



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

**REPORT**  
**ANNUAL REPORT FOR 2021**

DECEMBER 2021

Prepared by  
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First published in Phrasamutchedi, Samut Prakan, Thailand in December 2021 by the SEAFDEC-UNEP-GEF Fisheries Refugia Project, Training Department of the Southeast Asian Fisheries Development Center

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For citation purposes this document may be cited as:

FIA/Cambodia, 2021. Establishment and Operation of a Regional System of Fisheries Refugia in the South China Sea and Gulf of Thailand, Annual Report for 2021. Southeast Asian Fisheries Development Center, Training Department, Samut Prakan, Thailand; FR/REP/CAM94, 7 p.

## 1. Introduction

The Department of Fisheries Conservation (DFC) of the Fisheries Administration has been working the implementation of fisheries refugia project in Kep, Koh Kong, and Kampot provinces, supporting budgets from SEAFDEC/UNEP/GEF Fisheries Refugia since 2017 until now.

The DFC/FiA has worked closely with Provincial Hall Administration, Fisheries Administration Cantonment, Provincial Department of Agriculture, Forestry, and Fisheries, and Community Fisheries as well as NGO partner organizations such as MCC, FFI, and WEA, in order to establish, operate, and manage blue swimming crab refugai at Koh Po, Kep province and mackerel refugia at Peam Krasob, Koh Kong province in term of restoration of habitat linkage and marine fisheries stock. However, fisheries refugia in Kampot province have been in process.

In 2021, the DFC/FiA achieved working activities related to stakeholder consultation meeting of the establishment of fisheries refugia in Kampot province, site based management board meeting, releasing the brood stock of blue swimming crab into the nature, dissemination and law enforcement. In particular, the DFC/FiA also deployed concrete boxes into refugia sites. On other hand, other businesses have been done with SEAFDEC/PCU related to the process of the implementation of the fisheries refugia in the region level.

## 2. Working Results

### 2.1 Stakeholder Consultation Meeting

There are the series of stakeholder consultation meetings at local and provincial level were conducted to discuss, review, and verify the boundary of development companies and marine fisheries management including fisheries refugia, to ensure that the map of marine fisheries management area including fisheries refugia in Kampot has been approved by provincial governor.

On September 8, 2021 the stakeholder consultation meeting at provincial level was chaired by Kampot Provincial Governor and the meeting results supported and agreed the establishment of marine fisheries management area including fisheries refugia in Kampot province. Unfortunately, situation in Kampot province has been fluctuated due to changing a new provincial governor, so it needs more times to explain and discuss with new provincial hall administration.

Therefore, the establishment of marine fisheries management area including fisheries refugia in Kampot province has been in the process.

### 2.2 Site Based Management Board Meeting

DFC/FiA has been collaborating with Provincial Hall Administration and Fisheries Administration Cantonment to organize the site based management board meeting in Kep and Koh Kong provinces, supporting budgets from SEAFDEC/UNEP/GEF/Fisheries Refugia. Generally, the Technical Working Group meeting has been organized every 3 months and the Provincial Management Committee meeting has been conducted every 6 months.

In 2021, two Provincial Management Committee meetings and one Technical Working Group meeting in Kep province, and one Technical Working Group meeting in Koh Kong, were conducted. The Provincial Management Committee meeting was chaired by Provincial Governor, which was attended by the members of the Provincial Management Committee and the Technical Working Group was chaired by Deputy Provincial Governor, which was attended by the members of the Technical Working Group.

Therefore, the site based management board meeting has been held not to fit setting plan due to spreading Covid 19 pandemic this year.

### 2.3 Operation and Management of Fisheries Refugia Sites.

#### 2.3.1 Strengthening a Patrolling and Dissemination.

The DFC/FiA has been working with Fisheries Administration Cantonment in Koh Kong and Kep provinces and community fisheries in the operation and management of fisheries refugia site. To ensure effectively management, the DFC/FiA has made sub-contract with FiAC in Kep and Koh Kong provinces, supporting budgets from SEAFDEC/UNEP/GEF/Fisheries Refugia, to coordinate monthly awareness activities including project pilot management activities of blue swimming crab at Koh Po, Kep province, and mackerel refugia at Peam Krasob, Koh Kong province.

FiAC in Kep province started to patrol, monitor, and crack down illegal fishing at the blue swimming crab refugia site at Koh Po from 01 May to 31 July because of the crab spawning season. In addition, the FiAC disseminated the notice letter on the closed season of blue swimming crab issued by Provincial Hall Administration to fishers, community fisheries, and local authorities through meeting face to face with fishers, Local Media System and Provincial Hall Administration's Facebook.

Separately, FiAC in Koh Kong province started to patrol, monitor, and crack down illegal fishing at the mackerel refugia at Peam Krasob from 01 December to 31 March due to fish spawning season. Moreover, the FiAC disseminated the notice letter on the closed season of mackerel through local media system and provincial hall administration face book as well.

#### 2.3.2 Releasing Brood Stock of Crab in the Nature.

To increase the crab stock in the nature, Fisheries Administration Cantonment of Kep Provincial Department of Agriculture, Forestry, and Fisheries worked with community fisheries and local authorities to collect and buy the brood stock of the crab from fishermen in order to release those crab into the refugia site. This event was held during the closed season of blue swimming crab.

#### 2.3.3 Deploying Concrete Boxes Around the Boundary of Fisheries Refugia

The DFC/FiA worked with MCC and FiAC in Kep and Koh Kong provinces to set the location for deploying the concrete boxes into Marine Fisheries Management Area including Blue Swimming Crab in Kep province and Mackerel Refugia at Peam Krasob, Koh Kong province. The main purpose of deploying concrete boxes is to 1) prevent trawler from fishing that area, 2) restore marine fisheries resources, especially endangered species, 3) increasing fish stock, 4) increase artificial reef, 5) provide fish spawning and nursing habitats.

At the present, 130 concrete boxes have been deployed into Marine Fisheries Management Area in Kep province, including 80 concrete boxes from MCC and other 50 concrete boxes supporting budgets from the Royal Government of Cambodia. Moreover, other 50 concrete boxes were also deployed into mackerel refugia site in Koh Kong province, supporting budgets from the Royal Government of Cambodia.

### 3. Challenges.

There were some problems meeting during the implements of fisheries refugia project in Kep, Koh Kong, and Kampot provinces from January to December 2021 as follow:

- Covid 19 pandemic status spreaded strongly and at the same time, the Royal Government of Cambodia also locked down the country from April until June 2021.

- Provincial Hall Administration in project target provinces was so busy in fighting with COVID 19 pandemic in the communities.
- The establishment of the fisheries refugia in Kampot province has been meeting difficulty due to changing a new provincial governor, so it needs more times to explain and discuss furthermore with the new provincial hall administration.

#### 4. Other Business.

During the implementation of fisheries refugia project from January to December 2021, there were other businesses, being done with SEAFDEC/PCU as follow:

- Participating Regional Science and Technical Committee and Regional Steering Committee Meetings organized by SEAFDEC/PCU via Zoom Platform, and
- Communicating with SEAFDEC/PCU on the process of the Implementation of Fisheries Refugia Project.

#### 5. Annual Expenditures of Project Activity Implementation for 2021.

The project expenditures from January to December 2021 was detailed in the below table

**Table: Annual Expenditures of Project Implementation for 2021**

COMPONENT/ACTIVITIES	ANNUAL EXPENDITURES OF PROJECT IMPLEMENTATION FOR 2021				
	Q1	Q2	Q3	Q4	TOTAL
<b>COMPONENT 1: Identification and management of fisheries and critical habitat linkages at priority fisheries refugia</b>					
ACTIVITY 1.1: Developing fisheries and coastal habitat information and data collection programmes	0.00	0.00	0.00	0.00	0.00
ACTIVITY 1.2: Facilitating agreement among stakeholder on the boundary of fisheries refugia at Kep, Koh Kong , and Kampot provinces	557.5	901.25	2530.00	796.25	4785
ACTIVITY 1.3: Developing Community-Based Management Plans for Fisheries refugia sites at Kep, Koh Kong, and Kampot provinces	0.00	0.00	0.00	500	500.00
ACTIVITY 1.4: Establishing operational management for Fisheries refugia sites at Kep, Koh Kong, and Kampot	2461.25	2801.25	900.00	2100	8262.50

ACTIVITY 1.5: Strengthening civil society and community organization participation in the management of fisheries refugia sites	0.00	0.00	0.00	0.00	0.00
<b>Sub-total</b>	<b>3018.75</b>	<b>3702.50</b>	<b>3430.00</b>	<b>3396.25</b>	<b>13547.5</b>
<b>COMPONENT 2: Improving the management of critical habitats for fish stocks of transboundary significance via national and regional actions to strengthen the enabling environment and knowledge-based for fisheries refugia management</b>					
ACTIVITY 2.1: Enhancing policy guidance for improved management of the effects of fishing on critical habitats	0.00	0.00	0.00	0.00	0.00
ACTIVITY 2.2: Defining the policy and legal basis for formal designation and establishment of fisheries refugia in Cambodia	0.00	0.00	0.00	0.00	0.00
ACTIVITY 2.3: Development of national guidelines on the establishment and operation of fisheries refugia	0.00	1350	0.00	0.00	1350
ACTIVITY 2.4: Reforming national policy, legal and planning frameworks for demarcating boundaries and managing refugia	0.00	0.00	0.00	2100	2100.00
ACTIVITY 2.5: Enhancing access to information relating to status and trends in fish stocks and their habitats in Cambodian waters of the SCS	0.00	1500	0.00	0.00	1500.00
ACTIVITY 2.6: Improving national-level management and sharing of information and data on fish early life history in Cambodian waters of the SCS	0.00	0.00	0.00	0.00	0.00
ACTIVITY 2.7: Enhancing access to information relating to the locations and status of coastal habitats and management areas in Cambodian waters of the SCS	0.00	0.00	0.00	0.00	0.00

ACTIVITY 2.8: Strengthening the information base for the planning, monitoring and evaluation of management at priority fisheries refugia sites	0.00	0.00	0.00	0.00	0.00
<b>Sub-total</b>	<b>0.00</b>	<b>2850.00</b>	<b>0.00</b>	<b>2100.00</b>	<b>4950.00</b>
<b>COMPONENT 3: Information Management and Dissemination in support of national and regional-level implementation of the fisheries refugia concept</b>					
ACTIVITY 3.1: Enhancing national uptake of best practices in integrating fisheries management and biodiversity conservation	0.00	0.00	2700.00	2700	5400
ACTIVITY 3.2: Improving community acceptance of area based approaches to marine management	0.00	0.00	0.00	0.00	0.00
ACTIVITY 3.3: Knowledge generated and experiences from establishing and operating fisheries refugia captured and shared nationally, regionally, and globally	0.00	2700	0.00	0.00	2700
<b>Sub-total</b>	<b>0.00</b>	<b>2700.00</b>	<b>2700.00</b>	<b>2700.00</b>	<b>8100.00</b>
<b>COMPONENT 4: National and regional cooperation and coordination for integrated fish stock and critical habitat management in the South China Sea</b>					
ACTIVITY 4.1: Strengthened cross-sectoral coordination in the establishment and operation of fisheries refugia in Cambodia	76.5	173.21	492.00	115.62	857.33
ACTIVITY 4.2: Harnessing national scientific and technical expertise and knowledge to inform policy, legal and institutional reforms for fisheries refugia	0.00	0.00	0.00	2102.5	2102.50
ACTIVITY 4.3: Catalyzing local community action via establishment and operation of site-based management boards at 3 priority refugia sites	0.00	0.00	961.25	0.00	961.25
<b>Sub-total</b>	<b>76.5</b>	<b>173.21</b>	<b>1453.25</b>	<b>2218.12</b>	<b>3921.08</b>
<b>Grand Total</b>	<b>3095.25</b>	<b>9425.71</b>	<b>7583.25</b>	<b>10414.37</b>	<b>30518.58</b>