tuna, Southern bluefin tuna, Frigate mackerel, Pomfrets, Marlins, Sail-fisher, Swordfish,

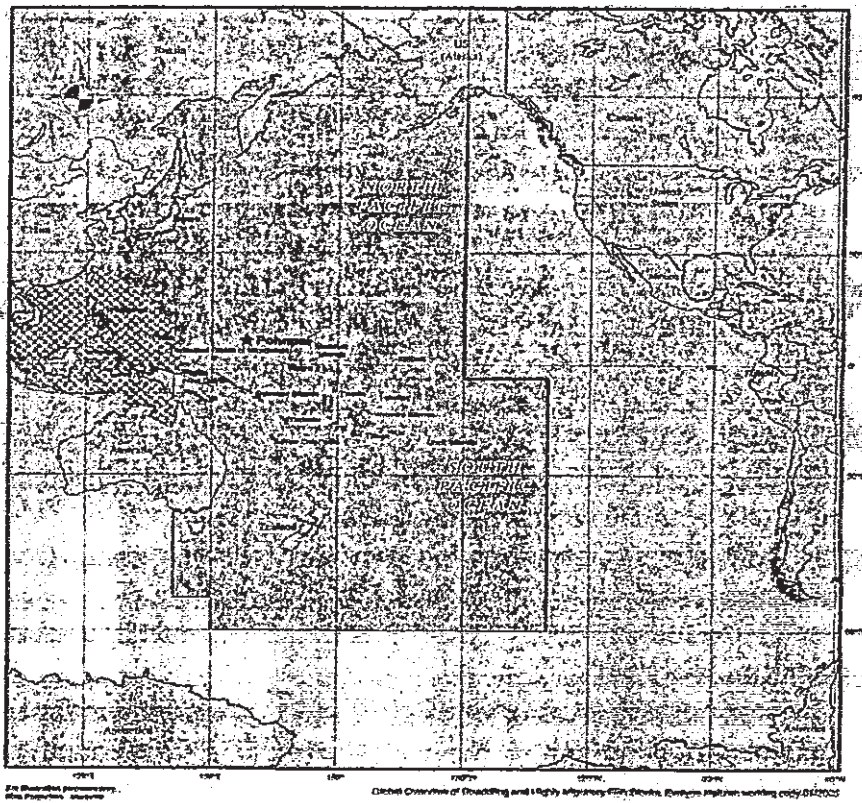


Figure 10. Convention Area of CCSBT

Table 4. Allocation TAC SBT Countries Member and Non-Member

No.	Countries	Nominal Catch	Catch Allocation	Effective Catch Limit
Member countries (for 2010-2011 in ton)				
1.	Japan	5,665	2,261	2,261
2.	Australia	5,665	4,270	4,015
3.	South Korea	1,140	859	859
4.	Taiwan	1,140	859	859
5.	New Zealand	1,000	754	709
6.	Indonesia	750	651	651
Non member countries (for 2010 in ton)				
1.	Philippines	45		
2.	South Africa	40		
3.	European Union	10		

Source: CCSBT (2010)

Sauries, Dolphin, Oceanic shark, Cetaceans.

The establishment of WCPFC is under Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC Convention). This convention is valid effectively since 19 June 2004 (Figure 11).

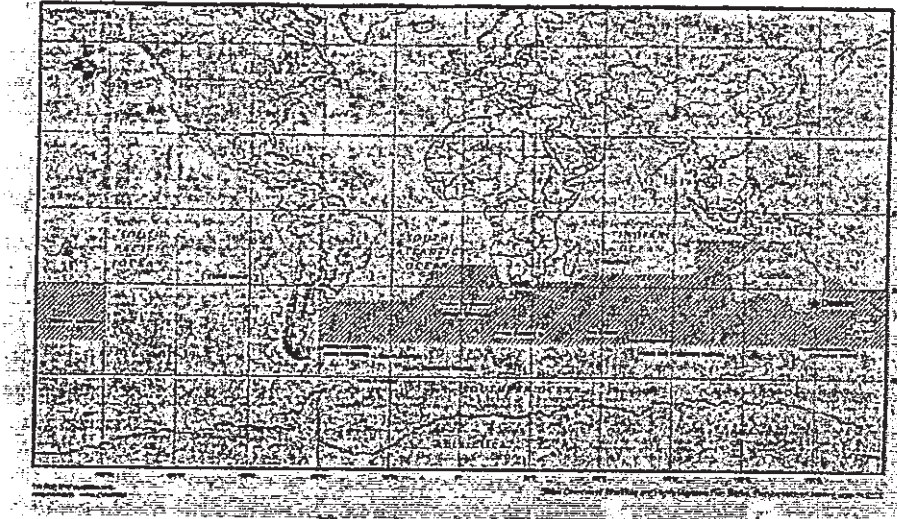


Figure 11. Convention area of WCPFC

Indonesia needs to comply with regulations, resolutions and the convention of RFMOs. This commitment is supported by President Regulation Number 9 /2007 concerning ratification of Agreement for the Establishment of the Indian Ocean Tuna Commission dated 5th March 2007, and President Regulation Number 109/ 2007 concerning ratification of Convention for the Conservation of Southern Bluefin Tuna dated 6th December 2007. However, Indonesia is still cooperating non member in WCPFC.

The national interest of joining member of IOTC and CCSBT, is not only to achieve sustainable fisheries development at regional or international, but also to ensure market access for tuna international trading. Indonesia is one of tuna exporter to international market especially to Japan, European Union and United States of America. According to the year of 2005-2009, the increased volume tuna export reached 3,14 percent and the increased value reached 9,18 percent.

Table 5. Tuna Export 2005-2009

Year	Volume (ton)	Value (US\$ 1.000)
2005	91.631	246.303
2006	91.822	250.567
2007	121.316	304.348
2008	130.056	347.189
2009	95.000	354.000
Average increased	3,14%	9,18%

Source: DKP (2010)

Meanwhile, in line with high demand in tuna market, global tuna trade is facing the facts that there is a declining in tuna stocks in the market worldwide. This is an indication that international tuna catching activities has been decreasing in productivity. This condition is an opportunity to fulfill the gap between demand and supply at tuna global market. In order to enhance the position of Indonesia, there many international non trade barrier issues such as high custom tariff, quota system and etc.

Therefore, all stakeholders are expected to be able to change the pattern of tuna fishing vessel operation with more efficiency in using fuel and the support of the government's intensive policy to continue to operate tuna fishing vessel in the EEZ and high seas.

The Government also is expected to design intensive policy to enhance efficiency in fishery tuna catching especially long line with variety information, accurate and valid.

This formulation policy also directly come from the business, professional association, academician, observer and other stakeholders. The accurate formulation policy can provide a respond between fisheries management at national and regional level. It is expected to have a better business condition in order to enhance tuna productivity.

V. ASEAN Tuna Working Group (ATWG) 2011

On May, 2011, Indonesia has been a hosted country to provide the first ASEAN Tuna Working Group meeting 2011-2014. There are five strategic thrust related with issues, action program, activities, work schedule and coordinator.

One of strategy thrust is a joint product promotion in international market. Indonesia and Philippines purposed few activities such as: (a) more and real action on implementation of the best practices of sustainable and "blue" tuna fishery industry; (b) sharing experience between the ASEAN countries on the implementation of the best practices of sustainable and "blue" tuna fishery industry; and (c) develop an ASEAN tuna database and information center.¹¹

Other strategy thrust is a development and acceleration of transfer and adoption of new technology Indonesia and Malaysia purposed action program such as transformation to sustainable tuna fishing practices this activities include raise awareness building on eco-friendly fishing gear identification and adoption of existing eco-friendly fishing gear, fishing gear adjustment (e.g. reducing by catch) and adopting to the Regional Fisheries Management Organizations (RFMOs) measures on fishing capacity, Indonesia purposed action program, reducing IUU fishing in the regions. This activities include joint effort in combating IUU fishing practices.¹²

ASEAN Ministers have agreed to adopt resolution and plan of action on the ASEAN SEAFDEC Conference on Sustainable Fisheries for Food Security Toward 2020. Fish for the people 2020, adoption to a changing environment. This agreement is dated on 17 June 2011 in Bangkok.

1. Issues

There are some issues of concern on the sustainable and responsible tuna fishing in the region of ASEAN. Firstly, continued increase of fishing pressure. As the economic value of tuna product (market demand and price) increases therefore, the more fishing tuna fleet will be operated in many countries in the world. Increased numbers of the fishing fleets and continued development of fishing gear and processing technology fishing will contribute to the increase of tuna catch. This global increase of fishing capacity and its efficiency has resulted in a higher fishing pressure for tuna resources. This will lead to overfishing problem for some tuna species in many different parts of the ocean. Secondly, many illegal, unreported and unregulated vessels (IUU fishing) can weakenin efforts

¹¹ ASEAN Tuna Working Group Meeting, 2011.

¹² Ibid.

in management of fisheries resources, unsustainable and irresponsible fishing, difficult in managing stock and conservation assessment also destruction in environment. All member states of the Regional Fishery Management Organization (IOTC, CCSBT, WCPFC) have to be assure that management of tuna resources in their respective EEZs are also comply with the regulation and resolution of the RFMO. IUU fishing has been an important issue in monitoring fisheries management in the world including in the ASEAN region. Indonesia with member ASEAN also others neighboring countries (Australia, Papua New Guinea and Timor Leste) developed regional plan of action (RPOA) to prevent, to combat and to eliminate IUU fishing activities. The implementation of RPOA relies on the commitment of the individual countries.

2. Potential Cooperation

Almost all of ASEAN member countries are exporting tuna products to international market (Japan, USA, European Union), therefore there is a common interest to build cooperation among members. This common interest give as common ground also common benefit for cooperation in the promotion of tuna products in global market.

Geographically Indonesia is coastal states and used to be the biggest exporter tuna in ASEAN. Some ASEAN member countries also imported tuna product from other countries therefore, Indonesia could offer cooperation with other members in strengthening fisheries management to assure sustainable tuna resources in the region.

VI. Closing

Tuna production trends is decreasing worldwide, therefore there is an urgent need to implement fisheries sustainable management practice especially for tuna species. Indonesian government issued many regulations and policy in relating to the high seas fisheries management base on agreement, resolution and convention from regional and international organization. This is also according to the mandate from fisheries law no.31/2004 and it has been changed into law number 45/2009.

All stakeholders in fisheries sector need to be involved in strengthening the society and the capacity building in fishery management and strong leadership with the support of some competence expertise.

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