**PIPELINE PROJECT**

**CONCEPT NOTE**

**Project Title:** Development of stock assessment method and strengthening of resources management measures on tropical Anguillid eels in ASEAN region.

**Project Funding Agency:** Japan ASEAN Integration Fund

**Lead Department:** SEAFDEC Secretariat, IFRDMD, AQD

**Proposed budget:** 800,000 USD (pending)

**Duration:** 2 years

1. Background

Eel resources are utilized as direct human consumption worldwide in the East and Southeast Asian region, the North and Latin American region, as well as in the European region. In 2007, the European eel was listed by CITES in Appendix II for international trade due to its resource decline and the possibility of future extinction. In addition to that, in 2010, EU banned export of the European eels from its member states. These regulations are believed to cause in part a recent shift from the European eels to other eel species such as the tropical Asian eel species, the American eels, etc. to compensate the shortage of global supply of eel seeds for eel farming.

Although the demand and use of the tropical eel resources in Southeast Asia is increasing, few, if any, conservation management measures for the tropical eels has been in place in ASEAN member states (AMS), especially where the tropical eel fisheries exist, causing poor management implementation for the sustainable use, as well as the long-term persistence, of these eel species. Furthermore, a lack of information and data relevant to biology, catch history/statistics, and eel aquaculture also makes it difficult to conduct comprehensive assessment of the eel resources in Southeast Asia. These facts may prevent the tropical eels from being good candidates of the favorable target species for commercial freshwater fisheries/aquaculture with appropriate resource management.

Given the above, the ongoing 2-year project was planned and has been conducted by SEAFDEC with full cooperation of AMS to develop fisheries statistics data collection system, examine the status of tropical eel species in AMS, and improve eel aquaculture condition. Although it is still at a preliminary stage, the project achieved to conduct baseline/regular surveys that collected basic fisheries statistics data in most, if not all, Southeast Asian countries, set out policy recommendations to help AMS initiate and improve management practices in their countries, and start researches to improve survival rate of juvenile eels under aquaculture conditions.

AMS realize that it is required to make more efforts in order to complete comprehensive assessment of the status of the eel resources and to bring each country’s best management procedures in reality. Although the initial fisheries statistics data collection system has been set out, it is not yet fully operated to obtain all of the required data and information, such as long-term catch data, precise distribution and diversity, and reliable trade data of each of the tropical eel species. Without these data and information, it is still difficult to estimate, for instance, allowable catch limit that is one of the key factors to secure sustainable use of tropical eel resources.

This project is proposed to strengthen the current fisheries statistics data collection system, conduct biological and ecological survey/researches on field, develop mathematical/statistical abundance estimation method, and propose appropriate management policy/measures.

2. Project Description/Justification

Through the ongoing project conducted by SEAFDEC with the full cooperation of AMS, it has
become evident that the operated activities are still at the initial stage. The trends of abundance, areas of distribution, and stock structure of the tropical eel species have been yet unclear, and consequently the lack of the information prevents AMS from determining the allowable catch limit of tropical eels. In order to control and manage the eel resources for the sustainable use, and long-term persistence, of tropical eel, therefore, it is necessary for AMS to develop and improve tools/methods for the better/advanced management.

Globally, conservation and management of the eel species is currently a big issue to be addressed adequately, as seen in the case of the European eel. A lack of proper legal framework results in the failure in fisheries management. Legally binding fisheries measures specific to the tropical eels have been so far implemented only in a few ASEAN countries (Indonesia and Philippines) that restrict export of the eels at a certain size. This project will develop and proposes appropriate management measures in the Southeast Asia with full cooperation and coordination from AMS.

3. Objectives

The objective of this project is to develop, improve stock assessment methods and resources management measures to secure sustainable use and conservation of tropical Anguillid eels in ASEAN region.

4. Intended activities to be implemented in the project

Output 1
Biological, ecological, and fisheries data and information will be properly collected in order to describe the current and future stock status of the tropical eel species.

Activity 1
1.1 To Collect the data on catch and catch effort by species and by life history stage (glass eel, and elver/yellow eel) in the countries where have eel fisheries in AMS in order to properly assess stock status.
1.2 To conduct field surveys in order to better understand biology and ecology, including habitat and its surrounding environment, of the tropical eel species.
1.3 To carry out field surveys and analysis in order to understand distribution, the level of diversity, and stock structure of the tropical eel species.

Output 2
Analytical methods for the comprehensive stock assessment of tropical Anguillid eel will be developed, improved.

Activity 2
2.1 To analyze catch per unit fishing effort (CPUE)
2.2 To develop a method for estimating abundance trend of the eel stocks
2.3 To develop a method for estimating allowable catch limit that will secure sustainable use of tropical Anguillid eel resources

Output 3
Management policy and measures are proposed and formulated that will be implemented in AMS in order to secure sustainable use and long-term persistence of tropical Anguillid eel resources.

Activity 3
3.1 To formulate the effective resource management measures for conservation and utilization of each of the tropical eel species
3.2 To develop an action plan for comprehensive resource management
3.3 To propose resource management policies in AMS
5. Progress and status
Project proposal will be submitted to Mission of Japan to ASEAN and ASEAN secretariat