



## PROJECT DOCUMENT

### ACHIEVEMENTS FOR YEAR 2019

<b>Project ID:</b> 201505001			
<b>Program Category</b>	ASEAN-SEAFDEC ASSP and FCG Mechanism		
<b>Project Title</b>	Promotion of Responsible Utilization of Inland Fisheries in Southeast Asia		
<b>Program Strategy No</b>	I	<b>Total Duration</b>	2015-2019
<b>Lead Department</b>	Inland Fishery Resources Development and Management Department (IFRDMD)	<b>Lead Country</b>	None
<b>Donor/Sponsor</b>	Japanese Trust Fund (JTF)	<b>Total Project Budget</b>	USD 289,104
<b>Project Partner</b>	None	<b>Budget for 2019</b>	USD 45,620
<b>Project Leader</b>	Dr. Dina Muthmainnah / IFRDMD	<b>Project Participating Country(ies)</b>	All Member Countries

#### PART I: OVERALL PROJECT DESCRIPTION

##### 1. Brief Project Description:

This project aimed at promoting and establishing the awareness for management of inland fisheries in Southeast Asia (hereinafter it is to be called “the region”).

There are three main activities on the project. The first one aimed at reviewing activities and methodologies for promoting inland fisheries in ASEAN Member States (hereinafter referred to as “AMS”). The second one aimed at promoting effective inland fisheries management measures in AMSs. The third one aimed at studying and developing habitat conservation/resources enhancement measures suitable for the region.

##### 2. Background and Justification:

Inland fisheries are one of the important components of the economies in the region, and its contributions in rural communities are particularly important in poverty alleviation, food security and nutritional well-being. The sustainability of inland capture fisheries much depends on the quality of aquatic habitats and ecosystems.

Taking account of these issues, we should consider that fishery is not the only sector that has interest on the inland water ecosystems and there are many sub-sectors, which are often overlooked by planners and policy makers though.

We point out two important factors for better management of inland fisheries in the region, one is the improvement of data collection and another is enhancement of the governance through the application of ecosystem approach to fisheries, as well as co-management.

This program is a way to establish and strengthen the regional networking for improving the fisheries management and the conservation of fisheries resources/environment in inland waters of the region.

### 3. Project Overall Objectives, Outcomes, Outputs, Indicators and Activities:

#### 3.1 Objectives, Outcome and Output of the Project

Objective	Outcomes	Outputs	Activities
<p><b>Objective 1:</b></p> <p>Reviewing the activities and the methodologies for promoting inland fisheries in AMS and finding a way forward for sustainable development of inland fisheries</p>	<p><b>Outcome 1:</b></p> <p>Understanding the present status of inland fisheries in AMS, as a basis of our consideration to find the way for sustainable development of inland fisheries in the region.</p>	<p><b>Output 1:</b></p> <ul style="list-style-type: none"> <li>• Grasping the present status of inland fisheries in the region.</li> <li>• Sharing the data, information and common understanding on inland fisheries in the region among AMS.</li> <li>• Publishing a printed matter that explains the summary of the features on inland fisheries in the region at the end of this project.</li> </ul>	<p><b>Activity 1.</b></p> <p><b>Review of activities and methodologies for promotion of inland fisheries and find ways forward</b></p> <p>Gathering the data and information on present status of inland fisheries in AMS by referring to literature, web sites, interview and field surveys.</p> <p>Holding a workshop and Forum Group Discussion (hereinafter referred to as “FGD”) for reviewing, sharing and exchanging the data and information among the fisheries experts, officers and stakeholders in AMS.</p> <p>Summarizing the various features and information on inland fisheries in AMS then publishing the results as a printed matter for distribution among AMS.</p>
<p><b>Objective 2:</b></p> <p>Seeking and promoting the effective management measures on inland fisheries in AMS</p>	<p><b>Outcome 2:</b></p> <p>Building up the skeleton of the framework for the management of inland fisheries in AMS.</p>	<p><b>Output 2:</b></p> <ul style="list-style-type: none"> <li>• Reaching and sharing the common understanding and issues/problems on the implementation process of the co-management and right-based fisheries management on inland capture fisheries in AMS. Seeking measures/solutions for these issues by developing human resources for the people involved through the meetings. (<i>Minor</i></li> </ul>	<p><b>Activity 2.</b></p> <p><b>Promotion of effective inland fisheries management measures</b></p> <p>Sharing, exchanging and analyzing the information on co-management and right-based fisheries management among fisheries experts, officers and stakeholders in AMS through the seminars, FGDs and field surveys. (<i>Minor revision in 2018, to change the word order to make the contents of the activity clear</i>)</p>

		<p><i>revision in 2018 to add issues regarding “common understanding” and “developing human resources”)</i></p> <p>Establishing the appropriate fisheries management measures such as size limitation, regulation on gears, open/close the fishing season, establishment of the preserves, those reflect the biology of the targeted species at specific habitat and climatic rhythm.</p> <p>Finding the appropriate management measures and additional treatment on fisheries operation and handling the products that improve the fishers’ livelihood.</p> <p>Making the map and establishing the database of habitat and inland waters resources in Southeast Asia in one format with geographic and time reference, that it can be accessed by the public.</p> <ul style="list-style-type: none"> <li>• Finding appropriate management measures on inland fisheries in AMS that are applicable to each area and country then ask DoFs to consider the feasibility of introducing these management measures at each country. <i>(Major revision in 2017 regarding the aims and expected results of the workshop.)</i></li> </ul>	<p>Implementing the biological studies on commercially exploited species such as growth speed, maturation, habitat and seasonal/growth-related migration, for reflecting the characteristics at each species and habitat onto the appropriate fisheries management measures.</p> <p>Studying the effects of several management measures on the livelihoods of fishers in inland fisheries from the perspective of socio-economic features.</p> <p>Activities to make map/data-base of inland fisheries in Southeast Asia</p> <p>Holding a workshop to share the common sense and principle on inland capture fisheries management measures and also discuss the application of the management measures onto each country, with consideration of the conditions and features of fisheries at each area. <i>(Major revision in 2017 regarding the aims and expected results of the workshop. In the original description, the aim of this workshop is to find the “practical</i></p>
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			<p><i>and simple indicators” for inland fisheries management framework. However, through the 3-year study, it became clear that it is difficult to find these “indicators” in concrete through the 3-year study in this project.)</i></p> <p>Opening regional training course(s) for the researchers and officers of AMS to enhance capacity building on improving the management on inland fisheries.</p>
<p><b>Objective 3:</b></p> <p>Studying and developing habitat conservation and resource enhancement measures suitable for the region</p>	<p><b>Outcome 3:</b></p> <p>Establishing the comprehensive policies for the management of inland fisheries in the region with relationship with various sectors and stakeholders.</p>	<p><b>Output 3:</b></p> <ul style="list-style-type: none"> <li>• Enhancing the capacity building on management of inland fisheries in AMS.</li> <li>• Seeking appropriate methods/measures on the usage of inland waters for developing habitat conservation and resources enhancement measures, with capacity building for the people involved in handling these issues. <i>(Minor revision on wording in 2018)</i></li> <li>• Proposal and following discussions among the scientists, officers, and the other stakeholders in AMS for establishing the comprehensive policies for the management of inland fisheries in the region.</li> </ul>	<p><b>Activity 3.</b> <b>Study of habitat conservation/resources enhancement measures</b></p> <p>Surveying and capacity building on studying for the development of habitat conservation and for resources enhancement measures applicable to AMS. <i>(Minor revision on wording in 2018)</i></p> <p>Holding a concluding workshop for establishing the comprehensive policies on inland fisheries management.</p>

### 3.2 Overall Scope/Description of Project

Activity	Description
<p><b>Activity 1:</b> Review of activities and methodologies for the promotion of inland fisheries and find ways forward</p>	<ul style="list-style-type: none"> <li>•Gathering the data and information on the present status of inland fisheries in AMS by referring to the literature, web sites, interviewing and field surveys. (Sub-activity 1.1)</li> <li>•Holding a workshop and FGD for reviewing, sharing and exchanging the data and information among the fisheries experts, officers, and stakeholders in AMS. (Sub-activity 1.2)</li> <li>•Summarizing the various features and information on inland fisheries in AMS then publishing the results as a printed matter for distribution among AMS. (Sub-activity 1.3)</li> </ul>

<p><b>Activity 2:</b> Promotion of effective inland fisheries management measures</p>	<ul style="list-style-type: none"> <li>•Sharing, exchanging, and analyzing the information on co-management and right-based fisheries management among fisheries experts, governmental officers, and stakeholders in AMS through the seminars, FGDs and field surveys. Implementing the biological studies on commercially exploited species such as growth speed, maturation, habitat and seasonal/growth-related migration, for reflecting the characteristics at each species and habitat onto the appropriate fisheries management measures. Studying the effects of several management measures on the livelihoods of fishers in inland fisheries from the perspective of socio-economic features. Activities to make map/data-base of inland fisheries in Southeast Asia. (Sub-activity 2.1. <i>Revised</i>)</li> <li>•Holding a workshop to share the common sense and principle on inland capture fisheries management measures and also discussing the application of the management measures onto each country, with consideration of the conditions and features of fisheries at each area. (Sub-activity 2.2. <i>Revised</i>)</li> <li>•Opening regional training course(s) for the researchers and officers of AMS to enhance capacity building on improving the management on inland fisheries. (Sub-activity 2.3. <i>It was originally planned in 2018 though, it is postponed to 2019 considering the confirmation process of effectivity of the measures/guidelines that would be accepted through sub-activity 2.2 in some preliminary trials.</i>)</li> </ul>
<p><b>Activity 3:</b> Study of habitat conservation/resources enhancement measures</p>	<ul style="list-style-type: none"> <li>•Surveying and capacity building on studying for the development of habitat conservation and for resources enhancement measures applicable to AMS. (Sub-activity 3.1. <i>To consider the amount and the wide-range of the target fields and also to reflect the results and knowledges from the other sub-activities, this sub-activity is extended till 2019, originally planned to complete in 2018 though.</i>)</li> <li>•Holding a concluding workshop for establishing the comprehensive policies on inland fisheries management at the end of this program. (Sub-activity 3.3)</li> </ul>
<p><b>Activity 4:</b> Coordination by the project leader</p>	<p>The project leader will coordinate and assist all researches and dissemination. Semi-annual meeting will be held on August to confirm the progress of respective activities and sub-activities. Project achievements will be summarized at the end of year. Annual progress report will be prepared. One assistant will be hired to carry out the project effectively.</p>

### 3.3 Activity, Sub-activity and Proposed Budget for 2015-2019)

(Unit: USD)

Activity	Sub-Activity	Y1 2015	Y2 2016	Y3 2017	Y4 2018	Y5 2019
<p><b>Activity 1:</b> Review of activities and methodologies for the promotion of inland fisheries and</p>	<p><b>Sub-activity 1.1:</b> Information gathering for understanding the present status of inland fisheries in the region</p>	5,000	25,000			

find ways forward	<b>Sub-activity 1.2:</b> Holding a workshop to review activities and methodologies for promotion of inland fisheries and find ways forward	25,000 (carry forward to 2016)				
	<b>Sub-activity 1.3:</b> Summarizing and publishing the features on inland fishery in the region			500	1,000	<b>8,181</b>
<b>Activity 2:</b> Promotion of effective inland fisheries management measures	<b>Sub-activity 2.1:</b> Studying on co-management and right-based fisheries management applicable to inland fisheries in the region	35,038 (carry forward to 2016)	20,771	20,149	71,526	<b>5,380</b>
	<b>Sub-activity 2.2:</b> Holding a workshop to develop guidelines for effective inland fisheries management in the region			26,000		
	<b>Sub-activity 2.3:</b> Opening a regional training course for the improvement on management of inland fisheries <i>(postponed to 2019)</i>					<b>10,095</b>
<b>Activity 3:</b> Study of habitat conservation/resources enhancement measures	<b>Sub-activity 3.1:</b> Studying for development of habitat conservation/resources enhancement measures applicable to the region. <i>(Extended till 2019)</i>				13,500	<b>2,200</b>
	<b>Sub-activity 3.2:</b> Holding a workshop to develop the policy recommendation on responsible inland fisheries resources utilization in the region					<b>15,202</b>
<b>Activity 4:</b> Coordination by the project leader	The project leader will coordinate and assist all researches and dissemination, that will be supported by one assistant who hires to carry out the project effectively.					<b>4,562</b>
.....	<b>Sub-Total Budget</b>	<b>65,038</b>	<b>45,771</b>	<b>46,649</b>	<b>86,026</b>	<b>45,620</b>

## PART II: ACHIEVEMENT OF 2019 PROJECT IMPLEMENTATION

### 1. Achievements of the Project Implementation for the present year 2019:

IFRDMD has conducted five sub-activities under three main activities (Activity 1, 2 and 3) in 2019. Under these sub-activities, we conducted one workshop, one training course, field surveys in Cambodia and Lao PDR, and finishing the book draft of features on inland fisheries in Southeast Asia. IFRDMD also collected data of fish biology, fishery activity and socio-economic in Koto Panjang Reservoir Indonesia, Tonle Sap Great Lake Cambodia and Nam Xouang Reservoir Lao PDR. Through the surveys, interviews, and information gathering through literatures and internet, we grasped and shared the present situation, features, and the issues that we should take any measures on inland capture fisheries in AMSs.

### 2. Information of Present Year Activity including Involved Stakeholders:

List of Actual Sub-activity	Type of activity	Number of Participants			Spent Budget (USD)
		MCs	SEAFDEC	Others	
<b>Activity 1</b>					
Review of activities and methodologies for the promotion of inland fisheries and find ways forward					
<b>Sub-activity 1.3</b> Summarizing and publishing the features on inland fishery in the region	I: Research	20 (8)	9 (3)	-	<b>8,181</b>
<b>Activity 2</b>					
Promotion of effective inland fisheries management measures					
<b>Sub-activity 2.1</b> Studying on co-management and right-based fisheries management applicable to inland fisheries in the region	I: Research	35 (10)	8 (5)	-	<b>5,380</b>
<b>Sub-activity 2.3</b> Opening a regional training course for the improvement on management of inland fisheries	I: Research	10 (6)	9 (5)	-	<b>10,095</b>
<b>Activity 3:</b>					
Study of habitat conservation/resources enhancement measures					
<b>Sub-activity 3.1:</b> Studying for development of habitat conservation/resources enhancement measures applicable to the region.	I: Research	35 (10)	8 (5)	-	<b>2,200</b>
<b>Sub-activity 3.2:</b> Holding a workshop to develop the policy recommendation on responsible inland fisheries resources utilization in the region	I: Research	19 (5)	19 (10)	-	<b>15,202</b>
<b>Activity 4:</b>					
Coordination by the project leader					
<b>Sub-activity 4.1:</b> The project leader will coordinate and assist all researches and	II: Training	3(0)	12 (4)	2	<b>4,562</b>

dissemination, that will be supported by one assistant who hires to carry out the project effectively.					
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*Remarks) Regarding the number of participants, please indicate total number of participants (and number of female participants within), such as 20 (10).*

### 3. Achievements and Expected Outcome/Outputs of the Activity:

Planned activity	Expected outcome/output	Achievements
<b>Activity 1</b>		
Review of activities and methodologies for the promotion of inland fisheries and find ways forward		
<b>Sub-activity 1.3</b> Summarizing and publishing the features on inland fishery in the region	Publishing a printed matter that explains the summary of the features on inland fisheries in the region at the end of this project.	Publish a book entitle: "The Features of Inland Fisheries in Southeast Asia", launches in October 2019.
<b>Activity 2</b>		
Promotion of effective inland fisheries management measures		
<b>Sub-activity 2.1</b> Studying on co-management and right-based fisheries management applicable to inland fisheries in the region	Reaching and sharing the common understanding and issues/problems on the implementation process of the co-management and right-based fisheries management on inland capture fisheries in AMS. Seeking measures/solutions for these issues by developing human resources for the people involved through the meetings.	IFRDMD conducts the survey in Nam Xouang Reservoir for gathering the data of fish biodiversity, fishery activity and socio economic by using the questionnaire and hires the enumerators. The one-year data was collected from June 2018 to May 2019.  IFRDMD continues to collect the data of fishery activity by using the questionnaire and hired the enumerator in Koto Panjang Reservoir, Riau Province, Indonesia. The one-year data was collected from May 2018 to April 2019.  IFRDMD collects the same data in Siem Reap Cambodia by using the form and questionnaire till August 2019 by hiring 3 enumerators.
<b>Sub-activity 2.2</b> Holding a workshop to develop guidelines for effective inland fisheries management in the region	Enhancing the capacity building on management of inland fisheries in AMS.	Holding the Regional Training Course for the improvement on management of inland fisheries in Vientiane, Lao PDR, 25-26 July 2019. The participants come from Cambodia, Lao PDR, Myanmar, Viet Nam, Thailand and Indonesia.
<b>Activity 3:</b>		
Study of habitat conservation/resources enhancement measures		
<b>Sub-activity 3.1:</b> Studying for development of habitat conservation/resources enhancement measures applicable to the region.	Seeking appropriate methods/measures on the usage of inland waters for developing habitat conservation and resources enhancement measures, with capacity	Monitoring the conservation zone in Nam Xouang Reservoir, Lao PDR that established in October 2018.

	building for the people involved in handling these issues	
<b>Sub-activity 3.2:</b> Holding a workshop to develop the policy recommendation on responsible inland fisheries resources utilization in the region	Proposal and following discussions among the scientists, officers, and the other stakeholders in AMS for establishing the comprehensive policies for the management of inland fisheries in the region.	Holding a workshop of five-year achievement of JTF VI by IFRDMD, Jakarta, Indonesia, October 2019. The participants come from all member countries, regional expert of inland fisheries, and SEAFDEC.
<b>Activity 4:</b> Coordination by the project leader		
<b>Sub-activity 4.1:</b> The project leader will coordinate and assist all researches and dissemination, that will be supported by one assistant who hires to carry out the project effectively.	Project management to lead to success	Progress meetings twice a year. The evaluation at the end of year by experts. Hiring one assistant to carry out the project effectively.

#### 4. List of Completed Publications and Others:

List of completed publications for the year 2019 and others	Type of media	Attached e-file
1. The Features of Inland Fisheries in Southeast Asia	Book	
2. Inland Fisheries Management in the Southeast Asian Region: Promoting Habitat Conservation in Lao PDR and Indonesia (Special Report) by Dina Muthmainnah and Takuro Shibuno	SEAFDEC-Newsletter Vol 42, No. 1	

#### 5. Evaluation from Participants of Member Countries for WS and Training Course:

Planned activity	Evaluation/ Views from Participants
<b>Activity 1</b> Review of activities and methodologies for the promotion of inland fisheries and find ways forward	
<b>Sub-activity 1.3</b> Holding a workshop to review activities and methodologies for promotion of inland fisheries and find ways forward	There was no evaluation from the participants of AMS.
<b>Activity 2</b> Promotion of effective inland fisheries management measures	
<b>Sub-activity 2.1</b> Studying on co-management and right-based fisheries management applicable to inland fisheries in the region	There was no evaluation from the participants of AMS.
<b>Sub-activity 2.2</b>	Not yet conducted.

Holding a workshop to develop guidelines for effective inland fisheries management in the region	
<b>Activity 3:</b> Study of habitat conservation/resources enhancement measures	
<b>Sub-activity 3.1:</b> Studying for development of habitat conservation/resources enhancement measures applicable to the region.	There was no evaluation from the participants of AMS.

## 6. Major impacts/issues:

It needs understanding of the wide variety of the real aspect of inland capture fisheries in the region with the capacity building of the people involved in the inland waters.

It needs to find out the critical issues regarding the fish stock to achieve the sustainable use of freshwater fish resources, before considering the several concrete management measures.

## PART III: ACHIEVEMENTS IN OVERALL PROJECT DURATION

### 1. Abstract of Achievements in the Overall Project Duration (project duration 5 years):

During 5-year implemented the project, IFRDMD conducted the field surveys to investigate the present status of inland fisheries in Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Viet Nam. The data of fish biology, fishery activity and socio-economic in Indonesia (Musi Banyuasin Regency, Koto Panjang Reservoir and Barito River), Tonle Sap Great Lake Cambodia and Nam Xouang Reservoir Lao PDR were collected using the questionnaires and hired the enumerators. IFRDMD initiated to set up the conservation zone signboards to promote the responsible on the utilization of inland fisheries in Nam Xouang Reservoir, Lao PDR, and three lakes (Cala Lake, Ulak Lia Lake, and Siarak Lake) in Musi Banyuasin Regency, Indonesia.

To enhance the capacity building, IFRDMD dispatched the researchers to attend the appropriate training, join the relevant meetings, and coordinate the in-house training. The dissemination of the result of researches was done by being the presenter or lecturer in the conferences. The Workshop to Review Activities and Methodologies for Promotion on Inland Fishery in 2016 was held to gather various kind of valuable information and made the summarization. IFRDMD started to grasp the information not only from the surveys or interview but also through kinds of literature and internet, that the information gathering was to publish in the semi-popular publication at the end of the project.

The Regional Training Course for the improvement on the management of inland fisheries was held in Vientiane, Lao PDR, that the participants came from Cambodia, Lao PDR, Myanmar, Viet Nam, Thailand, and Indonesia. At the end of project duration, IFRDMD organized the Workshop on 5-year of IFRDMD's Achievement for reviewing the result of the department and getting the improvement of inland fisheries study from AMSs.

### 2. Implemented Activities/sub-activities in the Overall Project Duration:

List of Activities	Description of Implemented Activities
<b>Activity 1</b> Review of activities and methodologies for the	

promotion of inland fisheries and find ways forward	
<b>Sub-activity 1.1:</b> Information gathering for understanding the present status of inland fisheries in the region	Information gathering by referring to the literature, web sites, interviewing and field surveys on the present status of inland fisheries in AMS
<b>Sub-activity 1.2:</b> Holding a workshop to review activities and methodologies for promotion of inland fisheries and find ways forward	Reviewing, sharing and exchanging the data and information among the fisheries experts, officers, and stakeholders in AMS by holding a workshop and FGD
<b>Sub-activity 1.3:</b> Summarizing and publishing the features on inland fishery in the region	Summarizing the various features and information on inland fisheries in AMS by publishing the semi-popular publication.
<b>Activity 2</b> Promotion of effective inland fisheries management measures	
<b>Sub-activity 2.1:</b> Studying on co-management and right-based fisheries management applicable to inland fisheries in the region	Sharing, exchanging, and analyzing the information on co-management and right-based fisheries management among fisheries experts, governmental officers, and stakeholders in AMS through the seminars, FGDs and field surveys. Implementing the biological studies on commercially exploited species such as growth speed, maturation, habitat and seasonal/growth, for reflecting the characteristics at each species and habitat onto the appropriate fisheries management measures. Studying the effects of several management measures on the livelihoods of fishers in inland fisheries from the perspective of socio-economic features. Activities to make data-base of inland fisheries in Southeast Asia.
<b>Sub-activity 2.2:</b> Holding a workshop to develop guidelines for effective inland fisheries management in the region	Organizing a workshop to share the common sense and principle on inland capture fisheries management measures and also discussing the application of the management measures onto each country, with consideration of the conditions and features of fisheries at each area.
<b>Sub-activity 2.3:</b> Opening a regional training course for the improvement on management of inland fisheries <i>(postponed to 2019)</i>	Holding the Regional Training Course for the improvement on management of inland fisheries in Vientiane, for the researchers and officers of AMS to enhance capacity building.
<b>Activity 3</b> Study of habitat conservation/resources enhancement measures	
<b>Sub-activity 3.1:</b> Studying for development of habitat conservation/resources enhancement measures applicable to the region. <i>(Extended till 2019)</i>	Conducting the field survey on studying for the development of habitat conservation and resources enhancement measures applicable to AMS. Enhancing the capacity building by conducting the collaboration survey with others department.

<b>Sub-activity 3.2:</b> Holding a workshop to develop the policy recommendation on responsible inland fisheries resources utilization in the region	Holding the Workshop on 5-year of IFRDMD's Achievement as the concluding workshop for establishing the comprehensive policies on inland fisheries management at the end of this program.
<b>Activity 4</b> Coordination by the project leader	
The project leader will coordinate and assist all researches and dissemination, that will be supported by one assistant who hires to carry out the project effectively.	Progress meetings twice a year. The evaluation at the end of year by experts. Hiring one assistant to carry out the project effectively.

### 3. Achievements and Outcomes/Outputs of Activities in the Overall Project Duration:

List of Activities	Achievements and Outcomes/Outputs of Activities
<b>Activity 1</b> Review of activities and methodologies for the promotion of inland fisheries and find ways forward	
<b>Sub-activity 1.1:</b> Information gathering for understanding the present status of inland fisheries in the region	<p>2015: As a part of our research activities on information gathering, the data of the types of fishing gears and the condition of fisheries in Central Kalimantan had been recorded.</p> <p>2016: In the workshop on Fishway Design, the need to know how to make the fish pass model and how to regulate water during low water level were discussed.</p> <p>2017: The present status and various kind of information regarding inland fisheries and surrounding issues in Lao PDR and Cambodia are grasped through the field surveys. There are different types of inland waters and variety of management measures are applied at each condition. Inland fisheries in Lao PDR are conducted in various inland waters such as rivers, swamps, rice-paddies and so on. However, the collecting catch information and surveys are mainly conducted limitedly in reservoirs. In Cambodia, fishers have various fisheries activities and they change/adapt their fishing methods, places, and related activities with the season especially related the water levels. On daily activities, we collected the publication on inland fisheries especially in Southeast Asia, to improve the information.</p>
<b>Sub-activity 1.2:</b> Holding a workshop to review activities and methodologies for promotion of inland fisheries and find ways forward	<p>2016: IFRDMD held a workshop on 8-10 August in Palembang, Indonesia, with participants from 8 DoFs of AMS and 9 scientists/specialists on inland fisheries in this region. The reports and presentation contained valuable information on inland fisheries and surrounding condition/background. IFRDMD is now summarizing and analyzing the information for extracting the important</p>

	issues to reflect it to our project, especially for Sub-activity 2.1 and 2.2 in 2017.
<b>Sub-activity 1.3:</b> Summarizing and publishing the features on inland fishery in the region	<p>2018: IFRDMD picked up some major components and features on inland capture fisheries in AMS by referring the literature, web sites (also including the results of the questionnaire and the workshop those had been conducted in 2016) with the cross-checking each other. Then we summarized these features and present status at each SEAFDEC member country into the table, to reveal the similarities and differences among the countries.</p> <p>After we finish completion of the summary table, we ask each SEAFDEC member country to confirm, any corrections and filling out the blanks remaining in the table by the end of 2017. The completed summary table express the basic data on the features of inland capture fisheries in the region and effective for consideration and planning our future activities.</p> <p>2019: Publish a book entitle: "The Features of Inland Fisheries in Southeast Asia", launches in October 2019.</p>
Activity 2 Promotion of effective inland fisheries management measures	
Sub-activity 2.1: Studying on co-management and right-based fisheries management applicable to inland fisheries in the region	<p>2016: IFRDMD conducted information gathering and field surveys in Lao PDR, Cambodia including the interviewing with MRC. In Lao PDR, fisheries committees have been established at each reservoir. They regulate their fisheries operations, dispute coordination and financial issues on fishermen's communities. However, the roles of the fisheries committees are still limited on basic issues and it seemed that it would be difficult to manage the fisheries resources by themselves (in one large-scale reservoir, fishers did not find effective measures against the decline of their target species).</p> <p>Inland fisheries in Cambodia is vary their styles, activities and efforts, depending on the seasonal variation of water level. One of the other characteristics of inland fisheries in Cambodia is the relationship/conflicts with other sectors on usage of inland waters. Dialogues among Lower Mekong Basin countries has been conducted on mitigating transboundary impacts from water management projects, fishing activities and exotic species.</p> <p>We also conducted in-house training on co-management of inland fisheries in Indonesia with inviting Prof. Endi from RIFEC, Gov. Indonesia as lecturer.</p> <p>2017: IFRDMD has conducted field surveys in Philippine, Thailand, Malaysia and Viet Nam for information gathering.</p> <p>Philippines has introduced the enumerator system for gathering the catch statistics at the landing places frequently. This system enabled us to gather reliable and monitor the situation of fisheries resources and their level of exploitation.</p>

	<p>Thailand also has data collection system on catch statistics by setting enumerators in the markets. They also conduct experimental operation for studying the fish biology in the wild stock.</p> <p>Re-stocking activities are also conducted in Thailand to enhance the production by Culture Based Fisheries in the reservoirs. In general, freshwater aquaculture is focused more than the capture fishery in Thailand.</p> <p>In Malaysia, we learn for Tagal system that it has success to revitalize rare fish resources and increase the income from livelihood of people around the tagal area.</p> <p>The opportunity of inland fisheries in Viet Nam is establishment of fish sanctuaries to protect valuable genetic resources.</p> <p>We also conducted In-House Training on the Features of Inland Fisheries in ASEAN region, and In-House on co-management and right based fisheries by inviting the lecturer from University and research institute, Indonesia, to deepen the understanding of the present status and issues in Inland fisheries in the region.</p>
<p>Sub-activity 2.2: Holding a workshop to develop guidelines for effective inland fisheries management in the region</p>	<p>2018: IFRDMD in collaboration with the Research Institute for Inland Fishery and Extension (RIIFE), Ministry of Marine Affairs and Fisheries of Indonesia held a “Workshop on Quantitative Estimation of Freshwater Fish Stock” on 21-22 November 2018 in Palembang, Indonesia. The objectives of the Workshop were: 1) to understand the methods on quantitative estimation of freshwater fish stock; 2) to identify appropriate methods for freshwater fish stock assessment; and 3) to discuss the strategic framework to implement simultaneously the appropriate fish stock assessment methods among ASEAN Member States (AMSs). The Workshop was attended by representatives from seven AMSs (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, and Thailand), chairman and members of the National Committee of Fish Stock Assessment for Indonesia, researchers from various institutes, and scientists from universities. Prof. Ian G. Cowx, Director of the Hull International Fisheries Institute, University Hull, UK; Prof. Dr. Indra Jaya from Bogor Agriculture University; Mr. Vanna Nuon from the Mekong River Commission; and Dr. Arif Wibowo, IFRDMD Chief and Director of RIIFE, served as resource persons. Moreover, each country delegate presented the report on estimated freshwater fish stock in their respective countries.</p>
<p>Sub-activity 2.3: Opening a regional training course for the improvement on management of inland fisheries (postponed to 2019)</p>	<p>2019: Holding the Regional Training Course for the improvement on management of inland fisheries in Vientiane, Lao PDR, 25-26 July 2019. The participants come from Cambodia, Lao PDR, Myanmar, Viet Nam, Thailand and Indonesia. This workshop aimed to review the collection of valuable information on inland fisheries, particularly on catch statistics, fishing gears, fisheries management measures and fishers’ livelihoods by each member Country. The researchers and officers of AMS enhanced their capacity building on improving the</p>

	management on inland fisheries.
Activity 3 Study of habitat conservation/resources enhancement measures	
Sub-activity 3.1: Studying for development of habitat conservation/resources enhancement measures applicable to the region. (Extended till 2019)	2018: Surveying and capacity building on studying for the development of habitat conservation and for resources enhancement measures applicable to AMS. IFRDMD, led by SEAFDEC/Training Department, conducted the collaboration surveys in Nam Xouang Reservoir, Lao PDR in determining and monitoring the conservation zone. IFRDMD initiated to set up the signboards to promote the responsible on utilization of inland fisheries in Nam Xouang Reservoir, Lao PDR and three lakes (Cala Lake, Ulak Lia Lake and Siarak Lake) in Musi Banyuasin Regency, South Sumatra Province, Indonesia.
Sub-activity 3.2: Holding a workshop to develop the policy recommendation on responsible inland fisheries resources utilization in the region	2019: IFRDMD will hold the Workshop on 5-year of IFRDMD's Achievement on 8-10 October 2019 in Jakarta, Indonesia.
Activity 4 Coordination by the project leader	
The project leader will coordinate and assist all researches and dissemination, that will be supported by one assistant who hires to carry out the project effectively.	2019: Progress meetings twice a year. The evaluation at the end of year by experts. Hiring one assistant to carry out the project effectively.

#### 4. Evaluation and Major Impacts/Issues in the Overall Project Duration:

Need to gather information more on inland fisheries at each area/country to understand the real situation and also to seek the key issues. It should be treated to achieve the sustainable use of freshwater fish resources before considering the several concrete management measures.

Need to understand the wide variety of the real aspect of inland capture fisheries in the region with the capacity building of the people involved in the inland waters.

Need to find out the critical issues regarding the fish stock to achieve the sustainable use of freshwater fish resources, before considering the several concrete management measures.

Revisiting including mapping the historical research activities and its findings should be carried out through desk study. This information could be treated as a baseline to strengthen and to fill the gap between achieving science-based local riverine healthy index and improvement conceptual fisheries management plan.

Prioritizing on-site location for data collection should be arranged under the scheme of protecting

inland waters ecosystem through reasonable annual work plan on research funds and its outcome.

One way to promote the responsible utilization of inland fisheries is set up the signboard containing the information on the importance and benefits of practicing conservation areas to the residents. This regulation does not allow private, and the group of the people uses any fishing gears and other animals-aquatic in this whole zone.

#### 5. Publications and Others (e.g. technical report, VDO, presentation file, etc.):

List of completed publications	Type of media	Attached e-file
IFRDMD started off preliminary survey on utilization of inland fisheries	SEAFDEC Newsletter Vol. 38 No.2, Apr-Jun 2015.	
IFRDMD organizes In-house Training on Co-management in Inland Fisheries	SEAFDEC Newsletter Vol. 39 No. 1, January-March 2016,	
IFRDMD held the In-House Training on Features of Inland Fisheries in Southeast Asia	SEAFDEC Newsletter Vol.40 No.2, April-June 2017	
Special Report: Gathering Catch Statistics and Related Data on Inland Fisheries (Dina Muthmainnah, Ni Komang Suryati, Sevi Sawestri, Satoshi Honda)	SEAFDEC Newsletter Vol.40 No.3, July-September 2017	
IFRDMD conducts in-house training on fisheries and modeling	SEAFDEC Newsletter Vol.40 No.3, July-September 2017	
IFRDMD conducts research in Mekong River and the Red River	SEAFDEC Newsletter Vol.41 No.1, January-March 2018	
IFRDMD staff participate in the MRC training	SEAFDEC Newsletter Vol.41 No.1, January-March 2018	
IFRDMD holds workshop on estimating freshwater fish stock	SEAFDEC Newsletter Vol.41 No.4, October-December 2018	
IFRDMD installs fishing regulation signboards in Lao PDR and Indonesia	SEAFDEC Newsletter Vol.41 No.4, October-December 2018	
Inland Fisheries Management in the Southeast Asian Region: Promoting Habitat Conservation in Lao PDR and Indonesia (by Dina Muthmainnah and Takuro Shibuno)	SEAFDEC Newsletter Vol.42 No.1, January-March 2019	
Highlighting the Importance of Inland Capture Fisheries in the Southeast Asian Region (Dina Muthmainnah, Safran Makmur, Sevi Sawestri, Aroef Hukmanan Rais, Siswanta Kaban, Freddy Supriyadi, Khairul Fatah, and Satoshi Honda)	Fish for the People: Volume 15 Number 3: 2017	
Presentation File: Situation of Inland Fisheries in Indonesia and Other Southeast Asian Countries (Dina Muthmainnah)	Workshop of Gifu Pref. Inland Fisheries Training Center Opening Ceremony Gifu, Japan, 24 July 2016	
Presentation File: The Effectivity of Inland Fisheries Management Toward Sustainable Utilization (Dina Muthmainnah)	International Class: Aquatic Resource Management, Palembang, Indonesia, 13 February 2019	
Presentation File: Presentation File: The implementation of inland fisheries management in Southeast Asia to keep the sustainability fisheries.	International Class: Inland Fisheries Research towards Sustainable Utilization, Palembang, Indonesia, 9 September 2019.	

