



**Establishment and Operation of a Regional System of
Fisheries *Refugia* in the South China Sea and Gulf of Thailand**

REGULATION AND FISHERIES MANAGEMENT FOR FISHERIES *REFUGIA* IN THAILAND

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1. INTRODUCTION

Thailand is one of the six countries participating in the project entitled “Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand”. Among 15 priority fisheries *refugia* sites for project implementation in the region, two sites have been defined in Thailand, located in the coastal areas of Trat Province in the East and Surat Thani Province in the South (Fig. 1-1) of the Gulf of Thailand.

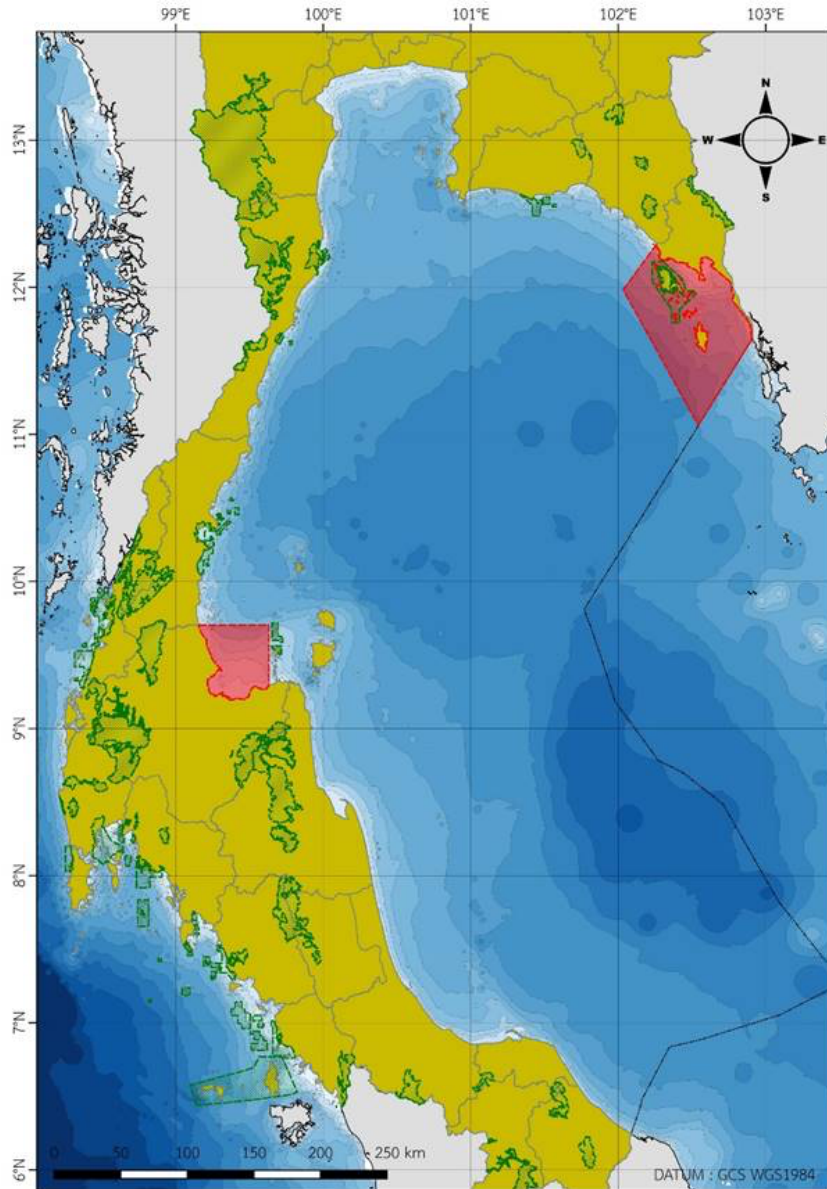


Figure 1-1 Priority fisheries *refugia* sites in Thailand

The implementation of fisheries *refugia* project in Thailand was initiated by the agreement between the Southeast Asian Fisheries Development Center and the Department of Fisheries of Thailand, signed in March 2017. National Fisheries Refugia Committee, National Scientific and Technical Committee, and Site-Based Fisheries Refugia Management Boards in Trat and Surat Thani were subsequently established to be the framework of the project management. Preliminary surveys were firstly conducted, followed by stakeholder initiation meetings in the two sites. The project was further operated by decision-making, guidance, cross-sectorial coordination, technical provision, and

community-led action by means of committee/board meetings, along with stakeholder consultation workshops and technical consultation meetings.

There are four components for project activities, one of which is: improving the management of critical habitats for fish stocks of transboundary significance via national actions to strengthen the enabling environment and knowledge-based for fisheries refugia management in Thailand. This main activity is targeted for national policy, legal and planning frameworks for demarcating boundaries and managing fisheries *refugia*. In this regard, this report is aimed to review policy, legal and institutional aspects of fisheries management in Thailand, including reforms of national regulations and ordinances for responsible fishing practices, process for issuing the regulations, fisheries management plan and its sectors related to fisheries *refugia*, as well as the progress of project implementation for this component.

This report is expected to be helpful for the review of fisheries regulation with a linkage to fisheries *refugia* management in Thailand. The report is also hoped to be beneficial for increasing institutional capacity in Thailand for the designation and operational management of fisheries *refugia* via the transformation of enabling environments and the generation of knowledge for planning, which is one of the final outcomes for fisheries *refugia* establishment and operation in Thailand and in the region.

2. REFORM OF LAW, REGULATION AND FISHERIES MANAGEMENT

The new Royal Ordinance on Fisheries B.E. 2558 (2015) and its revision in B.E. 2560 (2017) recognize the significance of sustainable management of the fisheries resources of Thailand and stipulates that the Thailand Department of Fisheries (DOF) develop and implement a National Fisheries Management Plan (FMP) (Department of Fisheries, 2020).

This National Marine Fisheries Management (FMP) (2019-2022) will build on the success of FMP (2015-2019) and takes into consideration the assessment of progress against the FMP (2015-2019) goals and objectives, changes in the status and nature of the fishery and newer approaches to management. Many of the management measures specified in the FMP (2015-2019) have already been implemented. Excellent progress has made against the urgent issues of (i) overfishing and overcapacity, and (ii) Illegal, unreported and unregulated (IUU) fishing. For the other issues, good progress has been made against all objectives (Department of Fisheries, 2015).

This progress is the direct result of a number of fisheries reforms that have been implemented since 2015 that included the conversion from an open-access to a limited-access fishery, tighter controls on IUU fishing including ratification and implementation of the Food and Agriculture Organization of the United Nations (FAO) Port State Measures Agreement (PSMA), implementation and enforcement of technical measures and more stringent requirements for overseas vessels, including ratification and implementation of the United Nations Fish Stock Agreement (UNFSA).

Marine fisheries are important both socially and economically for Thailand. In order to maintain the sustainable development of the sector, a number of challenges still need to be addressed. These include rebuilding and maintaining the fish resources at a level commensurate with the MSY, reducing the large quantities of small low value/trash fish, including juveniles of larger commercial species that are taken, further reducing illegal, unreported and unregulated fishing (IUU), improving the status of critical marine habitats (mangroves, sea grasses and coral reefs), improving the well-being of artisanal fishers and strengthening the capacity for effective fisheries management.

Based on these challenges, the goals of the FMP (2019-2023) are:

1. Fisheries resources restored to a level that can support the MSY in Thai waters and sustainable fishing expanded into deep-sea and overseas waters;
2. IUU-free fishery;
3. Healthy fishery habitats and environment;

4. Improved livelihoods of artisanal fishers and fishing communities; and
5. Effective fisheries management capacity.

Important management measures specified in the FMP (2019-2022) include the control of fishing effort through a total allowable effort (TAE) and licensing scheme and the use of incentives such as a buy-backs and license combination schemes to remove excess capacity for fishing vessel, the introduction of area-based management for selected fisheries, including clams and shrimp and introducing Fishery Improvement Projects (FIPs) for selected fisheries. Restrictions on the number and characteristics of fishing gear will be maintained. The expansion of sustainable fishing into deeper waters in Thailand and into overseas fishing grounds will be promoted. To reduce the catch of juvenile market fish, mesh size limits will be maintained or increased and seasonal closures improved. Artificial reefs and restocking programs will be maintained.

The FMP is designed to reduce the level of IUU fishing to a level that can be controlled through regular MCS arrangements in the future. Specific management measures to achieve this include a review of the National Plan of Action to Prevent, Deter and Eliminate IUU fishing (NPOA-IUU) and the further strengthening of Thailand's coastal State, flag State and port State responsibilities. The traceability systems already in place will also be improved and international and regional MCS networking adopted.

The DOF will collaborate with the Department of Marine and Coastal Resources (DMCR) to improve the status of critical habitats and rebuild biodiversity. A new important initiative of the FMP 2019-2022 will be the application of the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (FAO SSF Guidelines) to further improve the well-being of artisanal fishers and fishing communities.

The FMP also recognizes the importance of better data and information to inform management decision making and proposes several important changes on research, data and information that can be used in the future management of Thailand's marine fisheries.

Lastly the FMP recognizes the need for institutional changes and strengthening the human capacity to improve future fisheries management.

3. ROYAL ORDINANCE ON FISHERIES B.E. 2558 (A.D.2015) AND (AMENDMENT) B.E. 2560 (2017)

In recognition of the degraded fisheries resources and marine environment that occurred over the past 50 years, Thailand initiated major reforms in the marine fishery in 2015. These reforms began with a new Royal Ordinance on Fisheries B.E. 2558 (2015) that was amended in B.E. 2560 (2017) (Office of the Council of State, 2017). This new legal framework forms the basis for fishery and maritime regulations across the entire supply chain of the fishery sector, including the issuance of fishing licenses at a level appropriate to the natural productivity of the resources, the limitation of fishing gears, the revamp of fleet control measures, the management of catch, and the mechanism to deter potential infringements of the laws. Thailand has effectively entered into force the Food and Agriculture Organization of the United Nations (FAO) Port State Measures Agreement (PSMA) in 2016 and the United Nations Fish Stock Agreement (UNFSA) in 2017. It also fully complies with the relevant Regional Fisheries Management Organizations (RFMOs), such as the Southern Indian Ocean Fisheries Agreement (SIOFA) and the Indian Ocean Tuna Commission (IOTC).

The laws and regulations in Royal Ordinance on Fisheries B.E. 2558 (A.D.2015) and (Amendment) B.E. 2560 (2017) related to the management of fisheries *refugia* are as follows:

Section 4: The provisions of this Royal Ordinance aim to reorganize fisheries in Thailand and in waters at large with a view to preventing IUU fishing in order to preserve aquatic animal resources as a sustainable source of food for humanity and preserve the environment in an appropriate state along the line of approaches, criteria and standards recognized internationally, as well as to protect

the welfare of seamen and prevent all forms of forced labour in the fisheries sector, with due regard to the following objectives:

- (1) achieving good governance in the management and conservation of aquatic resources and the fisheries sector, and ensuring that complete and accurate data thereof are collected;
- (2) protection of special interests of artisanal fisheries and local fisheries communities;
- (3) fulfillment of Thailand's international obligations with regard to the conservation and management of aquatic resources;
- (4) to provide effective means for preventing, deterring and eliminating IUU fishing, as well as unlawful labour practices in the fisheries sector.
- (5) use of best available scientific evidence to achieve long-term economic, social and environmental sustainability, in line with the ecosystem based approach and precautionary approach, to ensure that fisheries resources are maintained or restored to a level that can produce the maximum sustainable yield;
- (6) prevent and eliminate overfishing and overcapacity and ensure that the level of fishing effort does not undermine the sustainability of fisheries resources;
- (7) implementation of systematic measures for the application of this Royal Ordinance;
- (8) cooperation with other states, private agencies, as well as international organisations, with a view to achieving the objectives under this Royal Ordinance;
- (9) ensure legal working conditions and welfare of workers in all areas of the fisheries sector;
- (10) ensuring effective monitoring, surveillance and control of fishing activities;
- (11) implementation of an effective traceability system from fishing operations to ultimate consumers;
- (12) imposing proportional and deterrent administrative and criminal sanctions.

Section 5: In this Royal Ordinance:

“Aquatic animals” mean animals normally inhabiting water, amphibians, animals inhabiting inundated areas, animals partially inhabiting water, and animals having one part of their life cycles in water during a specific water-borne part of their life cycles. These also include aquatic animals' eggs and spawns, sperms, marine algae, carcasses or any one part of those aquatic animals, as well as aquatic plants as specified by Notification of the Minister as well as residuals or any one part of such aquatic plants.

“Fisheries” means fishing operations, aquaculture, the caretaking of aquatic animals, or aquatic animal processing, including any operation in support of a fishing operation.

“Fishing” means to search, attract, catch, take or harvest fish or any activity which can reasonably be expected to result in the attracting, catching, taking or harvesting of fish at a fishing ground.

“Fishing ground” means a tract of land with still or running water, and any beach constituting public domain of State, including a forest and a ground which is naturally inundated, notwithstanding that it constitute a public domain of State or a tract of land privately owned, as well as seas.

“Seas” mean coastal seas, offshore seas, seas outside Thai waters and seas lying in the jurisdiction of another coastal state.

“Thai waters” mean inland waters, coastal seas and off-shore seas.

“Coastal seas” means the seas lying within the Kingdom extending up to three nautical miles from the baselines. In light of exigencies based on purposes related to aquatic resource management, a Ministerial Regulation may be issued to determine the expanse of coastal seas in any area to cover a distance starting from the baseline shorter or further than three nautical miles as appropriate. Any such adjustment shall not result in a distance off the baseline of less than one point five nautical miles nor of further than twelve nautical miles. In any such case, a map delineating the areas prescribed thereby shall be attached to any such Ministerial Regulation.

“Baseline” means a line where the sea meets land along a seashore and the outer limits of an island, specified as having a water depth line at zero meter on the navigation map of the Hydrographic Department, or the outer limits of reclaimed areas.

“Offshore seas” mean the seas located in the Kingdom beyond the coastal seas up to either the extreme bounds of the exclusive economic zones pursuant to the Notification on the exclusive economic zones of the Kingdom of Thailand or the extreme bounds of the continental shelves under the sovereignty of the Kingdom of Thailand, the further boundary of either being the line to prevail.

“Artisanal fishing” means fishing operations in coastal seas in which a fishing vessel is used or in which a fishing gear is used without a fishing vessel, but in any case does not include commercial fishing.

“Commercial fishing” means fishing operations using a fishing vessel of a size from ten gross tonnage or with an engine of a horse power as prescribed by the Minister, or using a fishing vessel with or utilizing fishing gears of the types, methods, the number of workers used, or natures of fishing as prescribed by the Minister. It shall also include using such fishing vessel to operate an aquatic animal processing, whether or not any fishing has also been conducted.”

Chapter 2: Fisheries Management

Section 12: The provisions of this Chapter aim to provide for policies and oversight of fisheries management by way of promoting the participation of all stakeholders in the management and conservation of aquatic animal resources, as well as to establish a system of good governance in order to ensure sustainable use as determined by the examination of best scientific evidence and balanced by economic, social and environmental considerations, in line with the ecosystem based approach and precautionary approach, and also to ensure that fisheries resources are maintained or restored to a level that can produce the maximum sustainable yield, as well as to prevent and eliminate overfishing and overcapacity and ensure that the level of fishing effort does not undermine the sustainability of fisheries resources.

Section 13: A committee shall be established, called “The National Fisheries Committee”, comprising Prime Minister as its chairperson, Minister of Agriculture and Cooperatives as its vice-chairperson, Permanent Secretary of the Ministry of Foreign Affairs, Permanent Secretary of the Ministry of Agriculture and Cooperatives, Permanent Secretary of the Ministry of Transport, Permanent Secretary of the Ministry of Natural Resources and the Environment, Permanent Secretary of the Ministry of Labour, Commander-in-Chief of the Royal Thai Navy, Commissioner General of the Royal Thai Police, Director-General of the Department of Provincial Administration, President of the National Farmers’ Council, President of the Thai Chamber of Commerce, President of the Federation of Thai Industries as committee members and not more than ten experts appointed by the Minister as committee members.

The Director-General shall serve as a committee member and secretary.

Section 25: In order to promote participation and provide support to local fishing communities in the management, maintenance, conservation, restoration and sustainable utilization of aquatic animal resources within fishing grounds in freshwater fishing zones or coastal seas, the Department of Fisheries shall take actions to provide assistance or support in the following matters:

- (1) promote participation on the part of local fishing communities in the development of the policy pursuant to section 19(1);
- (2) encourage association and arranging for the registration of local fishing community organisations pursuant to the rules prescribed by the Director-General;
- (3) provide counsel to local fishing communities related to the management, maintenance, conservation, restoration and utilization of aquatic animal resources, as well as provide assistance and support to the implementation of communities’ work, projects or activities in such matters;

- (4) disseminate knowledge or information on the management, maintenance, conservation, restoration and utilization of aquatic animal resources.

Section 26: There shall be a provincial fisheries committee in each of the provinces prescribed by the Minister. Any such provincial fisheries committee shall comprise the Provincial Governor as Chairperson, a representative of the Ministry of Natural Resources and the Environment, a representative of the Marine Department, the Provincial Chief Prosecutor in the capacity of the Head of the Provincial Chief Attorney’s Office, the Provincial Commerce Officer, District Chiefs in districts where fisheries operations are undertaken, the Chief Executive of the Provincial Administrative Organisation, the President of the Provincial Farmers’ Council as *ex officio* committee members, and not more than thirteen experts appointed by the Provincial Governor as committee members.

The Provincial Fisheries Officer shall serve as a committee member and secretary (Figure 3-1).

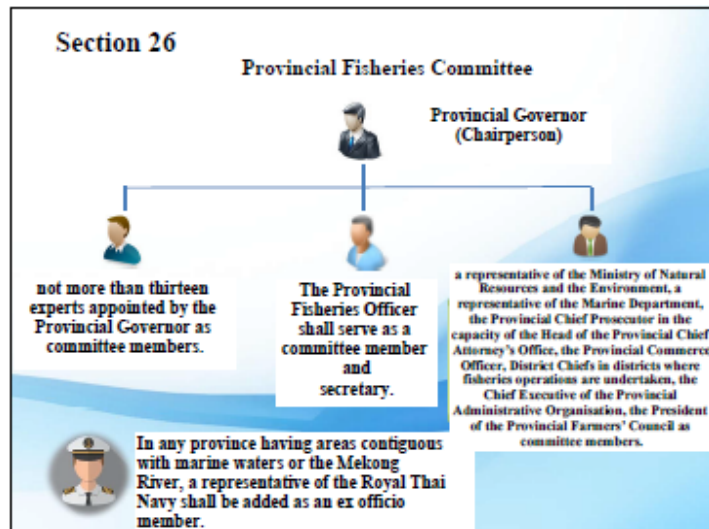


Figure 3-1 Provincial fisheries committee

Section 27: Expert committee members pursuant to section 26 shall be appointed from among the following persons in (Figure 3-2).

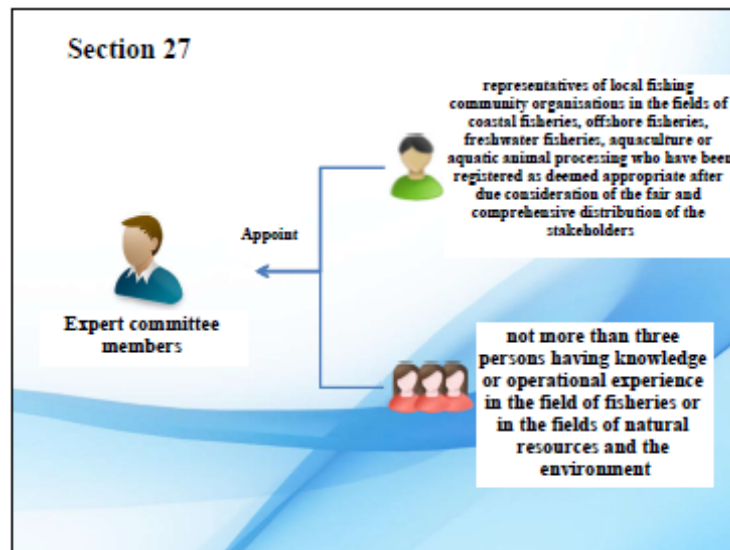


Figure 3-2 Expert committee members

Section 28: The Provincial Fisheries Committee shall have the following powers and duties in (Figure 3-3).

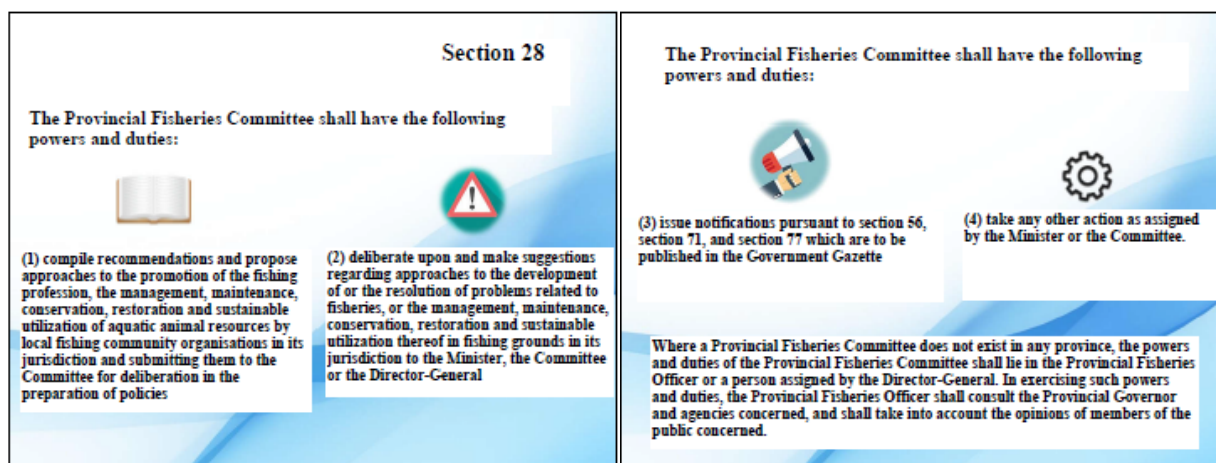


Figure 3-3 Provincial Fisheries Committee shall have the following powers and duties

Chapter 3: Fishing Operations in Thai Waters

Section 30: The provisions of this Chapter are aimed at the management, control and supervision of fishing operations, and the balance of interests between artisanal and commercial fishing. When exercising powers and duties under this Chapter, the parties concerned shall take into account the natural reproduction capacity as determined by best scientific methods in order to identify the points of reference which will allow fisheries undertakings to take place in a sustainable manner and enable the people to have access to an appropriate source of food.

Section 33: A person engaging in artisanal fishing shall comply with the rules and procedures for fishing prescribed by the Director-General.

For the purposes of monitoring, the Director-General may determine that a person engaging in artisanal fishing prepare a fishing logbook, which shall at least comprise information on the types and quantities of aquatic animals caught and the area(s) in which fishing grounds are located.

Any person engaging in artisanal fishing shall keep a fishing logbook under paragraph two and readily present it to the competent official upon the return of their fishing vessel to a port of entry.

Section 34: Any person granted an artisanal fishing license shall not conduct any fishing in offshore seas, unless granted permission by the Director-General or a designated person. Such permission by the Director-General may be announced and applied generally, and any requirements under rules and conditions for fishing in offshore seas may also be imposed.”

Section 36: A license under paragraph one shall be issued specifically for a fishing vessel and the license must state the amount and type of fishing gear permitted for use in a fishing operation in a fishing ground, permitted catch limit and permitted fishing period in line with the fishing capacity and maximum sustainable yield as stated in the Fisheries Management Plan. The number of licenses issued to a person shall not exceed the number prescribed by notification of the Minister.

Chapter 5: Conservation and Management Measures

Section 55: For the purposes of conservation and management designed to achieve a natural balance and the preservation of aquatic animal resources and the ecosystem in a sustainable manner based on a precautionary approach, persons engaging in fishing operations must comply with the provisions under this chapter.

Section 56: No person shall catch aquatic animals in an aquatic species sanctuary as prescribed by the Minister or by the provincial fisheries committee subject to the approval of the Minister, except for the purposes of academic advancement or for the purposes of the nurturing of aquatic animal breeds for which permission in writing has been granted by the Director-General or a person assigned by the Director-General.

There shall be attached to a notification determining any aquatic species sanctuary pursuant to paragraph one a map delineating the areas prescribed thereby.

Section 65: For the purposes of protecting rare aquatic animal species or preventing any harm to aquatic animals and the ecosystem, the Minister shall have the power to prohibit importation, exportation, transit, aquaculture, or having in possession of particular aquatic animals.

No person shall import, export, bring in transit, breed or have in possession aquatic animals pursuant to paragraph one unless a license is obtained from the Director-General or a person designated by the Director-General.

Section 66: No person shall catch aquatic mammals, rare aquatic animals or aquatic animals near extinction as prescribed by the Minister or take any such aquatic animal on board a fishing vessel, except where it is necessary to do so in order to save the life thereof.

Section 67: No person shall use or have in possession for the purposes of using any of the following fishing gears:

(1) a set bag net, a *Rua Sai Man* bag net or *Kan Su Ruan Sai Man* bag net, a *Li* bamboo trap, or any other tool exhibiting a similar character and requiring a similar method;

(2) a foldable trap or an elongated collapsible trap (*Ai Ngo*) with left and right inlets alternating on the sides for the purposes of trapping aquatic animals;

(3) a trawl net with the size of the meshes round the bottom part as prescribed by Notification of the Director-General;

(4) a push net attached to a motor vessel with the exception of a push net for the catching of krill.

Sub-paragraphs (1) and (3) shall not apply to any research conducted by the government for the benefit of finding an appropriate mesh size which people can use and is approved in writing by the Director-General or his assignee.

Paragraph one shall not apply to a person who conducts artisanal or freshwater fishing and is permitted to use fishing gears in accordance with the form of gears, the size of vessel, the fishing method, the fishing area, and conditions prescribed by the Director-General.

An application for permission, a permission, and a period of permission shall be in accordance with the rules, procedures, and conditions as prescribed by the Minister.”

Section 69: No person shall use a surrounding net with the size of the net meshes smaller than two point five centimeters to engage in a fishing operation at night.

Section 70: No person shall fish in the area and during the time period in which aquatic animals produce or lay eggs, raise their offspring or during any other periods necessary for protection of aquatic animals as prescribed by the Director-General, unless the person uses the gears, applies the fishing method, and complies with other conditions as prescribed by the Director-General.

The Director-General may assign in writing his power under paragraph one to the provincial fisheries committee.

Section 71: The Minister or the provincial fisheries committee shall have the power to issue notifications regarding the following:

(1) fishing gears according to their forms, fishing methods, fishing areas, the size of fishing vessels used in fishing operation and other conditions that are prohibited from fishing operations in fishing grounds;

(2) requirements to be complied with in relation to bycatches;

(3) an area necessitating the use of a fishing gear that requires pegging down, pitching, tying, stretching, pulling, sinking or any other method to keep any such tool fixed during a fishing session.

A notifications pursuant to paragraph one shall not apply to any action undertaken for the purposes of research or aquatic animal resource conservation by a public agency for which permission has been granted in writing by the Director-General or a person designated by the Director-General. In a case in which any such notification is issued for enforcement in a particular area, there shall be attached to any such notification a map delineating the area prescribed thereby.

Upon the approval of the Minister, the determination by the provincial fisheries committee shall apply to the areas under its responsibility and only to freshwater fisheries zones and coastal seas.

For the purposes of this section, the Minister shall have the power to issue notifications determining areas under the responsibility of the provincial fisheries committees in coastal sea areas.

Section 72: Where the issuance of any notification pursuant to section 71 involves overlapping areas in two or more provinces due to the geographical components or the natural ecosystem in that specific area, or for the purposes of achieving a systematic aquatic animal resource management system, the provincial fisheries committee shall propose to the Minister for the latter to exercise the power to determine any such matter in lieu of the provincial fisheries committee, and notify the provincial fisheries concerned thereof (Figure 3-4).

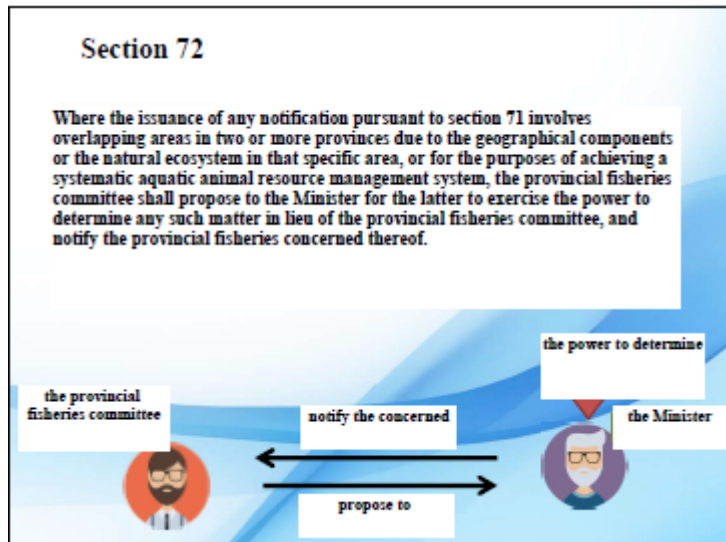
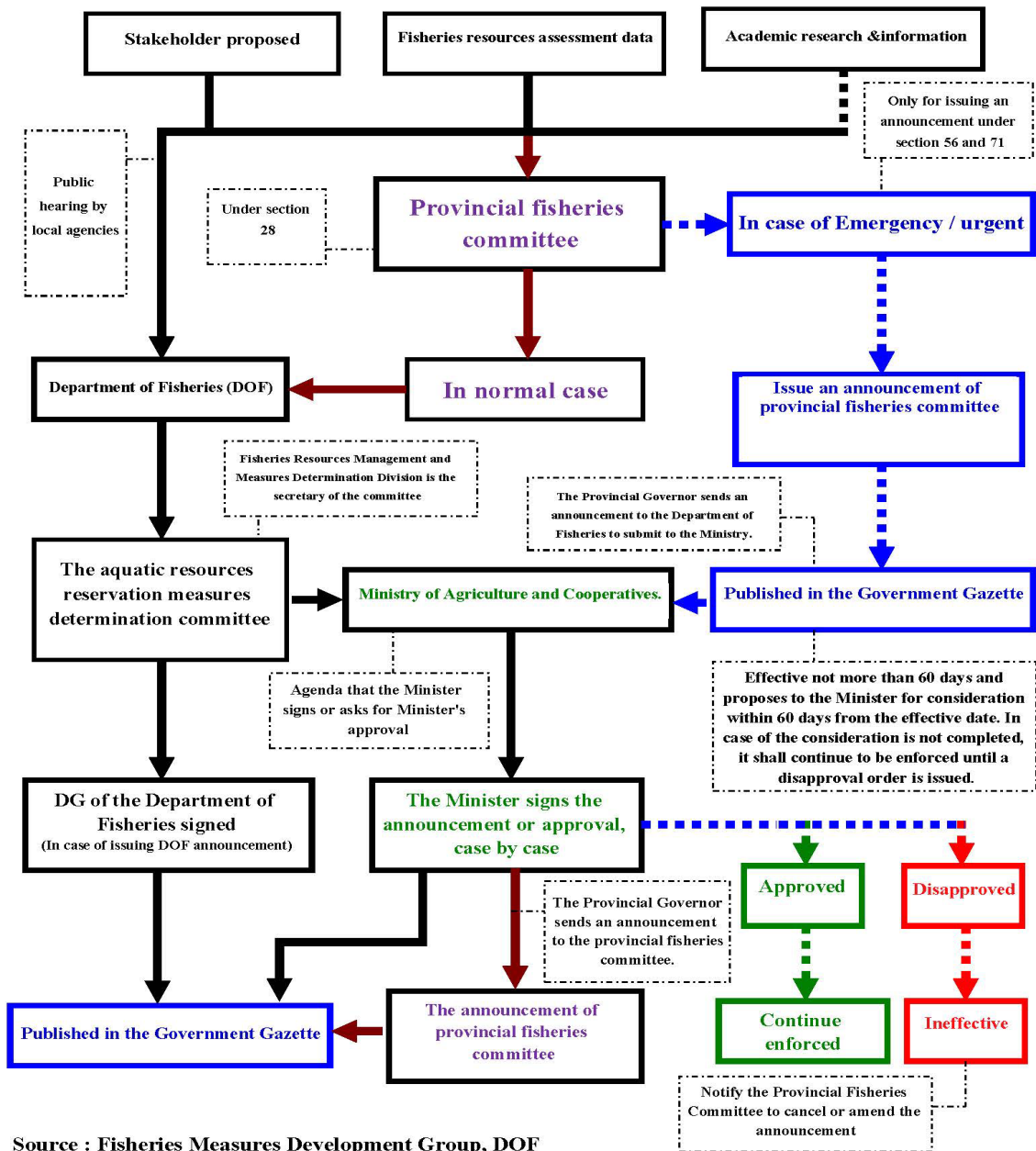


Figure 3-4 Notification pursuant to section 71 involves overlapping areas in two or more provinces

4. LEGISLATIVE PROCESS

Figure 4-1 is the legislative process from the Provincial Governor and the Minister of Ministry of Agriculture and Cooperatives.



Source : Fisheries Measures Development Group, DOF

Figure 4-1 Legislative process from the Provincial Governor and the Minister of Ministry of Agriculture and Cooperatives

5. FISHERIES MANAGEMENT

Background

This National Marine Fisheries Management (FMP) (2019-2023) builds on the success of FMP (2015-2019) and takes into consideration the assessment of progress against the goals and objectives of the FMP (2015-2019), changes in the status and nature of the fishery and newer approaches to management. A review of progress against the objectives and targets of the FMP (2015-2019) was carried out the full details are in the assessment report (Nootmorn, 2019). The report concluded that many of the management measures specified in the FMP had already been implemented, thus requiring an update and revision of the goals and objectives of management for the next five years. Excellent progress was made against the urgent issues of (i) overfishing and overcapacity, and (ii) Illegal, unreported and unregulated (IUU) fishing. For the other less urgent issues, good progress has been made against all objectives (Department of Fisheries, 2015).

As shown by the assessment, the overall situation in the marine fisheries of Thailand has improved significantly since the adoption of the FMP (2015-2019). Fishing effort in the demersal fleet, especially that targeting anchovies, has been reduced by more than 30% to a level below the fishing effort needed to produce maximum sustainable yield (MSY), thus allowing rebuilding of the fishery resources. IUU fishing has been the target of concerted efforts to control and inspect many aspects of the fishing activities throughout the value chain. Law enforcement has been strengthened and penalties for infringements greatly increased. The control of vessels fishing and transshipping fish outside of Thai waters has also been strengthened, with no vessel authorized to fish in 2017-2018. Measures have also been taken to reduce the catch of juvenile market fish and small low value/trash fish. Critical fishery habitats and biodiversity are being restored through the planting of mangroves and seagrass and the maintenance and expansion of marine protected areas (MPAs). Some progress has been made to improve the management of the artisanal fishery and its dependent communities, but more is required. Illegal labor practices have also been targeted and the overall situation is improving through issuing seaman books and improving working conditions for workers in fishing industries (Department of Fisheries, 2020).

Thailand's marine fishery reforms

In recognition of the degraded fisheries resources and marine environment that occurred over the past 50 years, Thailand initiated major reforms in the marine fishery in 2015. These reforms began with a new Royal Ordinance on Fisheries B.E. 2558 (2015) that was amended in B.E. 2560 (2017). This new legal framework forms the basis for fishery and maritime regulations across the entire supply chain of the fishery sector, including the issuance of fishing licenses at a level appropriate to the natural productivity of the resources, the limitation of fishing gears, the revamp of fleet control measures, the management of catch, and the mechanism to deter potential infringements of the laws. Thailand has effectively entered into force the Food and Agriculture Organization of the United Nations (FAO) Port State Measures Agreement (PSMA) in 2016 and the United Nations Fish Stock Agreement (UNFSA) in 2017. It also fully complies with the relevant Regional Fisheries Management Organizations (RFMOs), such as the Southern Indian Ocean Fisheries Agreement (SIOFA) and the Indian Ocean Tuna Commission (IOTC).

Monitoring, control and surveillance (MCS) has also been strengthened. The Fisheries Monitoring Center (FMC), where the Vessel Monitoring System (VMS) is overseen, now operates with state of the art equipment and manpower to detect high-risk fishing operations. The monitoring done by the FMC is complemented with the inspections at ports and at sea, where officers are on hand to eliminate the risks of illegal activities and, when applicable, prosecute them. The Department of Fisheries (DOF) also issued a Notification on 25 December 2015, requesting all owners of fishing vessels with a capacity of 30 gross tonnes (GT) and above operating outside Thai waters to bring the vessels back to port within 30 days of the issuance of the Notification. No licenses have been given to any fishing vessels to fish outside Thai waters since 2017. Overseas

fishing and transshipment in the future will require advanced electronic reporting and monitoring systems, equipped with CCTVs, cameras, and sensors. A catch traceability system now traces fish and fish products throughout the supply chain from the time they enter the country through to their final destination.

When the requirements for overseas vessels was being strengthened, a number of fishing and transshipment vessels, previously flagged by Thailand have reflagged to avoid the strict controls that are now in place. However, Thailand, as a party to the PSMA, is working with other States to impose stricter control measures to counter this. Article 8 of the Royal Ordinance on Fisheries B.E. 2558 (2015) and its revision B.E. 2560 (2017) allows Thai law enforcement authorities to pursue the prosecution all Thai, non-Thai, and stateless vessels associated with Thai beneficiaries, in line with the international Agreements and Conventions related to fisheries conservation and management. As the result, a number of arrests have been made and penalties applied. Thailand is also actively cooperating with other countries and RFMOs to keep track of vessels suspected of engaging in illegal fishing in overseas waters.

Thailand has also placed equal priority on labor reforms. Several International Labor Organization (ILO) Conventions have recently been ratified, such as Force Labor Protocol 29, Discrimination (Employment and Occupation) Convention (1958). Thailand is currently drafting a law to support Thailand's readiness to ratify the International Labor Organization's "Work in Fishing Convention" (C 188). Efforts have been made to regularize and collect biometric data of migrant workers. Oversights and protections provided to migrants recruited through legal channels have been significantly strengthened. Outreach to migrant workers has been expanded through the establishment of Migrant Worker Assistance Centers.

The enforcement of the laws, particularly the enforcement of fishery and labor cases, has been strengthened in all agencies involved in the enforcement system. The police force, the public prosecutors, and the court have all established special offices and set a clear timeline to expedite the fishery- and labor-related criminal cases. In addition to the criminal proceedings, the administrative sanctioning procedure is in place to impose such penalties to deter illegal activities.

In accordance with The Royal Ordinance on Fisheries B.E. 2558 (2015) the (Ministry of Agriculture and Cooperatives) developed a Marine Fisheries Management Plan of Thailand (FMP 2015-2019) that was adopted in 2015. Following the specification in the legislation, the FMP included:

1. Issuance of fishing licenses in line with the fishing capacity and the maximum sustainable yield, using reference points as the basis for determination;
2. Restoration of aquatic animal resources to their normal natural state;
3. Reduction in the fishing vessels engaged in commercial fishing operations;
4. Elimination of IUU fishing operations;
5. Resolution of conflicts of interests between artisanal and commercial fishing operations;
6. Preventing the catching of aquatic animals of premature sizes;
7. Development of information related to fisheries;
8. Enhancement of fisheries management.

This FMP (2019-2023) is a revision of the National Marine FMP (2015-2019) based on an assessment of progress and taking into consideration changes in the status and nature of the fishery and newer approaches to management.

Assessment of progress of the Marine Fisheries Management Plan (2015-2019)

A review of progress against the objectives and targets of the FMP (2015-2019) was carried out and full details are in the assessment report (Nootmorn, 2019). The report concluded that many of the management measures specified in the FMP had already been implemented and that the FMP needed to be updated and revised. Excellent progress was made against the urgent issues of (i)

overfishing and overcapacity, and (ii) IUU fishing. For the other less urgent issues, good progress has been made against all objectives.

The revision of the FMP should also take into account the suite of new management measures that are being considered. These include:

- Introduction of area-based management, e.g. clam and shrimp that inhabit specific areas;
- Fishing licensing system for different fishing zones, e.g. territorial use fishing rights (TURFs) for coastal communities, fishing permits at the Provincial level, and fishing license for national waters;
- FIPs for economically important species that can be controlled through market forces, such as trash from trawls, sardine, neritic tuna and blue swimming crab;
- Stricter law enforcement; and
- Feasibility of marine ranching.

Policy framework and legislation

International and regional cooperation

Thailand has ratified a number of key legal instruments relating to fisheries and the environment, including recent ratification of the UNFSA and the FAO PSMA.

Some key global legal instruments relating to fisheries and the environment

Law of the Sea Convention (UNCLOS)	Convention on Biological Diversity (CBD)	Convention on International Trade in Endangered Species (CITES)	Ramsar Convention on Wetlands of International Importance (Ramsar)	UN Framework Convention on Climate Change (FCCC) and Kyoto Protocol	UN Fish Stocks Agreement (UNFSA)	FAO Port State Measures Agreement (PSMA)
✓	✓	✓	✓	✓	✓	✓

As a member country of FAO, Thailand has adopted the FAO Code of Conduct of Responsible Fisheries (CCRF) and the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (the FAO SSF Guidelines). Thailand is a member of IOTC and SIOFA, a cooperating non-member of Western and Central Pacific Fisheries Commission (WCPFC) and non-contracting party of the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

Thailand has ratified 18 ILO conventions, including two conventions during the past 12 months. The Kingdom ratified the original Forced Labor Convention in 1969 and the 2014 Protocol updates that strengthens the earlier convention to take into account today's problems and changing conditions. The Thai government is also planning to ratify the ILO Work in Fishing Convention and two other conventions on collective bargaining and the right to organize for both national and migrant workers.

Thailand, as a member of the ASEAN community, is guided by the ASEAN Roadmap for an ASEAN Community (2009-2015) and its supporting Blueprints. Thailand has also endorsed the ASEAN-SEAFDEC Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 (Res/POA).

Thailand is part of the Regional Plan of Action against IUU fishing (RPOA-IUU), which is a ministerial initiative of eleven countries: Australia, Brunei Darussalam, Cambodia, East Timor, Indonesia, Malaysia, Papua New Guinea, The Philippines, Singapore, Thailand and Vietnam to promote responsible fishing practices and combat IUU fishing in the Southeast Asian region.

National fisheries policies

At the national level, the overall policy framework is guided by the 20-year National Strategy. This is implemented through the five-year National Economic and Social Development Plans (NESDP). NESDP (2017-2021) recognises that natural resources and the environment have rapidly deteriorated in both quantity and quality, resulting in higher economic costs and devastating negative impacts on people's quality of life. It also recognises that past attempts at management of natural resources and the environment have not been effective. It specifies the protection of marine resources by designating marine and coastal areas, employing restrictive measures for fisheries, banning larval and juvenile fishing, regulating the use of illegal fishing gear, and protecting the artisanal fisheries. It specifically highlights the issue of illegal unreported and unregulated (IUU) fishing and developing sustainable fisheries and aquaculture systems (Department of Fisheries, 2020).

The Fisheries Act (1947) provided the basics for managing Thailand's fisheries from 1947 through to 2015. The Act was replaced by a new Royal Ordinance on Fisheries B.E. 2558 (2015) and its amendment in B.E 2560 (2017). This new law strengthened Thailand's international obligations and broadened the concept of fisheries management under an ecosystem approach. Many of the policy statements of relevance to marine fisheries management are contained in this Royal Ordinance on Fisheries B.E 2560 (2017). The following are relevant to this FMP:

1. Achieving good governance in the management and conservation of aquatic resources and the fisheries sector, and ensuring that complete and accurate data are collected.
2. Protection of special interests of artisanal fisheries and local fisheries communities.
3. Fulfillment of Thailand's international obligations with regard to the conservation and management of aquatic resources.
4. Providing effective means for preventing, deterring and eliminating IUU fishing, as well as unlawful labor practices in the fisheries sector.
5. Using best available scientific evidence to achieve long-term economic, social and environmental sustainability, in line with the ecosystem based approach and precautionary approach that ensures that fisheries resources are maintained or restored to a level that can produce the maximum sustainable yield.
6. Preventing and eliminating overfishing and overcapacity and ensure that the level of fishing effort does not undermine the sustainability of fisheries resources.

As well as the fisheries law, there are a number of other Acts that apply, including the Thai Vessels Act, B.E. 2481 (1938). The Marine Department is in the process of amending two relevant laws, namely the Thai Vessel Act and the Navigation in Thai Waters Act, to be in line with the Royal Ordinance on Fisheries. There are also a number of natural resource exploitation Acts dealing with other natural resources, including the Minerals Act B.E. 2510 (1967), the Petroleum Act B.E. 2514 (1971), and the Tourism Act B.E. 2522 (1979). There are also three relevant nature conservation acts: Wild Animal Reservation and Protection Act B.E. 2503 (1960), a National Park Act B.E. 2504 (1961) and the National Forest Reserves Act B.E. 2057 (1964). These three acts cover both land and water, especially the National Park Act, which also includes marine parks as well as forest parks. A new Marine and Coastal Resources Management Act B.E. 2558 was also adopted in 2015.

Scope

The FMP (2019-2023) applies to all marine capture fisheries taken by both artisanal and commercial vessels in Thai waters (including the territorial waters out to 12nm and the Thailand exclusive economic zone (EEZ)) as well as marine capture fisheries conducted by Thai vessels in the territorial waters and EEZs of other States and the high seas. In Thai waters the fishing areas are those in the east (Gulf of Thailand) and those to the west (Andaman Sea) (Figure 5 - 1).

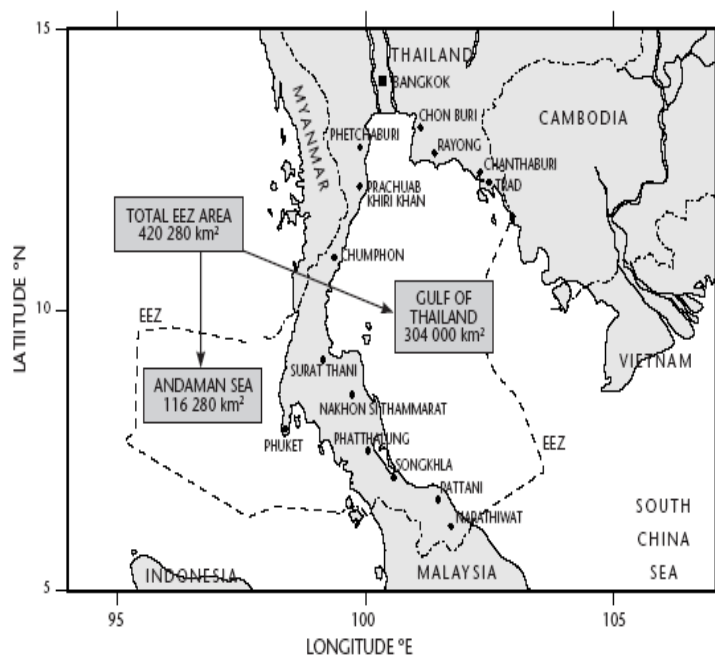


Figure 5-1 Gulf of Thailand and Andaman Sea marine fishing areas

The FMP covers the species of:

- All pelagic species;
- All demersal species;
- All highly migratory tuna and tuna-like species (often managed under a RFMO); and
- Other non-target, associate or dependent species taken while fishing, such as endangered and threatened species.

Vision, goals and underlying principles

The vision for the future of Thailand marine fisheries is:

Sustainably managed marine fishery that contributes to increased national prosperity, livelihoods and environmental well-being

This broad vision can be broken down into a number of goals that address major issues:

Goals:

1. Fisheries resources restored to a level that can support the MSY in Thai waters and sustainable fishing expanded into deep-sea and overseas waters.
2. IUU-free fishery.
3. Healthy fishery habitats and environment.
4. Improved livelihoods of fishers and fishing communities.
5. Effective fisheries management capacity.

The goal 3, Healthy fishery habitats and environment have 3 objectives; to restore and maintain critical habitats, to rebuild marine biodiversity and to reduce marine debris. The Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand is one management measure under 2nd objective, to rebuild marine biodiversity.

6. PROGRESS IN LEGISLATION ON FISHERIES REFUGIA IN THAILAND

6.1 Indo-Pacific mackerel, Trat Province

(1) Established national fisheries *refugia* management committee by issuing “Notification of the Department of Fisheries No. 1130/1/2561 Re: Appointment of Thailand’s National Fisheries *Refugia* Committee” for enhancing national coordination and overall planning operational management of fisheries *refugia* in Thailand;

(2) Established national fisheries *refugia* scientific and technical committee by issuing “Notification of the Department of Fisheries No. 1130/2561 Re: Appointment of Thailand’s National Scientific and Technical Committee” for building the national and site-level scientific and technical information base;

(3) Established local management board by issuing “Notification of Trat Province No. 472/2562 Re: Appointment of Site-Based Fisheries *Refugia* Management Board in Trat Province” for delineating *refugia* boundaries and formal designation of Trat site;

(4) Consecutively conducted the meeting of National Fisheries *Refugia* Committee to advise and recommend for the sites and legislation on fisheries *refugia* management in Thailand;

(5) Consecutively conducted the meeting of National Scientific and Technical Committee to make a technical guidance and suggestions, on a scientific and technical perspective, for legislation on fisheries *refugia* management in Thailand;

(6) Consecutively conducted the meeting of Site-Based Fisheries *Refugia* Management Board in Trat Province to facilitate laying down the measures for sustainable management of fisheries *refugia* of Indo-Pacific mackerel in Trat Province under acceptances by stakeholders and relevant provincial organizations;

(7) Conducted the stakeholder consultations in all the coastal communities in Trat province for getting the advice, recommendations and approves of fisheries *refugia* site and management measure for Indo-Pacific mackerel in Trat Province;

(8) Proposed fisheries *refugia* site and management measure for Indo-Pacific mackerel in Trat Province for approval in the meeting of Trat Provincial Fisheries Committee;

(9) Proposed the provincial-approved fisheries *refugia* site and management measure for Indo-Pacific mackerel in Trat Province to the “Fisheries Resource Conservation Measure Determination Committee”, Department of Fisheries; and

(10) Following the approval by “Fisheries Resource Conservation Measure Determination Committee of the Department of Fisheries”, fisheries *refugia* site and management measure for Indo-Pacific mackerel in Trat Province will be proposed to the Ministry of Agriculture and Cooperatives for consideration and approval, then the Notification on the management measure will be issued.

6.2 Blue swimming crab, Surat Thani Province

(1) Established national fisheries *refugia* management committee by issuing “Notification of the Department of Fisheries No. 1130/1/2561 Re: Appointment of Thailand’s National Fisheries *Refugia* Committee” for enhancing national coordination and overall planning operational management of fisheries *refugia* in Thailand;

(2) Established national fisheries *refugia* scientific and technical committee by issuing “Notification of the Department of Fisheries No. 1130/2561 Re: Appointment of Thailand’s National Scientific and Technical Committee” for building the national and site-level scientific and technical information base;

(3) Established local management board by issuing “Notification of Surat Thani Province No. 2079/2562 Re: Appointment of Site-Based Fisheries *Refugia* Management Board in Surat Thani Province for Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand” for delineating *refugia* boundaries and formal designation of Surat Thani site;

(4) Consecutively conducted the meeting of National Fisheries *Refugia* Committee to advise and recommend for the sites and legislation on fisheries *refugia* management in Thailand;

(5) Consecutively conducted the meeting of National Scientific and Technical Committee to make a technical guidance and suggestions, on a scientific and technical perspective, for legislation on fisheries *refugia* management in Thailand;

(6) Consecutively conducted the meeting of Site-Based Fisheries *Refugia* Management Board in Surat Thani Province to facilitate laying down the measures for sustainable management of fisheries *refugia* of blue swimming crab in Surat Thani Province under acceptances by stakeholders and relevant provincial organizations;

(7) The legislation of blue swimming crab in Surat Thani Province is on the way to be concluded by Site-Based Fisheries *Refugia* Management Board in Surat Thani Province, then being carried out the same processes as those in Trat Province.

7. CONCLUSION

This report is expected to be helpful for the review of fisheries regulation with a linkage to fisheries *refugia* management in Thailand. Thailand have the new Royal Ordinance on Fisheries B.E. 2558 (2015) and its revision in B.E. 2560 (2017) recognize the significance of sustainable management of the fisheries resources of Thailand and stipulates that the Thailand Department of Fisheries (DOF) develop and implement the Marine Fisheries Management Plan of Thailand, a National Policy for Marine Fisheries Management during 2015 – 2019 and Marine Fisheries Management Plan of Thailand (2019-2022). The fisheries regulations and fisheries management plans will be support and consistency for fisheries management of Indo-Pacific mackerel in Trat Province and blue swimming crab, Suratthani Province. And, The Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand is one of management measure under 2nd objective, to rebuild marine biodiversity.

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