



**PROJECT DOCUMENT**

**PROPOSED ACTIVITIES FOR THE YEAR 2020**

			<b>Project ID:</b> 2020040101
<b>Program Category:</b>	ASEAN-SEAFDEC ASSP and FCG Mechanism		
<b>Project Title:</b>	Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region		
<b>Program Strategy No:</b>	I	<b>Total Period</b>	2020 - 2024
<b>Lead Department:</b>	Marine Fishery Resources Development and Management Department (MFRDMD)	<b>Lead Country:</b>	None
<b>Donor/Sponsor:</b>	Japanese Trust Fund (JTF)	<b>Total Project Budget:</b>	USD 275,000
<b>Project Partner(s):</b>	None	<b>Budget for 2020:</b>	USD 60,000
<b>Lead Technical Officer:</b>	Mohammad Faisal bin Md Saleh, Senior Research Officer / MFRDMD	<b>Project Participating Country(ies)</b>	Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand and Vietnam

**PART I: PROJECT DESCRIPTION**

**1. Executive Summary:**

This project aims to evaluate the pelagic fish resources in the Southeast Asian region in order to establish the sustainable management strategy for the pelagic fisheries. The transboundary fishes like mackerel, tuna and anchovies, which are the major targeted species chosen for this project based on the abundance of those species in the AMSs, require efficient fisheries management strategies of their stocks. This project also involves the genetic component of the targeted one pelagic species in the SEA region and is developing the life-history study of the targeted species through age determination analysis. The information on the life history of major neritic tunas in the region was uninvestigated in most of the AMSs.

MFRDMD is the responsible SEAFDEC Department for this project to manage and coordinate all project activities with the financial support from the Government of Japan (JTF). Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam are involved throughout this project in providing information and samples required. This project entitled “Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region” is being proposed to aim at;

1. To evaluate the current status of two small pelagic species through stock assessment and risk assessment studies.
2. To evaluate the current status of two neritic tuna species through stock assessment and risk assessment studies.
3. To clarify the stock structure for neritic tuna species in the Southeast Asian region.
4. To carry out the life-history study for neritic tuna species in the SEA region.

As the keys to the fishery management and policies, stock assessments and risk assessments are considered as important starting points in providing the best scientific information to support the sustainable management of pelagic fishes in the SEA region.

## 2. Background and Justification:

The previous JTF projects namely JTF 2 and JTF 6 undertook a research on major targeted pelagic fishes in the SEA region with the different goals. The JTF 2 project aimed to ascertain the migration route and existence/absence of sub-populations of small pelagic fishes in the ASEAN region. Meanwhile, the JTF 6 project, which aimed to develop the reliable management strategies for purse seine fisheries in the Southeast Asian region, collected the fundamental information on purse seine fisheries (catch and effort data, biological data of species caught by purse seine gear) associated to the multispecies situation of pelagic fishes in the SEA region. Further study is required to acquire more extensive information and data for the assessment and management of four dominant pelagic species in the SEA region. In line with previous programmes as well as to strengthen the initiatives taken, thus there is a need to carry out the stock assessment (SA) and risk assessment (RA) for the pelagic fishery. This new project targets two neritic tuna species and two small pelagic species dominated the catch in each AMS in the SEA region.

The transboundary fish i.e. tunas, anchovies and mackerels are the economically important pelagic species that are high consumptions within the SEA countries, as well as dominated the fishery exports of the SEA countries to other regions of the world. In 2014, the neritic tuna contributed approximately 40% of the region's total marine tuna production, with the value of around USD 1 million (SEASOFIA 2017). Shorthead anchovy (*Encrasicholina heteroloba*) and Indian anchovy (*Stolephorus indicus*) are two dominant anchovies in the Southeast Asian region. Nevertheless, *Encrasicholina punctifer* dominated the landing in the northern part (Kelantan) of the East Coast of Peninsular Malaysia (Mohammad Faisal, 2016). Throughout 2002-2013, the production values (in US Dollars) of anchovies in the South China Sea fluctuated but gradually increased, while in the Andaman Sea, the values appeared to be stable and consistent (SEAFDEC 2002-2013). Mackerels contributed approximately 60% to the total small pelagic species production in 2014. *Rastrelliger* spp. contributed nearly 77% to the region's total mackerel production, with Indonesia as the largest producer (Fishery Statistical Bulletin of Southeast Asian 2014, SEAFDEC 2016a).

This project corresponds to Resolution No. 10 of at the ASEAN-SEAFDEC Conference in 2011; strengthened knowledge/science-based development and management of fisheries through enhancing the national capacity in the collection and sharing of fisheries data and information.

## 3. Gender Sensitivity of the Project

This is a gender-sensitive project where women and men are given equal opportunity to involved. Gender-sensitive indicators will be analyzed from fisheries data and capacity development program will be conducted. Fisheries data which integrate gender information through quantitative and qualitative aspects will be analyzed. The sex disaggregated data will also be collected for all activities implemented.

## 4. Project Goal, Outcome, Outputs, Activities, Indicators and Verification:

### 3.1

#### 4.1 Logical Framework

GOAL (Overall Objectives)	Indicators	Means of Verification
Sustainable Utilization of Pelagic Fishes in the Southeast	Incomes of workers (e.g. fishers, traders, processors, etc.) related in	Official statistical data on fisheries and data from socio-

Asian region	the pelagic fishery industry will increase through sustainable fishery production	economic surveys of workers (e.g. fishers, traders, processors, etc.) related in the fishery industry in the Southeast Asia
<b>OUTCOME</b>	<b>Indicators</b>	<b>Means of Verification</b>
Efficient Management Strategies for Small Pelagic Fishes and Neritic Tunas in the Southeast Asia region are adopted by governments and fishers	Number of AMSs incorporating the management advice on resource utilization in their national policies	FMPs (Fishery Management Plans) for pelagic fishes by each AMSs
<b>OUTPUT 1</b>	<b>Indicators</b>	<b>Means of Verification</b>
Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region	Number of assessments for small pelagic fish in SCS and AS (for targeted species, i.e. anchovies and mackerels/scads)	Conference presentations and technical reports
<b>ACTIVITY 1</b>	<b>Indicators: key inputs (Number to be conducted, Where, Time)</b>	<b>Means of Verification</b>
<b>Activity 1.1:</b> Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region	Number of targeted species in the region (anchovies and mackerels/scads)	Practical workshop and country/ technical report
<b>Activity 1.2:</b> Workshops for small pelagic fishes in the Southeast Asian region	2 workshops (1 internal workshop and 1 regional workshop)	Workshop reports
<b>Activity 1.3:</b> Meetings for small pelagic fishes in the Southeast Asian region	3 Core Expert Meetings	Meeting reports
<b>OUTPUT 2</b>	<b>Indicators</b>	<b>Means of Verification</b>
Stock Assessments and Risk Assessments for major neritic tuna species in the Southeast Asian region	Number of assessments at least 2 major species of neritic tuna in SCS and AS to be carried out	Conference presentations and technical reports
<b>ACTIVITY 2</b>	<b>Indicators: key inputs (Number to be conducted, Where, Time)</b>	<b>Means of Verification</b>
<b>Activity 2.1:</b> Stock Assessments and Risk Assessments for neritic tunas in the Southeast Asian region	Number of targeted species in the region (at least two)	Practical workshop and country/technical report
<b>Activity 2.2:</b> Clarification of the stock structure for one neritic tuna species in the Southeast Asian	Number of regions studied for Microsatellite DNA for Kawakawa:	Genetic workshop and scientific paper

region	Microsatellite DNA conducted in 12 locations in SCS, AS and SSS	
<b>Activity 2.3:</b> Life-history study for major neritic tuna species in the Southeast Asian region	Number of specimens studied for tuna in ECPM (Tok Bali/Kuantan): 1 stock – in Tok Bali/Kuantan	Practical workshop and technical report
<b>Activity 2.4:</b> Workshops for major neritic tuna species in the Southeast Asian region	4 workshops including stock assessment and genetic (2 internal workshops and 2 regional workshops)	Workshop reports

#### 4.2 Project Implementation Plan for 2020 - 2024

Activities	2020				2021				2022				2023				2024			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>Output 1:</b> Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region																				
Activity 1.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 1.2					X		X													
Activity 1.3			X								X								X	
<b>Output 2:</b> Stock Assessments and Risk Assessments for major neritic tuna species in the Southeast Asian region																				
Activity 2.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.3			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.4							X						X		X		X			

#### 4.3 Proposed Budget for 2020 - 2024

(Unit: USD)

**Total: \$275,000**

Output	Activities	Year 1 (2020)	Year 2 (2021)	Year 3 (2022)	Year 4 (2023)	Year 5 (2024)
Output 1: Stock Assessment and Risk Assessments for small pelagic fishes in the Southeast Asian region	Activity 1.1 Stock Assessments and Risk Assessments for small pelagic fishes	5,550	5,550	5,550	8,900	5,550
	Activity 1.2 Workshops for small pelagic fishes		18,000			
	Activity 1.3 Meetings for small pelagic fishes	25,000		25,000		25,000
Output 2: Stock Assessments	Activity 2.1 Stock Assessments and Risk Assessments for	3,450	3,450	3,450	6,900	3,450

and Risk Assessments for major neritic tuna species in the Southeast Asian region	neritic tunas					
	Activity 2.2					
	Clarification of the stock structure for one neritic tuna species	9,000	9,000	13,000	10,000	5,000
	Activity 2.3					
	Life-history study for major neritic tuna species	17,000	6,500	4,500	6,200	2,000
Activity 2.4						
Workshops for major neritic tuna species		13,000		20,000	15,000	
<b>Sub-Total</b>		60,000	55,500	51,500	52,000	56,000

## PART II: PROJECT ACHIEVEMENTS IN 2019

*Note: No information in 2019 are available since the new JTF 6-II activities will commence in 2020.*

## PART III: PROPOSED ACTIVITIES FOR THE YEAR 2020

### 1. Project Summary in 2020:

In 2020, MFRDMD will continue directing the collaboration from the member countries and relevant organizations to conduct regional studies on share stocks entitled “Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region” under the JTF 6-II. Considering the earlier-related projects under the same funding (JTF), MRFDMD will initiate some activities with aiming to evaluate the pelagic fish resources in the Southeast Asian region in order to establish the sustainable management strategy for the pelagic fisheries. The transboundary fishes like mackerels/scads, neritic tunas and anchovies, which are the major targeted species chosen for the project based on their abundance in the AMSs, require the efficient fisheries management strategy of their stocks. As a key to the fisheries management and policies, stock assessments and risk assessments are considered as important starting points in providing the best scientific information to support the strategies. This project also inquires the clarification of genetic structure of the targeted one neritic tuna species as well as develops its life-history through age determination analysis (otolith analysis). Yet, information on the life history of major neritic tunas was uninvestigated in most of AMSs. In 2020, the project will focus on collecting and compiling the regional information for stock and risk assessment study, and arranging the Core Expert Meeting to discuss the current status of targeted pelagic species in the South China Sea and Andaman Sea. Necessary equipment and samples for those studies will be purchased. By the end of the year, the meeting report will be produced and disseminated once available.

### 2. Outcome, Outputs and Activities and Proposed Budget:

(Unit: USD)

Proposed Activities	Descriptions	Proposed Budget
<b>Outcome</b>	<i>Efficient Management Strategies for Small Pelagic Fish and Neritic Tunas in the Southeast Asia region are adopted by governments and fishers</i>	

<b>Output 1</b>	<i>Stock Assessment and Risk Assessment for small pelagic fish in the Southeast Asian region</i>	
Activity 1.1: Stock Assessment and Risk Assessment for small pelagic fishes in the Southeast Asian region	<p><i>SEAFDEC/MFRDMD will collect and compile regional information of targeted small pelagic species from AMS for stock assessment and risk assessment study.</i></p> <p>&lt;Estimate&gt;</p> <ul style="list-style-type: none"> <li>○ Research Expense: <ul style="list-style-type: none"> <li>Hire of supporting staff: \$575 x 1 person x 6 months = \$ 3,450</li> </ul> </li> <li>○ Communication: \$ 1,800</li> <li>○ Stationery: \$ 300</li> </ul>	<b>\$5,550</b>
Activity 1.3: Meetings for small pelagic fishes in the Southeast Asian region	<p><i>SEAFDEC/MFRDMD will organize the 1<sup>st</sup> Core Expert Meeting (CEM) to discuss and update on the current status of targeted pelagic species in the South China Sea and Andaman Sea as well as sharing information and knowledge of genetic study of the targeted neritic tuna species. Representatives from each participating member countries will be invited to attend the CEM.</i></p> <p>&lt;Estimates&gt;</p> <p>Meeting Expenses</p> <p>Travel Costs:</p> <ul style="list-style-type: none"> <li>○ Member Countries <ul style="list-style-type: none"> <li>Air fare = \$ 3,940 (2 prs. from participating AMS)</li> <li>Land transport = \$ 200</li> <li>Daily Subsistence Allowances (DSA) = \$ 3,360</li> <li>Accommodation = \$ 4,690</li> </ul> </li> <li>○ SEC/TD <ul style="list-style-type: none"> <li>Air fare: \$250 x 2prs = \$ 500</li> <li>DSA = \$420</li> <li>Accommodation = \$ 536</li> </ul> </li> <li>○ MFRDMD <ul style="list-style-type: none"> <li>Air fare: \$120 x 8prs = \$ 960</li> <li>DSA = \$1,670</li> <li>Accommodation = \$ 2,613</li> <li>Local transportation = \$ 519</li> </ul> </li> <li>○ Resource Persons: <ul style="list-style-type: none"> <li>Air fare = \$ 1,230</li> <li>DSA = \$ 600</li> <li>Accommodation = \$402</li> </ul> </li> <li>○ Terminal Allowance: USD40 x 30prs = \$1,200</li> </ul> <p>Meeting Costs:</p> <ul style="list-style-type: none"> <li>○ Stationery: \$ 280</li> <li>○ Contingency: \$ 380</li> </ul> <p>Publication:</p> <ul style="list-style-type: none"> <li>○ Publication of Meeting Report: \$1,500</li> </ul>	<b>\$25,000</b>
<b>Output 2</b>	<i>Stock and Risk Assessment for major neritic tuna species in the Southeast Asian region</i>	
Activity 2.1: Stock Assessment and Risk Assessment for	<p><i>SEAFDEC/MFRDMD will collect and compile regional information of targeted species from AMS for stock assessment and risk assessment study.</i></p> <p>&lt;Estimates&gt;</p>	<b>\$3,450</b>

neritic tunas in the Southeast Asian region	Research Expenses: ○ Hire of supporting staff: \$575 x 1 person x 6 months = \$ 3,450	
Activity 2.2: Clarification of stock structure for one neritic tuna species in the Southeast Asian region	<Estimates> Research Expenses: ○ Sampling (additional locations): \$ 600 ○ Consumable equipment supplies: \$ 400 ○ Extraction kit: \$ 500 Consultant Fees: ○ PCR and Fragment Analysis: \$30 x 250 samples: \$ 7,500	<b>\$9,000</b>
Activity 2.3: Life-history study for major neritic tuna species in the Southeast Asian region	<Estimates> Research Expenses: ○ Equipment: ISOMET 1000 Precision Saw: \$ 13,500 ○ Preparation chemical: EpoKwick FC (resin & hardener): \$ 1,500 ○ Preparation kit: Cold Mounting Accessories: \$ 500 ○ Samples for trial: \$ 1,500	<b>\$17,000</b>

### 3. Implementation Plan of Activities in 2020:

Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Output 1:</b>												
Activity 1.1												
Activity 1.3												
<b>Output 2:</b>												
Activity 2.1												
Activity 2.2												
Activity 2.3												

### 4. Expected Activity Results in 2020:

Planned activity	Expected Activity Results
<b>Output 1</b> Stock Assessment and Risk Assessment for small pelagic fish in the Southeast Asian region	
<b>Activity 1.1:</b> Stock Assessment and Risk Assessment for small pelagic fishes in the Southeast Asian region	<ul style="list-style-type: none"> <li>Two small pelagic fish will be chosen</li> <li>Compilation of catch data of targeted two small pelagic species from AMSs for stock and risk assessment</li> </ul>
<b>Activity 1.2:</b> Meetings for small pelagic fishes in the Southeast Asian region	<ul style="list-style-type: none"> <li>Updated current status of targeted small pelagic fisheries in South China Sea and Andaman Sea</li> <li>1<sup>st</sup> CEM will be organized</li> <li>Meeting report will be published and disseminated to AMSs</li> </ul>
<b>Output 2</b> Stock and Risk Assessment for major neritic tuna species in the Southeast Asian region	
<b>Activity 2.1:</b> Stock Assessment and Risk Assessment for neritic tunas in the Southeast Asian region	<ul style="list-style-type: none"> <li>Two neritic tuna species will be chosen</li> <li>Compilation of landing data of two</li> </ul>

Planned activity	Expected Activity Results
	targeted neritic tuna species from AMSs
<p><b>Activity 2.2:</b> Clarification of stock structure for one neritic tuna species in the Southeast Asian region</p>	<ul style="list-style-type: none"> <li>• Purchase of the equipment, chemical, disposable laboratory consumables, kit and samples for genetic structure study of one neritic tuna in SEA region</li> <li>• Findings from PCR and Fragment analysis</li> </ul>
<p><b>Activity 2.3:</b> Life-history study for major neritic tuna species in the Southeast Asian region</p>	<ul style="list-style-type: none"> <li>• Purchase of the equipment, chemical, disposable laboratory consumables, kit and samples for otolith analysis of one neritic tuna species</li> <li>• Pilot study (trial) for otolith study of one neritic tuna species</li> </ul>