



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

**REPORT**

**NATIONAL FISHERIES REFUGIA COMMITTEE MEETING**

Prepared by

DEPARTMENT OF FISHERIES, MALAYSIA

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**SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER**  
TRAINING DEPARTMENT



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Southeast Asian Fisheries Development Center  
Training Department  
P.O.Box 97, Phrasamutchedi, Samut Prakan, Thailand  
Tel: (66) 2 425 6100  
Fax: (66) 2 425 6110  
<https://fisheries-refugia.org> and  
<https://seafdec.or.th>

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## SUMMARY

### DECISIONS OF THE NATIONAL FISHERIES REFUGIA COMMITTEE MEETING

1. This meeting was chaired by Mr. Sufian Sulaiman, Director-General of Department of Fisheries, Malaysia on 15<sup>th</sup> August 2022.
2. The meeting basically agreed on the proposed Fisheries Refugia Management Plan for mud spiny lobster species (*Panulirus polyphagus*) in Tanjung Leman, Johor and tiger prawn species (*Penaeus monodon*) in Kuala Baram, Sarawak with several recommendations for improvement.
3. The meeting also agreed on the proposed management strategy approach by species for immediate actions by project managers at each refugia site as follows:

#### i. Management Strategy for Mud Spiny Lobster in Tanjung Leman, Johor

- Designation of Closed Season for trawl operations from December 15<sup>th</sup>, until the end of February the following year for surrounding areas according to the following coordinates:

POSITION	LATITUDE	LONGITUDE
Point 1	N 1° 55.000'	E 104° 30.000'
Point 2	N 2° 20.000'	E 104° 30.000'
Point 3	N 1° 55.000'	E 104° 50.000'
Point 4	N 2° 20.000'	E 104° 50.000'

- Catch and Release approach if juvenile of lobster is less than 6 cm in size (carapace length) and berried female brood stock are caught in the waters of East Johore.
- Prohibition of possessing or keeping lobsters of less than 6 cm in size (carapace length).
- This action need to be carried out voluntarily in the first place through education and awareness program in 2022, before being included as an additional regulation in the license.

#### ii. Management Strategy for Tiger Prawn in Kuala Baram, Sarawak

- The designation of Closed Season for Trawl and Trammel Net operations starting from August to October for the surrounding areas according to the following coordinates:

POSITION	LATITUDE	LONGITUDE
Point A	4 <sup>0</sup> 35.40'	114 <sup>0</sup> 3.84'
Point B	4 <sup>0</sup> 42.30'	114 <sup>0</sup> 3.96'
Point C	4 <sup>0</sup> 48.00'	113 <sup>0</sup> 58.08'
Point D	4 <sup>0</sup> 34.74'	113 <sup>0</sup> 43.32'
Point E	4 <sup>0</sup> 22.80'	114 <sup>0</sup> 0.60'
Point F	4 <sup>0</sup> 35.40'	113 <sup>0</sup> 59.16'

- Setting the minimum size of allowable catch of tiger prawn at 15 cm in total length.
- This action need to be carried out voluntarily in the first place through education and awareness program in 2022, before being included as an additional regulation in the license.

## MINUTES

### NATIONAL FISHERIES REFUGIA COMMITTEE PROJECT IN THE WATERS OF THE SOUTH CHINA SEA AND GULF OF SIAM UNDER SEAFDEC/UNEP/GEF YEAR 2022

Date : 15<sup>th</sup> August 2022 (Monday)  
Time : 2.30 pm  
Venue : Palm Garden Hotel, Putrajaya  
Malaysia

#### **ATTENDEES :**

Name	Position	Institutions
Mr. Mohd Sufian Sulaiman- Chairperson	Director-General of Fisheries	Headquarters, Department of Fisheries (DoF) Malaysia
Commander (M) Yousry Yaali	Deputy Director of Operations	Malaysian Maritime Enforcement Agency of Sarawak
Mr. Haron Mahidi	Chief Assistant Director	Economic Planning Unit Agriculture and Rural Development of Sarawak
Mr Zakaria Ali	Deputy Director	Division of Fish Landing Regulation and Enforcement Malaysian Fish Development Board (LKIM)
Mr. Ahmad Hisham Idris	Deputy Secretary of Division	Food Security Section Ministry of Agriculture and Food Industry (MAFI)
Mr. Sallehudin Jamon	Director Research Division	Capture Fisheries Fisheries Research Institute Kampung Acheh, Sitiawan Perak
Mr. Zainudin Abd Wahab	Director	Department of Fisheries, Johore
Mr. Ismail Ibrahim	Head Development of Marine Parks and Marine Protection	Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya
Ms. Liza Long	Deputy Director	Department of Marine Fisheries, Sarawak
Ms Lim Ai Gaik	Head, International Branch	Division of Policy and Strategic Planning DoF Headquarters, Putrajaya
Ms. Nurridan Abdul Han	Senior Research Officer	Fisheries Research Institute, Bintawa, Sarawak

Mr. Mohamad Saupi Ismail	Director Research Division of Marine Parks	Fisheries Research Institute, Batu Maung, Penang
Mr. Dokanaer Kasto s/o Muning	Senior Fisheries Officer	Department of Marine Fisheries, Sarawak
Ms. Haryati Abd Wahab	Senior Fisheries Officer	Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya
Mr. Mohd Zaki Haron	Fisheries Officer	Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Protection DoF Headquarters, Putrajaya
Ms. Izarenah Md Repin	Fisheries Officer	Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Protection DoF Headquarters, Putrajaya
Mr. Rizwan Nordin	Fisheries Officer of Regional III	Miri, Sarawak
Mr. Mohd Fairus Anwar Roslan	Fisheries Officer	Division of Capture Fisheries Resources
Mr. Mohamad Anuar Roslan	Fisheries Officer	Department of Fisheries, Pahang
Ms. Noor Suhailis Zelani	Fisheries Officer	Division of Policy and Strategic Planning DoF Headquarters, Putrajaya
Mr. Mohd Ridzuan Rahim	Assistant Accountant	Southeast Asia Marine Resources Institute (ISMAT), Terengganu
Mr. Muhammad Khairul	Hamdan	Department of Fisheries, Johore
Mr. Muhammad Hakim Zulkifli		Department of Fisheries, Johore
Mr. Mohd Najib Md Idris		Department of Fisheries, Johore
Mr. Mohd Faizan Othman		Department of Fisheries, Johore
Mr. Zulkarnain Asha'ari	Director	Division of fish Landing Regulation and Enforcement LKIM
Prof. Mhd Ikhwanuddin Abdullah		Universiti Malaysia Terengganu

Dr. Hii Yii Siang	Consultant	Alchemy Universiti Malaysia Terengganu
Dr. Mohd Fazhan Mohd Hanafiah	Consultant	Alchemy Universiti Malaysia Terengganu
Prof. Dr. Nur Azura Sanusi	Consultant	Alchemy Universiti Malaysia Terengganu
Mr. Liew Hock Chark	Consultant	Alchemy Universiti Malaysia Terengganu
Dr. Ahmad Ali	Consultant	Alchemy Universiti Malaysia Terengganu
Mr. Hadil Rajali	Consultant	Kuching, Sarawak
<b>SECRETARIAT</b>		
Ms. Haryati Abd Wahab	Senior Fisheries Officer	Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya
Ms. Nurashiqin Sallih Udin		Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya
Ms. Nor Khalilah Zainuddin		Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya
Ms. Nur Hidayah Asgnari		Research Division of Capture Fisheries Fisheries Research Institute Kampung Aceh, Sitiawan Perak
Ms. Nor Amnah Taib		Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya
Ms Asma Mat Soh		Development of Marine Parks and Marine Protection Division of Marine Parks and Resource Management DoF Headquarters, Putrajaya

**MINUTES CHIEF COMMITTEE FISHERIES REFUGIA PROJECT IN THE SOUTH CHINA SEA AND GULF OF SIAM UNDER SEAFDEC/UNEP/GEF 2022**

**Date** : 15<sup>th</sup> August 2022 (Monday)  
**Time** : 2.30 pm  
**Venue** : Palm Garden hotel, Putrajaya, Malaysia

**1.0 CHAIRPERSON'S REMARK**

- 1.1 The Chairperson welcomed all members who physically attended the Chief Committee Meeting on Fisheries Refugia Project in the South China Sea and Gulf of Siam under SEAFDEC/UNEP/GEF for the year 2022.
- 1.2 The committee members were informed that to date, DoF had spent 47% of the allocation received from UNEP/GEF. The contribution received for this project was comprised of co-financing through in-kind and cash, amounting to USD1.6 million.
- 1.3 The members were also informed that the Refugia Project has been extended until December 2022, following the Covid-19 pandemic. It was projected that this project could be completed as scheduled, because till August 2022, the progress was recoded at 67%.
- 1.4 The objectives of today's meeting as stated by the Chairperson were as follows:
  - 1.4.1 Presentation on the Implementation Status of lobster and Tiger Prawn Refugia Management Plan prepared by the appointed consultants.
  - 1.4.2 Finalization of Fisheries Refugia management Measures by the Fisheries Refugia Project Master Committee.
  - 1.4.3 Presentation on the expenditure status of UNEP/GEF allocations.
- 1.5 The members of the meeting were notified that during th 2022 Malaysia Agriculture, Horticulture and Agrotourism (MAHA) Exposition, DoF had signed an MoU with Malaysian Public Higher Education Institutes (University of Malaya, the National University of Malaysia and Universiti Utara Malaysia). The MoU was intended to share expertise between DoF and universities.
- 1.6 The study in Tanjung Leman, Johore and Kuala Baram, Sarawak had been accomplished and latest findings need to be documented including consultation meetings with stakeholders to establish the Fisheries Refugia Management Plans.

**Notification**

**2.0 PRESENTATION OF THE IMPLEMENTATION STATUS OF FISHERIES REFUGIA MANAGEMENT PLAN IN MALAYSIA**

- 2.1 **Presentation of the Implementation Status of the Tiger Prawn Refugia Management Plan in Kuala Baram by Prof Mohd Ikhwanuddin Abdullah and Mr. Hadil Rajali**

2.1.1 Presentation slides are as shown **ANNEX 1**.

2.1.2 Details of presentation are as follows:

- i. The workshop held on 28<sup>th</sup> – 29<sup>th</sup> July 2022 had decided to establish the refugia in Kuala Baram into two (2) areas; namely Area A and Area B. Area A is an area of mangrove forest that becomes the habitats for tiger prawn postlarvae to grow (nursery areas) while Area B is the marine areas that serves as habitats for the juveniles as well as broodstock of tiger prawn.
- ii. Area A, which is the nursery area identified as having a high density of postlarvae and juveniles of tiger prawn in the waters of Lutong River, Miri River, Pasu River and Batang Baram.
- iii. In addition, Bakam River and Sibuti River are also identified as having a high density of tiger prawn juveniles.
- iv. The area in Figure 5 is a proposed refugia site in Kuala Baram with an area coverage off 852 km<sup>2</sup> (85,200 hectares) covering seven coordinates.
- v. This proposed area has been approved by the National Refugia Technical Committee.
- vi. DoF also concurred to maintain a 20m mangrove swamp areas as a buffer zone in the rivers within the refugia area.
- vii. The Release Program of (SPF) tiger prawn postlarvae intended to be carried out in Area A.
- viii. Results of studies conducted since 2019 indicated that almost 70% of tiger prawn were caught in waters less than five (5) nautical miles. Based on the life cycle of tiger prawn, those found in the coastal sea areas were immature tiger prawns.
- x. The suggested strategies proposed are as follows:
  - a. Reduce catch capacity to 50% in areas less than five (5) nautical miles
  - b. Close area for Refugia A and B
  - c. Reduce the number of vessels
  - d. Ban the use of destructive fishing equipment
  - e. Ban the sale of unlicensed tiger prawn broodstock
  - f. Utilize the Vessel Monitoring System (VMS) on fishing vessels
- xi. Enforcement by DoF and Stakeholders
- xii. The findings of study indicated that the spawning season for tiger prawn starts from August to October.
- xiii. The initial strategies recommendations to boost tiger prawn populations in the refugia areas are:
  - a. Implement Closed Season during spawning period



b. Catch and Release

- xiv. The implementation of Closed Season for tiger prawn from August to October for Trawls and Trammel Nets.
- xv. The Closed Area is proposed for implementation after the refugia area is established.
- xvi. The Catch and Release is recommended for implementation in Bintulu and Miri for ALL fishing equipment from February to April.
- xvii. The total allowable of catch for tiger prawn of minimum 15 cm in total length.
- xviii. For months other than that, another approach of catch and Release suggested that the minimum size for tiger prawn is more than 15 cm in total length.
- xix. Fishers operating in B and C Zones who practice the Catch and Release method publicly will receive appreciations from DoF (based on the weight of tiger prawn caught).
- xx. The recruitment of tiger prawn broodstock is allowed for research purposes only by obtaining permission from the Director-General of DoF.
- xxi. In addition, companies that possessed hatchery permits are allowed to collect tiger prawn broodstock by obtaining permission from Director-General of DoF in advance.
- xxii. Hydrological study and distribution of tiger prawn larvae study in the refugia areas are proposed to be carried out as well.
- xxiii. Engagement sessions with the stakeholders shall be subsequently carried out in the field.

**Notiication**

- 2.1.3 Based on the results of presentation, the Chairperson suggested that the details of the proposed Closed Season and the Catch and Release method should be revised and refined. The meeting also decided that for the management of the tiger prawn refugia, implementation of the Closed Season should be focused first and foremost, and the study of its effectiveness should be carried out subsequently.
- 2.1.4 The consultants were reminded about the need of preparation of infographics and publicity materials (e.g. videos, pamphlets, etc) for the content in the website and further publicity.
- 2.1.5 Consultants were recommended to prepare 'mock-up' calipers and execute trainings and consultations in the field.

**Actions by : DoF Sarawak and Consultants**

**2.2 Presentation on the Status of Implementation of Tanjung Leman Lobster Refugia Management Plan by Dr Hii Yii Siang**

- 2.2.1 Presentation slides are as shown in **ANNEX 2**
- 2.2.2 The members of the meeting were informed about the proposed management strategies as follows:
- i. Conservation of lobsters' habitats
  - ii. Deployment of artificial reefs as additional habitats
  - iii. Yearly prohibition on catching berried female lobsters and juveniles less than 6 cm in size (maturity size exceeding 6.5 cm)
  - iv. Closing of fishing season during the Northeast monsoon in December to February of the following year
  - v. Landing data surveillance and Lobster Puerulus Index Placement Survey
  - vi. Collaboration with Stakeholders in conducting awareness program
- 2.2.3 Members were also informed on the recommended improvement for Lobster Management Plan such as:
- i. Clear identification on the life cycle of lobster
  - ii. Utilization of prohibition posters
  - iii. Identify areas that have abundance of 6 cm lobsters caught by fishers
  - iv. Special calipers to be distributed to all fishers of Johore and Pahang. This caliper should be used by fishers to measure the length of lobster's carapace and if it exceeds more than 6 cm in length, the lobsters should be released into the sea.

**Actions by : Lobster's Consultants**

- 2.2.4 Secretariat shall revise the name of location for lobster in Tanjung Leman.

**Actions by : Secretariat**

- 2.2.5 Members of the meeting were informed that the consultants will carry out video shooting of lobsters as infographic reference sources.

**3.0 FINALIZATION OF REFUGIA MANAGEMENT MEASURES BY CHIEF COMMITTEE FISHERIES REFUGIA PROJECT**

**3.1 Finalization of Tiger Prawn Refugia Management Plan in Kuala Baram, Sarawak**

- 3.1.1 The Director-General of DoF agreed to implement Closed Season for tiger prawn starting in August to October and later on, was willing to consider the application of

Catch and Release method for tiger prawn of less than 60g in weight and 15 cm in size.

**Actions by : Tiger Prawn's Consultants**

### 3.2 Finalization of Lobster Refugia Management Plan in Tanjung Leman, Johore

The Director-General of DoF agreed to not allowing the catch of lobster of less than 6 cm in size. However, the data regarding to the exact number of fishers involved in the lobster fishing need to be verified.

**Actions by : Lobsters' Consultant**

## 4.0 EXPENDITURE PERFORMANCE

- 4.1 The expenditure performance are as shown in **ANNEX 3**.
- 4.2 Cumulatively, until August 2022, DoF Malaysia had received an allocation of RM646,824.56 (USD145,072) from the initially approved amount of RM1,023,957.18 (USD229,664). Based on the updated expenditure record until 12<sup>th</sup> August 2022, the cumulative expenditure was RM634,687.60 (USD142,355). Therefore, the balance of allocation at ISMAT amounting to RM14,155.93 (USD2,717). This expense information was calculated based on the current exchange rate.
- 4.3 The members of the meeting were notified that DoF had received an allocation from GEF amounting to USD41,047.57 for the implementation of activities in the third quarters of the current financial year.
- 4.4 The current balance at ISMAT was USD43,765.28
- 4.5 State DoF could put up application for funding if needed.

## 5.0 OTHER MATTERS

- 5.1 International borders of the countries involved in the proposed tiger prawn refugia areas need to be identified and focused.

**Action by : DoF Sarawak & Tiger Prawn Consultant**

## 6.0 ADJOURNMENT OF MEETING

- 6.1 The Chairperson thanked all members for the valuable inputs in this meeting and the meeting was adjourned at 6.11 pm.

Prepared by:

Development of Marine Parks and Marine Protection, Division of Marine Parks and Resource Management and Fisheries Research Institute, Kampung Acheh.