



PROJECT DOCUMENT

PROPOSED ACTIVITY FOR YEAR 2020

Project ID: 0120200101			
Program Categories:	Project under the ASEAN-SEAFDEC ASSP and FCG Mechanism		
Project Title:	Responsible Fishing Technology and Practice		
Strategy:	I	Total Duration:	2020 - 2024
Lead Department:	Training Department (TD)	Lead Country:	None
Donor/Sponsor:	Japanese Trust Fund (JTF)	Total Donor Budget:	USD 300,000
Project Partner:	None	Budget for 2020:	USD 60,000
Project leader:	Taweekiet Amornpiyakrit, Head, Fishing Technology Section / TD	Involved Country:	All Members Countries

PART I: OVERALL PROJECT DESCRIPTION

1. Executive Summary:

Southeast Asia is one of the world’s most biologically diverse, economically productive and potentially vulnerable marine zones. The fishery production in the region exhibited a continuously increasing trend in terms of volume in 2012-2016. Marine fisheries greatly contribute to high quality seafoods and create employment and income for livelihood of the fisherfolks, specifically in marine capture fisheries. Presently, marine fisheries resources in the Southeast Asian region are massively overexploited. It is vital that marine resources must be harvested responsibly and sustainably, and the future fisheries development is governed by the availability of sustainable fish stock. Indisputably, fishing activities can sometimes adversely impact the marine environments through excessive removals of ecologically and economically valuable species, and also by a direct physical contact with critical habitats, *e.g.* bottom trawls. Presently, most of the capture methods used for fishing is, however, heavily depending on the utilization of fossil fuels or petroleum. For many important fisheries, the high consumption of fuel constitutes a major constraint to their economic viability but also represents a significant source of greenhouse gas emissions. In general, active fishing gear like trawls and dredges can greatly impact the environment and more amounts of fuel required than other passive fishing gear as traps and hooks or other stationary fishing gear.

To facilitate the adoption of the concept *Low Impact and Fuel Efficient (LIFE) Fishing* as responsible fishing technology, the SEAFDEC Training Department (TD) would apply technological improvements (*e.g.* LED in light fishing, Marking of fishing gear, Deck machinery and its auxiliary devices) for the appropriate fishery machinery onboard fishing vessels over the traditional fishing vessels. With such technological improvements, the changes in behavior and fishing practices can greatly result in more responsible fishing manners, mitigating damages to aquatic ecosystems, reducing emissions and lowering fuel costs, and contribute to more economical and sustainable utilization of fisheries resources and to better human well-being and livelihood of the fisherfolks in the Southeast Asian region.

Through technical meeting/workshop/survey/research/study, the project aims to; 1) promote responsible fishing technology and practices to mitigate fishing impacts to marine ecosystem, 2) promote marine engineering technologies and their applicability on enhancing the capability of fuel consumption efficiency and safety in fishing operations, and 3) enhance human resource capacities on

fish handling techniques onboard fishing vessels. It is also envisaged that the fishing and marine engineering technologies will be improved at national and regional levels as well as enhanced in human resources capacities in the Southeast Asian region.

2. Background and Justification

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To meet the needs of responsible fishing technology and practices in the region, SEAFDEC has promoted the use of ‘Turtle Excluder Devices (TEDs)’ for shrimp trawls, to ensure harmless catch of marine turtles and to release them safely and properly since 1998. Subsequently, in 2000, SEAFDEC has continued to promote the use of the ‘Juvenile and Trash Fishes Excluder Devices (JTEDs) in trawl fisheries to address the problems on releasing juveniles and immature fish and to selectively harvest the target catch while reducing the level of unwanted catch in form of juveniles and immature and trash fish.

In line with the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030 and corresponding the United Nations’ Sustainable Development Goals 14 (Life Below Water: Conserve and sustainably use the oceans, seas and marine resources), SEAFDEC maintains its continuation in promoting the sustainable utilization and protection of marine and coastal fisheries resources and the ecosystems to avoid significant adverse impacts. The utilization of marine resources and environmentally friendly fishing gear and practices should be further developed and applied in order to maintain biodiversity and to secure fish for the people as well as to improve ocean health and to enhance the contribution of marine biodiversity to the development of the SEAFDEC Member Countries. Furthermore, taking into consideration, the efforts to prevent and significantly reduce marine debris will be exerted.

The program of activities under this project will be implemented based upon the current situation on the environmental impact of fishing gear and practices in the Southeast Asian region and national activities to mitigate those impacts to the marine ecosystem. The program of activities also includes research studies and the application and modification of marine engineering technologies on enhancing capability of fuel consumption efficiency and safety in fishing operations, reducing the emission of green-house gas and enhancing the safety-at-sea in fishing operations. Regional technical consultations and meetings along with the field practices will be periodically conducted to update the situation, share experiences, monitor the project implementation with the Member Countries. Network establishment towards the national initiatives to improve/apply the fishing technologies for supporting fisheries management will be also made.

The project will be implemented by SEAFDEC/TD in collaboration with responsible national agencies of the Member Countries, relevant organizations, institutions and other international partnerships (*e.g.* FAO, UN Environment, GEF, etc.) at both regional and national levels. Human resource development through the staff exchange, expert dispatchment and participation in the relevant meetings/workshops will be conducted.

3. Gender Sensitivity of the Project

The project is not gender-sensitive but neutral and equalized.

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

4.1 Logical Framework

GOAL (Overall Objectives)	Indicators	Means of Verification
Sustainable utilization and sound management to minimize impact of fisheries resources and marine ecosystem including by strengthening responsible fishing technology and practice in Southeast Asia	Proportion of SEAFDEC Member Countries managed their fisheries by application of technologies to reduce impact in fishing technologies, optimized fuel consumption, enhance safety on fishing operation and handling techniques onboard fishing vessel	Report of the technologies to reduce impact in fishing technologies, optimized fuel consumption, safety on fishing operation and handling techniques onboard fishing vessel, presented in the Regional Technical Meeting
OUTCOME	Indicator	Means of Verification
Strategic actions for improving low impact fishing technologies are promoted by Governments and other stakeholders	Fisheries management by introducing technologies to reduce impact in fishing technologies, optimized fuel consumption, safety on fishing operation and handling techniques onboard fishing vessel	Fisheries regulation or measure apply technologies to reduce impact in fishing technologies, optimized fuel consumption, safety on fishing operation and handling techniques onboard fishing vessel, presented in the Regional Technical Meeting
OUTPUT 1	Indicators	Means of Verification
Fishing technologies (<i>i.e.</i> fishing gear, fishing accessories, fishing practice) improved at national and regional level to reduce negative impacts to marine ecosystem	<ul style="list-style-type: none"> - At least 3 Member Countries (MCs) have activities, research/training, by introducing of concept Low Impact and Fuel Efficient (LIFE) fishing technologies in their fishing operations in 5 years. - IFCOME network to follow up the national initiative to improve/apply low impact fishing technologies to support fisheries management 	<ul style="list-style-type: none"> - Report of the research or training activities/programs developed and conducted in SEAFDEC MCs and presented in the Regional Technical Meeting. - Report on the research or study on the fishing technologies (<i>i.e.</i> fishing gear, fishing accessories, fishing practice) improved at national and regional level to reduce negative impacts to marine ecosystem - Number (60 persons) of fishing gear technologists will be members of IFCOME network
ACTIVITY 1	Indicators: key inputs (Number to be conducted, Where, Time)	Means of Verification
Activity 1.1: Regional Technical Meeting to identify and information gathering of environmental impacts fishing gear and practices in Southeast Asia and national activities/legislation to	<ul style="list-style-type: none"> - Inception meeting on the Regional Technical Meeting to identify and information gathering of environmental impacts fishing gear and practices in Southeast Asia and national activities/ 	<ul style="list-style-type: none"> - Meeting report(s) on the Regional Technical Meeting - Three (3) Member Countries (MCs) have activities, research/ training, by introducing of concept

reduce/mitigate impacts of fishing gear and practices to marine ecosystem	legislation to reduce/mitigate impact of impacts fishing gear and practices to ecosystem - Project end-meeting on the Regional Technical Meeting to identify and information gathering of environmental impacts fishing gear and practices in Southeast Asia and national activities/legislation to reduce/mitigate impact of impacts fishing gear and practices to ecosystem	Low Impact and Fuel Efficient (LIFE) fishing technologies in their fishing operations in 5 years - Number (60 persons) of fishing gear technologists will be member of IFCOME network. List of them are appear in the Regional Technical Meeting reports.
Activity 1.2: Research/study/survey on the appropriate technique to reduce/mitigate environmental impacts of fishing gear and practices to marine ecosystem	Two (2) Research/study/survey on the appropriate technique to reduce/mitigate environmental impacts of fishing gear and practices to marine ecosystem, e.g. light fishing, stationary fishing gear, marking of fishing gear, etc.	- Scientific reports on the techniques to mitigate the environmental impacts of fishing gear and practices to marine ecosystem - Publication in journal or magazine
Activity 1.3: Human resources development on techniques to reduce bycatch and discards, and mitigate impacts to habitat and vulnerable species	Regional technical training / workshop on techniques to reduce bycatch and discards, and mitigate impacts to habitat and vulnerable species	- Report on the regional technical training / workshop on techniques to reduce bycatch and discards, and mitigate impacts to habitat and vulnerable species - Number of participants of SEAFDEC Member Countries participated in the meeting - Series of publication used in regional technical training
Activity 1.4: Information dissemination on the fishing techniques, <i>i.e.</i> fishing gear, fishing accessories and fishing practices, to reduce bycatch and discards, and mitigate impacts to vulnerable species	Publication on the Regional technical meeting or training, research study and report on the fishing gear, fishing accessories and fishing practices, to reduce bycatch and discards, and mitigate impacts to vulnerable species	- Series of publication on the fishing techniques, <i>i.e.</i> fishing gear, fishing accessories and fishing practices, to reduce bycatch and discards, and mitigate impacts to vulnerable species to disseminate through SEAFDEC website. - Presentation or abstract or scientific paper presented in the national regional or international symposium/conference
OUTPUT 2	Indicators	Means of Verification

Marine engineering technologies (<i>i.e.</i> fuel efficiency, and green-house gas reduction and safety of fishing operation at sea) improved at national and regional level	<ul style="list-style-type: none"> - At least 3 MCs have research/training activities on marine engineering techniques to improve fuel utilization and safety in fishing operation - Sixty (45) fisheries officers has been trained on the marine engineering techniques to improve fuel utilization and safety in fishing operation 	Report in the project end meeting on the Regional Technical Meeting on the fuel consumption and/or safety in fishing operation in Southeast Asia
ACTIVITY 2	Indicators: key inputs (Number to be conducted, Where, Time)	Means of Verification
Activity 2.1: Regional technical meeting on information gathering of the fuel consumption in fishing operation and/or safety on fishing operation of major fishing operation in Southeast Asia (2020 and 2024)	<ul style="list-style-type: none"> - Inception meeting on the Regional Technical Meeting on the fuel consumption and/or safety in fishing operation in Southeast Asia in 2020 - Project end meeting on the Regional Technical Meeting on the fuel consumption and/or safety in fishing operation in Southeast Asia in 2024 	<ul style="list-style-type: none"> - Report on the regional technical meetings - Number (60 persons) of Marine engineer will be member of IFCOME network
Activity 2.2: Research/study/survey on the appropriate technique to reduce/mitigate environmental impacts of fishing gear and practices to marine ecosystem	Two (2) Research/study/survey on the appropriate technique to manage the fuel consumption and/or safety in fishing operation	<ul style="list-style-type: none"> - Report on the regional technical training / workshop on techniques to reduce bycatch and discards, and mitigate impacts to habitat and vulnerable species - Number of participants of SEAFDEC Member Countries participated in the meeting - Series of publication used in regional technical training
Activity 2.3: Human resources development on techniques to manage the fuel consumption, carbon emission and/or safety on fishing operation	One (1) Regional technical training / workshop on techniques to manage the fuel consumption, carbon emission and/or safety on fishing operation	<ul style="list-style-type: none"> - Report on the regional technical training / workshop on techniques to manage the fuel consumption, carbon emission and/or safety on fishing operation - Number of participants of SEAFDEC Member Countries participated in the training/workshop - Series of publication used in regional technical training/ workshop

<p>Activity 2.4: Information dissemination on techniques to manage the fuel consumption, carbon emission and/or safety on fishing operation</p>	<p>Publication or report on the regional technical meeting, training, research study on the techniques to manage the fuel consumption, carbon emission and/or safety on fishing operation</p>	<ul style="list-style-type: none"> - Series of publication on the fishing techniques, <i>i.e.</i> fuel consumption, carbon emission and/or safety on fishing operation - Presentation in the national regional or international symposium/conference
<p>OUTPUT 3</p>	<p>Indicators</p>	<p>Means of Verification</p>
<p>Regional and national human resources in fish handling techniques onboard fishing vessels improved</p>	<ul style="list-style-type: none"> - At least 3 MCs will be promoted fish handling onboard fishing vessel and drafting the training program in their fisheries. - Sixty (60) fisheries officers has been trained applicable fish handling on board fishing vessel training package for promotion in SEAFDEC MCs 	<p>Report in the project end meeting.</p>
<p>ACTIVITY 3</p>	<p>Indicators: key inputs (Number to be conducted, Where, Time)</p>	<p>Means of Verification</p>
<p>Activity 3.1: human resource development on fish handling techniques onboard fishing vessels (Trainer level)</p>	<p>Three (3) regional training of trainers (ToT) on fish handling techniques onboard fishing vessels</p>	<ul style="list-style-type: none"> - Report on the regional training of trainers (ToT) on fish handling techniques onboard fishing vessels - Number of participants of SEAFDEC Member Countries participated in the training/workshop - Series of publication used in regional technical training/workshop
<p>Activity 3.2: Human resource development on fish handling techniques onboard fishing vessels (National Scale)</p>	<p>Two (2) National training courses on the fish handling onboard fishing vessels</p>	<ul style="list-style-type: none"> - Report on the regional training of trainers (ToT) on fish handling techniques onboard fishing vessels - Number of participants of SEAFDEC Member Countries participated in the training/workshop - Series of publication used in regional technical training/workshop
<p>Activity 3.3: Information dissemination on fish handling techniques onboard fishing vessels</p>	<p>Publication on the Regional technical meeting or training report.</p>	<ul style="list-style-type: none"> - Series of publication on the fishing techniques, <i>i.e.</i> fuel consumption, carbon emission and/or safety on

		fishing operation - Presentation in the national regional or international symposium/conference
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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																				
Activity 1.2																				
Activity 1.3																				
Activity 1.4																				
Output 2:																				
Activity 2.1																				
Activity 2.2																				
Activity 2.3																				
Activity 2.4																				
Output 3:																				
Activity 3.1																				
Activity 3.2																				
Activity 3.3																				

4.3 Proposed Budget for 2020 - 2024

(Unit: USD)

Output	Activities	Year 1 (2020)	Year 2 (2021)	Year 3 (2022)	Year 4 (2023)	Year 5 (2024)
Output 1	Activity 1.1	20,000	-	-	-	20,000
	Activity 1.2	-	20,000	20,000	-	-
	Activity 1.3	-	-	-	20,000	-
	Activity 1.4	(Budget with Activity 1.1)	(Budget with Activity 1.2)	(Budget with Activity 1.2)	(Budget with Activity 1.3)	(Budget with Activity 1.1)
Output 2	Activity 2.1	20,000	-	-	-	20,000
	Activity 2.2	-	20,000	20,000	-	-
	Activity 2.3	-	-	-	20,000	-
	Activity 2.4	(Budget with Activity 2.1)	(Budget with Activity 2.2)	(Budget with Activity 2.3)	(Budget with Activity 2.4)	(Budget with Activity 2.1)
Output 3	Activity 3.1	20,000	-	20,000	-	20,000
	Activity 3.2	-	20,000	-	20,000	-
	Activity 3.3	(Budget with Activity 3.1)	(Budget with Activity 3.2)	(Budget with Activity 3.1)	(Budget with Activity 3.2)	(Budget with Activity 3.1)

Sub-Total	60,000	60,000	60,000	60,000	60,000
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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:

This newly developed project on ‘Responsible Fishing Technology and Practice’ would focus on the emerging issues and priority needs of the Southeast Asian region to address fishing impacts to the marine ecosystem as well as to promote marine engineering technologies and applicability on enhancing the capability of fuel consumption efficiency and safety-at-sea in fishing operations.

In 2020, two (2) regional technical meetings would be organized to identify and gather information on environmental-impacted fishing gear and practices to the marine ecosystem in the region, and to gather information on the fuel consumption and safety in fishing operations in the region *e.g.* trawl, purse seine, etc. It is expected that these two regional technical meetings would come up with the updated information, recommendations and way forwards from respective member countries on the existing situation of the fishing impacts and activities/legislation to mitigate the impacts of fishing gear and practices to the marine ecosystem as well as existing technology to improve the fuel consumption efficiency and safety on fishing operations. The obtained information and shared experiences in the meeting would be necessary for formulating project proposals in response to the needs of the Member Countries in the following years. A regional and/or national training aimed for trainers on fish handling techniques onboard fishing vessels will be also organized to enhance skills and experiences of the trainers in 2020.

2. Outcome, Outputs and Activities and Proposed Budget:

(Unit: USD)

Proposed Activities	Descriptions	Proposed Budget
Output 1: Fishing technologies (<i>i.e.</i> fishing gear, fishing accessories, fishing practice) improved at national and regional level to reduce negative impacts to marine ecosystem	Selection criteria/ recommendations to improve low negative impact fishing technologies (<i>i.e.</i> fishing gear, fishing accessories, fishing practice) at least 2 project areas/countries	
Activity 1.1	Regional Technical Meeting to identify and information gathering of environmental impacts fishing gear and practices in Southeast Asia and national activities/legislation to reduce/mitigate impacts of fishing gear and practices to marine ecosystem Inception meeting on the Regional Technical Meeting to identify and information gathering of environmental impacts	20,000

Proposed Activities	Descriptions	Proposed Budget
	fishing gear and practices in Southeast Asia and national activities/ legislation to reduce/mitigate impact of impacts fishing gear and practices to ecosystem (Year 2020; 20,000 USD) <i>Estimated expenditures:</i> <ul style="list-style-type: none"> ▪ <i>Traveling cost</i> = US\$ 5,500 ▪ <i>DSA</i> = US\$ 5,000 ▪ <i>Accommodation</i> = US\$ 5,500 ▪ <i>Others</i> = US\$ 4,000 	
Activity 1.4	Information dissemination on the fishing techniques, <i>i.e.</i> fishing gear, fishing accessories and fishing practices, to reduce bycatch and discards, and mitigate impacts to vulnerable species	Shared with Activities 1.1,
Output 2: Marine engineering technologies (<i>i.e.</i> fuel efficiency, and green-house gas reduction and safety of fishing operation at sea) improved at national and regional level	Marine engineering technologies (<i>i.e.</i> fuel efficiency, and green-house gas reduction and safety of fishing operation at sea) improved at national and regional level	
Activity 2.1	Two (2) Regional technical meeting on information gathering of the fuel consumption in fishing operation and/or safety on fishing operation of major fishing operation in Southeast Asia (2020 and 2024) Inception meeting on the Regional Technical Meeting on the fuel consumption and/or safety in fishing operation in Southeast Asia (Year 2020; 20,000 USD) <i>Estimated expenditures:</i> <ul style="list-style-type: none"> ▪ <i>Traveling cost</i> = US\$ 5,500 ▪ <i>DSA</i> = US\$ 5,000 ▪ <i>Accommodation</i> = US\$ 5,500 ▪ <i>Others</i> = US\$ 4,000 	20,000
Activity 2.4	Information dissemination on techniques to manage the fuel consumption, carbon emission and/or safety on fishing operation	Shared with Activities 2.1
Output 3: Regional and national human resources in fish handling techniques onboard fishing vessels improved	Regional and national human resources in fish handling techniques onboard fishing vessels improved	
Activity 3.1	Regional training of trainers (ToT) on fish handling techniques onboard fishing vessels (Year 2020, 2022, and 2024, annual budget 20,000 USD)	20,000

Proposed Activities	Descriptions	Proposed Budget
	<i>Estimated expenditures:</i> <ul style="list-style-type: none"> ▪ <i>Traveling cost</i> = US\$ 5,500 ▪ <i>DSA</i> = US\$ 5,000 ▪ <i>Accommodation</i> = US\$ 5,500 ▪ <i>Materials</i> = US\$ 3,000 ▪ <i>Others</i> = US\$ 1,000 	
Activity 3.3	Information dissemination on fish handling techniques onboard fishing vessels	Shared with Activities 3.1

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 1.4												
Output 2:												
Activity 2.1												
Activity 2.4												
Output 3:												
Activity 3.1												
Activity 3.3												

4. Expected Activity Results in 2020:

Planned activity	Expected Activity Results
Activity 1 Regional Technical Meeting to identify and information gathering of environmental impacts fishing gear and practices in Southeast Asia and national activities/legislation to reduce/mitigate impacts of fishing gear and practices to marine ecosystem	
Activity 1.1: Inception meeting on the Regional Technical Meeting to identify and information gathering of environmental impacts fishing gear and practices in Southeast Asia and national activities/ legislation to reduce/mitigate impact of impacts fishing gear and practices to ecosystem	<ul style="list-style-type: none"> • Meeting report to present the Potential fishing gear modification is identified, and trial/ development work plan drawn up for the year 2021-2023, and Selection criteria/ recommendations to improve low negative impact fishing technologies (<i>i.e.</i> fishing gear, fishing accessories, fishing practice) project areas/countries • Re-strengthen IFCOME network and list the member of networks
Activity 2 Regional technical meeting on information gathering of the fuel consumption in fishing operation and/or safety on fishing operation of major fishing operation in Southeast Asia	
Activity 2.1: Inception meeting on the Regional Technical Meeting on the fuel consumption and/or safety in	Meeting report to present the potential marine engineering techniques to improve

Planned activity	Expected Activity Results
fishing operation in Southeast Asia	fuel utilization and safety in fishing operation is identified, and trial/development work plan drawn up for year 2021-2023 and update the direction of SEAFDEC MCs to improve fuel utilization and safety in fishing operation
Activity 3 Regional/National training of trainers (ToT) on fish handling techniques onboard fishing vessels	
Activity 3.1: Regional training of trainers (ToT) on fish handling techniques onboard fishing vessels	<ul style="list-style-type: none"> • Training report on fishing handling techniques onboard fishing vessels and update present technology of SEAFDEC MCs to improve fuel utilization and safety in fishing operation • Fifteen fishery engineers of SEAFDEC MCs can organize the training program in their countries