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Thesis for the Degree of Master of Fisheries Science

**A Study on Vietnamese Tuna Fishery
Management in the Context of
Collaboration with the Western and Central
Pacific Fisheries Commission (WCPFC)**



by

Vu Manh Cong

Division of Fisheries Science

The Graduate School of World Fisheries University,

Pukyong National University

August, 2021

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Management in the Context of Collaboration
with the Western and Central Pacific Fisheries
Commission (WCPFC)

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베트남 다랑어 어업관리 연구

Advisor: Prof. Andrew C.M. Baio

by

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A Study on Vietnamese Tuna Fishery Management in the Context of Collaboration with the Western and Central Pacific Fisheries Commission (WCPFC)

A thesis

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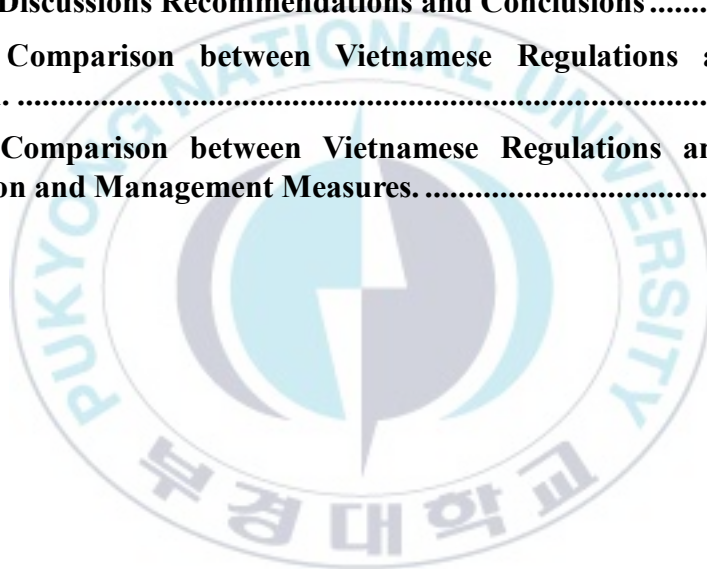
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ACRONYMS

ASC	Aquaculture Stewardship Council
BAP	Best Aquaculture Practices
CO	Carbon monoxide
CPUE	Catch Per Unit of Effort
CV	Chevaux Vapeur (Horsepower)
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CMMs	Conservation and Management Measures
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNMs	Cooperating Non-member
DCAFIS	Department of Capture fisheries
D-Fish	Directorate of Fisheries
EEZ	Economic Exclusive Zone
EU	European Union
FAC	Finance and Administration Committee
FAO	Food and agriculture organization of the united nations
GSO	General Statistics Office of Vietnam
Global GAP	Global Good Agricultural Practices
GDP	Gross Domestic Product
GRT	Gross Register Tonnage
GR	Gross Tonnage
HP	HorsePower
HDI	Human Development Index
IUU fishing	Illegal, unreported and unregulated fishing
IOTC	Indian Ocean Tuna Commission
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tuna
IMO	International Marine Organization
MT	Metric Tons
MARD	Ministry of Agriculture and Rural Development
NAFiQAD	National Agro-Forestry-Fisheries Quality Assurance Department
NSFC	National Financial Supervision Commission
OECD	Organization for Economic Cooperation and Development
PSMA	Port State Measures Agreement
DARDs	Provincial Departments of Agriculture and Rural Development
RFMOs	Regional Fisheries Management Organizations

RIA 1	Research Institute for Aquaculture No 1
RIA 2	Research Institute for Aquaculture No 2
RIA 3	Research Institute for Aquaculture No 3
RIMF	Research Institute for Marine Fisheries
SC	Scientific Committee
TCC	Technical and Compliance Committee
The US	The United States of America
VASEP	Vietnam Association of Seafood Exporter and Producer
VINAFIS	Vietnam Fisheries Society
VIFEP	Vietnam Institute of Fisheries, Economic, and Planning
VietGAP	Vietnamese Good Aquaculture Practices
WCPFC	Western and Central Pacific Fisheries Commission
WCPF	Western and Central Pacific Ocean



DECLARATION

I declare that the work in this thesis has been carried out by myself. Whist submitting my thesis for master degree, I have not been registered for any other research award. The work of this thesis have not been submitted to any other degree or academic award.



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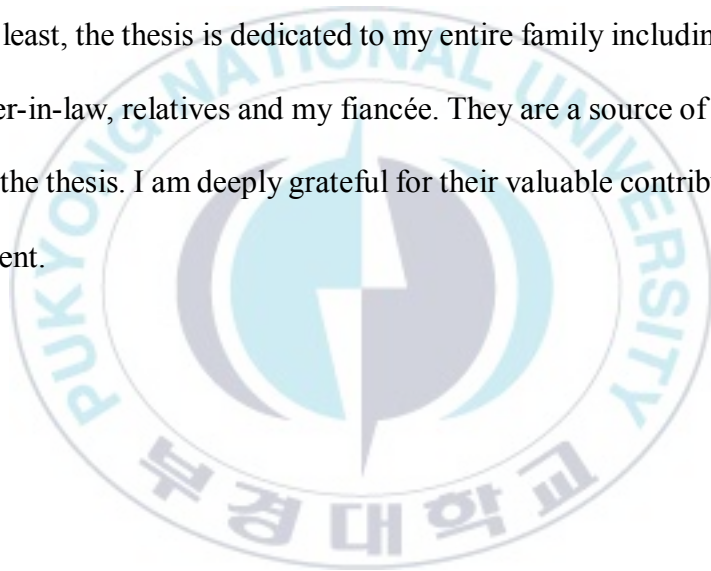
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A Study on Vietnamese Tuna Fishery Management in the Context of Collaboration with the Western and Central Pacific Fisheries Commission (WCPFC)

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Abstract

Tuna is a key export seafood product of many coastal localities of Vietnam with the total export value of US\$720,000 million (in 2019). However, even though the Tuna production of Vietnam has increased with increasing effort over the past 9 years, production in recent years has seen a slightly decreasing trend with increasing effort. Moreover, the Catch Per Unit of Effort has particularly witnessed a sharper decline. Vietnam is currently a cooperating non-member of the Western and Central Pacific Fisheries Commission (WCPFC). On ascension to full membership, the Tuna industry stands to benefit from the technical and material support of the commission. A logical pathway to becoming a full member of the commission is to ensure coherence and compatibility between the Government fisheries institutions and that of the commission. It is against this setting that the goal of the thesis is a sustainably exploited and managed Tuna fishery in Vietnam within a compatible and acceptable management framework involving the WCPFC, the national fisheries authority, and practitioners. In order to achieve the goal, three objectives have been pursued including; to review the status of the Tuna fishery in Vietnam in order to determine the opportunities to seize upon and challenges to address for sustainable resource exploitation; to review and compare the policy and regulatory provisions of the national fisheries authority and that of the WCPFC in order to discern the required alignment for compatibility and acceptability of a post-WCPFC membership governance structure; and finally; to propose required reforms in the fisheries of Vietnam to meet the Commission's approval for membership. Institutional analysis was drawn upon to examine the policy and legal framework of WCPFC in tandem with the regulative framework and policy of the Government of Vietnam. The results of the thesis show that by and large, Vietnam's regulations are aligned with WCPFC's management measures. However, several critical gaps and incompatibilities exist which require regulatory amendments or policy reforms in order to

ensure coherence with WCPFC's regulation. Therefore, the hypothesis that; Tuna fisheries governance in Vietnam is well aligned with WCPFC regulations has been rejected. The thesis advocates the precautionary principle and proposes specific recommendations that will enhance the compatibility of Vietnam's regulative framework with the Commission so as to obtain the approval for membership of the Western and Central Pacific Fisheries Commission.



Chapter 1. Introduction

1.0 Background

Chapter 1 has seven sections. It gives general information on where the study has been carried-out with respect to the social and economic environment. It also specifies the significance of the study and the thesis structure. Accordingly, Section 1.1 and its subsections, provides the geographic location of Vietnam; economic environment; demographic and socio-economic indicators and the poverty situation. Basically, the fisheries sector is a part of the wider economy; therefore, it is an important consideration to provide an overview of the socio-economic milieu in which the sector is embedded. Section 1.2 explains the rationale for the study. Section 1.3, 1.4, 1.5 specifies the research goal and objectives, questions, and hypothesis respectively. A single goal has been given. In order to achieve the goal, a number of objectives will be pursued. Section 1.6 details the significance of the research whereas, Section 1.7 outlines the structure of the entire thesis.

1.1 Country Economic and Social Context

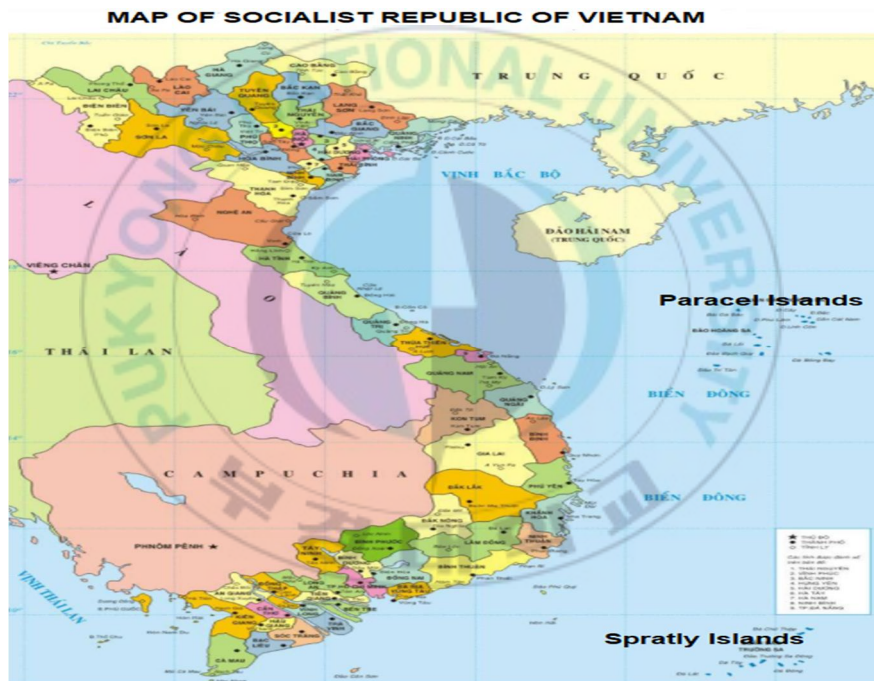
1.1.1 Geographic Location

Vietnam is situated in Southeast Asia, bordering China to the North, Laos and Cambodia to the West, and the South China Sea to the East and the South. The country lies between the latitudes 8° and 24°N, and the longitudes 102° and 110°E. Vietnam has a total land area is 331,698 km² and an estimated coastline of 3,260 km. The EEZ area of the country is around 753 883 km² (FAO 2019). Vietnam ratified the United Nations Convention on the Law of the Seas in 1994 (National Assembly of Vietnam 1994), showing the willingness to participate in the international community's quest in promoting maritime development and cooperation.

Marine fisheries resource production of Vietnam in the period 2011 to 2015 was estimated at 4.36 million MT, of which annual allowable catch was estimated at 2.45 million MT (RIMF 2018). In 2018, total fisheries production hit 3.59 million thousand MT up 6% from 2017 of which marine catch reached 3.37 million MT (D-Fish 2019). Vietnam has a dense river system with 2,360 rivers with a length of 10 km or more, including 106 major rivers, 105 lakes, and about 3,000-5000 reservoirs (VIFEP 2018a). The annual output of domestic exploitation from these water bodies is significant, around 180-200 thousand MT. In 2018, inland fishing output reached 218 MT (ibid.). Aquaculture has become a staple production activity

for many fishermen in Vietnam. Aquaculture contributes to creating jobs for workers as well as generating foreign currency income for the country. The total aquaculture area in 2018 was 1.3 million hectares with an output of about 4.3 million MT (ibid.).

Figure 1: Map of Socialist Republic of Vietnam



1.1.2. Economic Environment

The development progression of Vietnam in the past 30 years has been impressive. The economic and political reforms under Doi Moi, implemented in 1986, promoted a speedy economic growth, turning one of the lowest income countries

in the world into a middle-income country. During the period 2002-2018, GDP per capita rose by 2.7 times and reached more than US\$ 2,700 in 2019, and over 45 million people were no longer living in poverty (World Bank 2020). The economy of the country which relied heavily on agriculture is gradually moving towards more services and manufacturing-oriented economic activities. In 2019, only 17% of GDP was obtained from the agriculture sector while 39% was derived from the industry sector and 44% was accounted for by the services industry (Ngo 2019).

The fisheries sector contributed US\$ 8.743 billion¹ to the GDP in 2019 representing 3.4% of the national GDP which translates into 24.4% of the agriculture sector GDP (GSO 2019). In terms of the Human Development Index (HDI), Vietnam ranked 118 out of 189 in 2018 (United Nations Development Programme 2019). Vietnam's GDP growth in 2019 was 7.02% from 2018 a slight drop from the rate of 7.08 from the previous period 2017-2018. Inflation was kept below 3.6% as core inflation remained stable under 1.5% (National Financial Supervision Commission of Vietnam 2019).

¹ In May, 2019, the exchange rate is US\$1= 23,475 VND
(Source:<http://ncif.gov.vn/Pages/NewsDetail.aspx?newid=21742#:~:text=T%C3%ADnh%20%C4%91%E1%BA%BFn%20ng%C3%A0y%2031%2F5,%C4%91%E1%BA%A7u%20th%C3%A1ng%205%20nC4%83m%202019>)

1.1.3 Demographic and Socio-economic Indicators

According to General Statistics Office of Vietnam (2019), the population of Vietnam was 96.5 million, growing by 1.15% compared to the same period in 2018. The rural population is 62.7 million persons accounting for 65% of the population. The infant mortality rate (infant deaths per 1,000 live births) was 14‰ of which the under-five mortality rate (under-five deaths per 1,000 live births) was 21‰. The low death rates indicate the improvement in the maternity and child health care program in particular and the work of people's health protection and living standard improvement in general. The national average life expectancy at birth in 2019 was 73.6 years, of which the male's average life expectancy was 71.0 years and that for the females was 76.3 years (Op. Cit).

In terms of labor and employment, the labor force aged 15 and over (working-age) in the country was about 55.8 million people. With regard to gender disaggregation of the labor force, the female accounted for 47.3% while males represented 52.7%. There is a disparity between urban and rural areas in the labor force. In 2019, the working-age population in the urban areas made up 32.4%, and that of in rural area was 67.6%.

There were 54.7 million people employed in all sectors, of which employees in the service sector were 19.4 million persons, accounting for the biggest share (35.3%)

of the total national employment. The agro-forestry-fisheries sector employed 18.8 million persons, making up 34.5%; and 16.5 million persons were engaged in the industry and construction sector, accounting for 30.2% (ibid). The proportion of certified workforce in 2019 reached 22.8%, higher than the 2018 figures (22%). The unemployment rate of the working-age population was 2.17%, which was more or less the same in 2018 at 2.19%. The underemployment rate of the working-age population was 1.27% in 2019 (ibid.).

The provision of basic services has improved over the past 30 years. The capability of households to access infrastructure services has improved significantly. As of 2016, 99% of the population had reliable supply of electricity, rising from just 14% in 1993. Access to clean water in non-urban areas has been also enhanced significantly increasing from 17% in 1993 to 70% in 2016, while that of in metropolitan areas was over 95% (World Bank 2020).

1.1.4. Poverty Situation

Vietnam has obtained impressive results in alleviating poverty and promoting the quality of life for its people. According to World Bank (2018), enhancing revenue from agriculture, facilitated Vietnam's poverty alleviation strides, with poverty dropping by almost 4% since 2014, to 9.8 percent in 2016. For food poverty, Bui and Huyen (2020) show that 48.57% of Vietnam's rural population lacks food,

while 53.10% are vulnerable to food shortages. During 2014-2018, Gini coefficient measure of inequality in Vietnam was 0.4. The level of inequality in the rural area was higher than in the metropolitan areas. In 2018, the richest household group (the group of 20% of the richest population) had an average income per capita per month of US\$409.13 (GSO 2019). This figure was 10 times higher than that of the poorest group (the group of 20% of the poorest population) with an average income per capita per month of US\$40.53². Small scale fisheries play a crucial role not only in providing food but also in alleviating poverty. According to Zweig et al. (2005), offshore fisheries alleviates poverty from high on-boat operations to downstream employment (e.g., in processing). However, coastal and inland aquaculture and inshore coastal and inland fisheries management are considered to have more impact in sustaining livelihoods.

1.2 Rationale for the Study

Vietnam is currently, a cooperating non-member of the Western and Central Pacific Fisheries Commission (WCPFC). The Tuna industry stands to benefit from both technical guidance and material support from the commission when it becomes a full member. This will put the industry in good stead to derive optimal and sustainable societal utility from the Tuna resource. However, in order to fulfil the

² In the first quarter of 2018, the exchange rate fluctuated at US\$1= 22.770 - 22.780 VND (Source: <https://vneconomy.vn/chot-quy-1-2018-ty-gia-usd-vnd-on-dinh-20180330121510286.htm>)

requirements of full membership, the fisheries of Vietnam should follow the regulation of the commission and implement its policies and principles. But as Hollingsworth (2000) observed, economic behaviour and performance are shaped by the entire social system of production in which actors are embedded and not simply by specific principles of particular management styles and work practices. Consequently, mismatched multiple institutions could result in some wide departures from the desired state of affairs if not properly aligned. Therefore, it is worthwhile to conduct an investigation into the “Vietnamese tuna industry in the context of collaboration with WCPFC” with respect to addressing the aforesaid challenges. This will enable the review of the implementation of Vietnam's Tuna fishery policy and a proposal of the required enabling environment for the ascension to the full membership of the WCPFC. Additionally, the investigation seeks to forge an acceptable and compatible governance arrangement between the WCPFC, the national fisheries authority, and the Tuna fishery actors in the field so as to sustainably meet the full potential of the fishery in terms of revenue generation, employment, and food security.

1.3 Research Goal and Objectives

1.3.1 Research Goal

From the foregoing analysis, the goal of the study is; - a sustainably exploited and managed Tuna fishery in Vietnam within a compatible and acceptable management framework involving the WCPFC, the national fisheries authority and practitioners.

1.3.2 Research Objectives

In order to achieve the goal, a number of objectives should be pursued:

1. Review the status of the Tuna fishery in Vietnam in order to determine the opportunities to seize upon and challenges to address for sustainable resource exploitation.
2. Review and compare the policy and regulatory provisions of the national fisheries authority and that of the WCPFC as they relate to coherence in order to discern the required alignment for compatibility and acceptability of a post-WCPFC membership governance structure.
3. Propose required reforms in the fisheries of Vietnam to meet the Commission's approval for membership.

1.4 Research Question

Principal Question

The principal question of the research is: What are the required reforms to achieve a Tuna fishery in Vietnam that is sustainably exploited within a compatible and acceptable management framework involving all interested parties?

Sub-question

A number of questions should be answered to address the said objectives:

1. What are the opportunities or challenges in Vietnamese Tuna fishery to seize upon or resolve respectively for sustainable exploitation?
2. How compatible/coherent is the Tuna fishery governance framework of the national fisheries authority is with the WCPFC arrangements?
3. What are the required reforms to establish synergy/coherence between the national fisheries governance framework and that of the WCPFC?

1.5. Hypothesis

It is hypothesis that:

Tuna fishery governance arrangement in Vietnam is well aligned with the WCPFC for full membership of the commission and sustainable resource exploitation.

1.6. Significance of the Research

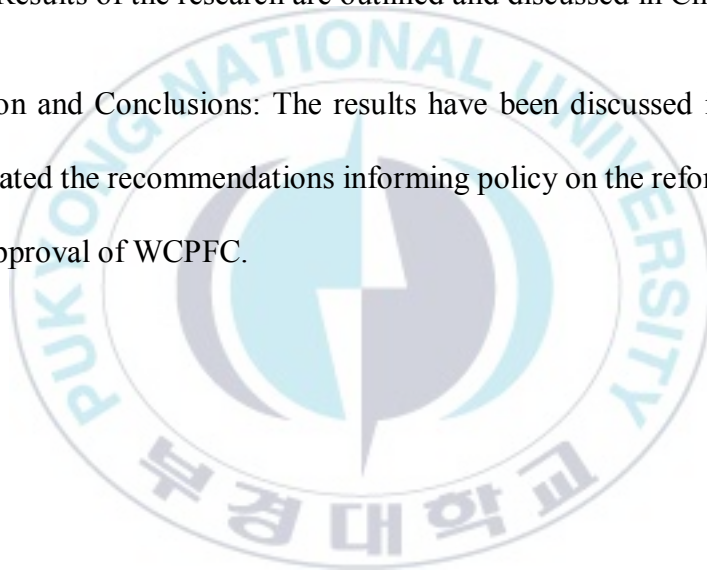
The result of this study will identify gaps in Tuna fisheries regulations of Vietnamese fisheries and proffer corrective measures. Secondly, it will assess the adequacy or otherwise, of institutions currently engaged in the Tuna fishery to live up to the task of effective and efficient Tuna resource management. Thirdly, it raises the issue of the importance of joining the WCPFC and explores reforms and capacity development required to assume membership in a coherent and compatible manner.

1.7 Thesis Structure

The thesis is divided into the following Chapters:

1. Introduction: This introductory chapter gives an overview of the socio-economic situation of Vietnam in order to contextualize the study in the prevailing social, cultural, and economic circumstances. The goal, objectives, research questions, hypotheses of the research have also been outlined in this Chapter.

2. Overview of the fisheries and aquaculture of Vietnam: The fisheries and aquaculture of Vietnam is reviewed with a special focus on the Tuna fishery, especially highlighting opportunities and constraints of the Tuna sector.
3. Material and methods: The methods applied in the research are outlined and explained as well as specifying data analytical approach.
4. Results: Results of the research are outlined and discussed in Chapter 4.
5. Discussion and Conclusions: The results have been discussed in this Chapter which generated the recommendations informing policy on the reforms required to obtain the approval of WCPFC.



Chapter 2. An Overview of the Fisheries and Aquaculture Sector of Vietnam

2.1 Overview of the fisheries and aquaculture sector of Vietnam

Background

Vietnam has 3,260 km of coastline with an EEZ area of around 1,000,000 km². The country also has more than 4,000 small and big islands stretching from North to South in addition to 12 large lagoons. More than 100 estuaries; a dense canal system; including more than 2,000 rivers with a length over 10km; 1,055 lakes with an area of 05 or more hectares with a total area of 332,190 hectares and about 3,000-5,000 reservoirs (Nguyen 2010; VIFEP 2018a). According to the evaluation report of the Research Institute for Marine Fisheries (RIMF) in 2018, the marine fishery resource biomass in the period 2011 – 2015 of Vietnam were 4.36 million MT, of which the annual allowable catch is estimated at around 2.45 million MT (RIMF 2018). These natural endowments have the potential for significant societal wellbeing from the use of fisheries resources in Vietnam.

The fisheries sector plays a pivotal role in the socio-economic development. Vietnam's fisheries sector has made significant progress to become an integral sector in the national economy, contributing impressively to the process of industrialization and modernization of agriculture in particular and the country's economic development in general. In 2019, the fisheries sector accounted for 24.4%

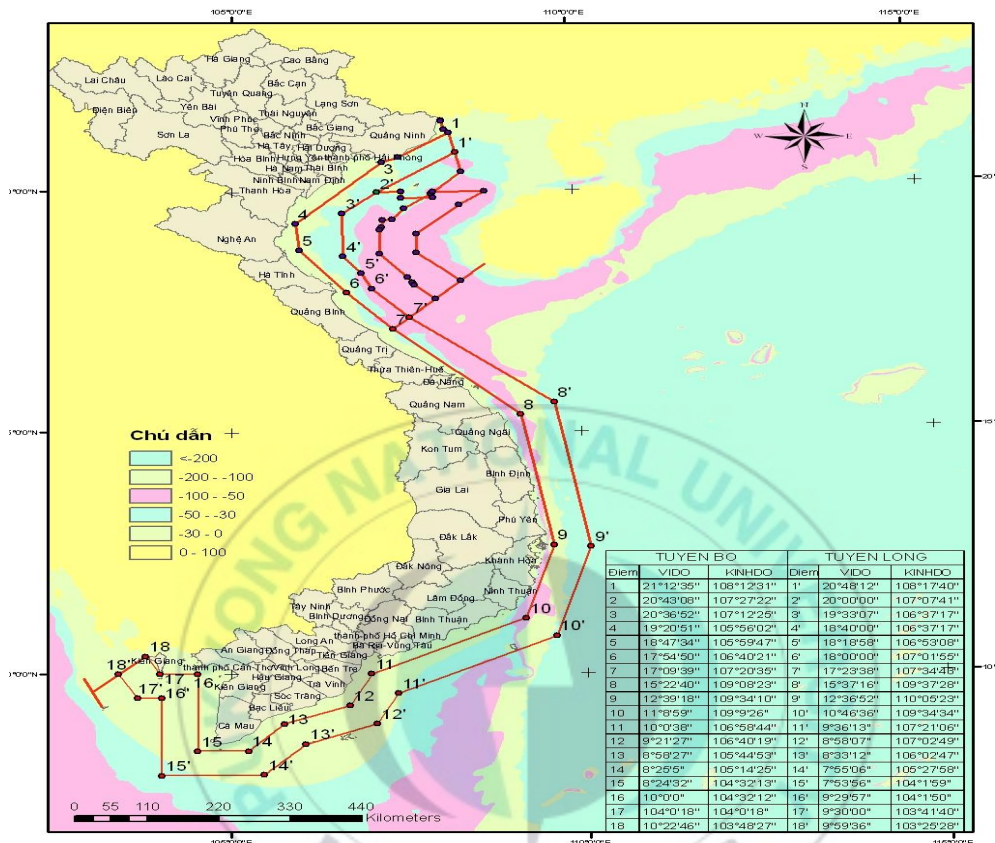
of agriculture gross domestic product (GDP) and 3.4% of the country's GDP (General Statistic Office of Vietnam 2019). About 30% of the dietary animal protein consumed by Vietnamese people is derived from varied fisheries products. Per capita consumption of fish rose from 12.8 kg to 20.4 kg during the period 1990-2000 and to 36.3 kg in 2017 (FAO 2019). However, it varies considerably from 60 kg per capita in Long An province to 30 kg per capita across the Mekong Delta down to 12 kg per capita in the Northern interior (ibid.). The sector also provides around 4.7 million jobs throughout the country with 1 million in capture fisheries, 2.5 million in aquaculture, and 1.2 million in processing and fisheries-related work (Harper and Sumaila 2019). Vietnamese seafood export revenue hit US\$8.6 billion (VASEP 2019) becoming the third largest exporters in value. The increase in Vietnam's exports mainly resulted from whitefish and crustacean trade (Rabobank 2019). The fisheries sector in Vietnam is sub-divided into three main sub-sectors; the marine, the inland, and the aquaculture sub-sectors (FAO 2019).

2.1.1 Marine sub-sector.

The marine fisheries are not readily classified into small-scale/artisanal or commercial fisheries in Vietnam. Engine sizes, hull length, distance from shore, fishing depth, and gear deployed all play some role in defining the type of fishing. In general, the country's marine fisheries are considered to be small-scale (Pomeroy et al. 2009). The marine fisheries are characterized by multiple species

and multiple gears mainly located in 4 fishing areas (Tonkin Gulf, Central Coast, South West, and South East). Other than these geographical zones, the fishing areas can be divided into the nearshore area, middle area, and offshore area. In 2010, the Government of Vietnam decreed (Decree 33/2010/ND) the management of capture fisheries to organizations and individuals in Vietnam's seawater. The Decree divided Vietnam's seawater into 3 areas of fishing zones. The near-shore area refers to the area limited by the water edge and the near-shore route, in which the vessels with a capacity of less than 20 HP could operate. The middle area refers to the area limited by the near-shore route and middle route which allows vessels with capacity from 20-90HP to operate; the offshore area refers to the area limited by the middle route and the outer boundary of the Vietnamese exclusive economic zone (EEZ) which allows vessels with a capacity greater than 90 HP to operate. The near-shore area and the middle shore area are showed in Figure 2:

Figure 2: Map of Fishing Zone Area of Vietnam



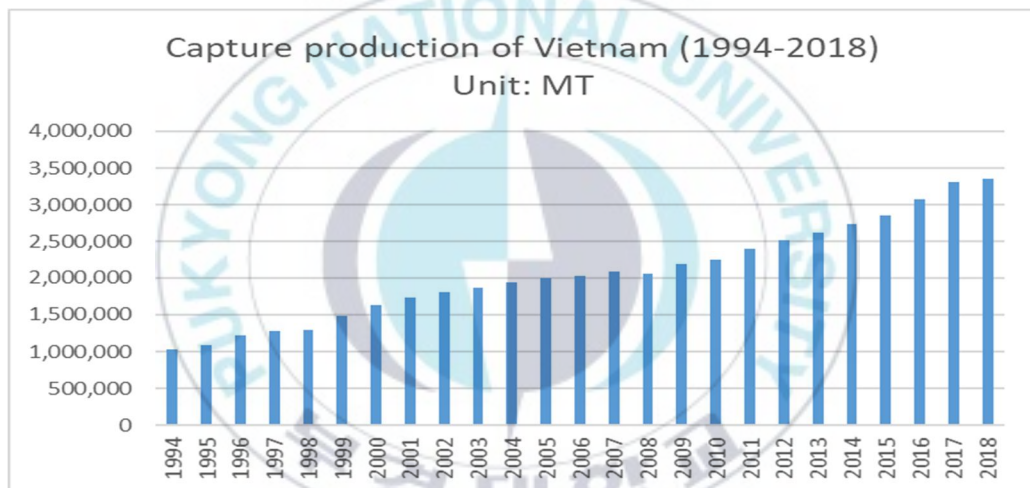
Source: Vietnamese's Government, 2010

Development of Marine Fisheries Production

Marine fisheries have developed significantly and rapidly since the early 1990s, contributing significantly to increasing Vietnam's seafood export turnover. In 1994, the production of capture fisheries was 1,025,909 MT. By 2018, the output rose to 3,347,039 MT, accounting for nearly 50% of Vietnam's total aquatic

product output (FAO 2019). Vietnamese capture fisheries consist of marine fishing and inland fishing, of which marine fishing accounted for 93.9% whereas; inland made up for 6.1% in 2018. Tuna fishing provided 16,650 MT of the total marine fisheries catch, accounting for 0.5% of the total marine fisheries catch (D-Fish 2018).

Figure 3: Capture Production Trend in Vietnam for the Period 1994-2018 (Unit: MT)



Source: FAO, 2019

Development and Diversity of Marine Fishing Fleets

There were only 41,266 fishing vessels with a total capacity of 727,500 horsepower (HP) in 1990 (Pham 2015) which has more than doubled to 96,000 fishing vessels in 2018 (D-Fish 2019). Vessels are now categorized by length for management purposes instead of by HP as previously practiced. Accordingly, in

2018 Vietnam had 46,491 vessels with the length from 6-12m, 8,914 pieces of 12-15m long, 27,484 pieces of 15-24 m, and 2,958 pieces ranging from 24m and above. There were also more than 40 different fishing gear types used in marine capture fisheries. The major ones are trawl, gillnet, purse-seine, longline, fixed trap and netting (D-Fish 2018).

Commercial Aquatic Resources

The main commercially exploited aquatic resources of Vietnam comprises of approximately 12,000 species of which 6,000 are demersal fauna; 2,435 species of fish, of which more than 100 are of economic value; 653 species of seaweed; 657 species of zooplankton; 537 species of phytoplankton; and many other kinds of seaweeds and seabirds. Some of the key commercially exploited fish species in Vietnam are; Japanese scad (*Decapterus maruadsi*), Yellowtail scad (*Atule mate*), Redspine threadfin bream (*Nemipterus nemurus*), skipjack tuna (*Katsuwonus pelamis*), frigate mackerel (*Auxis thazard*), yellowfin tuna (*Thunnus albacares*), bigeye tuna (*T. obesus*), longtail tuna (*Thunnus tonggol*), mahi-mahi (*Coryphaena hippurus*) ...

2.1.2. Inland fisheries

Inland fisheries still play a crucial role for rural people in many inland regions. Inland aquatic resources identified include; 1,027 freshwater fish species

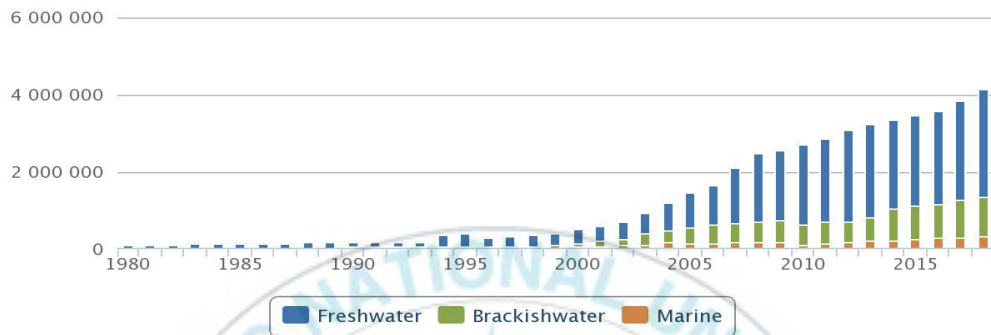
belonging to 22 orders; 97 families; and 427 breeds. Inland capture fishery landings include culture-based-capture, through the stocking of lakes, dams, and other inland waters, mainly with carp and tilapia which has considerable potential. The annual output of domestic exploitation is about 180-200 MT. In 2018, inland fishing output reached 218 thousand MT (VIFEP 2018).

2.1.3 Aquaculture

Since 1995, Vietnam's aquaculture has seen rapid growth. The growth rate of aquaculture is higher than that of capture fisheries. According to D-Fish (2018), aquaculture production surged from 415 thousand MT in 1995 to 4.3 million MT in 2018 (more than 10 times). The farming area reached 1.3 million hectares in 2018 (D-Fish 2018) from 230 thousand hectares in 1980 (Ngo 2012). The farming area remains stable, but the output has grown due to investment in management and technology. Aquaculture is mostly concentrated in the Mekong River delta (accounting for 95% of *Pangasius* production and 80% of shrimp production). Many international certifications such as Aquaculture Stewardship Council (ASC), Global Good Agricultural Practices (Global GAP), and Best Aquaculture Practices (BAP) have been applied in aquaculture. This is a good premise for approaching and expanding international markets.

Figure 4: Aquaculture Production of Vietnam in the period 1980-2018

Aquaculture production by culture environment the Socialist Republic of Viet Nam (tonnes)
Source: FAO FishStat



Source: FAO, 2019

The aquaculture sector can be categorized into marine, brackish, and freshwater aquaculture with brackish water aquaculture accounting for the largest proportion. Vietnam's marine aquaculture sector has been growing by about 20% per year since 2010 to produced 431,600 MT of fish and shellfish, from an area of 258,000 hectares, in 2018 (VIFEP 2018a). In relation to brackish aquaculture, Vietnam has a huge potential for coastal aquaculture with shrimp being the main species. The area of brackish water aquaculture recently increased dramatically - driven by the action plan of the Government aiming to push up shrimp production throughout the country, especially from brackish water shrimp farming. The total area used for brackish-water shrimp culture in 2017 was 720,000 hectares with an output of 689,000 MT (D-Fish 2018). In 2017, the area for stocking tiger shrimp

hit 621,000 ha and the area for rearing whiteleg shrimp reached 99,000 ha (ibid.). With respect to freshwater aquaculture; ponds, cages, net enclosures in reservoirs, lakes, rivers are the main environments for this kind of culture. In the North, Chinese carps mainly silver carp, grass carp, and bighead were reared mostly in pond culture which is considered as a suitable farming system (FAO 2005). The main freshwater aquaculture production was from the South of Vietnam, especially with the *Pangasius* as the key species. In 2019, the total area of *Pangasius* farming in the Mekong Delta was estimated at 6.6 thousand hectares and production reached 1.42 million MT (D-Fish 2019).

Diverse species are cultured in Vietnam including indigenous species (tiger shrimp, catfish pangasius (*Pangasius hypophthalmus*), and basa (*Pangasius bocourti*) and exotic species (tilapia (*Oreochromis mossambicus*), white-leg shrimp (*penaeus vannamei*), trout (*oncorhynchus mykiss*), sturgeon (*acipenser gueldenstaedtii*)). Brackish shrimp (white leg shrimp, tiger shrimp), Catfish pangasius, basa and tilapia are key species that have generated a high turnover, greatly contributing to the development of the fisheries sector. Other species with high economic value such as; cold-water finfish, mollusks, giant freshwater prawn and lobster, have grown steadily and contributed to increasing the yield and value from the fisheries sector. For the most part, aquaculture plays a pivotal role in creating employment, increasing income, and securing the livelihood for local people, thereby contributing to the economic development of Vietnam.

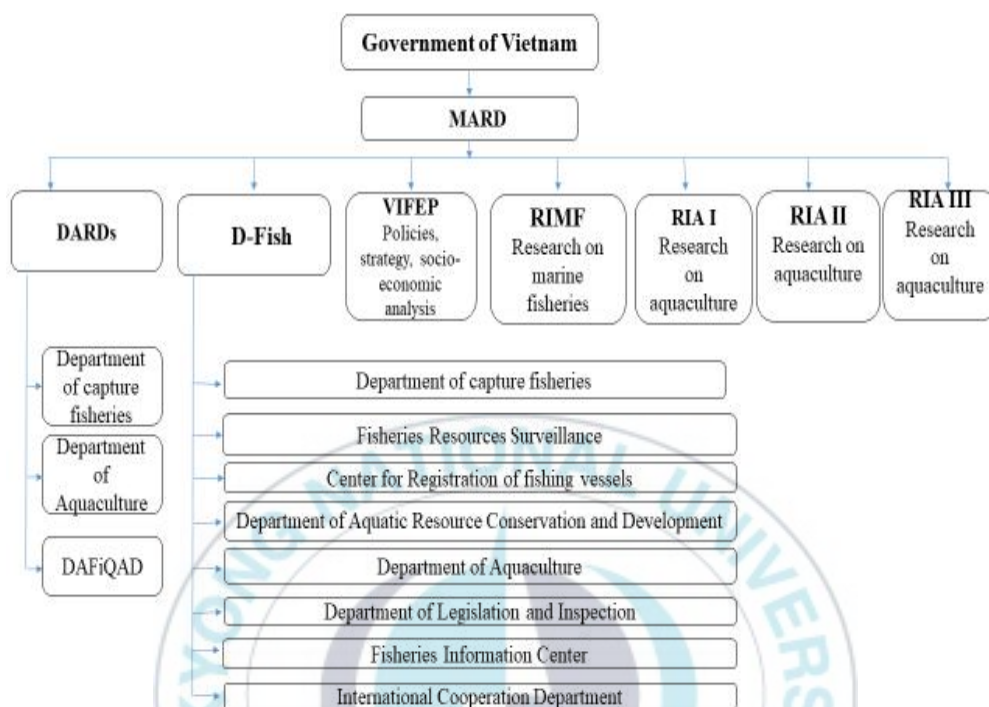
2.1.4. Fisheries Governance Organogram.

The main body responsible for the governance of fisheries and aquaculture in Viet Nam is the Ministry of Agriculture and Rural Development (MARD). Under MARD, the Directorate of Fisheries (D-Fish) supervises the management of fisheries and aquaculture. D-Fish has the responsibility for the formulation of policies and strategies for the development of fisheries and aquaculture and the enforcement of regulations related to fisheries production and conservation of fisheries resources. D-Fish is also in charge of the collection and aggregation of data on capture fisheries and aquaculture.

Apart from D-Fish, MARD also have institutes and universities involved in resource governance. The Research Institute for Marine Fisheries (RIMF) is in charge of research on marine fisheries; Research Institute for Aquaculture No 1 (RIA1); Research Institute for Aquaculture No 2 (RIA2); and Research Institute for Aquaculture No 3 (RIA3) - located along the country, are responsible for research on aquaculture in the country and Vietnam Institute of Fisheries, Economics and Planning (VIFEP) is tasked with research on economics, mechanism, policy, and planning for fisheries development. MARD also issues guidance documents to the Provincial Departments of Agriculture and Rural Development (DARDs) on the management of fisheries and aquaculture. Fisheries and aquaculture operations are conducted based on such guidance.

Additionally, the Viet Nam Sanitary and Phytosanitary Notification Authority and Enquiry Point is responsible for applying the sanitary measures related to international trade. The National Agro-Forestry-Fisheries Quality Assurance Department (NAFiQAD) is responsible for ensuring the quality and safety of agricultural, forestry, fishery products. The Department of Animal Health is responsible for the prevention and control of aquatic animal diseases, control of slaughter, veterinary hygiene, and management of veterinary and aquatic drug production and trading establishments. Agro-trade Viet Nam is in charge of the management of processing and preserving agricultural, forestry, and aquatic products. Some other stakeholders also contribute to the development of the fisheries sector in Vietnam such as The Vietnam Association of Seafood Exporters and Producers (VASEP), The Vietnam Fisheries Society (VINAFIS)....

Figure 5: Fisheries Governance Organogram of Vietnam



Legal and Regulatory Framework

Before 2019, Vietnamese fisheries was regulated by the Law on Fisheries No. 17/2003/QH11 (hereafter referred to as the 2003 Law on Fisheries). Based on the 2003 Law on Fisheries, a number of guiding documents, including circulars, decrees, were issued to guide the implementation of the Law. In order to align with international regulations and new requirements, Vietnam's National Assembly adopted a revised law on fisheries in 2017, the so-called Law on Fisheries No. 18/2017/QH14. The new law came into force on 1 January 2019, replacing the 2003 Law on Fisheries. The new law adopts a comprehensive

approach with new regulations such as; regulations on the management of fishing vessels, fishery logistic facilities, fight against illegal, unreported and unregulated (IUU) fishing, co-management in fishery resources protection, planning on protection and development of aquatic resources. The Government promulgated Decrees to implement the Law and the MARD issues circulars, decisions, and directives to implement the Government's Decrees. Under MARD, D-Fish will enact decisions and instructions to implement policies on seafood production. A number of policies were issued to manage the fisheries sectors including policies for capture fisheries, policies for fisheries resources conservation and development, and policies for aquaculture management.

Policies for Sustainable Fisheries and Aquaculture Management

Vietnam has been working towards issuing better policies to manage aquaculture and capture fisheries in a sustainable way. In terms of aquaculture, Vietnam has issued many policies for the development of key species such as Pangasius, brackish water shrimp ... These policies aim to promote aquaculture production to reduce fishing pressure in the capture fisheries sector. Some of aquaculture management policies such as Decree 55/2017/ND-CP on regulating Pangasius catfish farming, processing, and exporting; Decision 3824/QD-BNN-TCTS dated 06/09 2014 providing regulations on Vietnamese Good Aquaculture Practices

(VietGAP); Decision 4184/QD-BNN-TCTS dated on 18/10/2017 on approval of development scheme for national product "brackish water shrimp".

Additionally, Vietnam has also issued guidelines to help aquaculture farms comply with and implement the requirements of food safety, environmental protection, labor rights, and social responsibility. Fisheries Law 2017 also mentioned that satisfactory regulations on food safety is one of the conditions of the aquaculture establishment (Article 38).

Regarding the capture fisheries and protection of aquatic resources, Vietnam is well aware that, complying with and applying international law and management measures is the best way to exploit and manage natural resources in a sustainable manner. Therefore, Vietnam has adopted the Fisheries Law 2017 with many amendments to conform with international laws such as combating illegal, unreported, and unregulated fishing, managing fishing vessels, joining international conventions.

In terms of combat against IUU fishing, Vietnam has promulgated Decision No 78/QD-TTg on the national plan of action to prevent, deter and eliminate illegal, unreported, and unregulated fishing up to 2025. This plan was a step for the amendment of the policy pertaining to IUU fishing, contributing to conserve and protect of fisheries resources. According to Fisheries Law 2017, Vietnamese

competent authority shall certify the origin of captured fish and fisheries products from Vietnamese water (Article 61); publish the list of fishing vessels engaged in illegal fishing; strictly fine violating ship owner or captains (including withdrawal of fishing license, or refusal to re-issue the fishing license). These measures will help to curb and eliminate IUU fishing activities. Vietnam also added a new chapter (Chapter VI) on fisheries surveillance which confirms Vietnam's ambition to eliminate IUU fishing with stronger management measures.

Viet Nam has also applied Port State measures to fight against IUU fishing. Vietnam has issued Decision No 988/QĐ-BNN-TCTS on March 2019 with the announcement of the list of the fishing ports that are qualified to confirm seafood product traceability. Besides, Vietnam is implementing the FAO Port State Measures Agreement (PSMA), an international legal instrument to stop IUU fishing.

Vietnam has also issued a variety of policies for fisheries resource conservations and development such as Decision No.742/QĐ-TTg of the Prime Minister dated May 26th, 2010, approving the plan on the system of Vietnam's marine protected areas to 2020; Decision 188/QĐ-TTg dated on February 13th, 2012, approved the Program on protection and development of aquatic resources to 2020. These policies help to conserve and protect the fisheries resources of Vietnam.

2.2. Strategies for to Improving Tuna Production and Handling

2.2.1 Current Status of Tuna Fisheries of Vietnam

Tuna is captured in all 28 coastal provinces of Vietnam, but the major area is the South Central provinces targeting 3 main species: yellowfin tuna (*Thunnus albacores*), bigeye tuna (*Thunnus alalunga*), and skipjack tuna (*Katsuwonus pelamis*). In 2019, the total export revenue of Vietnamese tuna was 719 US\$ million from exports to nearly 100 countries and territories globally (VASEP 2019). Besides, the development of the tuna industry, the fishery also contributes to creating jobs for about over 35,000 workers in the coastal areas of the Central region.

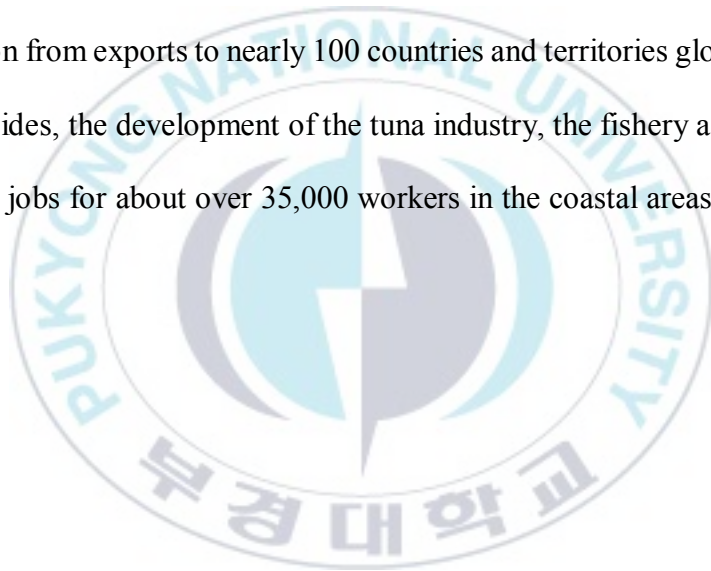
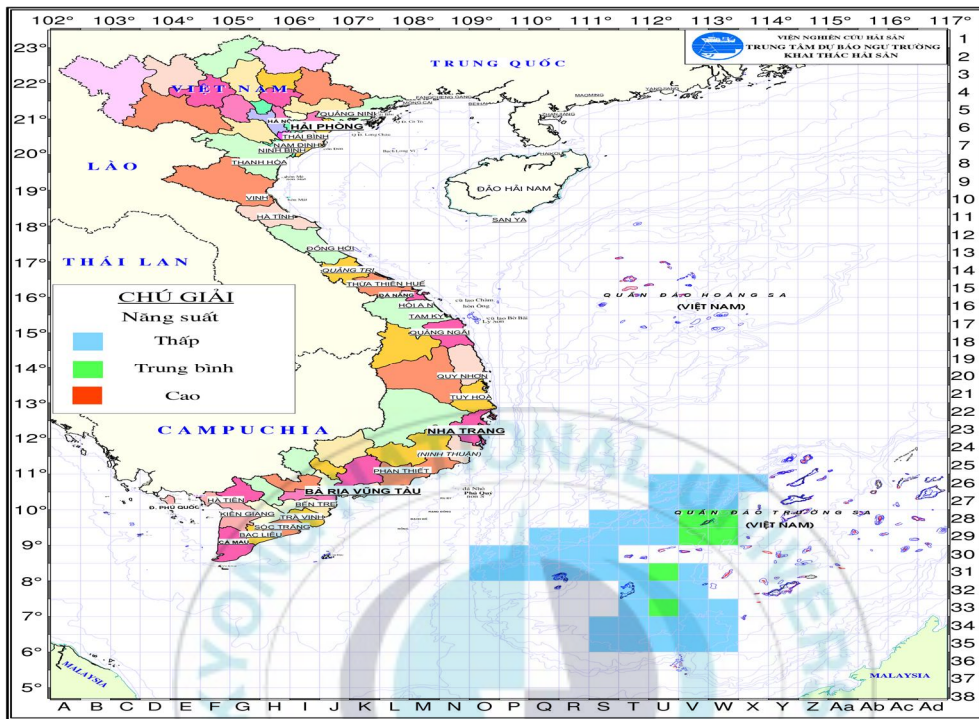


Figure 6: Map of Tuna Fishing Grounds in Vietnam (October, 2020)



Source: Directorate of Fisheries, 2020

2.2.1.1 Fleet and Production

In 2019, there were about 7,688 tuna fishing vessels, concentrated in the provinces of South Central such as Binh Dinh, Phu Yen, Khanh Hoa. Between 2011 and 2019, the group of vessels with capacity of less than 250 CV (Chevaux Vapeur)³ decreased by -4.9%/year, while the group of vessels with capacity of 250-399 CV increased on average by 6%/year and vessels with the capacity of above 400 CV

³ Chevaux Vapeur is a French word meaning horsepower

increased by 69%/year. During this period, the number of vessels with capacity of 250 CV and above rose significantly because Vietnam issued some policies to develop offshore capture. The group of inefficient vessels with capacity below 250 CV were upgraded to larger capacity. On the contrary, the number of vessels with capacity below 250 CV (see Table 1) decreased.

Table 1: Distribution of Tuna Fishing Fleets in Vietnam in the Period of 2011-2019

No	Size class (HP)	Number of Vessels (pcs)								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
I	Tuna longline	1102	1772	1729	1645	1623	1689	1924	2277	3248
1	50 - 89	156	173	9	0	1	0	0	3	87
2	90 - 149	142	518	169	22	8	9	5	5	244
3	150 - 249	531	742	399	201	85	89	73	70	45
4	250 - 399	240	270	647	687	418	407	391	395	323
5	> 400	33	69	505	735	1111	1184	1455	1804	2549
II	Tuna gillnet	1312	1204	898	979	973	1003	1061	1018	2156
1	50 - 89	627	605	212	133	125	94	81	56	317
2	90 - 149	261	200	307	60	60	53	48	47	301
3	150 - 249	184	174	175	86	93	85	67	56	71
4	250 - 399	216	204	132	199	281	273	271	197	297
5	> 400	24	21	72	261	414	498	594	662	1170
III	Tuna purse seine	595	592	1014	1586	1461	1459	1493	1772	2284
1	50 - 89	134	136	131	79	64	59	64	78	81
2	90 - 149	184	194	118	90	73	58	66	81	185
3	150 - 249	44	56	114	154	138	127	120	147	186
4	250 - 399	233	206	242	513	456	404	350	423	483
5	> 400	20	0	409	750	730	811	893	1043	1349
	Total	3009	3568	3641	4210	4057	4151	4478	5067	7688
1	50 - 89	917	914	352	212	190	153	145	137	485
2	90 - 149	587	912	594	172	141	120	119	133	730
3	150 - 249	759	972	688	441	316	301	260	273	302
4	250 - 399	689	680	1021	1399	1155	1084	1012	1015	1103
5	> 400	77	90	986	1746	2255	2493	2942	3509	5068

Source: WCPFC, 2020

Tuna production increased rapidly from 2011 to 2019 with average annual growth of 12%/year. In 2019, the total catch of tuna was 109,314 MT, of which, yellowfin tuna and bigeye accounted for 22,407 MT, (20%) and skipjack tuna output hit 87,357 MT (80%). Even though the tuna production of Vietnam has increased with increasing effort over the years, production in recent years have seen slight decreasing trend with increasing effort (Figure 7). The Catch Per Unit of Effort (CPUE) have particularly witnessed a sharper decline (Figure 8). This warrants dedicated stock assessment for informed sustainable exploitation. Sustainable resource management would be buttressed by support from WCPFC.

Table 2: Tuna Fishery Production in Vietnam for the period 2011 – 2019

N o	Fishing Gear	Tuna Fishery Production (MT)								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Longline	11954	16217	16177	13953	19885	17538	16681	17402	16207
	Bigeye tuna	2923	3761	2260	2350	2026	1115	1004	902	1554
	Yellowfin tuna	9031	12456	13917	11603	17859	16423	15677	16500	14653
2	Gillnet	13454	22375	39719	33603	31964	47439	41252	35026	32804
	Bigeye tuna	646	363	400	641	472	1671	411	276	228
	Yellowfin tuna	942	1024	2823	173	1762	771	560	521	599
	Skipjack tuna	11866	20988	36496	32789	29730	44997	40281	34229	31977
	Purse Seine	17235	26939	22484	33286	38902	58099	54692	68105	60303
	Bigeye tuna	345	965	805	1572	1676	2918	2508	3123	676
	Yellowfin tuna	3964	3336	2784	4229	5947	6617	6170	7683	4247
	Skipjack tuna	12926	22638	18895	27485	31279	48564	46014	57299	55380
	Total (nationwide)	42643	65531	78380	80842	90751	123076	112625	120533	109314

Source: WCPFC, 2020

Figure 7: Tuna production and number of tuna vessel during the period 2011-2019

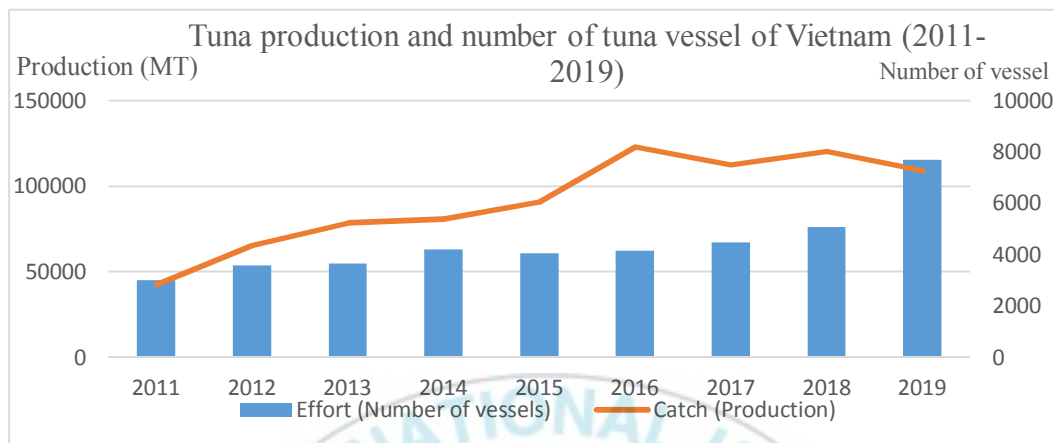


Figure 8: The Catch Per Unit of Effort (CPUE) of Vietnamese Tuna (2011-2019)

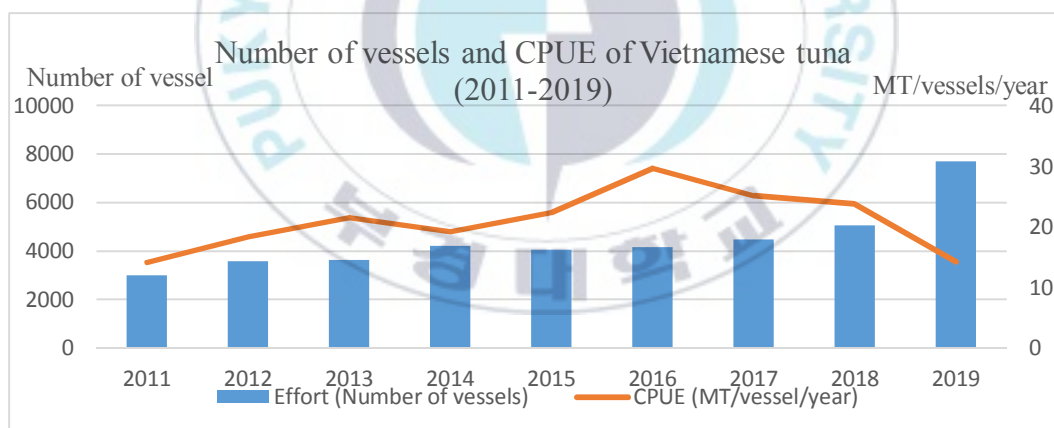


Figure 7 showed that the production tended to increase from 2011-2016, then levelled off from 2016-2018. From 2018-2019, the production tended to decrease. While the number of vessels tended to increase from 2011-2018, and sharply increase from 2018-2019.

Figure 8 indicated that CPUE tended to increase from 2011-2013 and 2013-2016. However, the CPUE tended to decline from 2016 to 2018, and then sharply fell from 2018-2019.

The foregoing analysis indicates that the sustainability of the Tuna is in doubt requiring urgent management attention. This calls for the application of the precautionary principle which provides that; “State should take into consideration uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality, and the impact of fishing activities (FAO 1995, 12). Moreover, the principle maintains that; “states should adopt cautious conservation and management measures, including, catch limits and effort limits (ibid., 13). As a regional fisheries organisation, the WCPFC apply international best practices including the precautionary principle. Should Vietnam become a member of WCPFC, the country will adhere to international best practices in addition to the technical guidance from the commission for the sustainable exploitation of fisheries resources.

2.2.1.2 Tuna Exports

The total export value of Vietnamese tuna was US\$719 in 2019, an increase of 8%/year compared to 2014 (US\$484 million). The main destination for tuna

products was the US market (accounting for 43.95%) and the EU (accounting for 19.47%) (WCPFC 2020).

Table 3. Export Value (m\$US) of the Vietnamese Tuna Products (2014-2019)

Product code	2014	2015	2016	2017	2018	2019
Tuna HS code 16 (1)	232	208	226	270	323	415
Canned tuna (HS code 16)	177	150	153	179	198	
Other processed tuna (HS code 16)	55	58	73	91	125	
Tuna HS code 03 (2)	252	246	284	323	330	304
Live /fresh/frozen/dried tuna (HS code 03) (ex. tuna HS code 0304)	59	43	43	50	51	
Tuna HS code 0304 (ex. surimi)	193	203	241	273	279	
Total tuna (1 + 2)	484	454	510	593	653	719

Source: WCPFC, 2020

Tuna exports to the US, EU, ASEAN, and Canada increased steadily over the years as demand in the export market remained high. The US market demanded more quantities of canned Tuna as well as frozen and fresh Tuna whereas; the European market largely demanded canned Tuna. Since the quality of handling Tuna in Vietnam was deemed unsatisfactory, exports of fresh and frozen Tuna products to Japan declined, leading to a decrease in Tuna exports to this market (VIFEP 2018b).

Chapter 3. Material and methods

The study uses descriptive and analytical frameworks to analyze the institutions of the Vietnamese Tuna fishery in tandem with the WCPFC framework so as to discern the required alignment for compatibility and acceptability of a post-WCPFC membership governance structure.

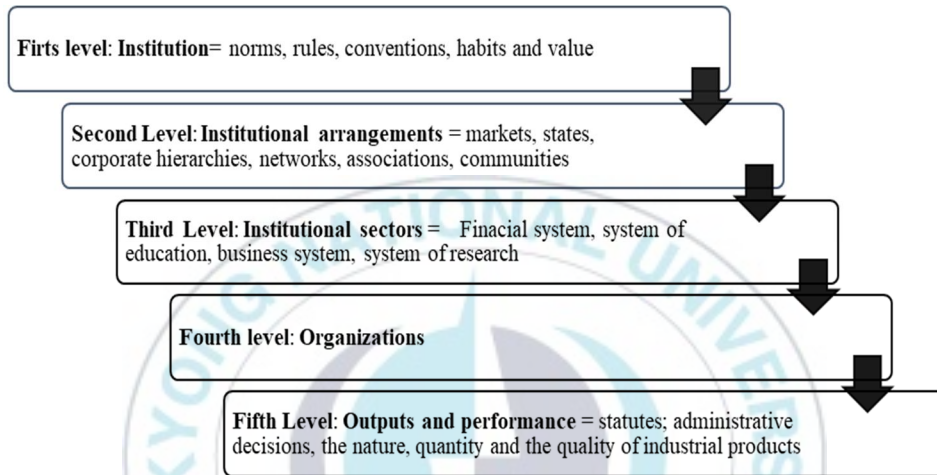
An in-depth review of the Tuna fishery in Vietnam was undertaken using secondary sources of information related to the research goal, objectives, questions and hypothesis, including published and unpublished reports/articles. Relevant documents (especially, legal, regulatory, policy and strategy documents from the national fisheries authority and WCPFC) collected from various sources such as the Vietnamese Ministry of Agricultural and Rural Development (MARD); Directorate of Fisheries of Vietnam (D-Fish); Vietnam Association of Seafood Exporter and Producer (VASEP), FAO, WCPFC and internet sources formed the basis of institutional and policy analysis to unearth opportunities to seize upon and challenges to address for a coherent management and sustainable Tuna resource exploitation in Vietnam.

3.1 Institutional Analysis

We have drawn upon the nested institutional analytical framework (Hollingsworth 2000) for a coordinated institutional analysis at 5 distinct but interrelated levels (Figure 9). However, for the purpose of addressing the specific goal of this study,

we only examine first level of institutional analysis (Op. Cit.) involving the comparative analysis of norms, rule and conventions of WCPFC and the Government of Vietnam for coherence and compatibility.

Figure 9: Components of Institutional Analytical Framework



Source: Hollingsworth 2000

The Tuna fish value chain and the legal, regulatory, policy and strategy provisions of both the national fisheries authority and the WCPFC were subjected to the framework as a way of ascertaining institutional coherence as well as identifying opportunities and challenges.

3.2 Tuna Value Chain in Vietnam

In Vietnam, Bigeye Tuna, Yellowfin Tuna, and Skipjack Tuna are the main target Tuna species. The value chain of these species is depicted in Figures 10 and 11.

Figure 10: Skipjack Tuna Value Chain in Vietnam

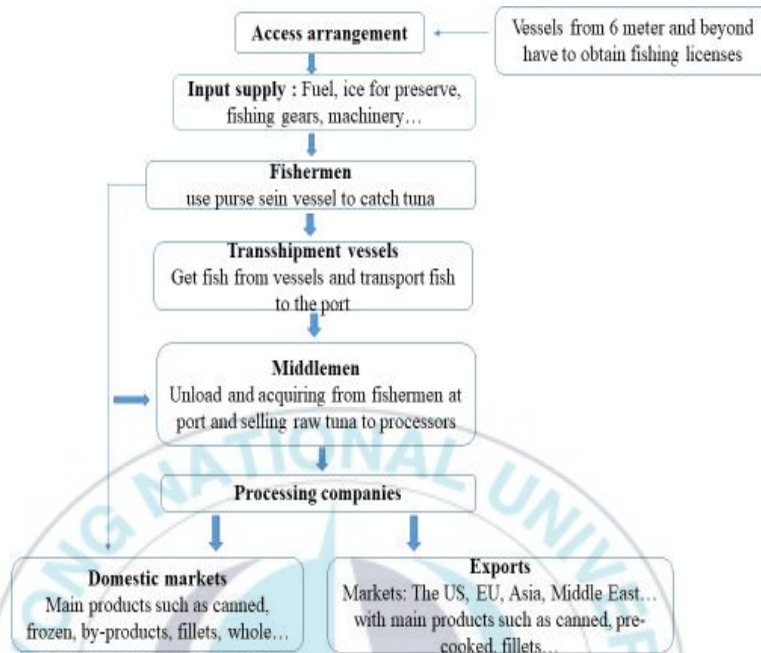
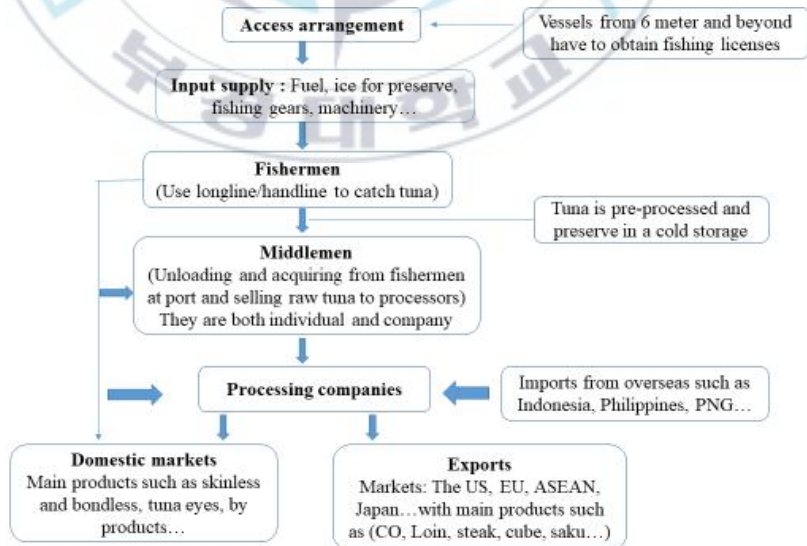


Figure 11: Yellowfin and Bigeyes Tuna in Vietnam



In terms of access arrangement, according to Fisheries Law 2017 (Article 50), fishing vessels of 6 meters and over have to obtain fishing licenses. Provincial People's Committee shall grant, extend, renew, and withdraw fishing licenses for these vessels while Ministry of Agriculture and Rural Development shall grant, extend, renew, and withdraw fishing licenses of the foreign organizations and individuals who conduct fishing operations in Vietnamese waters as well as Vietnamese organizations and individuals who conduct fishing operations beyond the jurisdiction of Vietnamese waters. Moreover, article 67 regulate fishing vessels with the maximum length of 12 meters and above which shall be technically inspected, classified, and granted with certificate of technical safety.

With regards to input supply, the input supply such as fuel, ice for preserving, fishing gears, machinery are procured by fishermen. However, according to (Luu 2018) most of the fishermen lack capital for production, so they have to depend on middlemen. Middlemen play an important role in providing loans and inputs for fishermen, and influence Tuna catch acquisition from fishermen.

3.2.1 Key Actors in the Tuna Value Chain:

In the skipjack tuna value chain, fishermen use purse seine vessels to harvest Tuna. Fishermen are the central actors in the chain, whose crew member average 10-15 members. Their fishing trip can last between 10-15 days then Middlemen buy the

Tuna catch from vessel owners and sell to processing companies. Transshipment vessels play as the role of providing logistic services. Processing company buys fresh Tuna product from middlemen, then process and exports or sell to the domestic market. Main products of domestic markets include canned, frozen, by-products, fillets and whole Tuna. Meanwhile, the main products for exports include canned, precooked and filleted Tuna for destinations such as the US, EU, Asia and the Middle East.

In the Yellowfin and Bigeyes Tuna value chain, fishermen are either individual or group fishers. They use handline/longline with the fishing team comprising of 6-8 members to fish for Tuna. Their fishing trip can last for 20-25 days and sell their catch to; Middlemen who then sell to the processing companies or supply to the domestic market. Processing companies set the price and purchase the bulk of Tuna production. Main products of domestic markets include skinless and bondless, Tuna eyes, by-product. Meanwhile, main products for exports include Tuna loin CO (Carbon monoxide), Tuna steak, Tuna cube, Tuna Saku destined for US, EU, Asia, and Middle East.

3.2.2 Challenges Faced by the Main Actors in the Value Chain

Fishermen

Fishermen have faced some difficulties such as:

- a) Production costs are high due to isolated fishing ground and increasing fuel price.
- b) Face risks at sea (weather conditions: Storm, tropical depression and safety at sea).
- c) Lack of preserving technology: According to (Luu 2018), 95% of vessels currently engaged in Tuna fishing are mainly wooden boats using traditional fishing techniques. Tuna, is shocked immediately after capture by an electric shocker before being loaded on-board. The fish is then pre-processed by removing its viscera, cleaning, and putting it into cold storage. Most fishing vessels currently use the traditional preservation method with mainly ground ice. The cold storage is quite rudimentary, usually made of wood with insulating rubber and waterproof sponge which cannot ensure the quality of fish.
- d) Fishers receive limited benefits from the chain. As (Nguyen and Curtis 2018) argued, brokers gain most of the benefit in relation to investment due to unfair market price. (Nguyen and Anh 2014) also submitted that the distributions of benefits and risk among the actors are unbalanced. The fishermen provide the largest investment but they receive the lowest benefits. Conversely, the middlemen and seafood processing companies get the largest share of benefit.

Companies

Companies have faced some drawbacks such as:

a) Scarce material resources,

b) Difficulties in export market. Tuna products of Vietnam encounter some difficulties in the market. In the US market Tuna enterprises must comply with the Dolphin safe label of the Earth Island Institute (EII) which takes a lot of time to verify for 2-3 times a year. Philippine and Thai companies enjoy 0% tax rate in the Japanese Market; whereas Vietnamese Tuna industry is to high-levels of import tax for canned skipjack Tuna products and Yellowfin Tuna/Steamed Tuna fillets and frozen Tuna.

WCPFC is responsible for granting annual quota for Tuna fishing and export to countries in the region. Currently, Vietnam has not joined this organization and without full membership, Vietnam's tuna export will face many difficulties.

Actors in the chain also have encountered difficulties in their interactions. (Nguyen and Anh 2014) showed that the Tuna value chain development is stalled due to the lack cooperation and sustainability. (Thu et al. 2020) indicated lack of trust amongst the Tuna fishing community. (USAID 2020) outlined the challenges in the Tuna value chain in Binh Dinh province including lack of supply chain management, and

lack of transparency between the players in the value chain. Additionally, (Nguyen and Anh 2014) argued that the participants in the Tuna value chain face difficulties in accessing information on the international markets and that they are disadvantaged due to the better bargaining power of the importers. Moreover, targeted policies the sustainable development of the Tuna value chain is limited.

Notwithstanding rapid development in recent years, Vietnam's Tuna fisheries have been facing some challenges such as; low production efficiency as the technology of fish capture and preservation of Tuna is obsolete and the production cost is high. The lack of cooperation between the actors in the chain and the unfair sharing of benefit, as well as lack of tax exemption and poor product quality results in low product competitiveness (in terms of price and product quality). These are issues that the country could address from the mentoring of regional fisheries organizations.

3.3 Policy Coherence

Policy coherence is defined as ensuring that policies are coordinated, complimentary and non-contradictory (Weston and Pierre 2003). We have approached the analysis from the static perspective OECD (2006) which focuses on:

- Internal policy coherence (whether the policy is coherent within the fisheries sector).

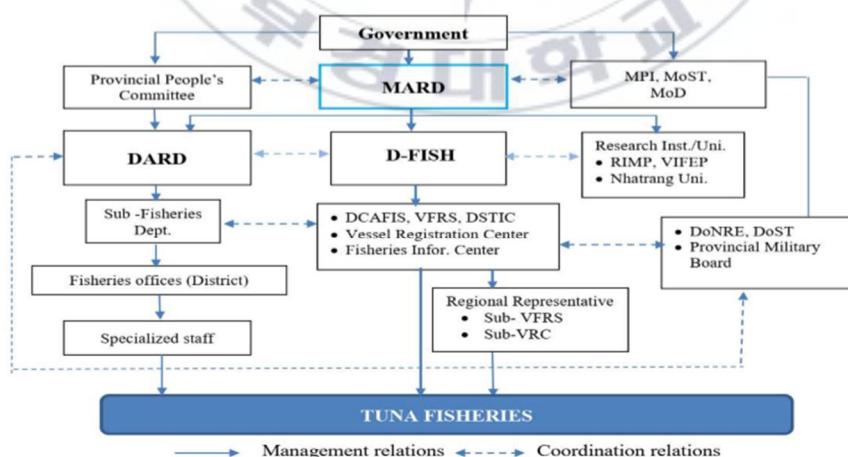
- Vertical policy coherence (investigates if policy is coherent at all levels - from local to international).
- Horizontal coherence (whether policy is coherent with other sectoral policies such as the environmental, forestry and agriculture policies).
- Trans-national coherence (coherence with regional and or international organizations such as Code of Conduct for Responsible Fisheries; Sustainable Development Goals).

3.4. Governance and Management Framework of Vietnam

3.4.1 Tuna Institutional Arrangements of Vietnam

The Tuna fisheries is managed by both central and local organizations.

Figure 12: Tuna Governance Organogram in Vietnam



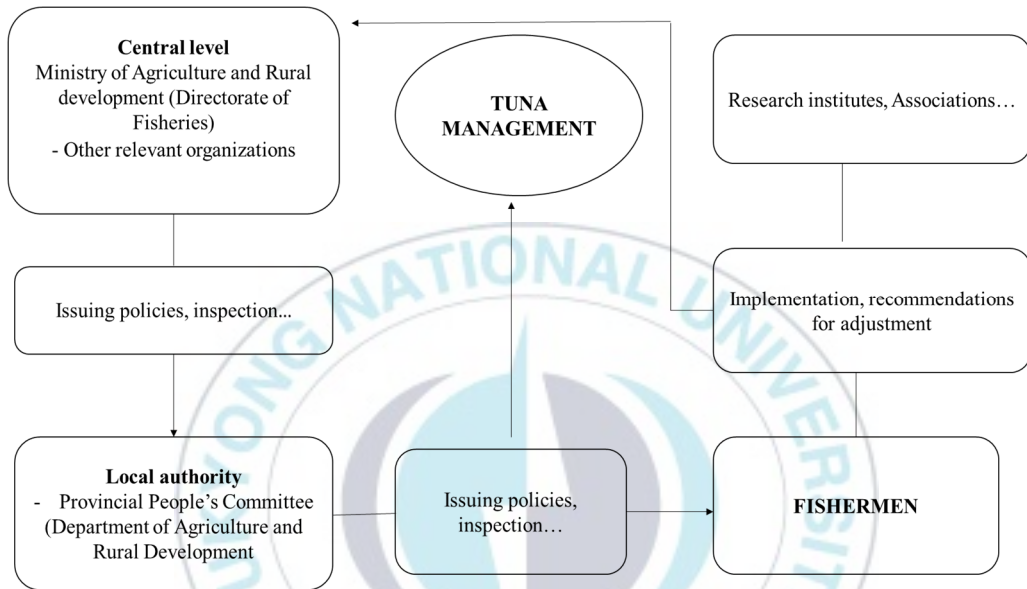
Source: USAID Oceans, 2020

At the central level, the main body responsible for the governance of fisheries and aquaculture in Viet Nam is the Ministry of Agriculture and Rural Development (MARD). Under MARD, the Directorate of Fisheries (D-Fish) supervises the management of fisheries and aquaculture. Under D-Fish, Department of Aquatic and Resources Conservation and Development is in charge of conservation of Tuna resources; Department of Capture fisheries (DCAFIS) supervise capture operation of Tuna, Tuna vessels, Tuna logistic facilities, catch control, traceability certificate. Centre for Registration of Fishing vessels is responsible for registry for vessels with the length of 20m or above; Department of Legislation and Inspection and Fisheries Resources Surveillance are in charge in inspecting, detecting and handling administrative violations in tuna fishing activities; Fisheries Resources Surveillance has the responsibility for monitoring vessels operating at sea; synthesis and statistics of tuna are subject to the duty of Fisheries Information Centre.

At the local level, the Sub-Department of Fisheries (under the Department of Agriculture and Rural Development at the provincial level) is an advisory body, assisting the Director of the Agriculture and Rural Department in managing fisheries. The Sub-Department is under the direction and management of the Department of Agriculture and Rural Development in accordance with the law; at the same time subject to professional guidance and examination by the Directorate of Fisheries under the Ministry of Agriculture and Rural Development.

Based on the Fisheries Law in 2017, the role of fisheries management of organizations at central and local levels was clearly specified.

Figure 13: State Agencies Managing Tuna Fishery in Vietnam



3.4.2 Organizations Involved in Tuna Fishery Management in Vietnam

Apart from state management agencies, there are some other stakeholders and organizations that also participate in contributing to the development of the tuna sector such as The Vietnam Association of Seafood Exporters and Producers (VASEP), Vietnam Tuna Fisheries Association (VINA TUNA), The Vietnam Fisheries Society (VINAFIS), RIMF (Research for Institute of Marine Fisheries, VIFEP (Vietnam Institute of Fisheries, Economic and Planning).

RIMF is in control of assessing marine resources, including tuna, fishing ground identification, and forecasting. RIMF also cooperates with D-Fish to develop technical regulations for the protection of tuna resources: fishing gear size, fishing method, fishing size, restricted area, forbidden time; Collecting data for tuna fisheries management...

VIFEP is in charge of researching policy and economic on fisheries development. In the period 2017-2018, VIFEP carried out a research on the solution for improving the efficiency of tuna value chain.

VINATUNA advocates the strengthening of cooperation between the government and processing plants, fishermen, and other players in the tuna sector. The organization also supports tuna processing companies and exporters in marketing activities and organizes training and awareness-raising for members. Notwithstanding, VINATUNA does not participate in controlling catch and export activities.

VASEP has the role in coordinating and linking the activities of enterprises, support in improvement value, quality, and competitiveness of Vietnamese seafood products, including tuna. They also represent and protect the legal and legitimate interests of members, including tuna enterprises.

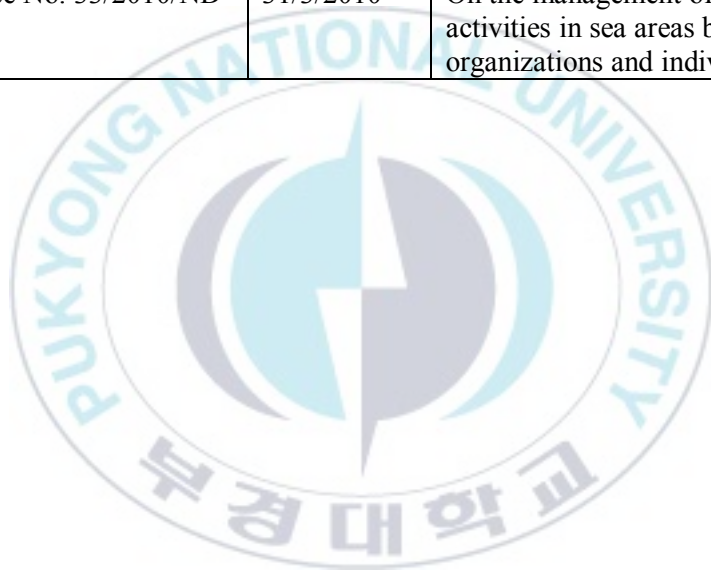
3.5 List of Vietnam's Legal Documents used to Compare with WCPFC Regulations.

No	Document reference	Date	Title
1.	Law No. 18 /2017/QH14	21/11/2017	Fisheries Law
2.	Decision 4840/QD-BNN-TCTS	23/11/2017	Approving the plan to implement some urgent solutions to overcome the warning of the European Commission on IUU
3.	Directive No. 45/CT-TTg	13/12/2017	On the implementation of urgent solutions to overcome the EC warning on IUU fishing
4.	Decision No.78/QD-TTg	16/1/2018	On approval of the national action plan to prevent, deter and eliminate Illegal, Unreported and Unregulated Fishing until 2025
5.	Circular 02/2018/TT-BNNPTNT	31/1/2018	Amending and supplementing Circular 50/2015/TT-BNNPTNT, Circular 02/2006/TT-BTS, Circular 62/2008/TT-BNN and Circular 26/2016/TT-BNNPTNT
6.	Decision No. 670/QD-BNN-TCTS	26/2/2018	Approve the implementation plan of the Prime Minister's Directive No. 45 CT-TTg dated December 13, 2017 on a number of urgent tasks and solutions to overcome the European Commission's warning against illegal, unreported and unregulated fishing.
7.	Circular 02/2018/TT-BNNPTNT	31/1/2018	Amending and supplementing Circular 50/2015/TT-BNNPTNT, Circular 02/2006/TT-BTS, Circular 62/2008/TT-BNN and Circular 26/2016/TT-BNNPTNT
8.	Circular 19/2018/TT-BNNPTNT	15/11/2018	Guiding on protection and development of fisheries resources
9.	Circular No. 21/2018/TT-BNNPTNT	15/11/2018	Regulation on recording the fishing logbooks; announcement of a designated fishing port to certify the origin of aquatic products from fishing; list of IUU fishing vessels; certification of raw materials, certification of fishing origin

10.	Circular 22/2018	15/11/2018	On seafarers aboard fishing vessels and state fisheries management vessels.
11.	Circular 23/2018/TT-BNNPTNT	15/11/2018	On technical inspection of fishing vessels, recognition of fishing vessel's technical inspection establishments, ensuring technical safety of fishing vessel, surveillance vessel, registration of fishing vessels, on-duty fishing vessels, removal of fishing vessels' registration, marking fishing vessels.
12.	Circular 24/2018/TT-BNNPTNT	15/11/2018	Regulate updating, using and managing national fisheries database
13.	Decree No. 42/2019/ND-CP	16/5/2019	On sanctioning of administrative violations in the field of fisheries.
14.	Decree 26/2019/ND-CP	8/3/2019	On detailing a number of articles and measures for the enforcement of fisheries Law 2017
15.	Decision 886/QD-BNN-TCTS	18/3/2019	announcing the List of designated fishing ports with enough system to confirm the origin of aquatic products from fishing (phase 1)
16.	Decision 988/QD-BNN-TCTS	26/3/2019	Announcing the List of designated fishing ports with enough system to confirm the origin of aquatic products from fishing (phase 2).
17.	Decision 1276/QD-BNN-TCTS	19/4/2019	Announcing the List of designated fishing ports with enough system to confirm the origin of aquatic products from fishing (phase 3).
18.	Decision 1481/BNN/TCTS	02/05/2019	Allocating the quota of fishing licenses of offshore exploitation for coastal provinces.
19.	Decision 3621/QD-BNN-TCTS	18/9/2019	Announcing the List of designated fishing ports with enough system to confirm the origin of aquatic products from fishing (phase 3).
20.	Decision 4413/QD-BNN-TCTS	04/11/2020	Promulgating the action plan of the MARD to implement the Government's Resolution No. 26/NQ-CP of March 5, 2020, promulgating the master plan and the Government's 5-year plan implementing the Resolution No.

			36-NQ/ TW dated October 22, 2018 of the 12th Party Central Committee on the Strategy for sustainable development of Vietnam's marine economy with a vision to 2045.
21.	Circular 13/2020/TT-BNNPTNT	9/11/2020	Amending and supplementing some articles of circular 02/2018/TT-BNNPTNT
22.	Decision No. 339/QD/TTg	11/3/2021	Approving Vietnam's fisheries development strategy to 2020, with a vision to 2045.
Vietnam's legal documents on capture and conservation of fisheries resources issued before Fisheries Law 2017			
23.	Decree No. 43/2017/ND-CP	14/4/2017	On the labeling of goods, the Decree excludes export goods which are not domestically consumed and are not subject to labeling
24.	Decree No. 41/2017/ND-CP	5/4/2017	Amendment and supplementation to a number of article of the decree on administrative penalties for violations in fields of aquaculture, veterinary, animal breeds, animal feed, forest management, development and protection, and forestry product management.
25.	Circular 04/2017/TT-BNNPTNT	24/2/2017	Providing the list of wild animals and plants specified in the Annexes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
26.	Decision 811/BNN-TCTS	6/2/2016	Approval of action plan for conservation of Vietnamese sea turtles for the period 2016-2025
27.	Decision No. 1976/QD-TTg	12/11/2015	Approving the master plan on the system of fishing ports and storm shelters for fishing vessels through 2020, with orientations toward 2030
28.	Decision No. 3562/QD-BNN-TCTS	1/9/2015	Promulgating the Tuna Fisheries Management Plan in Vietnam
29.	Decision 3465/QD-BNN-TCTS	6/8/2014	Approving the Pilot Project of exploiting, purchasing, processing and consuming tuna by chain
30.	Decree No.47/2015/ND-CP	14/5/2015	On the organization and operation of the agriculture and rural development inspectorate

31.	Decision 1445/QD-TTg	16/8/2013	Approving the master plan for fisheries development up to 2020, with a vision to 2030
32.	Decision No. 2760/QD-BNN-TCTS	22/11/2013	Approving "Project on restructuring the fisheries sector towards increasing added value and sustainable development".
33.	Decision No 188/QD-TTg	13/2/2012	Approving the program on protection and development aquatic resources to 2020
34.	Decision No.742/QD-TTg	26/5/2010	Approving the plan on the ecosystem of Vietnam's marine protected areas to 2020
35.	Decree No. 33/2010/ND-CP	31/3/2010	On the management of fishing activities in sea areas by Vietnamese organizations and individuals



Chapter 4. Results

4.1 Regulations of Tuna Fisheries Management in Vietnam

Vietnam has not yet issued any specific legislation for Tuna fisheries management. However, the country has stipulated a comprehensive fishery legislation system from the Law to its guiding and implementing regulations. These documents regulate capture fisheries operation, preservation of aquatic resources, regulation on fishing vessels and fishery logistic service establishments, seafood processing, import and export, and quality management of seafood. In which, tuna is also subject to the regulation of legal documents on fisheries in general.

The new Fisheries law enacted in 2017 adopts a comprehensive approach with new regulations such as; regulations on the management of fishing vessels, fishery logistic facilities, fight against illegal, unreported, and unregulated (IUU) fishing, co-management in fisheries resources protection, planning on protection and development of aquatic resources, including Tuna. The Law regulates on exploitation and conservation of fisheries resources including Chapter II: Protection and development of fisheries resources; Chapter IV: fishing operation; Chapter V: Management of fishing vessels, on-duty fisheries vessel, fishing ports, storm shelters of fishing vessels; Chapter VI: Fishing surveillance; and Chapter VII: Purchase, sales, pre-processing, export and import of fish and fishery products.

In order to orientate the development of the fisheries sector in general and the Tuna fishery in particular, a number of regulatory documents have been issued such as:

Decision No. 339/QD-TTg dated March 11, 2021 conveying the Prime Minister's approval of Vietnam's fisheries development strategy to 2020, with a vision to 2045. Contents of the decision related to Tuna fisheries sector includes; the development of marine fishing in the high seas, especially for pole and line tuna fishing; investment in advanced science and technology for Tuna fishing to improve the efficiency and quality of Tuna products; building and developing the brand of Vietnamese Tuna.

Decision 1445/QD-TTg dated August 16, 2013, approving the master plan for fisheries development up to 2020, with a vision to 2030. According to the decision, by 2020, the output of Tuna would reach 15,000-17,000 MT. However, in reality, the total output of Tuna in 2019 was 109,314 MT, 6-7 times higher than the oriented output.

Decision No. 2760/QD-BNN-TCTS approving "Project on restructuring the fisheries sector towards increasing added value and sustainable development". The specific issues in the decision includes 1) Reorganization of fishing vessel management, fishing capacity management, fishing seasons, fishing grounds in accordance with the exploitation capacity of marine resources for each region,

promote the decentralization of management of fishing vessels exploiting at coastal waters for local authorities to increase efficiency and effectiveness of management close to reality, reduce the fishing capacity, ensure preservation and rehabilitation of coastal marine resources; and 2) Investigate, monitor, and evaluate fisheries resources, collect fisheries information and forecast from fishing ground, continue the investigation to collect fishery data for sustainable fisheries.

Decision No. 3562/QD-BNN-TCTS dated September 1, 2015, promulgating the Tuna Fisheries Management Plan in Vietnam with the goal of managing Tuna fishing in accordance with international standards through the application of resource protection and management solutions to sustainably develop Tuna fishing in Vietnam. Specifically:

- The landing of Tuna at the fishing port should be statistically guaranteed to ensure traceability.
- The logbook system should be consolidated and operating stably.

Decision 3465/QD-BNN-TCTS dated August 6, 2014, on approving the Pilot Project of exploiting, purchasing, processing, and consuming Tuna from the value chain perspective.

Circular No. 21/2018/TT-BNNPTNT dated November 15, 2018 Regulation on recording the fishing logbooks; announcement of a designated fishing port to

certify the origin of aquatic products from fishing; list of IUU fishing vessels; certification of raw materials, certification of fishing origin. This is one of the regulations was issued to improve the efficiency of fisheries management, enhancing efforts to combat to IUU fishing of Vietnam.

Decision 886/QD-BNN-TCTS dated March 18, 2019, announcing the List of designated fishing ports with systems to confirm the origin of aquatic products from fishing.

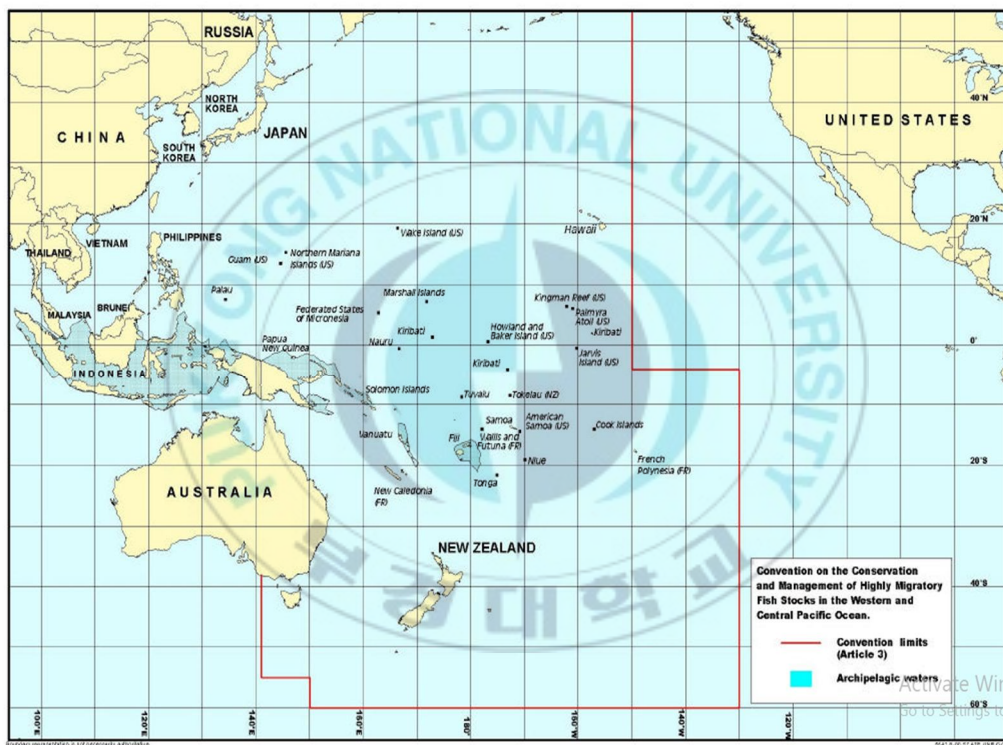
4.2. Governance and Management Framework of WCPFC

4.2.1 Organizational Structure of WCPFC

Allen (2010) indicated five Tuna RFMOs including the West and Central Pacific Fisheries Commission (WCPFC), the International Commission for the Conservation of Atlantic Tuna (ICCAT), the Inter-American Tropical Tuna Commission (IATTC), the Indian Ocean Tuna Commission (IOTC) and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). As one of the RFMOs, WCPFC was established by the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC Convention) which came into force on June 19, 2004. This Convention is the result of the long negotiations from 1994 until the Convention was officially enacted and implemented on 19 June 2004. The area covered by the Convention covers almost 20 percent of the Earth's surface (see figure 14 below). The Convention area does not include the South China Sea although the western boundary extends to the east Asian coast. The Convention area does not include the

South China Sea although the western boundary extends to the east Asian coast. The Convention area is adjacent or overlaps with the competence area of the Inter-American Tropical Tuna Commission in the east. The southern limit stretches out to 60 degrees South and the northern limit stretches out to Alaska and the Bering Sea.

Figure 14. Area of Competence WCPFC



Source: WCPFC, 2006

As of February 2021, WCPFC has 34⁴ official members, which include both independent states and participating territories. In addition, WCPFC also has the participation of 9⁵ cooperating non-member countries (CNM), including Vietnam.

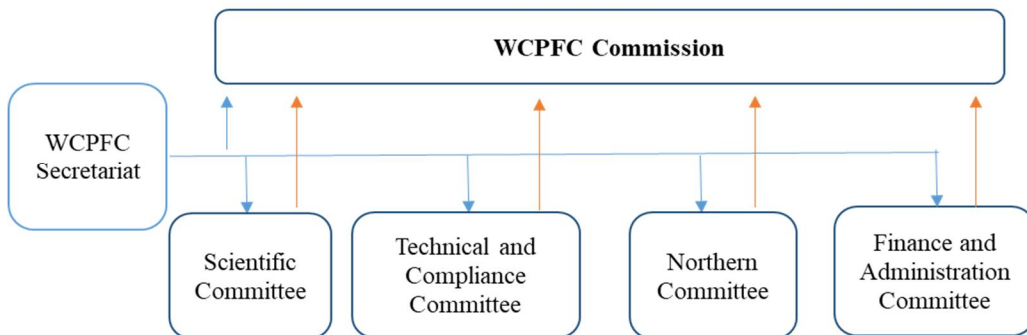
The objective of WCPFC is to warrant the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 United Nations Convention on the Law of the Sea and the 1995 UN Fish Stocks Agreement (FAO 2021).

The Commission supports four subsidiary bodies; the Scientific Committee (SC), the Northern Committee (NC), Technical and Compliance Committee (TCC), and the Finance and Administration Committee (FAC). Each of these bodies meets once a year followed by a full session of the Commission. A Secretariat was set up to assist the work of the Commission (WCPFC 2021).

⁴ Australia, China, Canada, Cook Islands, European Union, Federated States of Micronesia, Fiji, France, Indonesia, Japan, Kiribati, Republic of Korea, Republic of Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America, Vanuatu, American Samoa, Commonwealth of the Northern Mariana Islands, French Polynesia, Guam, New Caledonia, Tokelau, Wallis and Futuna.

⁵ The Bahamas, Curacao, Ecuador, El Salvador, Liberia, Nicaragua, Panama, Thailand, Vietnam.

Figure 15: Organizational Structure of WCPFC



Scientific Committee (SC) is established to advise the best scientific information for decision-making process. Accordingly, SC's meeting is annually conducted in August to address issues related to scientific data collection, stock assessment, and reporting of resources status for species/stocks managed by WCPFC. The meeting provides scientific advice to the Commission relating to management policies consistent with the status of resources.

Technical and Compliance Committee (TCC) organizes a meeting every September to discuss issues related to resource management, policy implementation, and enforcement. The TCC uses the findings on the status of resources from the SC to propose to the Commission, new or alternative management measures or tools. The TCC also evaluates the renewal application of CNM states at these meetings and recommends (or otherwise) membership renewal to the Commission before the Commission's meeting in December.

The Northern Committee is a special committee set up by the Commission to implement recommendations related to a part of the Convention Area at the 20 degrees North latitude. Members of this committee encompass all members located in the northern region, but observers may be sent by other members. The Commission makes decisions on management and conservation measures in the area based on the recommendations of the Northern Committee.

The Secretariat: The Commission also set up a Secretariat to assist the work of the Commission.

The Commission will set up other subsidiary bodies when necessary to perform its tasks, including working groups to evaluate technical issues and report the result of the working group to the Commission. The Commission also elect an Executive/Management Board including a Chairperson and a Vice-Chairperson from among the Contracting Parties.

4.2.2. WCPFC Regulations on Management and Conservation

4.2.2.1. The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

WCPFC was set up within the framework of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. The Convention was issued to guarantee the long-term conservation

and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean following the 1982 United Nations Convention on the Law of the Sea and the 1995 UN Fish Stocks Agreement. The Convention encompasses 12 parts, 44 articles, and 3 annexes.

Part I: General provisions, includes four articles: (1) Use of terms, (2) Objective of the Convention; (3) Area of application; (4) Relationship between the Convention and the 1982 Convention.

Part II: Conservation and management measures of migratory fish stocks, with the four Articles on conservation and management: (1) Principles and measures (2) The application of precautionary approaches; (3) The implementation of principles within the jurisdiction of the jurisdiction, (4) Compatibility of conservation and management measures.

Part III. The Commission for the Conservation and Management of Highly Migratory Fish Species in the Western and Central Pacific Ocean. This chapter consists of 14 articles, divided into 7 sections: Section 1: regulations on the establishment of committees, tasks of committees, subsidiary bodies; Section 2: Scientific Committee, stipulates the tasks of the Scientific Committee and Scientific Service provider; Section 3: Technical and Compliance Committee, tasks of the Committee; Section 4: Secretariat, Section 5: Financial arrangements of the

Commission; Section 6: Decision Making, Section 7: Transparency and cooperation with other organizations.

Part IV, obligations of the members of the commission: Member of the Commission should take measures to ensure its national, and fishing vessels owned or controlled by its national fishing in the Convention Area, comply with the provision of this Convention.

Part V, duties of flag States.

Part VI, regulations on compliance and enforcement including compliance and enforcement, boarding and inspection, and measures taken by a port State.

Part VII, regional observer program and transshipment regulations.

Part VIII, requirements of developing states.

Part IX, procedures for the settlement of disputes among members of the Commission.

Part X, Non-parties to this Convention.

Part XI, the provisions of good faith and abuse of right.

Part XII, the final provisions including regulation on the signature, ratification, acceptance, and approval of the Convention, accession, amendment, and withdrawal of the Convention, the entry into force...

4.2.2.2. WCPFC Management and Conservation Measures

WCPFC has issued many different conservation and management measures (CMMs), some have been replaced, some have been amended and supplemented. The objective of the CMMs is to provide to CCMS guidelines for their fishing operations in the Convention Area to achieve the goal of the Convention. As of February 2021, WCPFC has issued 41 resource conservation and management measures. The measures are listed and compare with Vietnamese regulation in Annex 2.

4.3 Analysis of Policy Coherence

4.3.1 Analysis of Fisheries Policy Coherence of Vietnam

4.3.1.1 Internal Policy Coherence

Internal policy coherence is observed between Vietnamese Fisheries Law and its guiding documents such as Decree, Decision, Circular. Fisheries Law in 2017 was adopted by the National Assembly as a general framework. Soon after the Law was enacted, governmental and ministerial documents were also developed to provide

detailed guidelines on how to implement the Law. For the most part, the documents on the fisheries sectors are issued in compliance with procedures and regulations to ensure consistency and uniformity. For example, the Decrees are in accordance with the Fisheries Law; the ministerial level documents are in line with documents issued by the Cabinet, Prime Minister, and with the Fisheries Law.

4.3.1.2 Vertical Policy Coherence

Fisheries Law 2017 is built on the principle of compliance with regulations and conventions of international law (e.g. Article 8 prescribed conservation and management of the aquatic living resources in the high seas and migratory fish species regulated by regional fisheries management organizations, and the United Nation Convention on the Law of the Seas 1982). Based on Fisheries Law 2017, MARD issues circulars, decisions, and directives to implement the Government's Decrees. Under MARD, D-Fish enacts decisions and instructions to implement policies on fisheries production. Based on the MARD's and D-Fish direction, DARDs issued documents to manage and develop the fisheries and aquaculture in each province in order to fulfil their tasks at lower levels. The management system at the provincial and district levels is similar to that at the national level. This is to ensure that policy is coherent at all levels - from local to international.

4.3.1.3 Horizontal Policy Coherence

There are some incoherent horizontal policies observed. Regarding management of zoning: The Vietnamese Law of the Sea regulates Vietnam's waters including internal waters, territorial waters, contiguous zones, exclusive economic zones, and continental shelf. Vietnam's right to sovereignty and jurisdiction is determined according to Vietnamese law or international treaties on the territorial border with which the Socialist Republic of Vietnam is a contracting party and in conformity with the United Nations Convention on the Law of the Sea 1982 (Clause 1 of Article 3). Meanwhile, the Fisheries Law and Decree 33/2010/ND-CP of the Vietnamese Government managing fishing vessels at Vietnamese waters is regulating fishing areas by coastal, inshore, offshore, and high sea areas. In general, fisheries Law is in line with other Laws such as Land Law 2013, Maritime Law 2015, the Law on Biodiversity 2018 (e.g. Article 76 of the Law on Biodiversity 2018 regulated inland water conservation zones; marine protected areas (MPA) subjected to the Law on Forest Protection and Development, the Fisheries Law, before the effective date of Law on Biodiversity should follow those Laws). It assures no overlap among the laws.

4.3.1.4 Trans-national Policy Coherence

Fisheries policies of Vietnam is coherence with regional and or international organizations (e.g. Article 8 of Fisheries Law 2017 prescribed that conservation

and management of the aquatic living resources in the high seas and migratory fish species shall follow the regulations regulated by regional fisheries management organizations and the United Nation Convention on the Law Of the Seas 1982).

Article 99 (Fisheries Law 2017) regulated that Fishery processing activities, export, import, re-export, import from the sea, and transit of rare, precious, endangered, threatened, and protected fish species listed in the Appendices to CITES Convention shall comply with CITES Convention and Vietnamese legislation.

Vietnam issued the national action plan (Decision No. 670/QD-BNN-TCTS) to combat IUU fishing that aligns with target 14.6 of sustainable development goals of the United Nation.

4.4 Comparing the Policy and Regulatory Provisions of the National Fisheries Authority of Vietnam and WCPFC

Vietnamese fisheries Law and its guiding documents (Decree, decision and circular) in comparison with Convention articles and CMMs of the Commission - identifying gaps and proposing recommendations to meet the Commission's requirements, is presented in section 3.5.

Comparison between Vietnamese regulations and that of WCPFC's Convention is shown in Appendix 1 whereas; comparison between Vietnamese regulations and WCPFC's CMMs is outlined in Appendix 2.

4.4.1 Key Gaps between Vietnamese and WCPFC Regulations

4.4.1.1 Output-based Measures for Tuna Fishery

Article 6 (b) of the Convention of WCPFC stipulates that members of the Commission shall take into consideration, uncertainties relating to the size and productivity of the stocks, reference points, stock conditions in relation to such reference points, levels and distributions of fishing mortality in reference to the provisions of Vietnam Fisheries Law 2017 (Article 49) which prescribes quota for fishing licenses. Accordingly, the basis for identification of fishing license quota at sea includes results of stock assessments; trend on the variation of fisheries resources; total allowable maximum sustainable catch; fisheries structure, species, and fishing grounds. In case of fishing highly migratory stocks or schooling species, the requirements stated the allowable catch per fish species shall be applied. The quota of fishing licenses and allowable catch by species in the offshore areas are regulated by the MARD while the number of fishing licenses and allowable catch by species at the coastal and inshore areas is specified by the Provincial People's Committees.

Circular 19/2018/TT-BNNPTNT (Chapter II: Investigation into and assessment of aquatic resources and living environment of aquatic species) regulates the overall investigation into and assessment of aquatic resources and the living environment of aquatic species and specifies guidelines for investigations into commercial

fishing. However, there has been a lack of results from conducting stock assessment to determine the total sustainable yield by species.

4.4.1.2 Data Collection and Tuna Fisheries Statistics

Data collection plays a critical role in fisheries resources management. Currently, fisheries statistic in Vietnam is based on varied methodological pathways. For example, Tuna fishery has been following WCPFC's statistical analysis whereas; other species have been following FAO's statistical guidelines. This is notwithstanding that Article 9 of the Fisheries Law stipulates that the National database on fisheries should be developed uniformly from central to the local level; and shall be standardized for the update, use, and management through information technology system. Article 51 (Decree 26/2019/ND-CP) also stipulates the responsibility of MARD to include; building a national database system on fisheries.

4.4.1.3. Conservation and Management of Migratory Fishes (Tuna, Swordfish, Shark, Marlin) and the Minimization of Bycatch (Sea Turtle and Seabird).

Seabirds and Turtles

Vietnam has not yet issued the regulation to minimize seabirds bycatch in line with WCPFC's regulation. In terms of the protection of sea turtles, Vietnam has issued the Decision 811/BNN-TCTS dated 6/2/2016 on approval of action plan for the conservation of Vietnamese sea turtles for the period 2016-2025. Moreover, Pacific

leatherback (*Dermochelys coriacea*) and other turtle species on the list of species that do not allow to be exported are protected by Decree 26/2019/ND-CP. However, Vietnam needs to effectively implement these provisions to be compatible with WCPFC's regulations.

Sharks and Mobulid Rays

Decree 26/2019/ND-CP and Circular 04/2017/TT-BNNPTNT listed silky shark, whitetip shark, and some other sharks (scalloped hammerhead shark, great hammerhead shark, smooth hammerhead shark) in the group of endangered, precious, and rare aquatic species. While Decree 26/2019/ND-CP and Circular 04/2017/TT-BNNPTNT listed Mobulid rays (*Mobula spp.*) in the group of endangered, precious, and rare aquatic species. However, Vietnam needs to effectively implements these provisions to be compatible with WCPFC's regulations

Swordfish and Striped Marlin

Vietnam currently does not have the regulation related to this species. It is required for Vietnam to enact the regulation to be compatible with WCPFC's regulation.

Conservation and Management of South Pacific Albacore; Bigeyes, Yellowfin, and Pacific Bluefin Tuna

Vietnam has not stipulated regulation in detail as WCPFC's regulation. Therefore, Vietnam must develop management plans for these species.

4.4.1.4 Observer Program

The observer program plays a pivotal role in monitoring and ensuring reliable fisheries data collection and exploitation. It is mentioned in many measures (CMM 2006-07; CMM 2009-06, CMM 2012-03; CMM 2017-03; and CMM 2018-05) – implemented by observers on-board. WCPFC regulations details the roles, responsibilities, and rights of the observers. Decree 26/2019/ND-CP specifies a number of articles and measures for the enforcement of fisheries Law 2017. For example, Article 46 of Fisheries Law 2017: provides the conditions for fishing vessels capturing beyond the jurisdiction of Vietnam. It stipulates that fishing vessels operating beyond the jurisdiction of Vietnam must have observers on-board in accordance with regulations of regional fisheries organization or coastal states. However, detailed regulations (with respect to roles, tasks, responsibilities of the observer as required in CMM 2018-05 and other regulations related to the observer) have not been developed. Therefore, to align with requirements of the WCPFC regulations, Vietnam needs to develop detailed regulations on observer programme.

4.4.1.5. Combating Illegal, Unreported, and Unregulated (IUU) Fishing

Vietnam has shown its determination in combating IUU fishing. Vietnam issued a National action plan to prevent, deter and eliminate IUU fishing until 2025. Article 8 of Fisheries Law 2017 provides that Vietnam will cooperate in inspection and taking action against illegal fishing conducted inside and outside Viet Nam's territory in consistence with the international treaties to which the Socialist Republic of Viet Nam is a party. Article 60.3 prescribed that MARD will announce the list of fishing vessels engaged in illegal fishing. However, to eliminate IUU fishing, Vietnam needs to apply a wide range of measures from granting licenses; monitoring vessels fleet; inspecting ports.

In terms of granting licenses, Vietnam has not required their vessels to have IMO (International Marine Organization) number to grant a fishing license. Meanwhile, in the CMM 2013-04, the Commission, on the other hand, encourages the vessels fishing in Area Beyond the National Jurisdiction and the vessels are at least 100 GT (Gross tonnage) or 100GRT (Gross register tonnage) in size to have IMO or LR (Lloyd's Register) numbers.

With regards to Boarding and Inspection Procedures (CMM 2006-08), Vietnam has issued the regulation for organizations and individuals engaging in fishing operations in Vietnam's territory to comply with boarding and inspection procedures and not obstruct inspector's activities. Specifically, Article 52d (Fisheries Law 2017) regulated organizations and individuals engaging in fishing

operations must comply with inspection and control of State competent authority; Article 57e regulated that foreign organizations and individuals conducting fishing operations in Viet Nam's sea should abide by the inspection and control of functional forces of Vietnam; Decree 43/2019/ND-CP also regulated the fine for obstructing the inspector's activities. Therefore, it is necessary for Vietnam to effectively implement the regulations on boarding and inspecting on the high seas.

Transshipment regulation should be strengthened with regards to not transshipping fish stocks by purse seine outside the Convention Area and regulation of ensuring vessels shall carry observer from WCPFC Regional observer program to observe transshipments.

Vietnam has become a party to the FAO Port State Measures Agreement (PSMA). Article 81 of the Fisheries Law specifies the rights and obligations of the fishing port authorities. In addition, article 83 also outlines the provisions on foreign vessels engaged in fisheries activities entering or leaving fishing ports in Viet Nam. However, the role port authority is unclear with respect to the function of inspecting at the fishing port. Decree No. 47/2015/ND-CP of the Government on the organization and operation of the agriculture and rural development inspectorate has not clearly defined the role of inspecting for the fishing port authority. Therefore, the fishing port authority needs to cooperate with related organizations to handle cases violating the fisheries law in the port areas.

In CMM 2017-02, guidelines for port states inspection procedures; guidelines for port inspector reports, and guidelines for the training of port inspectors are provided. However, in Vietnam, the regulation of inspection and training process are specified in the Inspection law rather than Fisheries Law. It is necessary for Vietnam to clearly define regulations on inspection in their guiding documents. Vietnam also should designate one or more of its ports as transshipment ports as recommended by WCPFC.

4.4.1.6. Some other Measures for the Implementation of Guidelines

Vietnam also needs to implement the regulations related to the following issues in order to be compatible with WCPFC's regulations:

- Prohibit the use of Large scale driftnets on the High seas in the Convention area.
- Apply high standards to the FAD closure and catch retention regulations to remove any possibility for the targeting of aggregated fish, or the discard of small fishes.
- Prohibit fishing on data buoys.
- Measure for Vessels without Nationality.
- Measure on Marine Pollution.
- Measure for Eastern High Seas Pocket Special Management Area.
- Measure for Charter notification scheme.

4.5. Institutional Analysis of Tuna fisheries.

We have drawn upon the nested institutional analytical framework (Hollingsworth 2000) for a coordinated institutional analysis at 5 distinct but interrelated levels. However, for the purpose of addressing the specific goal of this study, we only examine first level of institutional analysis involving the comparative analysis of norms, rule and conventions of WCPFC and the Government of Vietnam for coherence and compatibility.

For institutions of Vietnam, as noted in 4.1, Vietnam has not yet issued any specific legislation for Tuna fisheries management. However, the country has stipulated a comprehensive fishery legislation system from the Law to its guiding and implementing regulations. Tuna is also subject to the regulation of legal documents on fisheries in general. The regulations include:

- The Fisheries Law in 2017
- Decision No. 339/QD-TTg dated March 11, 2021 conveying the Prime Minister's approval of Vietnam's fisheries development strategy to 2020, with a vision to 2045.
- Decision 1445/QD-TTg dated August 16, 2013, approving the master plan for fisheries development up to 2020, with a vision to 2030.

- Decision No. 2760/QD-BNN-TCTS approving "Project on restructuring the fisheries sector towards increasing added value and sustainable development".
- Decision No. 3562/QD-BNN-TCTS dated September 1, 2015, promulgating the Tuna Fisheries Management Plan in Vietnam with the goal of managing Tuna fishing in accordance with international standards through the application of resource protection and management solutions to sustainably develop Tuna fishing in Vietnam.
- Decision 3465/QD-BNN-TCTS dated August 6, 2014, on approving the Pilot Project of exploiting, purchasing, processing, and consuming Tuna from the value chain perspective.
- Circular No. 21/2018/TT-BNNPTNT dated November 15, 2018 Regulation on recording the fishing logbooks; announcement of a designated fishing port to certify the origin of aquatic products from fishing; list of IUU fishing vessels; certification of raw materials, certification of fishing origin.
- Decision 886/QD-BNN-TCTS dated March 18, 2019, announcing the List of designated fishing ports with systems to confirm the origin of aquatic products from fishing.

For institutions of WCPFC, as discussed in 4.2.2, WCPFC was set up within the framework of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Moreover, as of

February 2021, WCPFC has issued many 41 conservation and management measures (CMMs). The objective of the CMMs is to provide to CCMs guidelines for their fishing operations in the Convention Area to achieve the goal of the Convention.

The overarching issue in tuna fisheries management of Vietnam are depicted in Table 4.

Table 4: Issues of Concern in Tuna Fisheries Management of Vietnam

Issues in tuna fisheries management	Vietnam National Fisheries Authority	WCPFC	Analysis
Stock Assessment	Vietnam Fisheries Law 2017 (Article 49) prescribes a quota for fishing licenses. Circular 19/2018/TT-BNNPTNT regulates the overall investigation into and assessment of aquatic resources and the living environment of aquatic species and specifies guidelines for investigations into commercial fishing.	Article 6 (b) of the Convention of WCPFC stipulates that members of the Commission shall determine stock-specific reference points and the action to be taken if they are exceeding.	There has been a lack of results from conducting stock assessment to determine the total sustainable yield by species of Vietnam.
Conservation and Management of Migratory Fishes (Tuna, Swordfish,	- For Sharks and Mobulid Rays, Decree 26/2019/ND-CP and Circular 04/2017/TT-BNNPTNT listed silky shark, whitetip shark, and some other sharks	The Commission stipulated CMM 2019-04: Conservation and Management Measure for Sharks and CMM 2019-	Vietnam currently does not have the regulation related to Swordfish and Striped Marlin. Vietnam has not stipulated

Shark, Marlin)	<p>(scalloped hammerhead shark, great hammerhead shark, smooth hammerhead shark) in the group of endangered, precious, and rare aquatic species. While Decree 26/2019/ND-CP and Circular 04/2017/TT-BNNPTNT listed Mobulid rays (<i>Mobula spp.</i>) in the group of endangered, precious, and rare aquatic species.</p> <p>- For Swordfish and Striped Marlin; and South Pacific Albacore; Bigeyes, Yellowfin, and Pacific Bluefin Tuna</p>	<p>05: Conservation and Management Measure on Mobulid Rays caught in association with fisheries in the WCPFC Convention Area; CMM 2009-03 for Swordfish; CMM 2006-04 for Striped Marlin; CMM 2020-02 for Pacific Bluefin; CMM 2020-01 for Bigeye, Yellowfin and Skipjack Tuna; CMM 2019-03 for North Pacific Albacore.</p>	<p>regulation in detail for South Pacific Albacore; Bigeyes, Yellowfin, and Pacific Bluefin Tuna as WCPFC's regulation. Therefore, Vietnam must develop management plans for these species.</p>
Minimize By-catch species	<p>In terms of the protection of sea turtles, Vietnam has issued the Decision 811/BNN-TCTS dated 6/2/2016 on approval of action plan for the conservation of Vietnamese sea turtles for the period 2016-2025. Moreover, Pacific leatherback (<i>Dermochelys coriacea</i>) and other turtle species on the list of species that do not allow to be exported are protected by Decree 26/2019/ND-CP</p>	<p>The Commission stipulated CMM 2018-03 for Seabirds and CMM 2018-04 for Sea Turtles.</p>	<p>Vietnam has not yet issued the regulation to minimize seabirds bycatch in line with WCPFC's regulation. Vietnam needs to effectively implements provisions of sea turtles to be compatible with WCPFC's regulations.</p>

Observer Program	Article 46 of Fisheries Law 2017: provides the conditions for fishing vessels capturing beyond the jurisdiction of Vietnam. It stipulates that fishing vessels operating beyond the jurisdiction of Vietnam must have observers on board in accordance with regulations of regional fisheries organization or coastal states	The Commission issues many measures on this regulation (CMM 2006-07; CMM 2009-06, CMM 2012-03; CMM 2017-03; and CMM 2018-05)	Detailed regulations (with respect to roles, tasks, responsibilities of the observer as required in CMM 2018-05 and other regulations related to the observer) have not been developed. Therefore, to align with the requirements of the WCPFC regulations, Vietnam needs to develop detailed regulations on the observer program.
Combating IUU fishing	Vietnam issued a National action plan to prevent, deter and eliminate IUU fishing until 2025. Article 8 of Fisheries Law 2017 provides that Vietnam will cooperate in inspection and taking action against illegal fishing conducted inside and outside Viet Nam's territory in consistence with the international treaties to which the Socialist Republic of Viet Nam is a party. Article 60.3 prescribed that MARD will announce the	The Commission issued CMM 2019-07 to regulate IUU fishing.	This regulation between Vietnam and WCPFC is aligned. Nevertheless, to eliminate IUU fishing, Vietnam needs to apply a wide range of measures from granting licenses; monitoring vessels fleet; inspecting ports.

	list of fishing vessels engaged in illegal fishing		
Port State Measure	<p>Vietnam has become a party to the FAO Port State Measures Agreement (PSMA). Article 81 of the Fisheries Law specifies the rights and obligations of the fishing port authorities. In addition, article 83 also outlines the provisions on foreign vessels engaged in fisheries activities entering or leaving fishing ports in Viet Nam. However, the role of port authority is unclear with respect to the function of inspecting at the fishing port. Decree No. 47/2015/ND-CP of the Government on the organization and operation of the agriculture and rural development inspectorate has not clearly defined the role of inspecting for the fishing port authority. Therefore, the fishing port authority needs to cooperate with related organizations to handle cases violating the fisheries law in the port areas.</p>	<p>In CMM 2017-02, guidelines for port states inspection procedures; guidelines for port inspector reports, and guidelines for the training of port inspectors are provided</p>	<p>In Vietnam, the regulation of inspection and training process are specified in the Inspection law rather than Fisheries Law. It is necessary for Vietnam to clearly define regulations on inspection in their guiding documents. Vietnam also should designate one or more of its ports as transshipment ports as recommended by WCPFC.</p>

Boarding and Inspection Procedures	<p>Vietnam has issued the regulation for organizations and individuals engaging in fishing operations in Vietnam's territory to comply with boarding and inspection procedures and not obstruct inspector's activities. Specifically, Article 52d (Fisheries Law 2017) regulated organizations and individuals engaging in fishing operations must comply with inspection and control of State competent authority; Article 57e regulated that foreign organizations and individuals conducting fishing operations in Viet Nam's sea should abide by the inspection and control of functional forces of Vietnam; Decree 43/2019/ND-CP also regulated the fine for obstructing the inspector's activities</p>	<p>The Commission issued CMM 2006-08 to regulate this regulation.</p>	<p>Vietnam has not regulated this regulation on the high seas. Therefore, it is necessary for Vietnam to effectively implement the regulations on boarding and inspecting on the high seas.</p>
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4.6. Relationship between Vietnam and WCPFC - Opportunities for Vietnam to become full Member of the Commission.

Vietnam has become cooperating non-member (CNM) of WCPFC since 2009. In recent years, Vietnam has shown its determination to become a full member of the

Commission. Thus, Vietnam has revised Fisheries Law and issued many guiding documents to meet the requirements of international and regional organization regulations. Vietnam has become a party to the FAO Port State Measures Agreement (PSMA) since 2019 in combat to IUU fishing. In the same year, Vietnam Government has approved the project "Sustainable Management of Highly Migratory Fish Stocks in the West Pacific and East Asian Seas" funded by the New Zealand Government that was coordinated by the Central and Western Pacific Fisheries Committee with the aims to enhance the capacity of technical staff, the policy of Vietnam; improve mechanisms for monitoring and assessment of highly migratory fish stocks to comply with WCPFC's regulations. However, Vietnam needs to comply with the regulations at CMM 2019-01 as a Cooperating Non-Member (CNM). Besides, Vietnam needs to update its legislation to ensure compatibility and compliance with all of the CMMs and regulations of WCPFC. Therefore, some recommendations would help Vietnam gain membership approval:

4.6.1. Legal Frameworks

Although the Fisheries Law 2017 has been developed toward issuing better policies to manage capture fisheries in a sustainable way, some regulations (e.g. regulation on the prohibition of using large scale driftnets on the high seas in the Convention; regulation on charter notification scheme, etc.) have not been developed. Therefore,

these regulations need to be developed to be compatible with WCPFC and other international laws.

Vietnam needs to publish the results of the stock assessment and the plan for the protection and development of fisheries resources. This is the basis for competent authorities to assess the fishing license quota as well as developing management plans. It is necessary to implement in detail the regulations to conserve and manage migratory fish (tuna, swordfish, shark, marlin) and minimize by-catch (sea turtle and seabird).

With regards to data collection and Tuna fisheries statistics, Vietnam needs to establish a national fisheries data base and a harmonised fishery data collection and statistics. The regulations related to the observer program should be clear on the roles, duties, rights, and responsibilities of an observer in consonance with CMM 2007-01 and ensure that there are sufficient resources to conduct the observer program on-board.

In terms of combat to Illegal, unreported, and unregulated (IUU) fishing, Vietnam should supplement the regulations of boarding and inspection on the high seas; the regulation of transshipment; and the regulations of inspection at fishing ports.

Other measures should be developed to fill in the gaps existing in the regulatory framework of Vietnam including; Prohibition of the use of large scale driftnets on the high seas in the Convention area; Application of high standards to the

application of the FAD closure and catch retention in order to remove any possibility for the targeting of aggregated fish or discards of small fishes; and Prohibition of fishing on data buoys.

4.6.2. Policies on Tuna Fisheries Management

Vietnam has not stipulated specific legal provisions for Tuna fisheries management. Therefore, it is necessary to supplement international regulation related to Tuna fisheries or promulgate the existing technical guidelines on Tuna fisheries. The documents pertaining to Tuna fisheries management (Decision 3465/QD-BNN-TCTS on approving the Pilot Project of exploiting, purchasing, processing, and consuming Tuna by chain; Decision No. 3562/QD-BNN-TCTS on promulgating the Tuna Fisheries Management Plan in Vietnam) should be amended to conform to the current management situation and to comply with the provisions of International best practices. Critical works for sustainable fisheries management such as sampling Tuna at port tuna data collection and analysis, and the development of a national Tuna database should be implemented in line with WCPFC regulations.

4.6.3. Institutional and Policy Frameworks on Tuna Fisheries Management

It is important to incorporate associations, research, and educational institutions in Tuna management as they play an integral role in developing technical regulations, researching, consultation, and proposing recommendations for improving the Tuna

fisheries sector. It also necessary to building capacity for staff, officials of local authority, and organs of D-Fish in implementing their tasks. Last but not least, lack of financial capital affects to the performance in implementation of fisheries policies and regulations. Therefore, the Government should encourage public-private partnerships in this area as well as attract investment from domestic and foreign organizations to promote the development of the tuna fisheries sector.



Chapter 5. Discussions Recommendations and Conclusions

The research results showed that even though the Tuna production of Vietnam has increased with increasing effort over the years, production in recent years has seen a slightly decreasing trend with increasing effort. Moreover, the Catch Per Unit of Effort has particularly witnessed a sharper decline. It showed that the sustainability of the Tuna could be in doubt requiring urgent management attention. It is against this background that the full membership of WCPFC will support Vietnam in managing the fishing fleet effectively as well as in complying with international laws and ensuring the sustainable exploitation of resources. Vietnam is currently a cooperating non-member of the Western and Central Pacific Fisheries Commission (WCPFC). On ascension to full membership, the Tuna industry stands to benefit from the technical and material support of the commission. A logical pathway to attaining full membership must pass through institutional alignment involving the Vietnamese Ministry of Agriculture and Rural Development and WCPFC to ensure coherence and compatibility. Institutional analysis was drawn upon to reviewed the status of the Tuna management in Vietnam from the comparative institutional analysis of the management measures of WCPFC in tandem with Vietnamese regulations for Tuna management.

Our analysis revealed important gaps which the government should addresss for coherence and compatability with international partners. These include: the lack of data collection and tuna fisheries statistics; lack of regulations on prohibition of the

use of large scale driftnets on the high seas in the Convention area; inadequate prohibition of FAD to curb targeting of aggregated fish or bycatch; inadequate regulations on conservation and management of migratory species; weak actions to combat IUU fishing; incompatible regulations on boarding and inspection procedures; inadequate implementation of port state measure; inconsistencies in the observer program.

5.1. Recommendation

Some recommendations that emerged from the results and analysis (Annex 1 and 2) that Vietnam government could apply to address these gaps include:

- In terms of stock assessment, it is recommended that there is a need to update the results of Tuna resource assessment by species and by sea area (by ecosystem) to review fishing quota and quota allocation; review and adjust the Tuna fishing fleet capacity to stock size. The identification of fishing license quota should be implemented to ensure that stock are exploited and conserved based on scientific evidence.
- With regard to data collection and Tuna fisheries statistics, Vietnam should implement the provisions on data collection (Article 9 of Fisheries Law 2017 and Article 51 of Decree 26/2019/ND-CP) to ensure the sustainable management of fisheries. This is also aligned with WCPFC's regulation that

effective conservation and management measures require the application of the best scientific information available.

- For Conservation and Management of Migratory Fishes (Tuna, Swordfish, Shark, Marlin), Vietnam currently does not have regulations related to Swordfish and Striped Marlin. The country has not stipulated regulation in detail for South Pacific Albacore; Bigeyes, Yellowfin, and Pacific Bluefin Tuna as WCPFC's regulation. Therefore, Vietnam must develop management plans for these species.
- About minimizing by-catch species, Vietnam needs to issue regulation to minimize seabird bycatch in line with WCPFC's regulation and effectively implements provisions of Tea Turtles to be compatible with WCPFC's regulations.
- In relation to the observer program, detailed regulations (with respect to roles, tasks, responsibilities of the observer as required in CMM 2018-05 and other regulations related to the observer) have not been developed. Therefore, to align with the requirements of the WCPFC regulations, Vietnam needs to develop detailed regulations on the observer program.
- With reference to combating IUU fishing, Vietnam has issued the National Action Plan to prevent, deter and eliminate IUU fishing until 2025. This regulation between Vietnam and WCPFC is aligned. Nevertheless, to eliminate IUU fishing, Vietnam needs to apply a wide range of measures

from granting licenses; monitoring vessels fleet and inspecting ports to supplement the regulation.

- About Port state Measure, in Vietnam, the regulation of inspection and training process are specified in the Inspection law rather than Fisheries Law. It is necessary for Vietnam to clearly define regulations on inspection in their guiding documents. Vietnam also should designate one or more of its ports as transshipment ports as recommended by WCPFC.
- When it comes to Boarding and Inspection Procedures, Vietnam has not regulated this regulation on the high seas. Therefore, it is necessary for Vietnam to effectively implement the regulations on boarding and inspecting on the high seas.
- Other measures should be developed to fill in the gaps existing in the regulatory framework of Vietnam including; Prohibition of the use of large scale driftnets on the high seas in the Convention area; Application of high standards to the application of the FAD closure and catch retention in order to remove any possibility for the targeting of aggregated fish or discards of small fishes; and Prohibition of fishing on data buoys.

In order to obtain the approval for membership of the Commission, recommendations which will help Vietnam's regulative framework be compatible with the Commission include:

Legal Frameworks

Although the Fisheries Law 2017 has been revised to ensure better policies to manage capture fisheries in a sustainable way, some regulations have not been developed to supplement the Law. Therefore, these regulations need to be developed in order to ensure compatibility with WCPFC and other international laws. Moreover, it is recommended that the government should review policies to incentivise economic sectors to invest in the Tuna fisheries sector.

Policies on Tuna Fisheries Management

Vietnam has not issued any legal documents for Tuna fisheries management. Therefore, it is necessary to supplement international regulation related to Tuna fisheries or promulgate the technical guidelines on Tuna fisheries. The documents pertaining to Tuna fisheries management should be amended to conform to the current management situation and to comply with the provisions of International Law. Critical measures for sustainable fisheries management such as sampling Tuna at port Tuna, data collection and analysis, and the development of a national Tuna database should be implemented in line with WCPFC regulations.

Institutional and Policy Frameworks on Tuna Fisheries Management

It is important to reinforce the role of associations, research, and educational institutions in Tuna management since these organizations play an integral role in

developing technical regulations, researching, consultation, and proposing recommendations for improving Tuna fisheries sector. It also necessary to building capacity for staff, officials of local authority, and organs of Directorate of Fisheries in implementing their tasks. Currently, Vietnam does not have a specialized agency in charge of the management of Tuna. Therefore, it is necessary to establish a working group on Tuna fisheries management to timely advice and submit to competent authorities for the enactment of Tuna fisheries management policies. The lack of financial capital affects the performance in implementation of fisheries policies and regulations. Therefore, the Government should invest in the implementation of these policies and attract investment from domestic and foreign organizations to promote the development of the Tuna fisheries sector.

5.2. Conclusions

We have examined the policy and legal framework of WCPFC and that of the Government of Vietnam. Vietnam's regulations are largely aligned with WCPFC's management measures, but there are critical gaps (see Table 4, and Annex 1 and 2). These issues should be resolved if Vietnam fisheries industry is to gain full membership of the Commission. Therefore, the hypothesis that - Tuna fishery governance arrangement in Vietnam is well aligned with the WCPFC for full membership of the commission and sustainable resource exploitation is rejected.

The foregoing recommendations, once acted upon, would facilitate the ascension to full membership of WCPFC.



Annex 1: Comparison between Vietnamese Regulations and WCPFC Convention.

WCPFC Articles	Vietnamese Regulation	Inconsistencies/Gaps	Recommendations
Article 1e (definition of fishing vessel, including support ships and carrier vessels)	FL Article 3(20) Fishing vessels means motorized or non-motorized vessels, ships or other types of boats to be used for fishing and logistics activities to support fishing.	None	None
Article 2 (Objective): To ensure conservation and sustainable use of highly migratory fish stocks	FL Article 5 (2) Fishing operations shall be conducted in accordance with fisheries resources availability, and in line with the protection, reproduction and development of fisheries resources. The fisheries operations shall not lead to depletion of the fisheries resources and affection to the biodiversity; shall apply ecosystem-based approaches, precautionary approach, and scientific indicators in fisheries management to ensure sustainable development.	None	None
Article 3 (Area of application, including waters under national jurisdiction and high seas)	FL Article 2: Regulating fishing operations in the waters both under and outside Vietnam's jurisdiction.	None	None
Article 5: Principles and measures for conservation and management: (a) adopt measures to ensure the long-term sustainability of highly migratory fish stocks (b) ensure that such measures are based on the best scientific evidence (c) apply the precautionary approach following this Convention and relevant internationally agreed	FL Article 8 (4,5) regulated that (4) Conservation and management of the aquatic living resources in the high seas and migratory fish species regulated by regional fisheries management organizations, and the United Nation Convention on the Law of the Seas 1982. (5) Cooperation in inspection and taking action to illegal fishing conducted inside and outside Viet Nam's territory in consistence with	None	None

standards, practices, and procedures; (d) assess the impacts of human activities on target stocks, (e) adopt measures to conserve, if appropriate, species in the same ecosystem as target species; (g) minimize pollution, gear abandonment, catch of non-target species or species at risk. (f) protect biodiversity in the marine environment;	the international treaties to which the Socialist Republic of Viet Nam is a party.		
Article 6: Application of the precautionary approach			
- (1a) Determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded		Not compatible Regulation is available	Vietnam needs to supplement this regulation in guiding documents
- (1c) Develop data collection and research programs for non-target species		Not compatible Regulation is available	
- 2. Be more cautious when information is uncertain or inadequate		Not compatible Regulation is available	
- 3. Take measures to ensure that, when reference points are approached, they will not be exceeded		Not compatible Regulation is available	
- 5. For new or exploratory fisheries, adopt CMMs including, inter alia, catch limits and effort limits		Not compatible Regulation is available	
Article 24. Flag state duties			

- (1a) Fishing vessels flying its flag comply with the provisions of this Convention	Article 53 regulated Organizations and individuals fishing beyond jurisdiction of Viet Nam shall be approved by Ministry of Agriculture and Rural Development in case of fishing in areas authorized by other states and territories, or be licensed in case of fishing in areas under authorization of regional fisheries management organizations, subject to conditions to be qualified by regional fisheries management organizations, other states and territory.	None	
- (1b) Fishing vessels flying its flag do not conduct unauthorized fishing within areas under the national jurisdiction of any Contracting Party	FL Article 53 and Decree 33/2010/ND-CP Article 6 prescribed Conditions for fishing outside sea areas of Vietnam	None	
- 2. Member states do not allow any fishing vessel entitled to fly its flag to be used for fishing for highly migratory fish stocks in the Convention Area beyond areas of national jurisdiction unless it has been authorized to do so by the appropriate authority or authorities of that member.	FL Article 53 and Decree 33/2010/ND-CP Article 6 prescribed Conditions for fishing outside sea areas of Vietnam	Article 6 of Decree 33/2010/ND-CP does not provide conditions to grant the fishing license in the Convention Area	Vietnam needs to supplement this regulation in guiding documents
- 4. Member States shall maintain a record of fishing vessels entitled to fly its flag and authorized to be used for fishing in the Convention Area beyond its area of national jurisdiction		Not compatible Regulation is available	Vietnam needs to supplement this regulation in guiding documents

- 5. Member States shall provide annually to the Commission, in accordance with the Commission procedures, information on the vessels fishing in the waters beyond national jurisdiction and updates		Not compatible Regulation is available	Vietnam needs to supplement this regulation in guiding documents
- 7. Fishing vessels that fish for highly migratory fish stocks on the high seas in the Convention Area are required to use near real-time satellite position-fixing transmitters in accordance with standards and specification set by the Commission		Not compatible Regulation is available	Vietnam needs to supplement this regulation in guiding documents
- 9. Fishing vessels that fish in the Convention Area in areas under the national jurisdiction of another member are required to operate near-real time satellite position-fixing transmitters in accordance with the standards, specifications and procedures to be determined by the coastal State.		Not compatible Regulation is available	Vietnam needs to supplement this regulation in guiding documents
- 10. Member states shall cooperate to ensure compatibility between national and high seas vessel monitoring systems		Not compatible Regulation is available	Vietnam needs to supplement this regulation in guiding documents
Article 25 Compliance and enforcement			
Member States shall: - 1. Enforce the provisions of WCPFC and related CMMs.	Decree 42/2019/ND-CP on administrative sanction in the fisheries activities regulated the		Vietnam needs to supplement detailed regulations according

<p>-2. Investigate fully any alleged violation by fishing vessels flying its flag of the provisions of WCPFC and related CMMs. A report on the progress of the investigation shall be provided to the Commission within two months of the request.</p> <p>- 3. Refer the case to its authorities with a view to instituting proceedings without delay in accordance with its laws if there is sufficient evidence.</p> <p>- 4. Ensure that a fishing vessel flying its flag involved in the serious violation of the provisions of this Convention or CMMs do not engage in such activities in the Convention Area until such time as all outstanding sanctions imposed by the flag State (serious violations are specified in Article 21 of UNFSA).</p> <p>- 8. Annually report to the Commission on the compliance measures including the imposition of sanctions for violations.</p>	<p>sanction for fishing vessels violate the regulation of Regional fisheries organization.</p>		<p>to WCPFC regulations</p>
<p>Article 26. Boarding and inspection</p> <p>- 1.All vessels used for boarding and inspection of fishing vessels on the high seas in the Convention Area shall be clearly marked and follow WCPFC provisions.</p> <p>- 3. Member state shall ensure that fishing vessels flying its flag accept boarding by duly authorized inspectors; Authorized inspectors shall comply with procedures for boarding and inspection</p>	<p>Article 57e regulated that foreign organizations and individuals conducting fishing operations in Viet Nam's sea should abide by the inspection and control of functional forces of Vietnam.</p> <p>Decree 43/2019/ND-CP also regulated the fine for obstructing inspector's activities.</p>	<p>Not regulations for high seas</p>	<p>Vietnam needs to supplement the regulations for high seas in legal documents.</p>

Article 27. Measures were taken by a port State			
<p>- 2. Inspect documents, fishing gear and catch onboard fishing vessels of another member State voluntarily entering its ports.</p> <p>- 3. Member States may adopt regulations empowering the relevant national authorities to prohibit landings and transshipments where it has been established that the catch has been taken in a manner that undermines the effectiveness of CMMS adopted by the Commission</p>	The Fisheries Law 2017 (Article 81, article 83) regulated on Right and obligations of the fishing port authorities and provision on foreign vessels engaged in fisheries activities entering or leaving fishing port in Vietnam	However, for inspection at the fishing port, the port authorities currently do not have defined authority for port inspection	Port authority need to coordinate with other agencies to handle cases related to fishery law violations occurring in the port waters and land areas. Fisheries Law should be supplemented compatible with WCPFC's Port State Measures.
Article 28. Regional observer program			
- 4. Each member of the Commission shall ensure that fishing vessels flying its flag in the Convention Area, except for vessels that operate exclusively within waters under the national jurisdiction of the flag State, are prepared to accept an observer from the regional observer program.	Article 46 (Decree 26/2019/ND-CP) stipulated that fishing vessel fishing beyond Vietnamese jurisdiction's water must have an observer onboard according to regional fisheries management organization or Coastal states.		Vietnam should supplement the regulation by accepting an observer from the regional observer program.
Article 29. Transshipment			
<p>- 1. Member states shall encourage their fishing vessels to conduct transshipment in port; A member may designate one or more of its ports as transshipment ports for WCPFC</p> <p>- 3. The Commission shall develop procedures to obtain and verify data on the quantity and species transshipped both in port and at sea in the Convention Area</p>	Article 5 (Circular 21/2018/TT-BNNPTNT) regulated that The masters of the fisheries purchase and transshipment vessels shall daily fill the logbook of purchase, transshipment of fishery products according to form No. 02, Appendix I promulgated together with the Circular; submitting logbook of purchase, transshipment of fisheries products to the fishing port		Vietnam needs to encourage their vessels to transship in port; Vietnam should designate one or more of its ports as transshipment ports as recommended by WCPFC.

- 4. The provision applies to transshipment in the waters outside national jurisdiction	management organization within 24 hours after finishing the loading and unloading of the fishery products.		
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Annex 2: Comparison between Vietnamese Regulations and WCPFC's Conservation and Management Measures.

CMM-WCPFC	Vietnam Regulations	Gaps	Recommendations
<p>CMM 2004-03 Marking and Identification of Fishing Vessels</p> <ul style="list-style-type: none"> - Member of commission should ensure that operators of vessels are required to mark the vessels for their identification with their International Telecommunication (ITU); the aforementioned vessels be called WCPFC Identification Number (WIN); the requirement for the marking of fishing vessels with the WIN is a condition for authorization to fish in the Convention Area beyond areas of national jurisdiction. - Regulated markings and other technical specifications. - Regulated record of WCPFC identification number (WIN) - Regulated review and amendment of the specification 	<p>Vietnamese fisheries Law 2017 (article 52. 2c) regulated vessels operating fishing activity must mark fishing vessels.</p> <ul style="list-style-type: none"> - Article 53. Conditions for fishing beyond jurisdiction of Vietnam prescribed that apart from following Vietnamese regulation, vessels need to pursuant to other conditions to be qualified by regional fisheries management organization (RFMO), other states, and territory. 	No	
<p>CMM 2004-04 Resolution on Conservation and Management Measures</p>			<p>This is a resolution of the Commission that works by the scientific and technical and compliance committee. Vietnam needs to follow this CMM.</p>
<p>CMM 2006-04 Conservation and Management Measure For Striped Marlin in the Southwest Pacific</p> <ul style="list-style-type: none"> - CMMs shall limit the number of fishing vessels for striped marlin to the number in any one year between (2000-2004) 	<ul style="list-style-type: none"> - No compatible regulation is available 		<p>Vietnam should implement this regulation into legal documents.</p>

<ul style="list-style-type: none"> - CMMs should cooperate to reduce striped marlin stocks. - CMM should report the catch levels of bycatch and target of striped marlin. 			
CMM 2006-07 Conservation and Management Measure for the Regional Observer Programme			Regulation on Regional Observer Programme is regulated more specifically at CMM 2018-05.
CMM 2006-08 Western and Central Pacific Fisheries Commission Boarding and Inspection Procedures <ul style="list-style-type: none"> - Member of the Commission shall ensure that vessels flying its flag accept boarding and inspection by authorized inspectors. - Priority for boarding and inspection may be given to Vessels, not on WCPFC Record of fishing vessels and are flagged to Members of the Commission; vessels without observers; large-scale tuna fishing vessels; vessels with a known history of violating conservation and management. 	Article 52d (Fisheries Law 2017) regulated organizations and individuals engaging in fishing operations must comply with inspection and control of State competent authority. Article 57e regulated that foreign organizations and individuals conducting fishing operations in Viet Nam's sea should abide by the inspection and control of functional forces of Vietnam. Decree 43/2019/ND-CP also regulated the fine for obstructing the inspector's activities.	No regulations for high seas	Vietnam needs to supplement the regulations for high seas in legal documents.
CMM 2008-04 Conservation and Management Measure to Prohibit the use of Large Scale Driftnets on the High Seas in the Convention Area <ul style="list-style-type: none"> - Prohibit use of large-scale driftnets on the high seas within the Convention Area 	No regulation		Vietnam needs to supplement regulations in legal documents that aligns with WCPFC's regulation.
CMM 2009-02 Conservation and Management Measure on the Application of High Seas FAD Closures and Catch Retention	No regulation		Vietnam needs to supplement regulations in legal documents that

<ul style="list-style-type: none"> - Follow the provisions of CMM 2008-01 in terms of FAD closure and catch retention. - Rules for FAD closure: No purse seine vessels conduct any part of a set within 1 nautical mile of a FAD - Rules for catch Retention: <p>Fish should not be retained on board for seasons related to the size, marketability, or species compositions....</p>			align with WCPFC's regulation.
<p>CMM 2009-03</p> <p>Conservation and Management for Swordfish</p> <ul style="list-style-type: none"> - CCMs should limit the number of fishing vessels for swordfish in the Convention area. - CCMs should limit the amount of swordfish caught by fishing vessels flagged to them in the Convention area. - CCMs should cooperate to protect the long-term sustainability and economic viability for swordfish - CCMs should report the total number of vessels and total catch of swordfish. 	No regulation		Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.
<p>CMM 2009-05</p> <p>Conservation and Management Measure Prohibiting Fishing on Data Buoys</p> <ul style="list-style-type: none"> - CCM should ban fishing vessels from fishing within 1 nautical mile of or interacting with a data buoy in the high seas of the Convention area 	No regulation		
<p>CMM 2009-06</p> <p>Conservation and Management Measure on Regulation of Transshipment</p> <ul style="list-style-type: none"> - Highly migratory fish stocks covered by the Convention should not be transshipped by purse seine outside the Convention Area. - CMMs should report against vessels flying their flag except the vessel is operated under charter, lease, or other similar mechanisms. 	<p>Fisheries Law 2017 (Article 60h) regulated that Transshipping or supporting a fishing vessel identified as having engaged in illegal fishing, except for force majeure.</p> <p>- Decree 50/2015/ND-CP also interpret "transshipment at sea" at Article 3.7.</p>		<p>Vietnam needs to supplement the following regulations in the legal documents:</p> <ul style="list-style-type: none"> - Highly migratory fish stocks covered by the Convention

<ul style="list-style-type: none"> - Each CMM should ensure that vessels they are responsible for carrying observers from WCPFC Regional Observer Program (ROP) to observe transshipments. 	<ul style="list-style-type: none"> - Item 6 in Decree 50/2015 also require fishing vessels to declare transshipment at sea (if applicable) to demonstrate that aquatic species was capture legally. 		<p>should not be transshipped by purse seine outside the Convention Area.</p> <ul style="list-style-type: none"> - Each CMM should ensure that vessels they are responsible for carry observers from WCPFC Regional Observer Programme (ROP) to observe transshipments.
<p>CMM 2009-09 Conservation and Management Measure for Vessels without Nationality</p> <ul style="list-style-type: none"> - Vessels without nationality means vessels not flying of any state or vessels flying the flag of two or more. - CCMs should take all measure to prevent these vessels from undermining measures adopted by the Commission - CCMs should report to the Secretariat if detecting the violation. 	<p>Not compatible. Regulation is available</p>		<p>Vietnam needs to supplement regulations in legal documents that aligns with WCPFC's regulation.</p>
<p>CMM 2009-10</p> <ul style="list-style-type: none"> - Conservation and Management Measure to Monitor Landings of Purse Seiners at Ports so as to Ensure Reliable Catch Data by Species 	<p>Decision 3477/QD-BNN-KTBVNL in 2009 on certification of captured species that are eligible for exports.</p>		<p>Vietnam needs to supplement regulations on collection species and size composition</p>

<ul style="list-style-type: none"> - The Commission and CCMs should work together to establish an arrangement with a Non-CCM to collect species and size composition data from canneries in the Non-CCM regarding purse seine catch in the Convention area. 			from canneries for purse seine catch in the Convention area.
<p>CMM 2010-01 Conservation and Management Measure for North Pacific Striped Marlin</p> <ul style="list-style-type: none"> - The total catch of North Pacific striped marlin will be subject to a phased reduction such that by 1 January 2013 the catch is 80% of the levels caught in 2000 to 2003. 			This CMM was supposed to amend in 2011 based on the revised stock assessment for the North Pacific striped marlin.
<p>CMM 2011-03 Conservation and Management Measure to Address the Impact of Purse Seine Activity on Cetaceans</p> <ul style="list-style-type: none"> - CCMs should prohibit their flagged vessels from setting a purse seine net on a school of tuna associated with a cetacean in the high seas and EEZ of the Convention area. - CCMs should require that a cetacean is unintentionally encircled in the purse seine net. - CCMs should report any instance in which cetaceans have been encircled by the purse seine nets of their flagged vessels. 	Not compatible. Regulation is available		Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.
<p>CMM 2012-03 Conservation and Management Measure for Implementation of the ROP by vessels fishing north of 20°N</p> <ul style="list-style-type: none"> - ROP for fishing vessels used exclusively to fish for fresh fish in the area north of 20 degrees north should be implemented: <ol style="list-style-type: none"> 1. No later than 31 December 2014. 2. CMM should achieve 5% coverage of the effort of each fishery fishing for fresh fish by the end of December 2014. 			This CMM is supposed to amend soon.

3. Observers should be sourced from the WCPFC ROP			
<p>CMM 2013-04 Conservation and Management Measure for WCPFC Implementation of a Unique Vessel Identifier (UVI)</p> <ul style="list-style-type: none"> - Flag CCMs should ensure that all their fishing vessels that are authorized to be used for fishing in the Convention Area beyond the flag CCM's area of national jurisdiction and that are at least 100 GT or 100 GRT in size have IMO or LR numbers issued to them. 	Not compatible. Regulation is available		Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.
<p>CMM 2013-05 Conservation and Management Measure on daily catch and effort reporting</p> <ul style="list-style-type: none"> - Master of each vessel flying its flag in the Convention area should complete an accurate written or electronic log of every day. - Master of each vessel provides an accurate and unaltered original or copy of the required information to its national authority within 15 days of the end of a trip or transshipment. - Master of each vessel keeps an accurate and unaltered original or copy of the required information pertaining to the current trip onboard the vessels at all times during the course of a trip. 	<p>Fisheries Law 2017 (Article 52.2h) prescribed that organizations and individuals engaging in fishing operations must record and submit reports and logbooks as guided by the Ministry of Agriculture and Rural Development.</p> <ul style="list-style-type: none"> - Circular 21/2018/TT-BNNPTNT regulated in detail aforementioned regulations with Form 1: Logbooks of capture; form 2: logbook of procuring and transmitting fisheries products; and form 3: report of capture activity. - Circular 13/2020/TT-BNNPTNT amendment and supplement some articles of circular 21/2018/TT-BNNPTNT. 	No	

<p>CMM 2013-06</p> <p>Conservation and Management Measure on the criteria for the consideration of conservation and management proposals</p> <ul style="list-style-type: none"> - CMMs should develop, interpret and apply conservation and management measures in the context of and in a manner consistent with the 1982 Convention and Articles 24, 25, and 26 of the Agreement. - CCMs shall cooperate, either directly or through the Commission, to enhance the ability of developing States, particularly the least developed among them and SIDS and territories in the Convention area. 			<p>Vietnam will follow this CMM.</p>
<p>CMM 2013-07</p> <p>Conservation and Management Measure on the special requirements of Small Island Developing States and Territories</p> <ul style="list-style-type: none"> - CCMs should cooperate, either directly or through the Commission to enhance the ability of developing States, particularly the least developed among them and SIDS and territories in the Convention Area to develop their own domestic fisheries for highly migratory fish stocks in terms of (Capacity development of personnel; technology transfers; fisheries conservation and management; Monitoring, control and surveillance; Support for the domestic fisheries sector and Tuna-fisheries related business and market access. - CMMs shall provide an annual report to the Commission on the implementation of this measure. 			<p>Vietnam will follow this CMM.</p>
<p>CMM 2014-02</p> <p>Conservation and Management Measure for Commission</p> <ul style="list-style-type: none"> - Commission VMS shall apply to all fishing vessels that fish for highly migratory fish stocks on the high seas within the Convention Area. 	<p>- Article 55.5 of Fisheries Law 2017 regulated that equipping a vessel monitoring system as regulated is one of the conditions to be received licenses for foreign organizations and individuals</p>		

<ul style="list-style-type: none"> - It shall apply to all vessels with the length of 24 metres and beyond with an activation date of 1 January 2008, and apply to all vessels 24 metres in length or less with an activation date of 1 January 2009. 	<p>conducting fishing operations in Viet Nam's seas.</p> <ul style="list-style-type: none"> - Article 53 regulated VMS is one of the conditions for fishing beyond the jurisdiction of Vietnam. - Article 50 regulated that fishing vessels of 15 meters and over in maximum-length have to have VMS to receive fishing license. 		
<p>CMM 2014-03 Standards, specifications and procedures for the Western and Central Pacific Fisheries Commission Record of Fishing Vessels</p> <ul style="list-style-type: none"> - CCMs shall submit complete vessels record data to the WCPFC Secretariat that meet the structure and format specification of Attachment 1, and submit vessel photographs that meet the specification of Attachment 2 - Submit vessel record data to the WCPFC Secretariat via Electronic transmission or Manual transmission. 	<p>Not compatible. Regulation is available</p>		<p>Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.</p>
<p>CMM 2014-06 Conservation and Management Measures to develop and implement a harvest strategy approach for key fisheries and stocks in the WCPO</p> <ul style="list-style-type: none"> - Objective of this measure is to agree that the Commission shall develop and implement a harvest strategy approach for each of the key fisheries or stocks under the purview of the Commission according to the process set out in this CMM. 	<p>Not compatible. Regulation is available</p>		<p>Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.</p>
<p>CMM 2015-02 Conservation and Management Measure for South Pacific Albacore</p>	<p>Not compatible. Regulation is available</p>		<p>Vietnam need to supplement regulations in legal documents that</p>

<ul style="list-style-type: none"> - CCMs should not increase the number of fishing vessels actively fishing for South Pacific albacore in the Convention Area south of 20°S above 2005 levels or recent historical (2000-2004) levels. - CCMs should cooperate to ensure the long-term sustainability and economic viability of the fishery for South Pacific albacore - CCMs should report annually the annual catch levels and the number of vessels fishing for South Pacific albacore. Catch by vessels shall be reported according to the following species groups: albacore tuna, bigeye tuna, yellowfin tuna, swordfish, other billfish, and sharks. 			aligns with WCPFC's regulation.
<p>CMM 2015-06 Conservation and Management Measure on a Target Reference Point for WCPO Skipjack Tuna</p> <ul style="list-style-type: none"> - The target reference point for the WCPO skipjack tuna stock shall be 50% of the estimated recent average spawning biomass in the absence of fishing ($SB_{F=0,t1-t2}$) - The Scientific Committee shall refer to the target reference point in its assessment of the status of the WCPO skipjack tuna stock and in reporting to the Commission on management advice and implications for this stock. 			Vietnam will follow this CMM.
<p>CMM 2016-02 Conservation and Management Measure for Eastern High Seas Pocket Special Management Area</p> <ul style="list-style-type: none"> - The E-HSP is the area of high seas bounded by the EEZ of the Cook Islands to the west, French Polynesia to the east and Kiribati to the north. - Vessel sightings: CCMs shall encourage their flagged vessels to report sightings of any fishing vessels to the Commission Secretariat. 			Vietnam will follow this CMM.

<ul style="list-style-type: none"> - VMS: Flag States shall monitor their vessels operating in the E-HSP, using at minimum the WCPFC VMS, to ensure compliance with this measure. - Vessel list: The Commission Secretariat shall maintain a “live list” of all fishing vessels present in the E-HSP, based on near-real time VMS information - Transshipment: All transshipment activities are prohibited in the E-HSP from 1 January 2019. 			
<p>CMM 2017-02 Conservation and Management Measure on minimum standards for Port State Measures</p> <ul style="list-style-type: none"> - The purpose of this measure is to establish process and procedures for CCMs to request that port inspection be undertaken on fishing vessel suspected of engaging in IUU or fishing activities in support of IUU fishing - This CMM regulated in detail (Designation of Ports; Authorized fisheries inspectors, inspection requirements, request for port inspection; and special requirements of small island developing states and participating territories. 	<p>The Fisheries Law 2017 (Article 81, article 83) regulated on Right and obligations of the fishing port authorities and provision on foreign vessels engaged in fisheries activities entering or leaving fishing port in Vietnam</p>	<p>However, for inspection at the fishing port, the port authorities currently do not have this function because port authorities are not state management agencies nor to be assigned to perform port inspection</p>	<p>Port authority need to coordinate with other agencies to handle cases related to fishery law violations occurring in the port waters and land areas. Fisheries Law should be supplemented with framework provisions compatible with WCPFC’s Port State Measures.</p>
<p>CMM 2017-03 Conservation and Management Measure for the protection of WCPFC Regional Observer Programme Observers</p> <ul style="list-style-type: none"> - This CMM applies to WCPFC ROP observers on fishing trips operating under the WCPFC ROP. - This CMM requires CCM’s fishing vessels report (in the event that a WCPFC ROP observer dies, suffers 	<p>Not compatible. Regulation is available</p>		<p>Vietnam needs to supplement regulations in legal documents that align with WCPFC’s regulation.</p>

from a serious illness or injury; has been assaulted, intimidated, threatened, or harassed)			
<p>CMM 2017-04 Conservation and Management Measure on Marine Pollution</p> <ul style="list-style-type: none"> - CCMs are encouraged to ratify, approve or accede to the annexes of MARPOL and the London Protocol. - CCMs should prohibit their fishing vessels operating within the WCPFC Convention Area from discharging any plastics but not including fishing gear. - CCMs are encouraged to undertake research into marine pollution related to fisheries in the WCPFC Convention Area. - CCMs shall cooperate to support SIDS and Territories through the provision of adequate port facilities for receiving and disposing of waste from fishing vessels. - CCMs are encouraged to conduct training and awareness programs for the crew and master of fishing vessels flying their flag regarding the impact of marine pollution and operational practices to eliminate pollution caused by fishing vessels. 	<ul style="list-style-type: none"> - Vietnam acceded to the Convention for Prevention of Marine Pollution (MARPOL) in 1991. - Article 75 of Fisheries Law 2017 regulated that the master of fishing vessel shall have the obligations of disseminating, providing guidance, assigning and urging the crewmember workers of fishing vessels to comply with the regulation of environmental protection. 		Vietnam needs to regulate in detail to be compatible with WCPFC's regulations.
<p>CMM 2018-03 Conservation and Management Measure to mitigate the impact of fishing for highly migratory fish stocks on seabirds</p> <ul style="list-style-type: none"> - CMM should implement the International Plan of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries (IPOA-Seabirds). - CMM should report to the Commission on their implementation of the IPOA-Seabirds including the status of their National Plans of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries. 	Not compatible. Regulation is available		Vietnam should implement this measure in the guiding documents to ensure conservation and management of seabirds following WCPFC's regulation.
<p>CMM 2018-04 Conservation and Management Measure of Sea Turtles</p>	- Vietnam has issued the Decision 811/BNN-TCTS dated 6/2/2016		Vietnam needs to regulate in detail to be

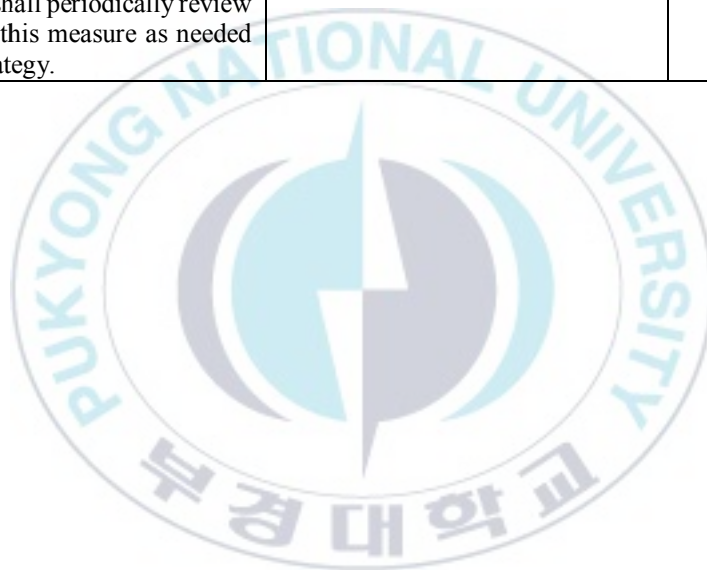
<ul style="list-style-type: none"> - CCMs will implement, as appropriate the FAO Guidelines to reduce Sea Turtle Mortality in Fishing operations and ensure the safe handling of all captured sea turtles in order to improve their survival. - CCMs should report to the Commission of their annual reports the progress of implementation of this measure, including information collected on interactions with sea turtles in fisheries managed under the Convention. - All data collected by the WCPFC Regional Observer program (ROP) on sea turtle interactions shall be reported as agreed to under other Commission data collection provisions. - CCMs shall ensure that fishermen are aware of and use proper mitigation and handling techniques, as described in WCPFC guidelines. 	<p>on approval of action plan for the conservation of Vietnamese sea turtles for the period 2016-2025</p> <ul style="list-style-type: none"> - Pacific leatherback (<i>Dermochelys coriacea</i>) and other turtle species on the list of species that not allow to exports of the Decree 26/2019/ND-CP. Pacific leather back also in the Annex I of Cites according to Circular 04/2017/TT-BNNPTNT. 		<p>compatible with WCPFC's regulations.</p>
<p>CMM 2018-05 Conservation and Management Measure for the Regional Observer Programme</p> <ul style="list-style-type: none"> - The objectives of the Commission ROP shall be to collect verified catch data, other scientific data, and additional information related to the fishery from the Convention Area and to monitor the implementation of the conservation and management measures adopted by the Commission. - CCM shall ensure that fishing vessels fishing in the Convention Area, except for vessels that operate exclusively within waters under the national jurisdiction of the flag State, are prepared to accept an observer from the Commission ROP if required by the Commission - Each CCM of the Commission shall be responsible for meeting the level of observer coverage as set by the Commission. 	<p>Not compatible. Regulation is available</p>		<p>Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.</p>

<ul style="list-style-type: none"> - CCMs shall source observers for their vessels as determined by the Commission. - CCMs shall explain to the vessel captain, observer duties relevant to appropriate measures adopted by the Commission. 			
<p>CMM 2018-06 Conservation and Management Measure for WCPFC Record of Fishing Vessels and Authorisation to Fish</p> <ul style="list-style-type: none"> - This CMM regulated: Authorization to fish; Members' record of fishing vessels; WCPFC Record of Fishing vessels; WCPFC Interim Register of non-member carrier and Bunker vessels. 	<ul style="list-style-type: none"> - Article 53 of Fisheries Law 2017 regulated Conditions for fishing beyond jurisdiction of Viet Nam and article 54 stipulated responsibilities of organizations and individuals engaging in fishing beyond jurisdiction of Viet Nam. 		Vietnam should implement the regulation of WCPFC Interim register of non-member carrier and bunker vessels.
<p>CMM 2019-01 Cooperating Non-Members</p>	<p>Vietnam is cooperating non-member of the Commission. Therefore, Vietnam is following this CMM.</p>		
<p>CMM 2019-03 Conservation and Management Measure for North Pacific Albacore</p> <ul style="list-style-type: none"> - CCMs should ensure that the level of fishing effort by their vessels flying for North Pacific albacore in the WCPFC Convention Area is not increased beyond 2002-2004 annual average levels; - All CCMs shall report annually to the Commission all catches of albacore north of the equator and all fishing effort north of the equator in fisheries directed albacore. 	<p>Not compatible. Regulation is available</p>		Vietnam needs to supplement regulations in legal documents that align with WCPFC's regulation.
<p>CMM 2019-04 Conservation and Management Measure for Sharks</p> <ul style="list-style-type: none"> - The objective of this Convention is to ensure the long-term conservation and sustainable use of sharks. - This CMM shall apply to sharks listed in Annex 1 of the 1982 Convention and any other sharks caught in 	<p>Decree 26/2019/ND-CP and Circular 04/2017/TT-BNNPTNT listed silky shark, whitetip shark and some other sharks in the group of endangered, precious and rare aquatic species.</p>		Vietnam needs to regulate in detail to be compatible with WCPFC's regulations.

<p>association with fisheries managed under the WCPF Convention.</p> <ul style="list-style-type: none"> - This measure shall apply to high seas and EEZ of the Convention area. - CCMs should implement the FAO International Plan of Action for the Conservation and Management of Shark (IPOA). 			
<p>CMM 2019-05 Conservation and Management Measure on Mobulid Rays caught in association with fisheries in the WCPFC Convention Area</p> <ul style="list-style-type: none"> - CCMs shall prohibit their vessels from targeted fishing or intentional setting on Mobulid rays in the Convention area. - CCMs shall prohibit their vessels from retaining on board, transshipping or landing any part or whole carcass of Mobulid rays caught in the Convention Area. - CCMs are encouraged to investigate at-vessel and post-release mortality in Mobulids including the application of satellite tagging programs to investigate the effectiveness of this measure and more effective methods of live release. 	<ul style="list-style-type: none"> - Decree 4413/QĐ-BNN-TCTS indicated that Vietnam will develop and implement action plans to protect some species like rays. - Decree 26/2019/ND-CP and Circular 04/2017/TT-BNNPTNT listed Mobulid rays (<i>Mobula spp.</i>) in the group of endangered, precious and rare aquatic species. 		<p>Vietnam needs to soon promulgate regulations compatible with WCPFC's regulations</p>
<p>CMM 2019-06 Conservation and Management Measure for the Compliance Monitoring Scheme</p> <ul style="list-style-type: none"> - The purpose of the WCPFC Compliance Monitoring Scheme (CMS) is to ensure that CCMs implement and comply with obligations arising under the Convention and conservation and management measures (CMMs) adopted by the Commission. The purpose of the CMS is also to assess flag CCM action in relation to alleged violations by its vessels, not to assess compliance by individual vessels. 			<p>Vietnam will follow this CMM to implement and comply with obligations arising under the Convention and conservation and management measures (CMMs) adopted by the Commission.</p>

<p>CMM 2019-07 Conservation and Management Measure to establish a list of vessels presumed to have carried out Illegal, Unreported and Unregulated Fishing Activities in the WCPO</p> <ul style="list-style-type: none"> - This CMM regulated (Identification of IUU activities; Information on alleged IUU fishing activities; Draft IUU vessels list; Provisional and current IUU vessel list; WCPFC IUU vessel list; and Modification of the WCPFC IUU vessel list). 	<p>Article 8 of Fisheries Law 2017 regulated that Vietnam will cooperate in inspection and taking action to illegal fishing conducted inside and outside Viet Nam's territory in consistence with the international treaties to which Socialist Republic of Viet Nam is a party Article 60.3 prescribed that Minister of Agriculture and Rural Development shall regulate the announcement of the List of fishing vessels engaged in illegal fishing</p>		<p>Vietnam needs more detailed regulations to be compatible with WCPFC regulations</p>
<p>CMM 2019-08 Conservation and Management Measure for Charter Notification Scheme</p> <ul style="list-style-type: none"> - The provisions of this measure shall apply to Commission members and participating territories that charter, lease or enter into other mechanism with vessels eligible under paragraph 4 flagged to another State or Fishing Entity for the purpose of conducting fishing operations in the Convention area as an integral part of the domestic fleet of that chartering Member or Participating Territory. 	<p>Not compatible. Regulation is available</p>		<p>Vietnam needs to soon promulgate regulations compatible with WCPFC's regulations</p>
<p>CMM 2020-01 Conservation and Management Measure for bigeye, yellowfin and skipjack tuna in the western and central Pacific Ocean</p> <ul style="list-style-type: none"> - Pending the establishment of harvest strategies, and any implementing CMM, the purpose of this measure is to provide for a robust transitional management regime that ensures the sustainability of bigeye, skipjack, and yellowfin tuna stocks. 	<p>Not compatible. Regulation is available</p>		<p>Vietnam should implement this measure in the guiding documents to ensure conservation and management of bigeye, yellowfin and skipjack</p>

			tuna following WCPFC's regulation.
<p>CMM 2020-02</p> <p>Conservation and Management Measure for Pacific Bluefin</p> <ul style="list-style-type: none"> - This conservation and management measure has been prepared to implement the Harvest strategy for Pacific Bluefin Tuna fisheries (Harvest Strategy 2017-02), and the Northern Committee shall periodically review and recommend revisions to this measure as needed to implement the Harvest Strategy. 	Not compatible. Regulation is available		Vietnam should implement this measure in the guiding documents to ensure conservation and management of Pacific Bluefin tuna following WCPFC's regulation.



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