

INTERNATIONAL WATERS EXPERIENCE NOTES

ESTABLISHMENT AND MANAGEMENT OF FISHERIES REFUGIA IN CAMBODIA



Abstract

Cambodia has started to implement fisheries refugia project since 2017 until now and 3 pilot sites of the project have been selected in Kep, Kampot, and Koh Kong provinces, including Kep for BSC refugia, Kampot for Juvenile refugia, and Koh Kong for Indo-Pacific Mackerel.

Two fisheries refugia in Kep and Koh Kong provinces have been endorsed by the Royal Government, three fisheries refugia profile in Kep, Kampot, and Koh Kong provinces were completed, and 5 year-management plans for Marine Fisheries Refugia and BSC refugia at Koh Po and Koh Tonsay Archipelago, Kep province was adopted by Kep Provincial Governor and Director General of FiA. At the same time, two site base management board in Kep and Koh Kong provinces were formulated by the provincial governor to coordinate and solve all challenges happening during fisheries refugia management and operation.

Lesson learned from three pilot sites, Blood Cockle Refugia at Prey Nob, Preah Sihanouk province has been endorsed by the Royal Governor of Cambodia on 20 August 2020 in term of sustainable management and utilization of fisheries sources resources. Recently, Cambodia exchanged the experiences and knowledge on fisheries refugia management and establishment with the Department of Fisheries of the Kingdom of Thailand in Kep and Kampot provinces.

Fisheries refugia is a management tool in ensuring sustainable fishing, restoring marine habitat, fisheries management, and addressing climate change impacts, so the fisheries refugia concept is a good practice and measure of marine fisheries resources in line with MAFF's Policy in the establishment of Marine Fisheries Management Area in coastal provinces in term of sustainable utilization of marine fisheries resources. In particular, its concept was integrated into 1) National Plan of Action for Combating IUU Fishing, 2) Final draft of 10-year strategy plan for fisheries conservation, 3) Marine Management Plan, 4) The draft New Law on Fisheries.

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ESTABLISHMENT AND MANAGEMENT OF FISHERIES *REFUGIA* IN CAMBODIA

PROJECT DESCRIPTION

Cambodia has started to implement Fisheries Refugia Project since 2017 until now and three pilot sites of the project has been selected in Kep, Koh Kong, and Kampot provinces, including Marine Fisheries Management Area including blue swimming crab refugia at Koh Po and Koh Tonsay Archipelago in Kep, Indo-pacific mackerel refugia at Peam Krasob in Koh Kong, and Marine Fisheries Management Area including Juvenile Grouper refugia at Prek Thnoat in Kampot provinces.

Marine Fisheries Management Area including blue swimming crab refugia at Koh Po and Koh Tonsay Archipelago in Kep covers the total size of 11307ha including 417ha for BSC Refugia and has been endorsed by the Royal Government of Cambodia on 12 April 2018. Indo-pacific mackerel refugia at Peam Krasob in Koh Kong province covers the total area of 1283ha and has been endorsed by the RGC on 16 September 2019. Marine Fisheries Management Area including Juvenile Grouper refugia at Prek Thnoat in Kampot provinces covers the total size of 8008ha including 332ha for Juvenile Grouper Refugia and has not been approved the RGC and now in process to finalize new boundary with province governor.

In addition, Cambodia established other fisheries refugia site at Prey Nob, Preah Sihanouk province focusing on blood cockle specie naming "Blood Cockle Refugia at Prey Nob, Preah Sihanouk province. This refugia site cover the total area of 116ha and was endorsed by the RGC on 20 August 2020.

Objectives of establishment and management of fisheries refugia are to: 1) ensure fish stock and sustainable fishing, 2) improve marine habitat and ecological system, 3) reduce threats to habitat linkages and fisheries resources, and 4) enhance local livelihood.

THE EXPERIENCE

• ISSUES

Some issues have been met during fisheries refugia project implementation. They are as follow:

- It is hard to prepare a meeting with provincial administration leaders (i.e. Provincial Governor or Deputy Governor), it always postpones the meeting with them for a few times;
- Fisheries Refugia in Kampot province has been postponed for approval so far due to changing new provincial governor and impact with the development companies, however it is expected to be endorsed at the end of this year;
- COVID 19 pandemic outbreaks in the project target provinces;
- It is observed that there are still a few numbers of illegal fishing activities at the refugia site during closing season; and
- Community fisheries and Fisheries Administration Cantonment still lack budget, materials, and equipment for patrolling and cracking down illegal fishing activities.

• ADDRESSING THE ISSUES

Four points are proposed to establish and manage fisheries refugia in Cambodia. Those points are described as follow:

1. Key Stakeholder Engaged in Establishment of Fisheries Refugia

Stakeholder consultation meeting play a main role in supporting the process of the establishment of fisheries refugia in Cambodia. Key relevant stakeholders were included at national and provincial level in which they were from

Key stakeholders engaged in the establishment of fisheries refugia in Cambodia are included at national and provincial level. They are from Provincial Hall Administration, Fisheries Administration, Involved Provincial Departments, Provincial Police, Provincial Military Police, Maritime Police, Involved District

and Commune Authorities, Development Partners (MCC, WCS, WEA, and FFI), Private Sector, and Community Fisheries

2. Key Stakeholders Engaged in Site Base Management Board

Site Base Management Boards (SBMB) are formulated to coordinate and solve all challenges taking place during the project implementation at the site level. In Kep province, there are two types of SBMB including Provincial Management Committee chaired by Provincial Governor and Technical Working Group chaired by Provincial Deputy Governor. In Koh Kong province, there is only one committee which is Technical Working Grouper chaired by Provincial Deputy Governor.

Key stakeholders engaged in site base management boards are from Provincial Hall Administration, Fisheries Administration, Involved Provincial Departments, Provincial Police, Provincial Military Police, Maritime Police, Involved District Governor, and Maritime Ocean Committee.

3. Research Studies

The project did research on Indo-Pacific Mackerel biological studies in Koh Kong province, providing technical assist from SEAFDEC starting from February 2019 to March 2020. The objective of the research was to provide scientific information and data for supporting the establishment and management of Indo-Pacific Mackerel *refugia* in Koh Kong province.

The research studies collaborated with Fisheries Administration Cantonment in Koh Kong province (FiAC) and Royal University of Agriculture (RUA) in Cambodia focusing on the operation of short mackerel gonad to identify the stage of fish gonad development from stage 1 to 5.

4. Management Measures

Management measures are taken as follow:

- Practicing closing season of targeted species. For example, BSC starting from May to July, and Indo-Pacific Mackerel starting from December to March. All kinds of fishing gears targeting to catch these species are prohibited;
- Installing mooring buoys around the boundary of fisheries refugia sites to demonstrate the refugia sites to fishermen during closing season;
- Patrolling, cracking down illegal fishing, and standing by at the refugia site during closing season;
- Deploying concrete blocks into MFMA and refugia sites in order to protect marine habitat, improve marine habitat, and prevent illegal fishing activities; and
- Disseminating a noticed letter issued by provincial administration on closing season

RESULTS AND LEARNING

Two fisheries refugia sites have been endorsed by the Royal Government of Cambodia. Marine Fisheries Management Area including Blue Swimming Crab Refugia in Kep province has been adopted on 12 April 2018 and Indo-Pacific Mackerel at Peam Krasob, Koh Kong province has been adopted on 16 September 2022. But Marine Fisheries Management Area including Juvenile Grouper Refugia in Kampot province has been in process to finalize the new boundary with Provincial Governor, and It is expected to be adopted at the end of this year. At the same time, the concept of fisheries refugia has been integrated into 1) National Plan of Action for Combating IUU Fishing, 2) Final draft of 10-year strategy plan for fisheries conservation, 3) Marine Management Plan, 4) The draft New Law on Fisheries as follows:

- Article 15 and 16: Stated about type of Fisheries Management with inclusion of Fisheries Refugia (FR)
- Article 17: Stated about Legal type to support the establishment of FR
- Article 20: Stated about Where FR shall be established
- Article 24: Stated about Restriction of fishing activities within FR
- Article 126: Stated about Penalty (250\$ - 2500\$) and in some case the amount is double.

Moreover, three fisheries refugia profiles in Kep, Kampot, and Koh Kong province have been completed and 5 year-Action Plan for Marine Fisheries Management Area including BSC refugia at Koh Po and

Koh Tonsay Archipelago, Kep province has been officially approved by Kep Governor and Director General of FiA. Two site base management boards in Kep and Koh Kong provinces have been officially formulated by provincial governor. In particular, leaflets on fisheries refugia has been published and distributed to participants during National Fish Day Ceremony on 1st July 2022 under presided by the Prime Minister of the Kingdom of Cambodia.

The establishment of fisheries refugia plays a main role in ensuring sustainable fishing in the present and long-term management, so the fisheries refugia concept is a good practice and measure of marine fisheries resources in line with MAFF's Policy in the establishment of Marine Fisheries Management Area in coastal provinces in term of sustainable utilization of marine fisheries resources.

REPLICATION

Based on the lesson learned from three pilot sites under the refugia project in Kep, Kampot, and Koh Kong provinces, Blood Cockle Refugia at Prey Nob, Preah Sihanouk province has been endorsed by the Royal Governor of Cambodia on 28 August 2020 in term of sustainable management and utilization of fisheries sources resources, especially blood cockle in that site

Moreover, FiA discussed with Development Partners and Fisheries Administration Cantonments (FiAC) in coastal provinces, which they will plan to propose the development of more fisheries refugia sites in their target provinces. FiAC -Kampot province will plan to establish five fisheries refugia sites in the total area of 472ha with targeted species such as young mud crab, juvenile grouper, rabbit fish, and oyster. FiAC- Kep province will plan to establish a new one site for blue swimming crab refugia in the size of 50ha. FiAC- Koh Kong province will plan to create a new one site for blood cockle refugia in the size of 200ha. FiAC- Preah Sihanouk provinces will plan to create four fisheries refugia sites in the total area of 810ha with targeted species such as shellfish, vinegar crab, and blood cockle. In general, FiAC in coastal provinces will plan to propose the development of new 11 fisheries refugia sites in their target provinces with the size of 1532ha.

Recently, the fisheries refugia project in Cambodia exchanged the experiences and Knowledge on management and establishment approaches of fisheries refugia with Department of Fisheries (DoF) of the Kingdom of Thailand on 12 to 14 September 2022 in Kep and Kampot provinces.

SIGNIFICANCE

The fisheries refugia project is very significant to GEF IW project and transboundary water resources management. This project supported transboundary species management measure in regional level. Regional Action Plan for Transboundary Species, Indo-Pacific Mackerel in Gulf of Thailand Sub-Region were developed and adopted.

Moreover, the fisheries refugia project is also a management tool in ensuring sustainable fishing, restoring marine habitat, fisheries management, and addressing climate change impacts. The lesson learned from this project could be adopted to other marine areas of the world where over-fishing and use of inappropriate fishing gears and practices are significant impediments to the sustainable exploitation of fisheries resources and utilization of coastal habitat.

REFERENCES

High Ranking Official from MAFF monitored Activities of Short Mackerel Refugia in Koh Kong Province <https://fisheries-refugia.org/refugia-country-activities/refugia-cambodia>;

Integration of habitat conservation into fishery management in the South China Sea areas enhanced via the fisheries *refugia* approach: <https://fisheries-refugia.org>.

KEYWORDS

- South China Sea
- Gulf of Thailand
- Fisheries Refugia
- Marine Habitat and ecosystem

- Marine Fisheries Management Area
- Transboundary species