

## Oceans Governance: Implementation of the Precautionary Approach To Anticipate In Fisheries Crisis

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### Abstract

*Two concepts coexist under the precautionary approach. The first one, based on the strengthening of the concept of environmental protection, aims to promote a prevention proportional to the potential risks. The second one looks for the eradication of risks and it may even require the "proof demand" of innocuousness. Implementation of the precautionary approach in the fishing sector became established as a reaction in general situation of world fish stocks to guarantee the sustainability of the exploitations. This paper tries to stress the implementation of the precautionary approach in Australia's practice to application in Indonesia's legal framework of fisheries. The Concept of precautionary approach must analysis with compatibility approach before implementation in national level. Oceans governance of the fisheries management and conservation. The result of research formally found that Indonesia has no formal adoption of the precautionary approach. This research recommend to incorporates the precautionary approach to the legal framework of national fisheries policy in Indonesia.*

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*Keywords:* Precautionary approach, concept of precautionary, oceans governance

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### 1. Introduction

In the last two decades, there has been a significant increase of fishing activity affecting the stocks of fish resources in the world. FAO (Food and Agriculture Organizations) reported that in 2013, the total production of fisheries was drastically increased from 19,3 million tons to 100 million tons. This causes the decrease of fish stocks emerging the crisis in the world's fisheries [1]. According the FAO's information that 53% of the world's fisheries resources have been fully exploited and 32% overexploited. *Overexploited*, the fishery is being exploited at above a level which is believed to be sustainable in the long term, with no potential room for further expansion and a higher risk of stock

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collapse. There were causes of Fisheries Crisis in the world.

According to the Report of 16 th Commission for the Conservation of Southern Bluefin Tuna (CCSBT) meeting In Jeju Island, South Korea (23-26 October 2009). The 25% cut in the Australian quota for Southern Bluefin Tuna has been described by the Wilderness Society as a step in the right direction, but the cut is too little too late with the fish species tittering close to the edge of extinction [2]. The Quota reduction was made in an agreement at the *Commission for the Conservation of Southern Bluefin Tuna* meeting in South Korea in October 2009. TRAFFIC's Global Marine Programme believe that the Southern Bluefin Tuna populations would not recover for many years, even under the best scenario. The members of Commission for Conservation of Southern Bluefin Tuna agree it is a crisis with breeding stock being somewhere between three and eight per cent of its original level. So that a 20 per cent cut is a step towards resolving the terribly low level of Southern Bluefin Tuna Stock, with the scientific assessment of the scenario saying there could be recovery, but only after many years.

The fisheries management and conservation stems fundamentally from the fact that fish resources are common property. It is well known, both from theory and experience, that common property resources will be overexploited and possibly irreversibly depleted unless subjected to appropriate fisheries management and conservation. Due to the pervasive external effects involved in the fishing activity, fisheries management and conservation are clearly beyond the reach of any single agent. Fisheries management and conservation requires of the integrated action at the industry level and governance .

## 2. Materials and Method

### 2.1. Conceptual Approach

The research was legal research by document and regulation analysis. Legal research are the finding assembling of authorities that bear on question of law; and the field of study concerned with the effective marshalling of authorities that bear on a question of law [3]. Various versions of precautionary approach exist in international instrument, as follow: One of the primary foundations of the precautionary approach and globally accepted definition from World Charter for Nature 1982, stated [4]:

“Activities which might have an impact on nature shall be controlled and the best available technologies that minimize significant risk to nature or other adverse effects shall be used; In particular: (a) Activities which are likely to cause irreversible damage to nature shall be avoided; (b) Activities which are likely to poses a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed; (c) Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects; d) Agriculture, grazing, forestry and fisheries practices shall be adapted to the natural characteristics and constraints of given areas; (e) Areas degraded by human activities shall be rehabilitated for purposes in accord with their natural potential and compatible with the well-being of affected populations.”

Underlying concept of general framework of the precautionary approachas reflected in the Rio Declaration of 1992, which provides that [5]:

*“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation“.*

There is no uniform understanding of the precautionary approach among states and other members of the international community.

The precautionary approach, however, requires to anticipate action at an earlier step. It provides a tool for dealing with situations where there is potential damage, but scientific uncertainty, they shall not postponing totake management measures.

In the fisheries management field a broad array of precautionary approach are available in various international legal instruments. For example, the 1995 Agreement on Fish Stocks adopts the precautionary approach in article 6, paragraph 2:

“States shall be more cautious when information is uncertain, unreliable or inadequate and that the absence of adequate scientific information shall not be used as a reason for postponing to take conservation and management measures”.

The application of the precautionary approach is one of the general principles of the Agreement; see also annex II to the Agreement, "Guidelines for the application of precautionary reference points in conservation and management of straddling fish stocks and highly migratory fish stocks" [6].

If we look at the main objective of the precautionary approach is to prevent the resources degradation in protect environment resources, as well as to recuperate the impoverished resources, so that they could be available for use by both present generations and future ones. Nevertheless, we have to apply the precautionary approach not only to the resource itself, but we also have to take into consideration the legal consequences of the measures to be applied, since a modern fisheries management and conservation are based on the idea that any national action plan must take into implementation in national levels.

**2.2. Components of precautionary approach in fisheries**

The Precautionary approach in fisheries management and conservation may combine a variety approach as follows: Adopting the sustainable development principle, adopting the approach of precautionary management, using the best scientific evidence available, agreeing on acceptable levels of impacts, improving management response time, and strengthening monitoring, control and surveillance [7].

Governments must implement Surveillance and controlling activity, intended to ensure standard implementation of input and output control in order to manage fishing activity. They have a duty to evaluate fishing vessels and fishing gears (detail design, fishing vessel suitability, fishing gears suitability, fishing vessels registration, crew of fishing vessel, monitoring and calculate fishing vessel productivity, evaluate fishing port development (redesign fishing port development, fishing port development requirement, fishing port operational standard, controlling fishing port development)

**2.3. The obligation to cooperate in conserving the fisheries resources**

However, before the agreement of UNIA 1995 about the obligation to cooperate in conserving the fish resources, it had been responded by several countries such as Japan, New Zealand, and Australia. Those countries sign an agreement about the conservation of bluefin tuna in Canberra, 10 May 1993 through the Convention for the Conservation of Southern Bluefin Tuna (CCSBT) and issue the agreement in 20 Mei 1994. The purpose of this convention is to ensure the appropriate management through the optimum conservation and exploration of southern bluefin tuna and the formation of Southern Bluefin Tuna Commission. CCSBT Convention provides the precautionary fishing methods. This includes above all the establishment of a Total Allowable Catch (TAC) and adoption a Management Procedure. This is to consider ecological as well as socio-economical circumstances.

Table.1. Total allowable Catch of Member States of CCSBT

Source: <http://www.ccsbt.org>.

No.	Member States	2012	2013	2014
1	Japan	2,519	2,707	3,366
2	Australia	4,528	4,713	5,147
3	Republic of Korea	911	948	1,036
4	Fishing Entity of Taiwan	911	948	1,036
5	New Zealand	800	833	909
6	Indonesia	685	709	750

Here is also Indian Ocean Tuna Commission (IOTC) [8] established based on Article 15, FAO’s constitution and framework, and the Agreement for the Establishment of the Indian Ocean Tuna Commission in Rome, Italy, 25 November 1993. The agreement is base on United Nations Convention on the Law of the Sea in 1982 (UNCLOS 1982) articles 56, 64, and 116 until 119. With the consideration stated above, it is very important for the costal state and fishing state in the high seas to form a regulation to manage the fish resources of Highly Migratory Fish including

Indonesia as one of countries that ratifies UNCLOS 1982.

### 3. Result and Discussion

#### 3.1. International Fisheries Governance

During this time has shown that the uncontrolled exploitation of marine resources results in the depletion of fish stocks and is neither environmentally or economically sustainable. Many States have recognized the need to take action on a global basis to limit exploitation of the world's oceans. The developments in the international law of the sea, and particularly the emergence of the UNCLOS 1982 and other associated agreements, have provided an essential framework for establishing a more adequate system of ocean governance. UNCLOS 1982, which entered into force on 16 November 1994, sets out a comprehensive regime for the governance of the oceans, covering all aspects of ocean space from delimitation to environmental control, scientific research, fishing and other economic and commercial activities, technology and the settlement of disputes relating to ocean matters. The establishment of Exclusive Economic Zones (EEZ), (UNCLOS 1982, Article 55-75), was the most significant innovation in relation to the governance of marine fisheries resources during the second half of the twentieth century. By the time that the UNCLOS 1982 was agreed in 1982, more than 80 coastal states had declared EEZ, mostly of 200nm (370.4 km , 1 nm : 1.852 km). Within this zone the coastal state enjoys "sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living" (Article56).

The coastal state has the right to set a total allowable catch on the basis of the best scientific evidence available to it (Art.61). This established a legal right for coastal states to manage fisheries off their coasts and establishes a framework within which coastal state can effectively limit access to their fisheries. UNCLOS 1982 also touched upon the issue of fish resources which extend beyond the limits of an EEZ into a neighboring EEZ ('shared stocks') and resources which extend into, or migrate through, the high seas ('straddling fish stocks' such as tuna and swordfish), (UNCLOS 1982, Article.63-64). In both cases, States were called upon to cooperate either directly or through appropriate regional organizations to ensure the conservation and sustainable utilisation of the stocks in question. In the case of straddling and highly-migratory stocks, the international community agreed further measures to implement the provisions of UNCLOS 1982 in the form of the 1995 UN Fish Stocks Agreement. The 1995 UN Fish Stocks Agreement places Regional Fisheries Management Organizations (RFMOs) in a pivotal and central position in terms of its implementation; they provide the primary mechanism through which States should cooperate to achieve enhanced resources conservation and management. The FAO publishes the map of RFMOs, one as follow:

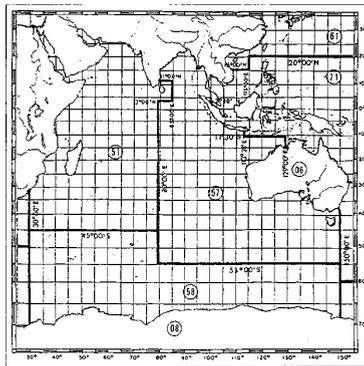


Figure 1. *Map of world fishing statistical areas monitored by FAO.*  
Available at <http://www.fao.org/docrep/fao/007/y5852e/Y5852E23.pdf>.

Article 118 UNCLOS 1982 stated that States shall cooperate with each other in conservation and management of living resources in the areas of the high seas. States whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned. They shall as appropriate, cooperate to establish subregional or regional

fisheries organizations to this end. For that reason so the member of RFMOs has a policy to implementation the precautionary approaches for sustainability of fisheries.

### 3.2. Implementation of the Precautionary Approach in Australia

Australia Provides for the precautionary approach in the Australian *Fisheries Management Act 1991 Section 3, paragraph 1 (b)*, Act No. 162 of 1991 as amended 22 July 2008, an explicit reference to the precautionary approach, states that *The Australian Fisheries Management Authority* must pursue the objective of: “Ensuring that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development and the exercise of the precautionary approach, in particular the need to have regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment”.

Precautionary approach in fisheries have been developed primarily for retained species but there is an increasing emphasis on the broader ecosystem issues, such as by-catch, habitat destruction and general conservation benefits. There are also arguments for an even broader application of the precautionary approach so that it encompasses social and economic impacts of fisheries-management decisions. In addition, the Fisheries Legislation Amendment Act 1997 No. 120 of 1997 introduced the precautionary approach into section 6, paragraph b, of the Fisheries Administration Act 1991, Act No. 161 of 1991 as amended 2 July 2008 Act no. 36 of 2008. In respect to the meaning of the precautionary approach, the latter act refers to the National Environment Protection Council Act No. 126 of 129 of 1994 Section 3.4 (iii), which basically reiterates the language of Approach 15 of the Rio Declaration. However, in a subparagraph, the National Environment protection Council Act 1994 sets out that public and private decisions should be guided by applying the precautionary approach. Furthermore, as regards driftnet fishing, the Fisheries Management Act 1991 provides for general prohibition for a body of a corporation “that is incorporated in Australia or carries on activities mainly in Australia”[9]. In Australia, Fishery observer is Australian Fisheries Management Authority, AFMA is the statutory authority responsible for the efficient management of Commonwealth fishery resources on behalf of the Australian community. AFMA manages fisheries within the 200 nautical mile Australian Fishing Zone (AFZ) and on the high seas AFMA consults extensively with stakeholders. In a regulatory environment, they employ a partnership approach which includes establishing and operating Management Advisory Committees (MACs) for each major Commonwealth fishery.

The Precautionary approach to keep review the conditions and trends of the stocks and to gather, analyze 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. To encourage recommend and coordinate research and development activities with respect to the stocks and fisheries. To adopt on the basis of scientific evidence, conservation and management measures to ensure the conservation and management measures to ensure the conservation of the stocks. To keep under review the economic and social aspects of the fisheries based on the stocks. [10]

Table.2. Provisions of the Fisheries Management Act 1991 (Cth)

No	Article	Analysis
1	Art. 8	<i>(Application of Act to areas outside the AFZ);</i>
2	Art. 16 A	<i>(AFMA to meet obligation under Fish Stocks Agreement</i>
3	Art. 16 B	<i>(Australian-flagged boats that have previously undermined conservation and management measures);</i>
4	Art. 32	<i>(Grant of fishing permits);</i>
5	Art. 57A	<i>(The High Seas Register);</i>
6	Art. 57 B	<i>(Information to be included in the High Seas Register),</i>
7	Art. 57C	<i>(Notification obligation),</i>
8	Art. 57 D	<i>(Inspection of the High Seas Register</i>
10	Art. 105	<i>(Offences in pieces beyond the AFZ),</i>

AFMA has routinely based management decisions, at least in part, on the precautionary approach. AFMA has stated that it applied precaution when it makes decisions about the use of fisheries resources where gaps remain in data and

information upon which to base sound fisheries management. It has stated further that in practice, that acts on the best available information takes steps to protect those fisheries resources and their supporting without waiting for scientific certainty [11].

### 3.3. Implementation of the Precautionary Approach in Indonesia

Indonesia is an Archipelagic state that has abundant natural resources and thousands of islands linked by million kilometers of aquatic area. Therefore, the country whose population is more than 210 millions people has enormous potency in maritime field. However, because of the lack of the marine and coastal management system, the exploitation toward the natural wealth has not contributed significant results for the country's revenue. Indonesia has 17.499 islands, which the length of island coastlines is more than 81.000 km and the width of the ocean is about 5,8 millions km or approximately 70% of the total area of Indonesia (DKP, 2008). Thus, the marine potency in Indonesia is definitely considerable, for instance the large amount of biological diversity of both fish capture, marine tourism, marine industries, sea transportation, sea mining, sea constructions, and sea services. One the other hand, based on the characteristics of the complexity of sea territory and marine resources, inherent conflicts upon them have occurred as long as human civilization (Johanes P. Tamtomo, 2004). The sea law stated above requires the states to well corporate directly or through the international organization in order to sustain the conservation and the increase the optimum exploration. Therefore, Indonesia regulates some regulations considering the agreement above as follows: a) *President Regulation* RI 2009 No. 9 about the sign of Agreement for the Establishment of the Indian Ocean Tuna Commission in 5 March 2007 and Indonesia becomes its permanent member in 9 July 2007. *President Regulation* RI 2007 No. 109 about the sign of Convention for the Conservation of Southern Bluefin Tuna in 6 December 2007 and Indonesia becomes its permanent member in 8 April 2008. b) *Act No 21/2009* about the ratification of Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 (UNCLOS 1982) related to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks in 18 June 2009 (LNRI 2009 No. 95 and TLNRI No. 5024).

By authorizing those regulations, it means that Indonesia adopts those regulations as the national law, which is further described in applying national act. . The fishing activities in Indonesia are mostly conducted in a big ship to fish longline tuna in the high seas. Based on the data from Indonesian *Tuna Association* (Astuin), the Indonesian long-line tuna vessel has operated to fish the tuna around Cocos Island in the southern of Christmas Island until Mauritius Archipelago and Seychelles State [12]. Those ships harbor in Benoa Bali and Muara Baru Jakarta. They can stay in the seas for several months to fish the tuna. In 2006, they were informed not to catch the fish around the Pacific Ocean because Indonesia has not been the member of Regional Fisheries Management Organization (RFMO). Therefore, they have to leave those regions of they are accused for performing illegal fishing. From the information above, it requires (1) certain regulation about the conservation of fish resources of highly migratory fish separated from articles 56, 64, and 116 until 119 of UNCLOS 1982, so that the Indonesian fishermen of long-line tuna in ZEE and high seas can be protected, (2) the description of Regional Fisheries Organization's regulation which is applied by Indonesia to achieve compatibility of conservation and management measures with the implementation of United Nations of Implementing Agreement 1995. Those requirements are aimed to protect the highly migratory fish stocks from overfishing and prevent its extinction. In Act No.31/ 2004 as amended Act No 45/2009 about fisheries it states:

“the management of fisheries outside Indonesia implemented based on the practices of act and the generally accepted international requirement and standard, for the sake of the international corporation, government might publish a gradually the information related to the steps of the conservation and management of fish resources. Government actively participates in the membership of regional and international organizations in cooperating the management of regional and international fisheries”.

However, the regulations of fish resources in Indonesia stated in government regulation Nu. 60 / 2007 have regulated the conservation of highly migratory fish. Therefore, it causes the vacuum of law in regulating the management and conservation of fish resources of highly migratory fish. In 2009, fishing in the high seas has been regulated in Ministry Degree of Marine Affairs and Fisheries No.PER.03/MEN/2009. Fisheries Act 31/2004 as amended act No 45 / 2009 and implanting in Decree of Minister Marine Affairs and Fisheries 13/MEN/2004 regarding Fishermen Controlling Guidance for Fish Resources Management.

#### 4. Conclusion

One of the major development in marine fisheries management is the the increasing importance of regional fisheries management organizations. This research formally found that Australia have implemented the precautionary approach incorporate into legal framework and national policy. And, Indonesia has no formal adoption of the precautionary approach. This research recommends to incorporate the precautionary approach to the legal framework. Indonesia marine policy should be developed to management and conservation of fisheries to anticipate in fisheries crisis.

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