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Thesis for the Degree of Master of Fisheries Science

**Legal Aspect for EEZ Fishery Management
in Tanzania**

by

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KOICA-PKNU International Graduate Program of Fisheries Science

The Graduate School

Pukyong National University



February 2012

Legal Aspect for EEZ Fishery Management
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탄자니아의 EEZ 어업관리에 관한 법적
체 제

Advisor: Prof. Choi Jong Hwa

by

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February 24, 2012

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Abbreviations

CITES	Convention on International Trade on Endangered Species.
DG	Director General.
DSFA	Deep Sea Fishing Authority.
DWFN	Distant Water Fishing Nations.
EC	Executive Committee.
EEZ	Exclusive Economic Zone.
EFZ	Excusive Fishing Zone.
FAO	Food and Agriculture Organisation.
UNFSA	United Nation Fish Straddling Stock Agreement.
GDP	Gross Domestic Product.
HACCP	Hazard Analysis and Critical Control Point.
HP	Horse Power.
IOTC	Indian Ocean Tuna Commission.
IPOA IUU	International Plan of Action to prevent, deter and eliminate IUU fishing.
IUU	Illegal, Unreported and Unregulated.
KOICA	Korea International Cooperation Agency.

LOSC	Law of the Sea Convention.
MARPOL	International Convention for the Prevention Pollution from Ship.
MCS	Monitoring, Control and Surveillance.
MLDF	Ministry of Livestock Development and Fisheries.
MSY	Maximum Sustainable Yield.
OA	Open Access.
RFMO	Regional Fisheries Management Organization.
SADC	Southern African Development Community.
SIOFA	South Indian Ocean Fisheries Agreement.
STCW	Standards of Training, Certification and Watch keeping, Convention.
SWIOFP	South West Indian Ocean Fisheries Project.
TAC	Total Allowable Catch.
TPDF	Tanzania People's Defence Force.
TRA	Tanzania Revenue Authority.
UNCLOS	United Nation Convention on the Law of the Sea.
VMS	Vessel Monitoring System.
WWF	World Wildlife Fund.

Legal Aspect for EEZ fishery Management in Tanzania

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Abstract

The concept of EEZ was created by the ‘UN Convention on the Law of the Sea 1982’; it allows nations to claim a geographical area of the sea and also places a number of obligations to the host nation with the aim of preserving and controlling the EEZ for the benefit of all nations.

The EEZ is a zone extending up to 200 nautical miles from the baseline of the coastal state, in which she has extensive rights to enjoy the natural resources, while other countries have the jurisdictional rights for navigation, over-flight by aircraft and laying of cables and pipelines.

The EEZ's are extremely significant politically, economically, environmentally, socially, technically and legally, 36% of the world oceans are someone's EEZ and 97% of the World trade travels by sea passes through the EEZ.

Before the introduction of industrial fishing technology we could rather say that fish is an inexhaustible resource, but due to the installation of sophisticated electronic equipment in commercial fishing vessels, fishing has led to over exploitation in the EEZ and even on the high sea. On supervision control of EEZ the coastal States have to establish strong regional fisheries management organizations (RFMOs) to cooperate in managing the fishing zones.

This study examines the UNCLOS 1982, and provides the legal fishery framework for Tanzania's EEZ fishery management in relation to the international fisheries law. The majority of fishing fleets engaged in EEZ fishing are from Europe and Asia. Efficient management on EEZ is very important in economic development of Tanzania.

There are so many challenges facing the monitoring and control of EEZ in Tanzania, including financial problems, lack of personnel capacity building, management problems, tragedy of the commons etc, and therefore this paper is going to provide some way out to those challenges.

It should be taken in mind that the EEZ provides a very large potential resource for the coastal State. In order to benefit from this the Government must develop the necessary indigenous expertise and seek cooperation at regional level to ensure adequate surveillance, observation and exchange of information. If well managed under regional cooperation and solidarity, the EEZ can provide several opportunities to achieve sustainable economic development in less developed countries.

The proposal fishery framework provided by this study is a joint venture modal of function under two Ministries responsible for fisheries from Tanzania Mainland and Zanzibar, the General Director (GD) is an executive officer of DSFA assisted by four Assistance Directors (AD's) of; Administration Department, MCS Department, Quality Control Department and Maritime Law Department. This is an independent authority responsible to the Ministers.

1. INTRODUCTION

This study is going to examine the international fisheries law, as Tanzania one of the country which posses exclusive economic zone (hereinafter in this thesis, it is called EEZ) then can not be isolated with the laws and therefore the case study is on how Tanzania absorb the international fisheries aspects.



Figure 1. World map, showing the area of Exclusive Economic Zones.

1.1 INTERNATIONAL FISHERIES LEGAL BACKGROUND

After the World War II, there has been increased in fish catch and this was mainly due to two factors; technical improvements, such as the development of sophisticated electronic fish finding equipment, large vessels with huge storage devices including large and stronger net, and secondly greater investment in the fisheries industries of developing countries.

But, recently, the rate of increase in the world catch has been slowly going down mainly because most commercially exploitable fish stocks are now over-exploited.

The international law of the sea has a very long story but starting from 1958 where the UNCLOS I established the following concerning with fishing;

- a. Convention on the Territorial Sea and Contiguous Zone.
- b. Convention on Continental Shelf.
- c. Convention on the High Sea.
- d. Convention on the Fishing and Conservation of Living Resources of the High Sea.

In 1977 the 30 major coastal states proclaimed 200 nautical miles EFZ or EEZ, this leads to the 1982 UNCLOS to be established and adopted, the Convention concentrate on;

- a. Establishment of 12 nautical miles territorial sea and the transit passage regime.
- b. Establishment of 200 nautical miles EEZ and archipelagic regime.
- c. Limit of continental shelf changed from water depth to 200 nautical miles distance.
- d. Marine environment protection regime and scientific research regime were established etc.

Generally, due to the geographical and biological reasons there will always remain substantial differences between the fish catches for states, since the offshore zones of states, such as EFZs and EEZs are of varying sizes and fish are normally found in the greatest abundance in the areas where there is most zooplankton, hence many species feed, directly or indirectly, these areas are the sub-tropical western coasts of America and Africa, along the equator, temperate and sub-Arctic waters and also in shallow continental shelf waters.

One of the most important characteristics of fish is their migratory nature, this has essential implications as far as jurisdictional boundaries in the sea are concerned, the basic concept of international law of fisheries should be clearly understood, fish is a common property natural resource, that is free

swimming fish in the sea are not owned by anyone, property right only arise when the fish are caught and put into the possession of a fisherman.

From the common property nature of the marine fish, therefore it follows that anyone can enter into a particular fishery. It obviously then as more fishermen enter the fishery more and more fish will be caught, and if the quantity of fish caught, together with fish lost through natural mortality exceeds the amount of fish being added to the stock through reproduction the size of stock will start to decrease, if care is not taken the fish stock may even collapse, as what has happened with the Antarctica whales and the California sardines. This phenomenon is known as over-fishing. Moreover, in the absence of any regulation, an individual fisherman has no incentive to restrain his activities in order to prevent over-fishing because there is no guarantee that other fishermen will follow his example. Therefore, usually unregulated fishery will leads to over-fishing.

Another problem and consequence of the common property nature of the fish is to leads into economic inefficiency, normally fishery will begin with few entrants and each of whom will make a profit, other fishermen see this profits and will eventually attracted to the fishery. As the number of fishermen increase in that particular area, the size of catch will tends to

retard and hence the economic return per vessel will decrease and therefore over-capacity or over-capitalization occurred, so as Tanzanian EEZ is not significantly exploited then this study is going to reveal on how to deal with over-capacity/over capitalization.

1.2 OBJECTIVES OF THE STUDY

The main objective of this study is to examine and evaluate the international fisheries law, with respect to UNCLOS 1982, and hence provide a legal framework for management of shared EEZ of United Republic of Tanzania (Zanzibar and Tanzania Mainland).

This study is also expecting to provide a smooth way out toward the “overlapping claim of EEZs between Tanzania and Seychelles, Seychelles is an island State located in the Indian Ocean, she lies east side of Tanzania, the Ocean space between these two states is less than 400 nautical miles hence resulting into overlapping of EEZs between the two states.

The scope of this study not only intends to base on management of fishing activities in EEZ but also provide the insight view of other economic activities which can take place in the EEZ apart from deep sea fishing.

The other specific objectives aims on identifying problems mainly facing fisheries world widely and hence provide pre alert on fishing vampires such as over fishing, over capacity and lack of capacity to manage the resource, and also the failure of the State to make ratification on the related Conventions and hence slack implementation.

1.3 SIGNIFICANCE OF THE STUDY

The importance of living marine resources to the economy of Tanzania can not be under-rated. These resources make a significant contribution to the gross domestic product (GDP) of the State, foreign exchange earnings, provision of employment and most obvious use of fish is as food for human consumption, fish is an important source of animal protein and contain important vitamins and minerals.

The write up of this study will also provide economic analysis through loyalty of the sustainable use of EEZ marine resources in Tanzania with regard to the international fisheries regime.

This research is also expected to assists policy makers on EEZ aspect and hence decision making about the economic management on EEZ fisheries.

1.4 RESEARCH METHODOLOGY

The achievements of this study, were through visiting and collections of physical storage media in the libraries, and access them into my related field of study.

Various discussions with my Supervisor and other Professors in this study, also was one of the major methods used to make up this paper.

The study concentrated on comprehensive view of the legacy management of EEZ, the case study was Tanzania, due to some limitations to effect the data collection then thorough utilization of library prevailed.

1.5 SIGNIFICANCE OF EEZ

The extension of coastal State jurisdiction by means of 200 nautical miles EEZ from baseline, the area which had previously been narrow coastal State limits to encompass areas which had formerly been high seas provides the following essentials;

- a. The area contains the major proportion of ocean natural resource and is a site of most ocean activities;
- b. The area contains most commercial exploitable fish stock.

- c. The most world's marine natural resources (non-living), for instance submarine oil deposits, minerals (e.g. manganese nodules, copper) are carried in this area.
- d. The large proportion of marine scientific researches is carried in this area (EEZ).
- e. All the major shipping route of the world passes through this area (EEZ).
- f. The area represents a major change in the regulation of and access to ocean activities.



2. GENERAL THEORY ON EEZ FISHERY

2.1 GENESIS OF THE CONCEPT

The EEZ concept can be regarded as the direct result of the developments in the law of the sea concerning coastal state fisheries jurisdiction. The EEZ represents a new reality in the domain of the law of the sea. It is the most outstanding and revolutionary transformation of the law of the sea brought by the developing countries.

Since World War II, technological developments have brought a new kind of relationship between the coastal states and its adjacent sea areas, before World War II, international ocean politics had intended to emphasise in the protection of security, navigation and trade, but there after it has been shifted its emphasis to the protection of the ocean wealth and economic interests of the ocean including fishing.

The first formulation of the doctrine of the EEZ found in the unilateral claims of the Latin American states in 1952 they signed so called ‘Santiago Declaration on the Maritime Zone’. The Pacific coastal states of Chile, Ecuador and Peru, they did not have continental shelves of any significance off their shores. They were anxious to control adjacent fisheries resources to

compensate for this natural handicap. The Declaration proclaimed that each of them, as a principle of its maritime policy, possess sole sovereignty and jurisdiction over the area of the adjacent to the coast of its own country and extending not less than 200 nautical miles from the coast.

On June, 1971, 13 Latin American states adopted 'Santo Domingo Declaration', the term 'patrimonial sea' which consists of renewable and non-renewable natural resources of the adjacent sea area, was used. It was declared that the whole area of both the territorial sea and the patrimonial sea should not exceed 200 nautical miles.

The term 'Exclusive Economic Zone' was introduced for the first time by Kenya in 1971 during the Asian-African Legal Consultative Committee in Sri Lanka.

The failure of the Conference I and II on the Law of the Sea to recognise the needs and interests of the developing coastal states on preferential rights on fisheries gave rise to unilateral claims during the 1960's. This was helped by greater investment in fisheries of developing countries and the emergence of new independent states in Africa and Asia withdrawn from colonial powers and had strong belief in their priority to utilize marine resources adjacent to their coasts and, also exercise of sovereignty over the resources. It could be

therefore very difficult to resist these new needs and interests from developing coastal states.

It was then necessary to develop new approach and philosophies towards the challenges, and the Conference III of the Law of the Sea recognised this by establishing the EEZ.

2.2 THE CONCEPT OF MANAGEMENT

The coastal states should establish efficient Regional Fisheries Management Organizations (RFMO), in Indian Ocean we have Indian Ocean Tuna Commission (IOTC), which manage highly migratory species mainly tuna, this commission was established in 1993 under the auspices of FAO, is open to both coastal states and states whose vessels fish for tuna in the Indian Ocean.

The objectives of this commission are to ensure the conservation and optimum utilization of tuna in the Indian Ocean and to encourage the sustainable development of the fishery. Also, to encourage and coordinate scientific research, adopt conservation and management measures, and keep under review economic and social aspects of the fisheries.

Another international body is South Indian Ocean Fisheries Agreement (SIOFA) which manages fish stock by geographical area.

These RFMO's are responsible for managing fish stock in the EEZ and on the high sea, and also fish stocks which migrate through their jurisdiction waters.

RFMO's also have a duty to conserve all species associated or affected by their fisheries, including seabirds, turtles, dolphins, sharks and non-target fish. These responsibilities should be with accordance to the international agreement governing the oceans, such as FAO's Code of Conduct for Responsible Fisheries, and the UN Fish Stock Agreement, both of which were established in 1995.

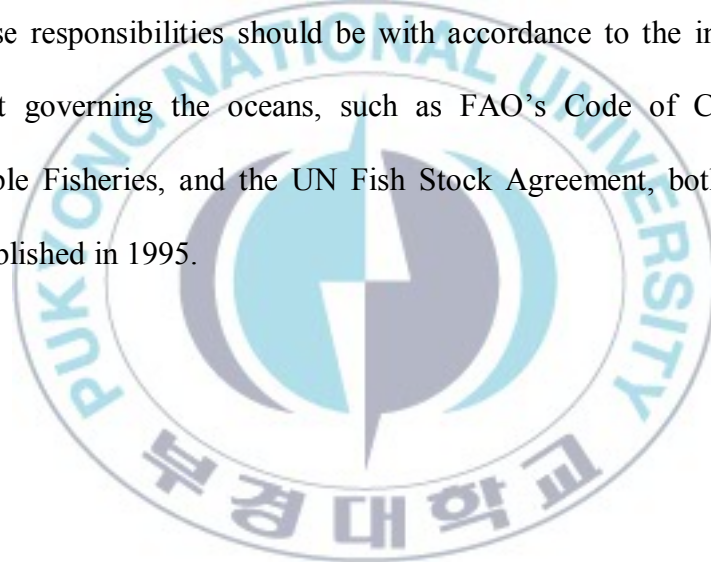




Figure 2. Regional Fisheries Management Organizations (RFMO's) in the World.

2.3 LEGAL ASPECTS OF EEZ

The United Republic of Tanzania has signed the 1982 UN Convention on the Law of the Sea (UNCLOS of 1982) on 30th September, 1985. The Part V of the Convention is dedicated to EEZ, which provides thorough explanation for the purpose of exploiting and exploring, conserving and managing the marine natural resources. The fisheries law and regulation in Tanzania are in such a way that does not contradict with respect to the 1982

UNCLOS. Also, the United Republic of Tanzania is contracting party to the 1993 UN FAO Compliance Agreement.

The duties of coastal States are formulated in very wide and general terms, and the coastal state is given a broad discretion by the UNCLOS 1982, particularly in setting the allowable catch. The coastal state could legitimately set any size of TAC as long as it did not leads to over exploitation which endangered fish stocks.

2.3.1 Sovereign right of coastal State

Article 56(1) within the EEZ the coastal state has ‘sovereign rights for the purpose of exploring and exploiting, conserving and managing’ the fish stock of the zone.

2.3.2 Access of other states to the EEZ, Article 62(2)

Article 62(2) of the Convention provides that where the fishermen of the coastal states are not capable of taking the whole of the allowable catch, then the coastal State is to permit the fishermen of other states to fish for the balance what its fishermen take and the allowable catch.

The coastal state is given a broader discretion in deciding which other state's fishermen are to be given access to the EEZ.

Article 62(3) provides that: "the coastal states shall take into account all relevant factors, including *inter alia*, the significance of the living resources of the area to the economy of the coastal state concerned and its other national interests, the provisions of the Articles 69 and 70, the requirements of developing states in the sub region or region in harvesting part of the surplus and the need to minimize economic dislocation in state whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks."

Article 69 and 70 stated above deals with landlocked and geographically disadvantaged states given access to engage into fishing.

2.3.3 Power to put regulations on legislation, Article 62(4)

Where the fishermen of other states are given access to its EEZ, the coastal state can prescribe conditions to govern such fishing, that is according to article 62(4) of the Convention, which provides that these conditions may, for example, require foreign fishermen to have fishing licenses, to land part or all of their catches in the coastal state, to train coastal state personnel, to

observe the coastal state's conservation measures, 10% of the seamen working onboard ship should be citizen of the coastal state, etc.

The prescribed regulations for foreign vessels fishing in EEZ of the coastal state should be in conformity with the Convention, and it may enforce them by measure including 'boarding, inspection, arrest and judicial proceedings' (Article 73(1)).

It should be taken in mind that hot pursuit is possible in the case of those vessels that attempt to evade enforcement measures.

2.4 IPOA-IUU fishing in Tanzania

In recent years, the EEZ's and adjacent high sea in South West Indian Ocean have been faced with increased illegal, unregulated and unreported (IUU) fishing in the various forms, including the falsification of vessels information by vessel owners, double flagged of vessels, unregistered and unlicensed fishing, and unreported fishing activities.

IUU fishing has become a problem that seriously affects the country's economy, moreover, IUU fishing has also resulted in diplomatic embarrassment.

2.4.1 What is IUU fishing?

The international plan of action to deter, eliminate and prevent illegal, unreported and unregulated fishing (IPOA-IUU) is a common vision and guiding principals of the declaration, which are translated in the plan of action into concrete action lines to advance the achievement of the implementation of measures to deter, eliminate and prevent IUU fishing.

The IPOA-IUU was developed as a voluntary instrument, within the framework of the Code of Conduct for Responsible Fisheries that apply to all states and entities and to all fishers. These measures focused on all state responsibilities, flag state responsibilities, coastal state measures, port state measures, international agreed market-related measures, research measures and RFMO's measures.

IUU fishing is not a new phenomenon, but the IUU fishing terminology is new;

a. Illegal fishing refers to fishing activities

i) Conducted by national or foreign vessels in waters under the jurisdiction of a state without the permission of that state, or in contravention of its laws and regulations.

- ii) Conducted by a vessels flying the flag of states that are parties to a relevant RFMO but operates in contravention of the conservation and management measures adopted by that organization or by which the states are bound or relevant provisions of the applicable international law, or.
- iii) In violation of national laws or international obligations, including those undertaken by cooperating states to a relevant RFMO.

b. Unreported fishing refers to fishing activities

- i) Which have not been reported or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or
- ii) Undertaken in the area of competence of a relevant RFMO which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

c. Unregulated fishing refers to fishing activities

- i) In the area of application of a relevant RFMO that is conducted by vessels without nationality, or by those flying the flag of a state not party to that organization, or by a fishing entity, in a manner that is not consistent with or

contravenes the conservation and management measures of that organization; or

ii) In the area or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with state responsibilities for the conservation of living marine resources under international law.

2.4.2 IPOA-IUU fishing implementation in Tanzania

The principal legal instruments on implementation of IPOA-IUU fishing are; UNCLOS 1982; The 1993 FAO Compliance Agreement; and the 1995 UNFSA.

The IPOA-IUU fishing is a non binding force of FAO which provides action plan to deter, prevent and eliminate illegal, unreported and unregulated fishing. Tanzania is party to UNCLOS 1982 and The 1993 FAO Compliance Agreement, but not the 1995 UNFSA.

Based on IPOA-IUU fishing endorsed by FAO Council on 23rd June, 2001, The United Republic of Tanzania has established what is known as National

Plan of Action to prevent, deter and eliminate Illegal, Unreported and Unregulated fishing (NPOA-IUU). This was the basic building block to combat IUU fishing in Tanzania. The NPOA-IUU applies within the EEZ of the United Republic of Tanzania, and to all fishers of all types, and any nationality. The FAO Code of Conduct for Responsible Fisheries applies to the interpretation and application of the NPOA-IUU and its relationship with other international agreement and legal instruments.

The DSFA manages the deep sea fishery in the EEZ of the United Republic of Tanzania is mainly concentrated with DWFN, the FAO Code of Conduct for Responsible Fisheries is being applicable as well as the IOTC resolutions.

In September, 2010 the DSFA submitted the names of three fishing vessels which conducted IUU fishing in the Tanzanian EEZ, as shown in the table below,

Table 1 list of IUU fishing vessels in Tanzanian EEZ in 2010

No	Name of vessel	Call sign	Type of vessel	Flag state	Position observed	Date
1	SHUEN YING NO.232	S 7 P R	LONG LINER	SEYCHELLES	Mnazi bay Marine Parks	21/07/2010
2	CHUNG YING NO.323	S 7 O P	LONG LINER	SEYCHELLES	Mnazi bay Marine Parks	21/07/201
3	YING TA HSIANG	BI-2482	LONG LINER	TAIWAN	09 14.16"S 039 45.7"E	28/07/2010

2.4.3 Objective of NPOA-IUU fishing

The objective of NPOA-IUU fishing is to deter, eliminate and prevent IUU fishing by providing a national framework and organization with comprehensive, effective and transparent measures by which to act, including appropriate regional and international instruments.

2.4.4 Participants and responsibilities

The NPOA-IUU fishing of the United Republic of Tanzania stipulates the responsibilities of each participants, which includes, *inter alia*, provisions for participants of a number of organizations and regional states including but not limited to;

1. Fisheries Division, Ministry of Livestock Development and Fisheries (MLDF).
2. Department of Fisheries, MANREC, Zanzibar.
3. Deep Sea Fishing Authority (DSFA).
4. Tanzania Revenue Authority (TRA).
5. Tanzania People's Defence Force (TPDF).
6. The Maritime Police.
7. Ministry of Foreign Affairs.
8. Southern Africa Development Community (SADC).
9. International Maritime Organization (IMO).
10. Indian Ocean Tuna Commission (IOTC).
11. Research and Environmental Institutions, and Donor programmes.
12. Food and Agriculture Organization (FAO) of the United Nations.
13. Kikosi Maalumu cha Kuzuia Magendo (KMKM) Zanzibar.

2.4.5 Control and review of NPOA-IUU fishing

Control of NPOA-IUU fishing for Tanzania is vested in the Director of Fisheries, in the Ministry of Livestock Development and Fisheries, *inter alia*, the Director is responsible for;

- Development and implementation of the NPOA-IUU fishing,
- Review and update the document of NPOA-IUU fishing.
- Dissemination, periodic updates and changes of the document.
- Monitoring FAO guidelines, and global trends in the policy and strategies of anti-IUU.

▪ coordinating all anti-IUU activities within the Tanzania marine waters liaising with other authorities or States as required achieve the aim.

The NPOA-IUU fishing is to be reviewed annually as a minimum.

Significant changes to FAO policy, Tanzanian matters are to be communicated to all concerned parties by the fastest means.

2.4.6 NPOA-IUU fishing enforcement

The United Republic of Tanzania as a state will use all available jurisdiction means in accordance with international law, including port state measures, coastal state measures, market-related measures, and such measures as are necessary to prevent IUU fishing by licensed or unlicensed foreign flag or Tanzanian fishers. The NPOA-IUU will not discriminate in form or fact against any state or its fishing vessels.

2.4.7 Flag state control

As a sovereign state, the United Republic of Tanzania will exercise its right under international and domestic law to regulate its own fishing vessels, such as controlling and licensing procedures for national flag vessels, safety of vessels and crews fishing in the Tanzanian EEZ, access to fisheries, gear types and size, VMS, environmental impact due to fishing activities, reporting procedures, etc.

The Government of Tanzania will hold accountable the flag states of non Tanzanian flagged vessels fishing either legally or illegally in the EEZ of the United Republic of Tanzania, in regard to licensing, safety of vessels and crews, marine pollution, gear types and size, engine HP, IUU-fishing, CITE'S, by-catch, VMS, etc. The Government will maintain a complete register of Tanzanian flagged fishing vessels in accordance with the FAO Compliance Agreement to promote compliance with international conservation and management measures by fishing vessels on the high sea.

2.4.8 Port and coastal state control

The United Republic of Tanzania as a sovereign state will exercise its right under international and domestic law to take measures to control all fishing

vessels fishing in its waters, with regard to; inspection of vessels, crews qualifications and their passport, insurance of vessel and crews, logbook, gear, VMS, communications, catch report, transshipment, entry and exit report, CITE'S, marine pollution, etc.

2.5 FISHING INSPECTION AND LICENSING (NPOA-IUU)

The Ministry of Livestock Development and Fisheries (MLDF) is responsible to conduct the inspection to the fishing vessels before providing the license.

2.5.1. Inspection

All fishing vessels regardless of flag state are required to visit a nominated Tanzanian inspection port (Dar es salaam or Zanzibar) for a pre license safety and environmental inspection on first arrival in Tanzania or at the start of fishing season each year.

The inspection will be carried out by a qualified ship surveyor and fisheries inspectors to ascertain the following; identity of the vessel and its crews including all relevant registration and seaworthiness documentation from flag state, vessel safety equipment with regard to IMO guidelines, condition

of storage, processing spaces, sanitation and general hygiene in accordance with HACCP regulations, communications (radios, GMDSS, etc), gear, insurance of vessel and crews, navigational aids, etc.

The cost of berthing and inspection will be paid by the fishing vessel. The cost of any remedial work or repairs identified during the inspection will be borne by the vessel's owner, if the vessel is not cleared to fish by the inspection team, any cost arising from a prolonged stay in the harbour will be borne by the vessel's owner.

The senior fisheries inspector will brief on the precise terms and conditions of the license, including location, time, species, gear, catch report, on board observer, etc. The skipper will have opportunity to clarify details before signing a statement that s/he has been fully briefed of access on the Tanzanian fishing. This statement can be used in subsequent investigations and prosecutions when appropriate.

2.5.2 Licensing

The NPOA-IUU fishing in Tanzania provides the following measures on the issue of licensing to fish in the Tanzanian EEZ;

a. The identity of all non-Tanzanian vessels will be verified including checking of regional and IOTC registers to ascertain whether the vessel has been suspected or proven to have been involved in IUU fishing activities in other states. If this has been reported by a competent regional or international authority, the fishing vessel may be impounded pending legal action by the third part state. In any event, a fishing vessel with a history of IUU fishing or non-compliance with the conditions of license will not be issued a license to fish in Tanzania.

b. It is the duty of fishing vessel's owner to provide a full and detailed list of all previous names and ports of registration the fishing vessel has operated. These details will be checked before a license is issued.

c. The senior fishery inspector will take digital photographs of the vessel and her marking to add in the data-base of the vessels, this will assist in identification of the vessel from the air.

d. The senior fishery inspector will insure that the charts held or navigation system of the vessel adequately and correctly shows the designated fishing areas before the license is issued.

e. Licenses are to be collected and signed by skipper of the vessel, not the ship's agent. The license is to be laminated for protection and as an anti tampering measure, and is to be displayed on the bridge of the vessel at all the times.

f. Skippers are to be issued telephone, fax and e-mail addresses of the MCS operation room and requested to help in the anti-IUU effort by reporting any suspicious fishing activities.

g. Skippers are to be requested to make provisions for fishery observer and to collect or return him/her at a nominated port as required by the Fisheries Division observer program. Failure to do this might lead to the license not being issued.

In 2010 the DSFA licensed fifty (50) fishing vessels, mostly DWFN for the fishing period ranging from one (1) month to twelve (12) months. Most fishing vessels are flag states of France, Spain, Seychelles and Taiwan, and few fishing vessels of Tanzania.

The fishery types are long liner and purse seiner fishing vessels.

3. THE STATUS OF TANZANIAN EEZ

The EEZ is a zone extending up to 200 nautical miles from the baseline of coastal state with which she enjoys extensive rights in relation to natural resources and related jurisdictional rights, and other states enjoy the freedoms of navigation, over flight by aircraft and the laying of cables and pipelines.

Tanzania has an EEZ area of 241,541 Km^2 , and has archipelagic straight baselines whereby on October 1989 with the 'Territorial Sea and EEZ Act of 1989' the government established baselines as the low water mark along the coast, including the coast of all islands.

On December 1982, the government signed the UNCLOS, with declaration.

On September 1985, the government made the ratification to the UNCLOS.

On October 1994 the government signed Part XI Agreement and the ratification of that Part was made on June 1998.

The EEZ fishing began in 1998, nine fishing vessels were licensed. Since then, the number of licenses has increased to 64 in 2004 and the available catch data showed increase in catch from 2,506 tonnes in 2001 to 14,917 tonnes in 2003. The fish potential production in the EEZ has not been

assessed, although, due to licensed fishing vessels there is indication that a potential worth investment exist.

3.1 INTERNATIONAL FISHERIES OVERVIEW IN TANZANIA

Tanzania is the United Republic whereby Zanzibar Island and Tanzania Mainland were united to form The United Republic of Tanzania, but each has her own separate Ministry responsible for fisheries matters.

The Deep Sea Fishing Authority (DSFA) has established in Tanzania so as to manage the related international fishery matters. Although the Authority is juvenile but it is a good start toward solving challenges including responsibilities, management problems, international conventions ratifications and implementation, etc. In the case of regional and international cooperation the United Republic of Tanzania should collaborate with developed countries like Korea Republic to harmonize the sustainable exploitation, capacity building, management and conservation of fishery resources in the shared water bodies especially the EEZ.

In the action program there is a need to revise the fisheries legislation, and establish the Territorial Sea Act and Exclusive Economic Zone Act with update time to time so as to meet the requirement of fisheries global changes.

Table 2 Fish catches (in metric tones) from the Tanzanian EEZ
for 2001-2003

Year	Sword fish	Yellow fin	Big eye	Alba core	Skip jack	Marlin	Shark	Others	Total
2001	208	60	23	36	1	18	0	2158	2504
2002	1898	357	82	55	0	0	48	4173	6613
2003	14	3045	181	72	1734	0	0	9870	14916
Total	2120	3462	286	163	1735	18	48	16201	

Source: Fisheries Division, Ministry of Natural Resources, Tanzania.



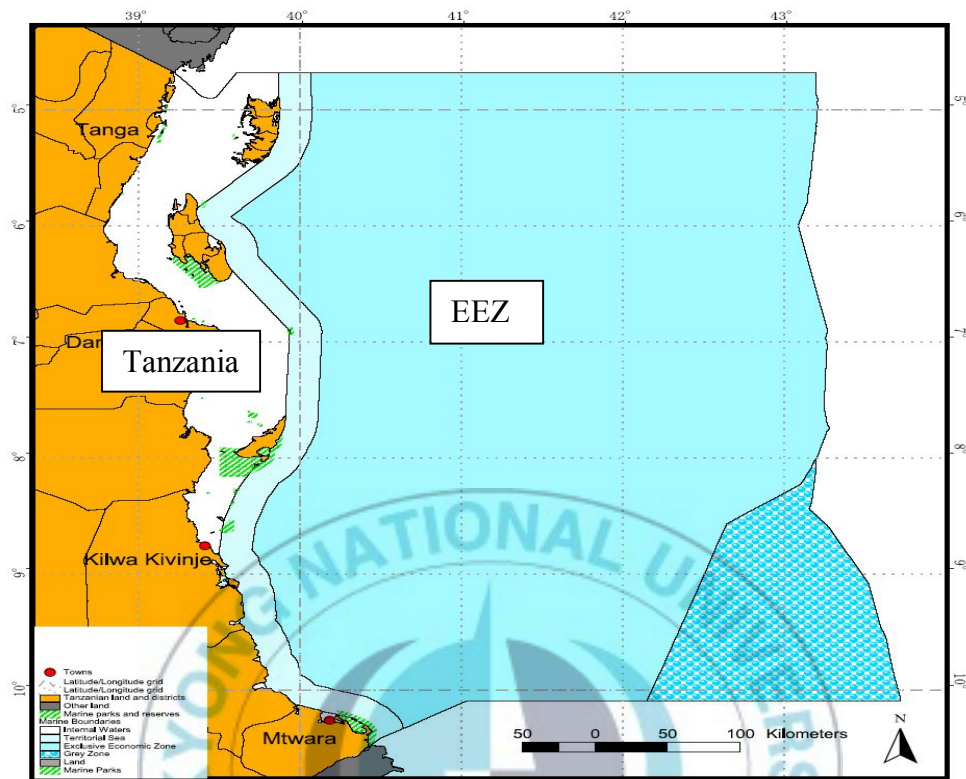


Figure 3. The EEZ map of Tanzania

The EEZ is a concept of recent origin which has attracted support by most of the developing coastal states (from Asia, Latin America and Africa) and also from the developed coastal states such as Canada and Norway. The EEZ is a reflection of the aspiration to the developing countries for their economic advancement and desire to gain control over the marine natural

resources, particularly fish stocks, whereby the EEZs of developing countries were extensively exploited by the huge distant foreign fishing vessels from developed states

3.2 LEGAL SYSTEM OF TANZANIAN EEZ

The EEZ is a separate functional zone situated between the territorial sea and the high seas, the right and duties within the EEZs as stipulated in the article 56 of the Law of the Sea Convention (LOSC) are as follow;

- a. The coastal State has sovereign right for the purpose of exploring and exploiting, conserving and managing the *non-living natural resources* of the sea bed and subsoil and the superjacent waters, the reference to the non living resources of the superjacent waters relates to the various minerals which can be extracted from sea water.
- b. The coastal State has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural living resources that is the fish stocks of the zone, according to the Law of the Sea.

Convention (LOSC) article 56(1). The coastal state must ensure that fish stocks in the EEZ are not endangered by over-exploitation, and such stocks are maintained and restored to the level that can produce

the maximum sustainable yield (MSY).

c. The coastal state has sovereign rights to other economic resources such as the production of energy from sea waves (water), current and winds. This provision gives the coastal state quite a new right so as to permit development in technology. It should be beard in mind that the production of energy usually requires the construction installation baseament in the sea water. eg. wave barrages. Also, the coastal state has the right to establish artificial islands, for any purpose such as deep water ports, offshore airports, mining platforms etc, but should not cause interference to the use of recognised sea lanes essential to international navigation (Law of the Sea, art. 60(7)).

d. The coastal state has the right to regulate, authorise and conduct the marine scientific research in its EEZ.

e. The coastal state has the power to protect and preserve the marine environment in her EEZ. The coastal state should have a proper legislative and enforcement competence to deal with dumping of waste and other form of pollution from ships or seabed activities.

f. Definition of EEZ: According to the Part V, article 55 of the UNCLOS 1982, the EEZ is defined as; 'An area beyond and adjacent

to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal state and the rights and freedoms other states are governed by the relevant provisions of the Convention’.

3.2.1 ‘Territorial Sea and Exclusive Economic Zone Act of 1989’

The Act was enacted by Parliament of United Republic of Tanzania.

The Act to establish territorial sea and to establish EEZ of the United Republic of Tanzania to exercise the sovereign rights of the State for exploration, exploitation, conservation and management of the resources of the sea and matters connected with those purposes.

a) Part II of the Act

i) EEZ

Part II of the Act, it talks about EEZ

7 (1) There is established contiguous to the territorial waters, a marine zone to be known as the EEZ.

(2) Subject to subsection (3), the EEZ shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

(3) Notwithstanding subsection (1) where the median line as defined by subsection (4) between the United Republic and any adjacent or opposite state is less than 200 nautical miles from the baselines of the territorial sea. The outer boundary limit of the zone shall be that fixed by agreement between the United Republic and other states, but where there is no such agreement the outer boundary limit shall be the median line.

(4. The median line is a line every point of which is equidistant from the nearest points of the baseline of the territorial sea, on the one hand, and the corresponding baselines of the territorial sea of any adjacent or opposite state as recognized by the Minister on the other hand.

ii) Making boundary lines of the zone on charts or maps

Section 8 of the Act, states on making the boundary lines of the zone on charts or maps,

8 (1) The Minister shall cause the boundary lines of the zone to be marked on a sealed map or chart, and that map or that chart shall be judicially noticed.

8 (2) The Director of Land Surveying in the Ministry responsible for lands shall keep safe custody of the map or chart referred to in subsection (1) and

everybody may at reasonable time inspect that map or purchase a certified copy thereof.

iii) Rights in, and jurisdiction over the zone

The rights in, and jurisdiction over the Tanzanian EEZ in section 9, 10 and 11 of the Act of 1989, is the same as stipulated in the UNCLOS 1982.

Section 9 (1) Sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non living of the waters superjacent to sea bed and its sub-soil, and with regard to other activities for the economic exploration and exploitation of the zone such as the production of energy from the water current and winds.

9 (2) Jurisdiction with regard to;

- (i) The establishment and use of artificial islands, installations and structures.
- (ii) Marine scientific research, and
- (iii) The protection and preservation of the marine environment.

9 (3) Other rights and duties provided for under international law.

iv) Exploitation of the resources

10 (1) Subject to the Act, no person shall within the zone, except under or in accordance with an agreement with the Government of the United Republic;

a) Explore or exploit any resources thereof.

b) Carry out any search or excavation.

c) Conduct any research.

d) Drill in or construct, maintain or operate any structure or device or;

e) Carry out any economic activities.

10 (2) The section shall not apply to fishing by a citizen of the United Republic.

10 (3) Any person who contravenes the provision of this section shall be guilty of an offence and shall, on conviction be liable to a fine of not less than US dollars two hundred and fifty thousand or to imprisonment for a term not exceeding five years, or to both such fine and imprisonment, and in addition, the court may order the forfeiture of any vessel, structure, equipment, device or thing in connection with which the offence was committed.

v) Freedom of navigation, over flight and laying of cables, etc

11. The United Republic shall recognize within its EEZ the right of other states whether coastal or land locked to freedom of navigation and over flight, the laying of cables and pipelines, and other lawful uses of the sea relating law to navigation and communication such as are recognized under international of law or embodied in a bilateral agreement.

vi) Application of certain laws

Section 12 of the Act 1989, states about the application of other laws related to marine matters, that, any laws enacted by the National Assembly and the House of Representatives relating to fisheries, national environment management, merchant shipping, petroleum and mining shall apply in relation to the exploration of the natural resources and the question of marine pollution in the Territorial Sea and the EEZ Act of 1989.

b) Part V of the Act

Part V Section (17) of the Act 1989, states about the general offences and miscellaneous provisions;

i) General offence

17. Any person who

- a) Assaults, resists, obstruct or intimidate an authorized officer or any person assisting him in the execution of his duty;
- b) Uses indecent, abusive or insulting language to an authorized officer in the execution of his duty;
- c) Interferes with or hinders an authorized officer in the execution of his duty;
- d) By any gratuity, bribe, promise or other inducement prevents an authorized officer from carrying out his duty;
- e) without the authority of an authorized officer is found in possession of any articles seized under section (14);
- f) Contravenes any provision of this Act for which no penalty is provided or the regulation shall be guilty of an offense and shall, on conviction, be liable to a fine not less than US dollars one hundred thousand (US\$ 100,000) or to imprisonment for a term not exceeding two years, or to both such fine and imprisonment and, in addition, the court may order the forfeiture of any vessel, structure, equipment, device or thing in connection with the offence was committed.

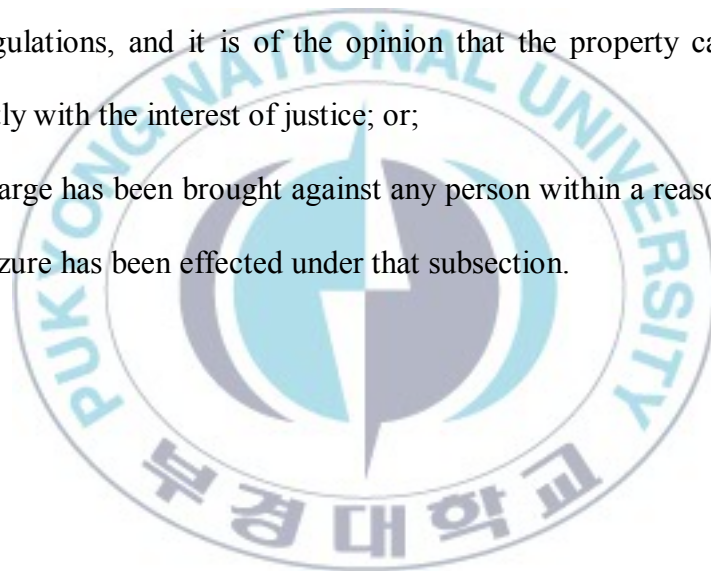
ii) Return of property seized

Section (18) of the Act states about the return of the property seized, whereby,

Subject to the provision of section (15) a court may order that property seized under subsection (3) of the section (14) be returned to the person from whom it was taken or to a person named by that person where;

(a) The court dismisses a charge brought against that person under this Act or the regulations, and it is of the opinion that the property can returned consistently with the interest of justice; or;

(b) No charge has been brought against any person within a reasonable time after a seizure has been effected under that subsection.



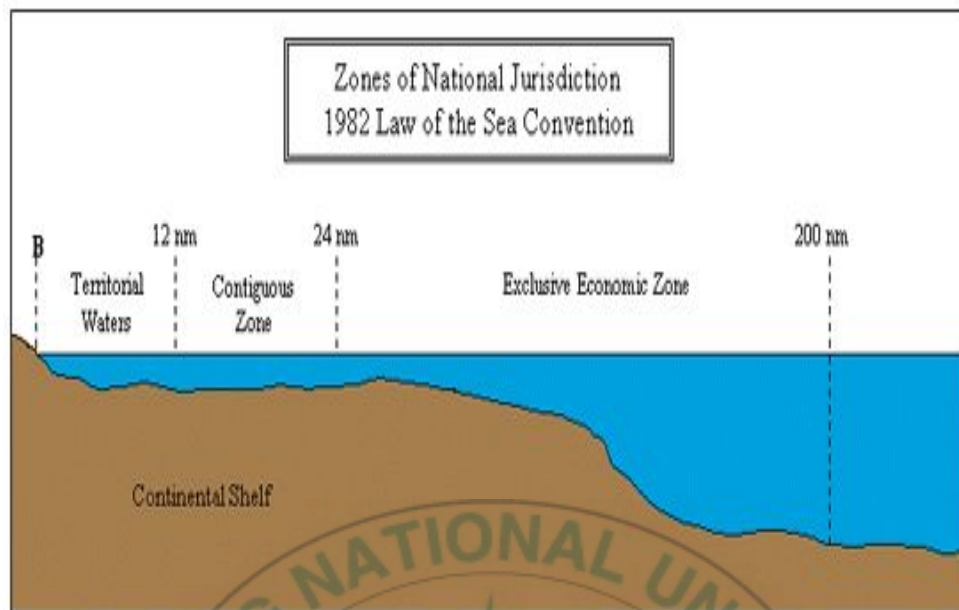


Figure 2. Zones of States jurisdiction under UNCLOS.

3.2.2 ‘The Fisheries Act of 2003’

This is an Act to repeal and replace the Fisheries Act of 1970, to make provision for sustainable development, protection, conservation, aquaculture development, regulation and control of fish, fish products, aquatic flora and its products, and for the related matters.

The Act was enacted by the Parliament of the United Republic of Tanzania.

The Act is more concentrated on the domestic laws covering from territorial sea going towards inland water bodies, does not talk anything concerning EEZ. However, there is a need to make some amendment to the Act.

3.3 FISHERY RELATION WITH OTHER STATES

All other states whether land locked or not has got the right to engage in fishing within the EEZ of Tanzania as long as they comply with fisheries rules and regulations adopted by the Government. The state may in exercise of its sovereign rights take mitigative measures against foreign fishing vessels take necessary to ensure compliance with the laws and regulations.

3.3.1 Regional cooperation

The United Republic of Tanzania has a strong relationship with Southern African countries in conservation and management of EEZ fishery especially in MCS Operations. Since, she is the member of Southern African Development Community (SADC). The ratification of UNCLOS 1982, through non binding force of IPOA-IUU, Tanzania has established what is known as NPOA-IUU which applies to all fishers regardless nationality in Tanzanian EEZ and International, therefore, with SADC

Protocol in preventing, deter and eliminating IUU fishing Tanzania is in cooperation with Southern African countries in implementing the common vision and guidelines IPOA-IUU based from 1995 Code of Conduct for Responsible Fisheries.



Figure 5. Map showing SADC member states

Also, the country has been in cooperation with IOTC (which manage highly migratory species, mainly tuna) to ensure the conservation and optimum utilization of tuna in the Indian Ocean and encourage sustainable

development of fisheries resources and SIOFA which manage fish stock by geographical area.

The SADC Protocol on Fisheries signed in 2001 and put into force in 2002 whereby the SADC Ministers responsible for marine fisheries resolved to find regional solutions to the growing plague of IUU fishing. SADC/MCS program was launched in 2001 up to 2006. The program has finished and showed positive impact.

It has been emphasized the need to continue and deepen regional cooperation for action against IUU and for MCS.

The Indian Ocean Commission (IOC) MCS program is underway.



Figure 6. Member states of South West Indian Ocean Fisheries Project (SWIOFP)

The Indian Ocean is the only Ocean fully surrounded by developing countries. The lack of capacity to drawl appropriate benefit from the resources in their EEZ can not be under estimated, and therefore, countries of the region have developed a collaborative project that embraces their own fishery related needs and expectations in the region and transboundary context. The project is known as South West Indian Ocean Fisheries Project (SWIOFP), which is being implemented by the World Bank. It has a basic objective of promoting regional marine and coastal biodiversity and sustainable exploitation of their resources in order to maintain ecological integrity in the region.

3.3.2 Proposal between Tanzania and European Union (EU)

There is an economic proposal for an EU Council regulation concerning the agreement between the EU and Tanzania. This proposes that a three years fishing agreement provides the EU fleets to tuna fishing in Tanzanian waters. There were regular EEZ patrol, including aerial patrol carried out funded by SADC and the EU which have apparently resulted into revenue increase due to massive increase in licensing. There are now 84 licensed foreign fishing vessels, mainly from EU and Asia. According to available data, during the

peak fishing season up to 10,000 tonnes of tuna are caught in Tanzania's EEZ per week, and country's resource of that type of fish could be worth as much as 200 Million US\$.

The agreement is not held still in negotiation concerning financial bargaining and evaluating issuance of deep sea fishing licenses.

3.4 THE INTERNATIONAL FISHERIES DISPUTES

Under the UNCLOS, EEZ is a sea zone over which a state has special rights over the exploration and use of natural marine resources.

Generally, the EEZ of a state extends to a distance of 200 nautical miles out of its coastal baseline. The exception to this rule occurs when EEZ would be overlapped each other, that is, state coastal baseline are less than 400 nautical miles apart. When an overlapping occurs it is up to the states to delineate to the nearest state.

A state's EEZ starts at the seaward edge of its territorial sea and extends outward to a distance of 200 nautical miles from the baseline. Thus, EEZ includes the contiguous zone.

The common source of conflict between coastal states over maritime matters is the extent (overlapping) of EEZs. One of the well known

examples of such dispute was the Greenland - Jan Mayen case between Denmark and Norway.

3.4.1 Maritime boundary agreement between Tanzania and Kenya

Maritime boundary agreement between Tanzania and Kenya took place in July, 1976.

Boundary baseline and description;

a) Ras Jimbo beacon-Kisite island (rock);

On the west, the median line between the Ras Jimbo beacon-Kisite island /Ras Jimbo-Mwamba-Wamba beacon base lines to a point 12 nautical miles from Ras Jimbo up to a point here in after referred as 'A', located at $4^{\circ}49.56''S$, and $39^{\circ}20.58''E$

b) Ras Jimbo-Mwambab-Wamba beacon;

On the east, the median line derived by the intersection of two arcseach being 12 nautical miles drawn from Mpunguti ya juu-lighthouse and Ras Kigomasha lighthouse respectively here in after referred to as point "B", located at $4^{\circ}40.52''S$ and $39^{\circ}36.18''E$.

c) Mwamba-Wamba beacon-Fundo island beacon (rock)

On the south, an arc with centre as the northern intersection of arcs with radii 6 nautical miles from point “A” as described in the paragraph 2(a) above and point “B” which is the southern intersection of arcs from Ras Kigomasha lighthouse and Mpunguti ya juu lighthouse.

d) Fundo island beacon (rock)-Ras Kigomasha lighthouse;

The eastward boundary from point “C”, which is the northern intersection of arcs from Ras Kigomasha lighthouse and Mpunguti ya juu lighthouse as described under paragraph 2(b) above, shall be the Latitude extending eastwards to a point where it intersects the outer most limit of territorial sea boundary areas of national jurisdiction of the two states.

e) Kisite island (rock)-Mpunguti ya juu lighthouse;

The marine charts of 1:250 000 describing the coordinates of the above points shall form and integral part of this agreement.

3.4.2 Maritime Boundary Agreement between Tanzania and Mozambique

Maritime Boundary Agreement between Tanzania and Mozambique took place in Maputo, Mozambique on 28th December 1988, and entered into force 29th July, 1993.

The Agreement consists of the following items;

i) Internal waters (Article 2 of the Agreement)

The outer limit of the internal waters of the two countries is defined by a means of straight line drawn across the mouth of the Ruvuma Bay from Ras Matunda, located at latitude 10°21.32"S and longitude 40°27.35"E to Cabo Suafo, located at latitude 10°28.14"S and longitude 40°31.33"E.

ii) Territorial sea (Article 3 of the Agreement)

The territorial sea boundary line between the two countries is delimited by application of the equidistance method of drawing a median straight line from point "B" to a point 12 nautical miles located at 10°18.46"S and 40°40.07"E here in after referred to as point "C".

iii) Exclusive Economic Zone (Article 4 of the Agreement)

The delimitation of the EEZ between the two countries is delimited in conformity with the equidistance method by prolonging the median straight line used for the delimitation of the territorial sea from point "C" to a point 25.5 nautical miles, located at 10°05.29"S and 41°02.01"E, here in after referred to as point "D".

From this point the EEZ is delimited by application of the principle of equity by a line running due east along the parallel of point "D". The point

of termination of this line will be established through exchange of notes between the United Republic of Tanzania and People's Republic of Mozambique.

3.4.3 Maritime Boundary Agreement between Tanzania and Seychelles

Maritime Boundary Agreement between Tanzania and Seychelles took place in January 2002. In the Article (1) of the agreement, the delimitation line between the EEZ and the continental shelf of Republic of Tanzania (Mafia Island) and the EEZ and continental shelf of the Republic of Seychelles (Aldabra Atoll-Picard Island) will be based on the equidistance, considered in this particular case as an equitable solution in conformity with international law. This line has been determined by using the nearest baseline from which the territorial sea of each state is measured.

3.5 THE PROPOSED EEZ FISHERIES MANAGEMENT FRAMEWORK

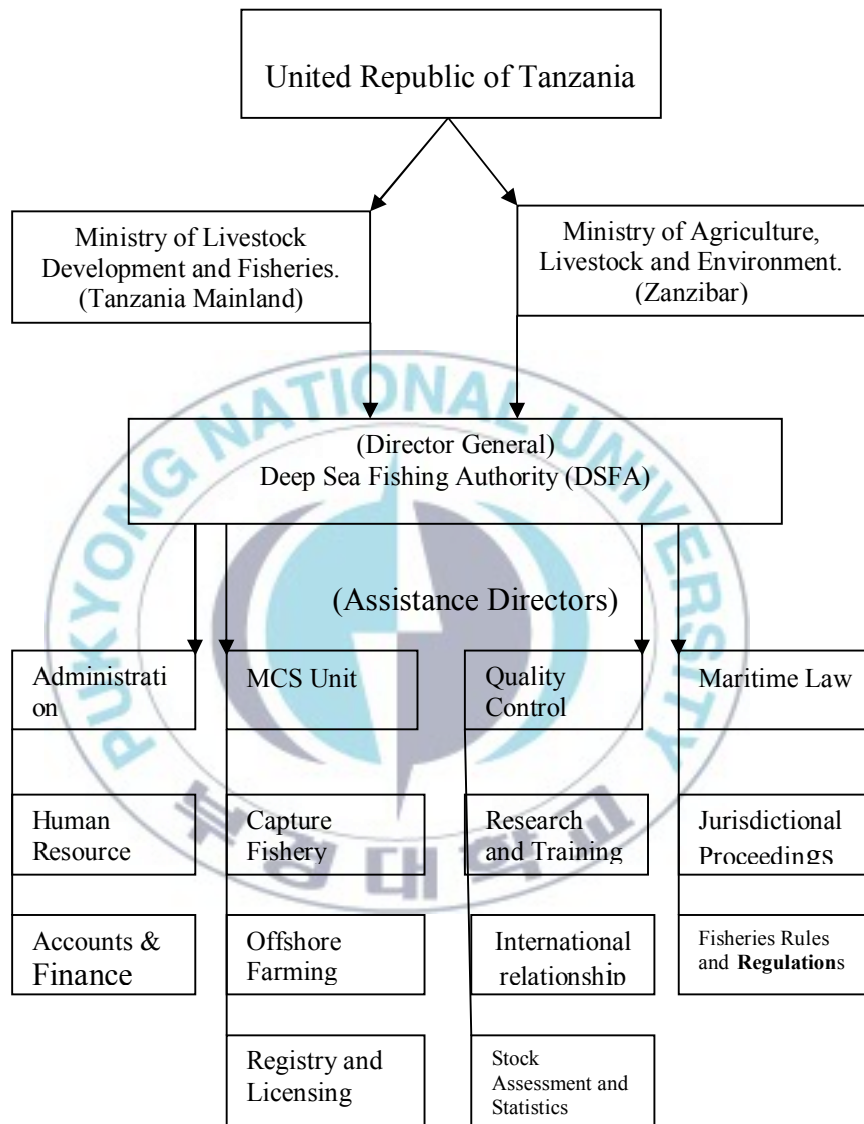


Figure 7. Proposed framework for EEZ management in Tanzania.

3.5.1 Deep Sea Fishing Authority (DSFA)

The DSFA is the government agency controls aspects of fisheries within the EEZ of Tanzania, the input and output controls measures should be made by this Authority, such as vessel licensing, limited entry application, catch quotas, technical regulations, catching technique, etc. catching technique may includes; prohibiting devices such as bows, arrows, spears, etc. limit on fish traps, restricting the number of simultaneous fishing vessels, limiting average time at sea, etc.

UNCLOS, provides that a coastal state may, ‘in the exercise of its sovereign right’ in the EEZ, ‘take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with its laws.

3.5.2 The functions of the Authority (DSFA)

The functions of the Authority shall includes *inter alia*,

- a) To promote, regulate and control fishing in the EEZ of the United Republic.

- b) To regulate the licensing of persons and ships intending to fish in the EEZ.
- c) To formulate and coordinating the programs for scientific research in respect in fishing.
- d) To formulate fisheries policies.
- e) To negotiate and enter into any fishing or other contract, agreement, or any kind of fishing cooperation with any government, international organization, or other institution in pursuance of the provisions of the Act.

Director General (DG) is the chief executive officer of the Authority (DSFA) and he shall be highly qualified and experienced in domestic and international fisheries activities, and he shall be responsible to the Minister or Executive Committee (EC) for;-

- a) Issuing fishing licenses.
- b) Preparation of the annual budget of the Authority (DSFA)
- c) Preparation and submission of long and short term plan of the Authority (DSFA).
- d) Keeping and maintenance of record of;
 - i) Vessels licensed to carry out fishing activities in the EEZ of the United Republic of Tanzania.

- ii) Catches of fish by vessels licensed to carry out fishing activities in the EEZ.
- iii) Illegal practices and defaulters of rules and regulations made under ‘Deep Sea Fishing Authority Act of 1998’.

3.5.3 General offence and penalty

Any person who carries out fishing activities in the EEZ contrary to ‘Deep Sea Fishing Authority Act 1998’, or regulations made under the Act, commit an offence and upon conviction is liable to a fine of not less than one billion shillings or to imprisonment for a term of not less than twenty years or to both that fine and imprisonment and in addition to the fine and imprisonment, the Court may order forfeiture of the vessel, structure, equipment or thing in connection to the offence committed.

Any person who;

- a) Assaults, resist, obstruct or intimidates an authorized officer or any person assist him in execution of his duty under ‘Deep Sea Fishing Authority Act 1998’ or under ‘Territorial Sea and Exclusive Economic Zone Act 1989’,

- b) Uses indecent, abusive or insulting language to an authorized officer in execution of his duty,
- c) Interferes with or hinders an authorized officer in execution of his duty,
- d) By any gratuity, bribe, promise or other inducement prevent an authorized officer from carrying out his duty,
- e) Contravenes any provisions of the Act for which no penalty is provided in the regulation.

Commits an offence and is, upon conviction, liable to a fine not less than one million shillings, or to imprisonment for a term not exceeding two years, or to both that fine and imprisonment and, in addition the Court may order the forfeiture of any vessel, structure, equipment device or thing in connection with which the offence was committed.

3.5.4 Management Obligations

UNCLOS's fisheries provisions defer much to subsequent agreement, consisting largely of duties to negotiate, cooperate and take 'necessary measures'. The Convention requires the coastal states to enter into negotiations with a view to taking necessary measures to conserve the living resources, and shall 'as appropriate cooperate to establish Regional

Fisheries Management Organizations. The DSFA managements should cooperate with other coastal states in relation to several categories of fishery;

a) Anadromous species, such as salmon, shad, and sturgeon are migratory fish that return to a state's internal waters to spawn but they spend most of their life in the sea. Article 66 of the UNCLOS 1982 governs these species. It provides that the state in whose rivers such fish spawn (state of the origin) is primarily responsible for their management and shall take appropriate regulatory measures to ensure their conservation.

b) Catadromous species, such as eels are ordinarily river dwelling species, conversely to anadromous, these they spawn in the sea and spend most of their lives in fresh water. In relation to such species the general rules governing fishing in the EEZ apply, but are supplemented by an obligation on coastal state through whose EEZ catadromous species migrate to cooperate over management including harvesting of these species with the state in whose waters the species spend the greater part of their life cycle, Article 67 of the Convention.

c) Straddling stocks; highly migratory species, such as tuna, marlins, swordfish, oceanic sharks, etc. during their life cycle they move not only

through the EEZ of two or more states but also on the high sea. article 64 of the Convention provides that the coastal state's right and duties of fishery management in its EEZ are supplemented by an obligation to cooperate with other states fishing for highly migratory species in the region with a view to ensuring conservation and promoting the objective of optimum utilization of such species within the EEZ and high sea. The combined effect of Article 64 of UNCLOS and the 1995 Straddling Stocks Agreement applies equally to highly migratory species.

3.5.5 Legal applications;

The 1995 Straddling Fish Stock Agreement represents a remarkable effort to create a regulatory framework for sustainable management of international/EEZ fisheries and add details to some of the 'very general' UNCLOS provisions on fisheries regulations. The UNFSA assign a central role to RFMOs in the cooperative management of straddling fish stock and highly migratory stocks;

a) Enforcement scheme Articles 18, 19, 21 and 24 provides the UNFSA enforcement scheme. As flag states each member must;

- i. Ensure that their vessels comply with RFMO measures and do not engage in activities undermining their effectiveness, such as licences, conditions upon fishing, etc.
- ii. Not authorise its vessels to fish unless it can regulate their conduct effectively.
- iii. Enforce RFMO measures 'irrespective of where violations occurs', and impose sanctions 'adequate in severity' to ensure compliance and deter violations.

b) Inspection

Under Article 21(1) the 'duly authorised inspectors' of an UNFSA State party which is also a member of the relevant RFMO may 'board and inspect' the fishing vessel of any other UNFSA to ensure compliance. Inspection reveals clear grounds for believing that a vessel has acted contrary to applicable RFMO measures, the inspector may secure evidence and must contact the flag state. The inspecting state shall ensure that boarding and inspection is not conducted in a manner that would constitute harassment.

c) Investigation

If the inspection reveals clear grounds that the vessel has breached relevant RFMO measures, the flag state must be informed, and take enforcement action or authorise the boarding state to do so.

d) Enforcement

Under UNFSA Article 21, the boarding state may secure evidence and direct a vessel into port where;

- i) There are clear grounds for believing vessel has committed a serious UNFSA violation, such as, fishing without a license, fishing with prohibited gear, failing to maintain accurate catch records, etc.
- ii) The flag state fail to respond to a request to investigate within three days, or
- iii) The flag state fail to respond (in unspecified time frame) to evidence warranting enforcement action.

Article 21(14) creates a degree of port state inspection and control by applying all of Article 21, to situations where a state party has clear grounds of the offence and that vessel has subsequently entered its national jurisdiction.

a) State responsibility

UNFSA Article 21(18) provides that 'State shall be liable for damage or loss attributable to them arising from action taken under Article 21 where it is unlawful or exceeds that reasonably force required in the light of available information to implement its provision, that is allegations of unlawful conducted at sea fisheries inspections.

b) Stateless vessels

Article 110 of UNCLOS 1982 and Article 21(17) of UNFSA both provide that a state may board and inspect a fishing vessel on the high sea on reasonable suspicion of the statelessness, simply provides that 'where evidence so warrants, the state may take such action as may be appropriate in accordance with international law'. This word is capable of accommodating divergent views as to prescriptive and enforcement jurisdiction over stateless vessels at general international law.

Therefore, the DSFA should establish the rules and regulations schemes with respect to UNCLOS and UNFSA 1995 for procedures on boarding, inspections, investigations, and enforcement.

4. THE CHALLENGES FACING EEZ SUPERVISION

The main legal challenges facing EEZ supervision can be categorised into two; namely, migratory nature of the fish and tragedy of the common.

4.1 MIGRATORY NATURE OF THE FISH

One of the most challenges of fish is their migratory nature. Most fish stock migrate often considerable distances during the course of their life cycle. This has essential implications as far as jurisdictional boundaries in the sea are concerned.

Furthermore, most fish stock are inter related either in the sense that one stock feeds on another (as cod do upon herring) or in that they inhabit the same area, so that fishermen intending to fish for one species will often take another species as by-catch. For example, long line tuna fishing they catch sword fish, sharks etc. as by-catch. Thus, regulations designed to deal with one particular stock will have legal consequences challenge for other stock.

4.2 TRAGEDY OF THE COMMON

Fisheries as a common property natural resource, that is, free swimming fish in the sea are not owned by anyone else, the property right only arises when the fish are caught and reduced into the possession of an individual fisherman. From this challenge of common property nature of the marine fish, the following extended consequences will be observed;

4.2.1 Over-fishing

A tendency of fishermen to fish above biological optimum levels always leads into over-fishing, because anyone can enter into a particular fishery. It obviously follows that as more fishermen race into fishery, more and more fish will be caught. If the quantity of fish caught, together with fish lost through natural mortality exceeds the amount of fish being added to the stock through reproduction, then the size of stock will eventually start to

decrease, and in the extreme cases the stock may even collapse, as what has happened with the Antarctic whales and the California sardines.

4.2.2 Over-capacity

Another extended consequence of the common property nature of fish is that it leads to over-capacity (over-capitalization), and hence fishing becomes an economic inefficiency. Initially fisheries will begin with few entrants of who will make a profit. Other people seeing this profit will eventually be attracted to the fishing, as a result the number of fishermen participating in the fishery will definitely increase and the size of the catch, that is economic return per vessel will decrease.

4.2.3 Conflicts between fishermen

The common property nature of fish will also leads to the competition and conflict between different groups of fishermen, especially when the situation reach to the open access conflicts between fishermen is inevitable. Normally, the conflict arise between fishermen using different types of

fishing gears, for instance, trawlers seek to fish in the areas where there is stationary gear such as long line. The conflict may also arise between fishing and other uses of the EEZ, such as the offshore oil, mineral and gas industry, not only on the cases associated with fishing but also with pollution to the sea.

4.2.4 Marine pollutions

There are so many sources of marine pollution, such as shipping, dumping into the sea, seabed activities, land based activities, etc. ships are driven by oil-burning diesel engine, some oils are discharged through bilge system and use of fuel tanks for water ballast purposes in the oil tankers, throwing of garbage overboard, sewage, and other waste discharge into the sea, and also marine accidents (such as the recent one in the Gulf of Mexico). All these result into marine pollution.

4.3 MANAGEMENT PROBLEMS

There are series of challenges facing the supervision of EEZ resulted from management inefficiency, especially to the developing countries like Tanzania;

4.3.1 Lack of capacity to manage

To the most of developing countries, the knowledge and skills for personnel to manage and control the EEZ is limited, and therefore, the fisheries resources are exposed to unwelcome visitors and engage in fishing with huge sophisticated fishing vessels exploiting the resources.

4.3.2 Regional and international management framework

The regional fisheries management organizations (RFMO) within the Indian Ocean EEZ, are not effectively implementing the duties concerned, this may be due to political differences or financial budget cut, hence, resulting to illegal, unreported and unregulated (IUU) fishing.

Illegal fishing is fishing conducted by vessels of any nationality within waters under national jurisdiction in contravention of national fisheries laws and regulations, or fishing by vessels which contravene RFMO measures. Unreported fishing describes catch subject to reporting requirements which goes un- or under reported to a coastal state authority or RFMO measures, and un-regulated fishing is fishing by stateless or non party vessels in a RFMO management area in a manner contrary to RFMO measures.

Due to inefficiency RFMO there is lack of specific data collection and exchange.

4.3.3 Financial problems

Funding to the fisheries sector programs, such as enforcement of fisheries rules and regulations (conducting patrol on 241,521Km² EEZ by ship or air), conducting research, training, etc. is major challenge to the Government, due to financial difficulties faced by the country major part of the various action programs are supported by stakeholders, such as KOICA, EU, SADC, WWF, etc.

4.3.4 Hesitating for convention ratification

There is a lack of widespread of convention ratification. Many developing countries tends to slacken in convention ratification, this may be due to capability to absorb the contents, and therefore, resulting into implementation inefficiency.

5. SOLUTIONS TO THE CHALLENGES

Solutions to the challenges are slightly differ from one coastal state to another, but the most important combat to the difficulties on legal EEZ management especially to the developing coastal states like Tanzania is the capacity building to the personnel in the particular field of fisheries, other solutions are;

5.1 EFFECTIVE REGULATED FISHERY MANAGEMENT

The effective international regulated fishery management should be strongly implemented to prevent over-fishing. It should be taken in mind that, in the absence of effective regulations an individual fisherman has no incentive to restrain his fishing activities in order to prevent over fishing, because there is no guarantee that other fishermen will evacuate to follow his example,

thinking that if one competitor is removed then there is more fish for those who remain.

5.1.1 Installation of TAC

This regulated fishery management should necessary control the amount of fish to be caught by installation of total allowable catch (TAC) system in the EEZ over a given period of time, such system of TAC must describes how much fish are allocated to individual states to be caught from EEZ over a specified period of time. This system (TAC) ensures that there is no more fish caught from EEZ's stock than biologically justifiable, and hence the living resources are not endangered by over-exploitation.

5.1.2 Establishment of common fisheries policy

Establishment of common fisheries policy among the integrated international management of the neighbouring coastal states with regard to the duties stipulated in the UNCLOS, this RFMO should implement the common fisheries rules and regulations concerning their EEZ, such as making a limit to the number of fishing vessels allowed, limiting their size,

limiting the number of days they may fish, and fishing gear restrictions, etc. with similarities throughout the region.

5.1.3 Effective MCS unit

Article 62(4) of UNCLOS permits the coastal state to establish laws and regulations relating to fishing by nationals of third states in its EEZ.

Cohesive cooperation on international fisheries law enforcement among the neighbouring coastal states by using joint venture monitoring, control and surveillance (MCS) unit and effective mitigative measures between the states.



Figure 8. Modern Patrol boat for MCS unit

Full and well equipped MCS unit, sea patrol boat with helicopter platform (air patrol) is one method which creates deterrence and hence complying with the fisheries rules and regulations on EEZ fishing.

Also, the use of satellite technology, such as vessels monitoring system (VMS) to trace the track all registered vessels allowed to engaging into EEZ fishing.



5.1.4 Ratification of conventions.

All members of regional coastal states should make ratification to the UNCLOS and absorb that convention in their fisheries rules and regulations. By putting the convention into force, will facilitates the implementation of enforcement to comply with the rules on EEZ fishing.

The ratification of the convention should not be only to UNCLOS, but also to others which are marine related, such as 73/78 MARPO, CITES, 1995 STCW, etc.

5.1.5 Strategy on IUU fishing

The DSFA should have to draw up the action plan and implement it, so as to prevent, deter, and eliminate IUU fishing. The commitment to enforce sanctions for the effective elimination of IUU fishing is strictly needed, and evaluate appropriate standard of punishment on enforcement.

5.2 CAPACITY BUILDING

The essential of capability to manage the fisheries resources can not be under rated. Government, institutions and stakeholders officials should be facilitated with technical knowledge and equipment in fishery aspects.

5.2.1 Training

Time to time training should be made to the human resources, so that the personnel on fisheries sector are not lagging behind with rapid change of technology application in the world of fisheries.

Also, 10% of the crew onboard ship fishing on EEZ of Tanzania should be the qualified citizen of this coastal state, as this will creates employment and provides fishing knowledge and skills of deep sea by experience. The fisheries learning institutes within Tanzania should be facilitated so as to produce the competent human resource personnel in the sector.

5.2.2 Research

Researches should be made so as scientific evidence available can evaluate and assess the TAC to be implemented. Also, the coastal state must consider

the scientific research on species which are highly migratory during their life cycle, so as to provide sustainable smooth way out on harvesting them.

5.2.3 Stakeholders participations

The fisheries stakeholders and other interested partners in the sector should be trained so as to understand the marine ecosystems as this will make them to have positive participation on preservation and conservation of the marine living resources.



6. CONCLUSION AND RECOMMENDATIONS

The determination of the outer limit of Tanzania's EEZ depends on negotiation and agreement with the relevant neighbouring countries, i.e. Kenya (at north), Mozambique (at South), Comoro islands (south east) and Seychelles (at east). Recently there is no challenge facing Tanzania with maritime boundary delimitation since the agreements have made. Close regional cooperation is necessary for the management and conservation of natural resources and protection of the marine environment, safety of navigation, and other peaceful and rightful uses of the ocean.

In addition, it is recommended to improve the enforcement teams as an essential unit for the implementation of the 'Territorial Sea and Exclusive Economic Zone Act of 1989' and 'Deep Sea Fishing Authority, 1998'. It should be remembered that, the potential of EEZs can only be achieved when the coastal states possess the capacity to manage and exploit the resources, hence capacity building is very essential. The government should strive for obtaining scientific and technological abilities through the existing human resource and fisheries institutions are pooled and stimulated to pursue and gear towards sustainable development of marine resources.

It is also significantly recommended to step forward in improving the ‘Territorial Sea and Exclusive Economic Zone Act of 1989’ in Tanzania, although there is much to do in implementing the Act both at domestic and regional levels. Since the Act is general and basic one, then it needs a set of more detailed regulations for its implementation, therefore, I would like to suggest the following regulations to supplement the Act in the future;

- 1) Implementing regulations on EEZ and continental shelf;
- 2) Regulations on the management of foreign fishing;
- 3) Regulations on management of highly migratory and straddling species;
- and,
- 4) Regulations on the constructions and management of artificial installations at sea, (such as offshore cage culture, off-shore port, etc.)

Furthermore, a large proportion of marine scientific research takes place within 200 nautical miles of the coast, and all the major shipping routes of the world pass through EEZ’s of coastal states in which ports of departure and destination are situated. In view of these extensive activities apart from fisheries, it is crucial importance to abide the legal regime of the EEZ as provided in the UNCLOS 1982 to harmonize the use of sea.

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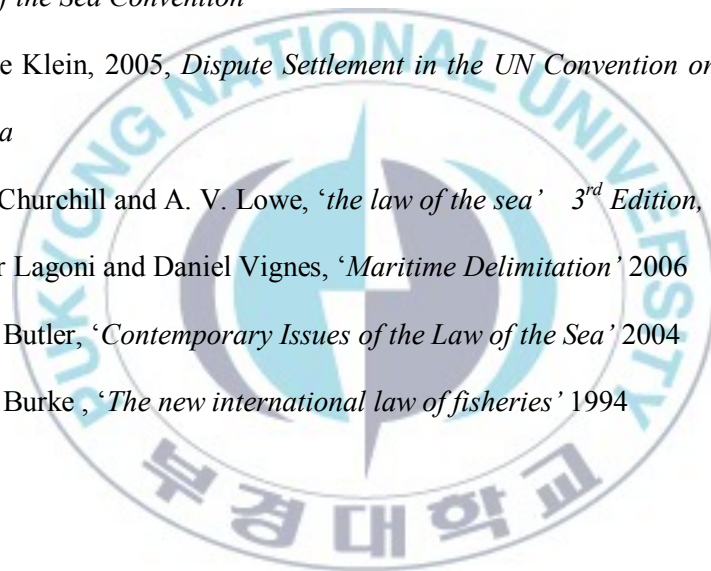
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