



PROJECT DOCUMENT

PROPOSED ACTIVITIES FOR THE YEAR 2020

Project ID: 0520200102			
Program Category:	ASEAN-SEAFDEC ASSP and FCG Mechanism		
Project Title:	Sustainable Utilization of Anguillid Eel in the Southeast Asia Region		
Program Strategy No:	I	Total Period	2020 - 2024
Lead Department:	Inland Fishery Resources Development and Management Department (IFRDMD)	Lead Country:	None
Donor/Sponsor:	Japanese Trust Fund (JTF)	Total Project Budget:	USD 225,000
Project Partner(s):	None	Budget for 2020:	USD 45,000
Lead Technical Officer:	Takuro Shibuno, Deputy Chief / IFRDMD	Project Participating Countries)	All Members Countries

PART I: PROJECT DESCRIPTION

1. Executive Summary:

This project is aimed at keeping the sustainable management and utilization of anguillid eel fisheries resources in the Southeast Asian region through the strategic program of sustainable eel resources management. There are two main activities under the project. The first one is for sustainable eel fisheries resources and to standardize the data collection system in Southeast Asia. The second is mapping the genetic population structure of tropical eels in Southeast Asia based on mtDNA approach.

2. Background and Justification:

With the rapid decline of temperate eels, the market value of tropical eels rises in recent years. Glass eel (juvenile of eel) capture fisheries in tropical zone increase dramatically. In order to avoid the over exploitation on glass eel, the Indonesian government issued the regulation to prohibit export of eel seeds less than 150 g from Indonesia's territory. The similar policies to prohibit export of eel seeds are enforced in some other countries. Conservation and management policy issues on tropical eel resources for their sustainability become more important not only in Indonesia but also in the region. Therefore, the region needs a policy to balance between utilization and sustainability of tropical eel resources. At the same time, we should consider that we just have quite limited knowledge on tropical eel species in this region.

In the five-year program (2015-2019), IFRDMD conducted its activities to establish and strengthen a regional network for improving the management and conservation of anguillid eel fisheries resources and environment in the region. IFRDMD also focused on the capacity development in the member countries for improving the management of anguillid eel fisheries.

In the fisheries management, the information on genetic population structure or stocks are very important because it can identify the source and sink populations and the potential for the replenishment of depleted stocks. Further, molecular genetic techniques have become more

widespread in oceanic systems and in the fisheries management due to the ability to identify distinct stocks, genetic health and connectivity between stocks. Genetic study with an objective to identify genetic population structure of the tropical eels (*Anguilla* spp. except *Anguilla bicolor*) in Southeast Asia will be conducted for five years (2020-2024). The marker (mtDNA) will be used in this study.

IFRDMD will be further engaged in promoting the sustainable management and utilization of anguillid eel resources in the Southeast Asian region. The activities will be conducted for improving the sustainable eel fisheries and standardizing the data collection system, and clarifying the eel genetic population structure in Southeast Asia.

3. Gender Sensitivity of the Project

This project is sensitive with the gender issue. The market chain on anguillid eel resources closely related to the woman activity for supporting their livelihood. Mostly the consolidator and collector of anguillid eel in certain countries are female. They also support for the data collection as enumerator. Therefore, in the 2020-2024 study, it needs to strengthen their empowerment through this project.

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

4.1 Logical Framework

GOAL (Overall Objectives, Impact)	Indicators	Means of Verification
Sustainable fisheries resources to support the food security and livelihood	The livelihood of fishers is secure and stable, fishery diversity is maintained	Historical catch data on anguillid eel provided by enumerators
OUTCOME	Indicators	Means of Verification
Strategic program of Sustainable Eel resources management in Southeast Asia	AMS implement the Strategic program of Sustainable Eel resources management in Southeast Asia	Government adopts the document and makes a policy/regulation
OUTPUT 1	Indicators	Means of Verification
Sustainable eel fisheries and standardize data collection system in Southeast Asia	Developing sustainable and standardize data collection system	Government adopts the system
ACTIVITY 1	Indicators: key Inputs (Number to be conducted, Where, Time)	Means of Verification
Activity 1.1: Conducting a survey to collect the data of catch and CPUE of Anguillid eel fisheries	A survey conducted	Survey reports
Activity 1.2 Conducting a survey to collect the biological data of Anguillid eel fisheries	A survey conducted	Survey reports
Activity 1.3: Conducting a regional workshop organized at IFRDMD for making the Field	Regional workshop is organized at IFRDMD for making the Field guide to identify the Anguillid eel	Field guide to identify the Anguillid eel

guide to identify the Anguillid eel		
OUTPUT 2	Indicators	Means of Verification
Genetic population structure of tropical eels in Southeast Asia	Genetic data of tropical eels in Southeast Asia	Genetic study report
ACTIVITY 2	Indicators: key inputs (Number to be conducted, Where, Time)	Means of Verification
Activity 2.1: Conducting a survey to collect tissue sample of tropical eels in Southeast Asia	A survey conducted	Survey reports
Activity 2.2: Conducting genetic analyses in laboratory	A laboratory analysis conducted	Survey reports
OUTPUT 3	Indicators	Means of Verification
Successful project management through regular monitoring and evaluation	Project achievement.	Report of results and evaluation
ACTIVITY 3	Indicators: key inputs (Number to be conducted, Where, Time)	Means of Verification
Activity 3.1 Project monitoring and evaluation lead by Project Leader undertaken	<ul style="list-style-type: none"> - Progress meetings twice a year to confirm the improving of each activity. - The evaluation at the end of year by experts. - Hiring one assistant to carry out the project effectively. 	Semi-annual and annual progress report, and their evaluation results

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
Output 1:																				
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	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.3																			x	x
Output 2:																				
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
Output 3:																				
Activity 3.1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

4.3 Proposed Budget for 2020 - 2024

(Unit: USD)

Output	Activities	Year 1 (2020)	Year 2 (2021)	Year 3 (2022)	Year 4 (2023)	Year5 (2024)
Output 1	Activity 1.1	16,000	16,000	16,000	16,000	8,000
	Activity 1.2	10,000	10,000	10,000	10,000	4,000
	Activity 1.3					14,000
	Activity 1.4					
Output 2	Activity 2.1	11,000	9,000	9,000	9,000	9,000
	Activity 2.2	3,500	5,500	5,500	5,500	5,500
Output 3	Activity 3.1	4,500	4,500	4,500	4,500	4,500
Sub-Total		45,000	45,000	45,000	45,000	45,000

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, the project on the sustainable utilization of anguillid eel in the Southeast Asia region will commence with conducting a survey for collecting the catch and biological data (Activity 1.1 and Activity 1.2). The survey will contribute to the sustainable eel fisheries and standardize the data collection system in the member countries. Further in the Activities 2.1 and 2.2, a genetic survey will be conducted to identify the genetic population structure of tropical anguillid eels in Southeast Asia by using a mtDNA marker. The sample and/or tissue of *Anguilla marmorata* will be collected and analyzed in the selected member countries (i.e. Indonesia, Philippines, Viet Nam, and Myanmar) in 2020. Under the Activity 3, a meeting will be conducted twice a year to confirm the progress and improvement of each activity. The achievement of the study will be evaluated by experts at the end of 2020. One Project Assistant will be hired to carry out the project operations and administration effectively.

2. Outcome, Outputs and Activities and Proposed Budget:

(Unit: USD)

Proposed Activities	Descriptions	Proposed Budget
Outcome	Strategic program of Sustainable Eel resources management in Southeast Asia	
Output 1	Sustainable eel fisheries and standardize data collection system in Southeast Asia	26,000
Activity 1.1	Conducting a survey to collect the data of catch and cpue of Anguillid eel fisheries. <i>The Surveys will conduct in Indonesia and Philippines for updating status and collect the data of catch and effort of Anguillid eel fisheries</i> <i>Estimated expenditures: Enumerator fee (4 countries) : \$ 16,000</i>	16,000
Activity 1.2	Conducting a survey to collect the biological data of Anguillid eel fisheries.	10,000

	<p>The survey to collect the biological data of Anguillid eel will conduct in Indonesia and Philippines. Kind of biological data are such as length-weight, reproduction biology, otolith.</p> <p>Estimated expenditures: Transportation to AMSs : \$ 4,000 Accommodation fees : \$ 3,000 Local transport : \$ 400 DSA : \$ 2,300 Office expenditures and contingency: \$300</p>	
Output 2	Genetic population structure of tropical eel in Southeast Asia	14,500
Activity 2.1	<p>Conducting a survey to collect tissue samples of tropical eel.</p> <p><i>In this part, the activities is collection eel tissue samples. Eel tissue samples will be collected by collaboration. Some of area by national project and some of area by JTF project. In 2020, JTF budget will be used for the collection eel tissue sample in three area Indonesia (Bali, Kalimantan, and Maluku). Samples from regional countries (Philippines, Viet Nam, and Myanmar) will be conducted when activities survey to collect the biological data of Anguillid eel fisheries happen.</i></p> <p>Estimated expenditures:</p> <ul style="list-style-type: none"> • DSA Researcher = \$ 630 • DSA Enumerator/DOF = \$ 315 • Accommodation/Hotel = \$ 1,680 • Local transport = \$ 900 • Airfare = \$ 2,400 • Sample fees = \$ 3,000 • Sample fees to AMS (Viet Nam and Philippines) = \$ 2,000 	11,000
Activity 2.2	<p>Conducting laboratory work to analyze genetic population structure of tropical eel.</p> <p><i>In this part, there are two activities. The first is laboratory work for the extraction, PCR, electrophoresis, and sequencing. The second is analysis data.</i></p> <p>Estimated expenditures:</p> <ul style="list-style-type: none"> • Ethanol absolute = \$ 213 • Kit for extraction = \$ 605 • Kit for PCR = \$ 150 • Sequencing cost = \$ 2,420 <p>Tissue, Glove, Mask, delivery service of sample to Genetic science = \$ 112</p>	3,500
Output 3	Project management to lead to success	4,500
Activity 3.1	<p>Progress meetings twice a year to confirm the improving of each activity. The evaluation at the end of year by experts. Hiring one assistant to carry out the project effectively.</p> <p><i>Progress meetings will be conducted to confirm the improving of each activity. The achievement of this study will be evaluated at the end of year by experts. One Assistant will be hired to carry out the</i></p>	

	<i>project operations and administration effectively.</i> <i>Estimated expenditures:</i> <ul style="list-style-type: none"> ● <i>Travel cost of 2 evaluators (share)</i> = \$ 2,200 ● <i>Meeting costs (share)</i> = \$ 300 ● <i>Salary of Assistant (share)</i> = \$ 2,000 	
--	---	--

3. Implementation Plan of Activities in 2020:

Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Output 1:												
Activity 1.1												
Activity 1.2												
Activity 1.3												
Output 2:												
Activity 2.1												
Activity 2.2												
Output 3:												
Activity 3.1												

4. Expected Activity Results in 2020:

Planned activity	Expected Activity Results
Output 1 Sustainable eel fisheries and standardize data collection system in Southeast Asia	
Activity 1.1 Conducting a survey to collect the data of catch and CPUE of Anguillid eel fisheries	<ul style="list-style-type: none"> ● Database of catch and CPUE of Anguillid eel fisheries ● Survey report
Activity 1.2 Conducting a survey to collect the biological data of Anguillid eel fisheries	<ul style="list-style-type: none"> ● Survey report
Output 2 Genetic population structure of tropical eels in Southeast Asia	
Activity 2.1 Conducting a survey to collect tissue samples of tropical eels in Southeast Asia	<ul style="list-style-type: none"> ● Report of collection eel tissue sample from the field
Activity 2.2 Conducting genetic analyses in the laboratory	<ul style="list-style-type: none"> ● Report of laboratory work. ● Submit to Journal
Output 3 Successful project management through regular monitoring and evaluation	
Activity 3.1 Project monitoring and evaluation lead by Project Leader undertaken	<ul style="list-style-type: none"> ● Progress meetings conducted twice a year to confirm the improving of each activity ● The evaluation at the end of year by experts ● One Assistant hired to carry out the project operations and administration effectively