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**ECOSYSTEMS IMPROVED FOR
SUSTAINABLE FISHERIES
(ECOFISH) PROJECT**

ECOSYSTEMS IMPROVED FOR SUSTAINABLE FISHERIES (ECOFISH) Project

ENVIRONMENTAL MITIGATION AND MONITORING PLAN

ECOFISH Document No.: 12/2013
Version: Final

Implemented with:

Department of Agriculture-Bureau of Fisheries and Aquatic Resources
National Government Agencies
Local Government Units
Assisting Organizations

Supported by:

United States Agency for International Development
Contract No.: AID-492-C-12-00008

Managed by:

Tetra Tech ARD

30 September 2013

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The authors' views expressed in this document do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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Abbreviations and Acronyms

ACM	-	Asbestos Containing Materials
ADS	-	Automatic Directives System
AOTR	-	Agreement Officer's Technical Representative
BEO	-	Bureau Environment Officer
CBD	-	Convention on Biological Diversity
CE	-	Categorical Exclusion
CFR	-	Code of Federal Regulations
COP	-	Chief of Party
COR	-	Contracting Officer's Representative
DCOP	-	Deputy Chief of Party
DENR	-	Department of Environment and Natural Resources
ECOFISH	-	Ecosystems Improved for Sustainable Fisheries
EGAT	-	Economic Growth and Trade
EPA	-	Environmental Protection Agency
EAFM	-	Ecosystem Approach to Fisheries Management
EMMP	-	Environmental Mitigation and Monitoring Plan
EIA	-	Environmental Impact Assessment
EIS	-	Environmental Impact Statement
EMB	-	Environmental Management Bureau
FAA	-	Foreign Assistance Act
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
GMO	-	Genetically Modified Organisms
IEE	-	Initial Environmental Examination
LGU	-	Local Government Unit
M&E	-	Monitoring and Evaluation
MEO	-	Mission Environmental Officer
MKBA	-	Marine Key Biodiversity Areas
NDw/C	-	Negative Determination with Conditions
PCB	-	Polychlorinated Biphenyls
PERSUAP	-	Pesticide Evaluation Report and Safer Use Action Plan
PMP	-	Performance Monitoring Plan
PPP	-	Public-Private Partnership
USAID	-	United States Agency for International Development

1. Introduction

The technical assistance and services contract was awarded to Tetra Tech - ARD for the implementation of USAID/Philippines' Ecosystems Improved for Sustainable Fisheries (ECOFISH) Project in June 29, 2012, under contract number AID-492-C-12-00008. The main objective of the ECOFISH Project is to improve the management of important coastal and marine resources and associated ecosystems that support local economies. The ECOFISH Project is intended to foster fishing sector reforms through the application of the Ecosystem Approach to Fisheries Management (EAFM) in larger marine conservation areas and involving clusters of Local Government Units (LGUs). It will promote the growth and restore the profitability of fisheries through conservation of ecosystem health and effective management.

The ECOFISH Project is in line with the current U.S. Country Assistance Strategy with respect to assistance directed at reducing threats to biodiversity and improving natural resources and environment. The ECOFISH Project is expected to contribute to achieving "Development Objective 3: Environmental Resilience Improved," particularly "IR3.2 Natural Resources and Environmental Management Improved" of the results framework of USAID/Philippine Mission's Country Development Cooperation Strategy (2012-2016). The Project is also designed to contribute to priority goals and actions laid out in the Philippine Development Plan (2011-2016) particularly Chapter 4 (Competitive and Sustainable Agriculture and Fisheries), and Chapter 10 (Protection, Conservation and Rehabilitation of Environment and Natural Resources). This five-year project will provide technical assistance to the Government of the Philippines (GPH), through the Department of Agriculture – Bureau of Fisheries and Aquatic Resources (DA-BFAR) and implemented in partnership with selected LGUs.

This Environmental Mitigation and Monitoring Plan (EMMP) will serve as reference guide for project staff and partners implementing tasks/activities under the Ecosystems Improved for Sustainable Fisheries (ECOFISH) Project. It determines the characteristics of tasks/activities implemented under ECOFISH and for managing their impacts. It simplifies the environmental due diligence process for the larger set of activities to be implemented under ECOFISH, and will reduce the amount of paperwork and time involved in the process. The environmental management activities are incorporated in the current ECOFISH Annual Work Plan and Performance Monitoring Plan. The ECOFISH EMMP is updated annually in consultation with the Contracting Officer's Representative (COR). Future updates of the EMMP will be conducted concurrently with the Annual Work Plan and PMP. This coordination will ensure that environmental mitigation and monitoring are actively considered as the direction of ECOFISH evolves and specific activities take shape.

2. Project Objectives

The main objective of the ECOFISH Project is to improve the management of important coastal and marine resources and associated ecosystems that support local economies. It will conserve biological diversity, enhance ecosystem productivity and restore profitability of fisheries in eight marine key biodiversity areas (MKBAs) using ecosystem approaches to fisheries management (EAFM) as a cornerstone of improved social, economic and environmental benefits.

The application of EAFM principles and practices is a proven approach for reversing the decline of fish biomass in municipal waters and build community resilience. EAFM aims to manage fisheries at ecosystem scales rather than the scales defined by jurisdictional boundaries. Effective collaborative governance arrangements for EAFM provides the multiple benefits of improving ecosystem management, reducing the unit costs of management, and making the establishment of sustainable financing mechanisms and public-private partnerships (PPPs) more feasible and attractive to investors. Development of PPPs is a key strategy of the Philippine Development Plan.

The ECOFISH Project is designed to make an impact on eight (MKBAs) in the country (Figure 1), namely: (1) the Calamianes Group of Islands MKBA, (2) Lingayen Gulf MKBA, (3) Ticao Pass – Lagonoy Gulf - San Bernardino Strait MKBA, (4) Danajon Reef MKBA, (5) South Negros MKBA, (6) Surigao del Sur and Surigao del Norte MKBA, (7) Sulu Archipelago MKBA, and (8) Verde Island Passage MKBA. They represent all six marine bio-regions of the Philippines and were selected due to their extremely high need for marine biodiversity conservation. These areas are marine ecosystem “hotspots” in the Philippines that mirror the common issues impacting capture fisheries locally and nationally, namely:

- loss of marine biodiversity;
- declining fish stocks;
- high population growth;
- limited private sector investment;
- inconsistent policies and programs for sustainable fisheries; and
- weak institutional and stakeholder capacity to plan and implement fisheries management.

Although majority of project activities will cut across these eight MKBAs, implementation strategies, focus, priorities, and levels of engagement may differ from place to place mainly because each MKBA has unique ecosystem features, opportunities, and threats.

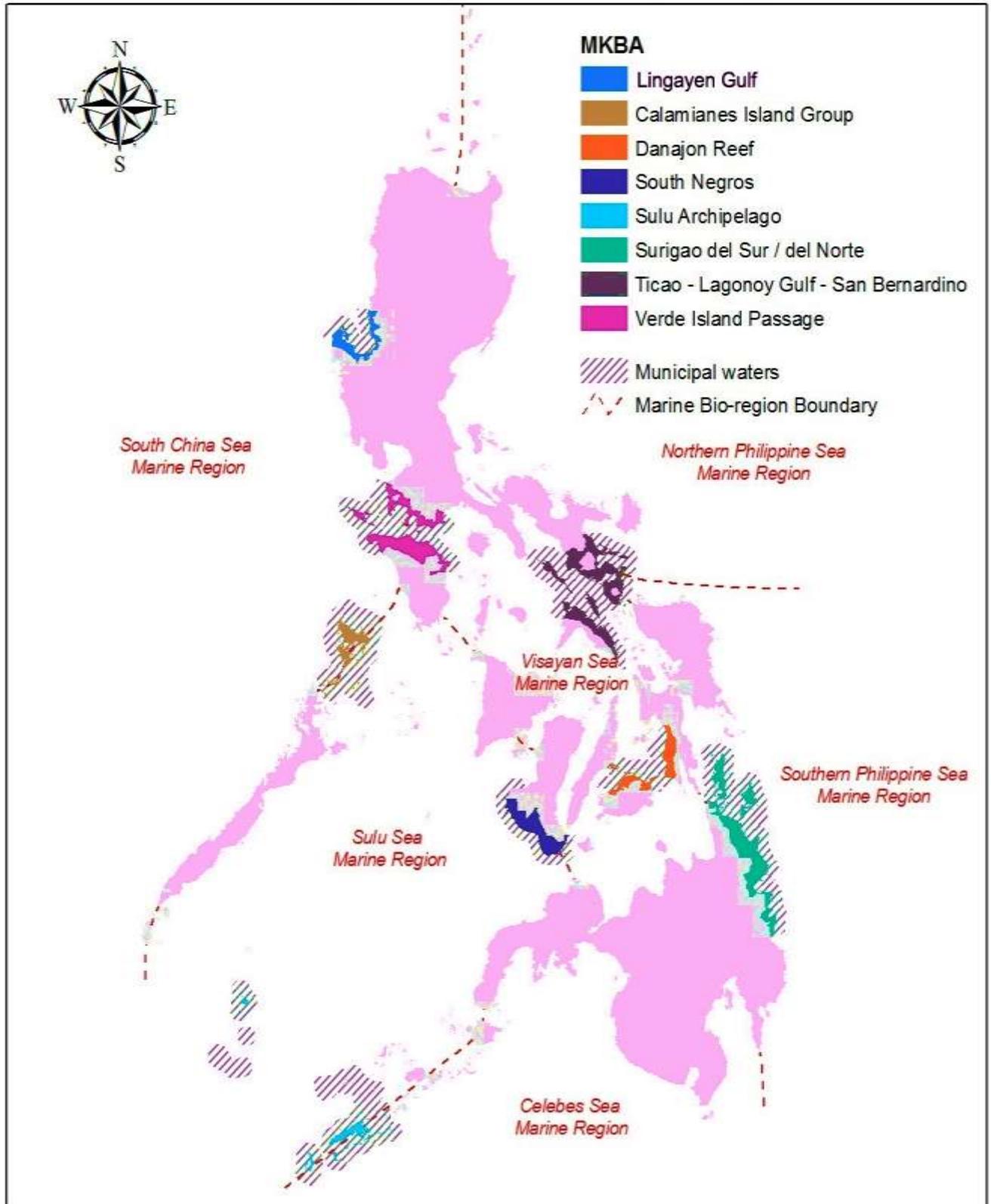


Figure 1. Map of the Eight Marine Key Biodiversity Areas (MKBA) of ECOFISH

3. National Environmental Policies and ECOFISH Environmental Compliance Contract Requirements

The structure and content of this EMMP follows the requirements stipulated in the USAID ECOFISH contract, and further documented in its Initial Environmental Examination (IEE). In accordance with 22CFR216, the IEE provided a first review of the reasonably foreseeable effects of the ECOFISH project on the environment, and recommended the Threshold Decisions for project activities that contribute to the same results framework and objective of conserving biodiversity and sustainable fisheries productivity in at least eight (8) marine key biodiversity areas.

In 2011, USAID conducted the “Philippine Biodiversity and Tropical Forestry Analysis” which provides the information necessary for USAID to comply with Sections 118 and 119 of the U.S. Government Foreign Assistance Act (FAA) of 1961, as amended, to guide and inform USAID/Philippines as it develops its new Country Development Cooperation Strategy for the Philippines. The assessment showed that recent USAID environmental programs have focused on catalyzing local governments to directly invest in and implement environment and natural resources programs and in linking environmental investments with improved status of natural resources to demonstrate that achieving multiple co-benefits across sectors is possible.

However, mainstreaming and scaling-up remains a challenge, even if good practices are being replicated at the local government level. At this stage, what is needed is a set of actions to mainstream the conservation and sustainable utilization of tropical forests and biological diversity in the overall development strategy in order to achieve broad-based economic growth.

The recommended actions to USAID fall into three (3) key areas, which are the same areas that the ECOFISH Project will work on: (1) Governance – Strengthening the monitoring and evaluation systems of governments, expanding and deepening co-management arrangements, managing environment and natural resource conflicts and law enforcement, and building institutional capacity of governance actors; (2) Knowledge creation and management – Support mainstreaming valuation of ecosystems services to inform macro-economic and local development planning, and set up payment for ecosystem services mechanisms for improved management of land and resource uses; and, (3) Economic incentives – Design and implement economic instruments tailored to the unique conditions of the areas where they are applied such as payments for water, erosion-prevention, and climate regulation that a forest protected area provides to agricultural areas.

Since 1978, the Philippines has been governed by the Philippine Environmental Impact Statement (EIS) System, which requires all government agencies, government-owned or controlled corporations, and private companies to prepare an environmental impact assessment (EIA) for any project or activity that substantially affects the quality of the environment. Not only does the EIS system emphasize the regulation of industrial pollution, it also aims at protecting natural resources, fragile ecosystems and the rights of local communities. Aside from being a regulatory scheme, the EIS plays a role as a comprehensive planning and management

instrument as well. The Environment Management Bureau (EMB) is responsible for policy development and review, as well as monitoring of implementation of the Philippine EIA Law.

In addition, the Philippines is a signatory to several international environmental agreements such as the Convention on Biological Diversity (CBD), which aims to promote biodiversity conservation, the sustainable use of its components, and fair and equitable sharing of benefits from the use of resources at the ecosystems, species and genetic levels. As a signatory to the CBD, the Philippines government is required to develop and implement national biodiversity strategies and action plans, integrate these into broader national plans for environmental conservation and sustainable development, and report on measures undertaken to implement the Convention and country effectiveness in meeting its objectives.

The Philippines is also one of six (6) countries in the Coral Triangle Region to form a multilateral initiative called the *Coral Triangle Initiative for Food Security, Coral Reefs and Climate Change*. The goal of the country-led initiative is to safeguard the region's biodiversity and economic resource base through adoption of an ecosystem approach to fisheries management (EAFM); establishment of effectively managed marine protected areas; conservation of endangered species; and adoption of ecosystem-based approaches to climate adaptation.

For ease in review/use, the most pertinent section of the USAID ECOFISH contract is included below:

“H.27 ENVIRONMENTAL COMPLIANCE

The Foreign Assistance Act of 1961, as amended, Section 117 requires that the impact of USAID's activities on the environment be considered and that USAID include environmental sustainability as a central consideration in designing and carrying out its development programs. This mandate is codified in Federal Regulations (22 CFR 216) and in USAID's Automated Directives System (ADS) Parts 201.5.10g and 204 (<http://www.usaid.gov/policy/ads/200/>), which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities. Contractor environmental compliance obligations under these regulations and procedures are specified in the following paragraphs of this contract.

In addition, the Contractor must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between host country and USAID regulations the latter shall govern.

An Initial Environmental Examination (IEE) has been approved by the Mission Environmental Officer which covers the funding for this contract. The IEE covers activities expected to be implemented under this contract. USAID has determined that a *Categorical Exclusions* applies to one or more of the proposed activities. This indicates that if these activities are implemented subject to the specified conditions, they are expected to have no significant adverse effect on the environment. The Contractor will be responsible for implementing all IEE conditions pertaining to activities to be funded under this contract.

As part of its initial Work Plan, and all Annual Work Plans thereafter, the Contractor, in collaboration with the USAID Contracting Officer's Technical Representative, shall review all ongoing and planned activities under this contract to determine if they are within the scope of the approved Regulation 216 environmental documentation. If the Contractor plans any new activities outside the scope of the approved Regulation 216 environmental documentation, it shall prepare an amendment to the documentation for USAID approval of environmental documentation amendments. Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received from USAID."

4. Environmental Mitigation and Monitoring

ECOFISH has an approved Initial Environmental Examination (IEE). It is anticipated that the provision of technical assistance, assessments, studies, policy analyses, biophysical and socio-economic research, and stakeholder consultations to be conducted under this Project will not have a direct impact on the environment and, thus, are recommended for Categorical Exclusion (CE) pursuant to CFR 216.2(c)(2)(i) and CFR 216.2(c)(2)(iii). However, "activities involving public-private partnerships and technical assistance" for livelihoods or natural resource regeneration "may have negative consequences if environmental considerations are not factored into these activities and the resulting program designs." For the latter, a Negative Determination with Conditions was recommended, as follows:

- All technical assistance, workshops, consultations, research and recommendations for program designs involving livelihood or resource generation actions will include Best Practices regarding sustainable use, including principles of environmental protection, impact mitigation and environmental sustainability.
- Any technical assistance targeting alternative livelihoods will first require submittal and approval of a brief activity description including an evaluation of the environmental implications of the alternative livelihood sector being developed. This document must be approved by the Agreement/Contracting Officer's Representative (A/COR), and if deemed necessary by the A/COR, an IEE will be required.
- No pesticides or fertilizers may be procured or used, or recommended for procurement or use without first completing an amendment to the Initial Environmental Examination that addresses the requirements of 22 CFR 216.3(b) including a Pesticide Evaluation Report/Safe Use Action Plan which must be approved in writing by the EGAT Bureau Environment Officer.
- If, during implementation, activities are considered other than those described above, such as pilot demonstrations, further environmental review will be conducted by the implementing partner, which will be cleared by USAID prior to activity implementation.
- These conditions will be integrated in the contract and/or grant agreement and shall be reflected in the over-all work plan of the contractors and/or grantees, as appropriate. If necessary, the contract or agreement will require the preparation of an environmental mitigation and monitoring program that will be reviewed and approved by the COR/AOTR and the MEO.

- Due diligence investigation of the environmental record and practices of each partner in a Public-Private Partnership will be made particularly an analysis of a partner’s past record of environmental accountability and how it might affect the partner’s specific plans under the PPP.
- Only native and locally-sourced species of mangroves will be used for any mangrove reforestation activity. These activities will follow the recommendations made by the Ecosystems Research and Development Bureau, the principal research and development unit of the Department of Environment and Natural Resources (DENR). The Bureau has published “The phenology of selected Philippine mangrove species: A calendar,” which provides a list of native and locally-sourced mangrove species for use in establishing mangrove plantations (<http://erdb.denr.gov.ph/pub.php?pub=denr>).

The ECOFISH IEE does not cover the following activities:

- (1) Assistance for procurements (including payments in kind, donations, guarantees of credit) or use (including handling, transport, fuel for transport, storage, mixing, loading, application, cleanup of spray equipment, and disposal) of pesticides (where pesticides cover all insecticides, fungicides, and rodenticides, etc. covered under the “Federal Insecticide, Fungicide, and Rodenticide Act” or FIFRA) or activities involving procurement, transport, use, storage, or disposal of toxic materials, which will require preparation of a PERSUAP in accordance with Reg.216.3(2)(b)(1)-(2) in an amended IEE submitted to Asia/BEO for approval.
- (2) Activities involving support to wood processing, agro-processing, industrial enterprises and regulatory permitting.
- (3) Assistance, procurement or use of genetically modified organisms (GMOs), which would require preparation of biosafety assessment (review) in accordance with ADS 201.3.12.2(b) in an amendment to the IEE approved by Asia BEO.
- (4) Procurement or use of Asbestos Containing Materials (ACM) (i.e., piping, roofing, etc.), Polychlorinated Biphenyls (PCB) or other toxic/hazardous materials prohibited by US EPA as provided at <http://www.epa.gov/asbestos> and/or under international environmental agreements and conventions, e.g. Stockholm Convention on Persistent Organic Pollutants as provided at <http://chm.pop.int>.

Any of these actions would require an amendment to the IEE duly approved by the Asia BEO.

Moreover, the ECOFISH IEE provides for the following:

- “4. RECOMMENDED MITIGATION ACTIONS (INCLUDING MONITORING AND EVALUATION)
- 4.2 Mitigation, Monitoring, and Evaluation

The conditions identified in this IEE will be integrated into the awards to implementing partners, which will require the development of an Environmental Mitigation and Monitoring Plan (EMMP). The EMMP will be prepared by the implementing partner and will be approved by the A/COR and the MEO. The EMMP will be developed at the Project or activity level to monitor and implement the conditions stated above. In addition, project work plans and budgets will

specifically provide for the implementation of the EMMP. Performance management plans will also incorporate measures of EMMP implementation for review and approval of the A/COR.”

The goals and processes for environmental mitigation and monitoring are clearly defined by USAID. This Plan, including all definitions, builds directly upon USAID’s most up-to-date guidance on the development and implementation of EMMPs.

Environmental mitigation, defined as *the implementation of measures designed to reduce the undesirable effects of a proposed action on the environment*, is central to the environmental compliance process, and is essential to achieving environmentally sound activity design and implementation. Mitigation can reduce impacts in three (3) ways:

- (1) Prevention and control measures, which fully or partially prevent an impact/reduce a risk by:
 - a. Changing means or technique;
 - b. Changing the site; or
 - c. Specifying operating practices;
- (2) Compensatory measures, which offset adverse impacts in one area with improvements elsewhere; and
- (3) Remediation measures, which repair or restore the environment after damage is done.

Prevention of impacts by changes to activity design, site, or technique is the most reliable approach to mitigation.

Environmental monitoring is defined as:

- *The systematic measurement of key environmental indicators over time, within a particular geographic area; and*
- *The systematic evaluation of the implementation of mitigation measures.*

Environmental monitoring is a necessary complement to mitigation, and should be a normal part of monitoring project results. The ECOFISH EMMP defines environmental mitigation and monitoring and identifies measures and procedures to be followed by relevant staff and partners.

In terms of mitigation, this Plan defines:

- **What and Why:** What are the significant impacts that need to be mitigated? For each significant impact, what are the proposed mitigating measures?
- **Who:** Who carries out mitigation measures? Who manages or verifies?
- **When:** At what stage in the project cycle is each measure implemented? Is there adaptive mitigation?
- **With what resources:** What is the budget? Who pays?

In terms of monitoring, this Plan defines:

- **What:** What are the indicators?

- Why: Why each indicator – what is the purpose of each indicator?
- When and How: When and how will indicators be measured? How will the information be analysed?
- Who: Who monitors? Who analyses? Who reports? Who receives the information?
- With what resources: What is the budget? Who pays?

Mitigation and monitoring are critical parts of environmentally sound design and implementation. Mitigation minimizes adverse environmental impacts. Monitoring assesses whether the mitigation measures are sufficient and effective. To be effective, mitigation and monitoring must be:

- **Realistic:** Mitigation and monitoring must be achievable within time, resources, and capabilities.
- **Targeted:** Mitigation measures and indicators must correspond to impacts.
- **Funded:** Funding for mitigation and monitoring must be adequate over the life of the activity.
- **Considered Early:** Preventive mitigation is usually the cheapest and most effective form of mitigation, but prevention must be built in at the design stage.

4.1. ECOFISH Tasks and Deliverables that May Require Environmental Mitigation

The ECOFISH IEE identified two (2) categories: (1) Categorical Exclusion (CE), and (2) Negative Determination with Conditions (NDw/C) for key Tasks and Deliverables (Table 1). In keeping with USAID/Philippines guidance on the development of EMMPs, subsequent sections of this EMMP will focus on activities that are categorized as NDw/C.

Table 1. ECOFISH Activities and IEE Classification

Task	Task/Deliverable	IEE (CE or NDw/C)
Task 1.	Establish and Implement a National Training Program	CE
Task 2.	Provide Technical and Advisory Support at the National Level	CE
	Deliverable 1: Policy Studies on EAFM, MPA, and Climate Change	CE
	Deliverable 2: Toolkits, Sourcebooks, and Case Studies on EAFM, MPA, and Climate Change	CE
	Deliverable 3: A National Database on EAFM Established Using the Annual Monitoring Data in the 8 MKBAs	CE
	Deliverable 4: State of the Marine Resources Report	CE
	Deliverable 5: National, Regional and Municipal EAFM Trainings Conducted	CE
Task 3.	Create Public-Private Partnerships	NDw/C
	Deliverable 6: Public-Private Partnerships Supporting ECOFISH Objectives Established	NDw/C

Task 4. Provide Technical and Advisory Support at the Local Level	CE
Deliverable 7: Bio-physical, Social and Economic Baseline Assessments of the 8 MKBAs	CE
Deliverable 8: Scientific Studies on Select MKBA- Specific Fish Species	CE
Deliverable 9: MPA Network Analyses in the 8 MKBAs	CE
Task 5. Develop a Registry of Users of Municipal Fishing Waters	CE
Deliverable 10: Fisheries Management Plans of Select Inter-LGU Alliances in the 8 MKBAs	CE
Deliverable 11: Registry of Users of Municipal Fishing Waters Established in Select Municipal LGUs in the 8 MKBAs	CE
Task 6. Identify and Implement Sustainable Financing Programs to Support EAFM Projects	NDw/C
Deliverable 12: Revenue Generation System for Fisheries Management Established and Effectively Implemented in Select LGUs	NDw/C
Deliverable 13: Sustainable Financing Programs for EAFM Implemented in Select LGUs in the 8 MKBAs	NDw/C
Task 7. Establish a Baseline on Coastal and Marine Resources and Relevant Socio-economic Information, Develop and Apply Metrics on Monitoring EAFM Implementation in Target MKBAs	CE

4.2. Potential Environmental Impacts/Issues and Mitigation Responses

The Philippine fisheries sector is enormously important to the economy, particularly to the poorer and more marginalized citizens whose livelihoods depend on small-scale fisheries. Despite this importance, BFAR’s national stock assessment reports indicate that two-thirds of the 12 major fishing bays in the country are already overfished. Excessive fishing has resulted in the decrease in average sizes of fishes, shifts in species composition, and steep decline in abundance of valuable species. While the Philippines currently ranks 8th globally in total fisheries production, the economic and food security benefits derived from this sector are only a fraction of what they could be if managed properly.

At the national level, while promoting private sector investment, the excess capacity of the fishing sector must be addressed by reducing the number of fishing licenses; combating illegal, unregulated, and underreported fishing; and addressing short-term negative impacts on food security through strategic fish imports. At the local level, improved management of municipal waters must be addressed through the individual and collective efforts of local governments, communities, and assisting organizations.

Like any other development program, some ECOFISH activities may potentially have negative consequences to the environment. In this section of the EMMP, we describe these potential negative environmental impacts associated with each activity (that is assigned a NDw/C category), identify other issues that require special attention in design and implementation, and propose corresponding mitigation measures.

All NDw/C-categorized deliverables under ECOFISH are essentially similar with respect to potential environmental impacts and mitigation measures associated with the prospective PPPs, livelihoods or enterprise activities under Task 3, Deliverable 6; Deliverable 10; and Task 6, Deliverables 12 and 13. ECOFISH will ensure that PPP, livelihood and enterprise best practices are mainstreamed into activity design and implementation. ECOFISH will orient partners and other stakeholders about this EMMP so that they include sound environmental considerations and management techniques in their proposed activities.

Grants disbursed under the Special Activities Fund (SAF) represent an important implementation tool for ECOFISH. The Project will use SAF grants to build program pipelines for technical assistance from universities, experts and consultants for site-based monitoring systems, surveys and special studies to support value-adding economic activities like fishery post-harvest and eco-tourism development. The SAF will also be used to meet costs for opportune but unplanned activities that are necessary to achieve the results of the ECOFISH Project. As the grants are selected, they will be reviewed to determine if potential negative environmental impacts might occur with implementation, and relevant corrective conditions and requirements shall be applied prior to grant implementation.

ECOFISH will screen potential environmental impacts of SAF grant activities using the Environmental Screening Template. The DCOP will work with the USAID COTR to determine eligibility of the grant applications and ensure environmental compliance. SAF grants that are found to have negative impacts shall be disapproved.

The table below presents the mitigation and monitoring measures proposed by ECOFISH in response to potential environmental impacts and issues. For grants and subcontracts, ECOFISH will use the Environmental Screening Template to review grant proposals. This will ensure that funded proposals do not result in negative environmental impacts, develop mitigation measures as needed, and specify monitoring and reporting requirements for grantees and subcontractors. If activities are not currently covered under the approved IEE, ECOFISH will write an Environmental Review Report, and mitigation and monitoring requirements will be included in agreements and contracts.

Table 2. ECOFISH Mitigation and Monitoring Measures in Response to Potential Negative Environmental Impacts and Issues.

Activity	Negative Environmental Impact	Mitigating Measure	Monitoring Indicator/ Criteria	Monitoring & Reporting Schedule	Responsible Party
Mangrove Reforestation	It could alter existing ecosystem or habitat (e.g. seagrass)	Conduct participatory and technical assessment of the proposed areas and designate zone/s for mangrove planting	Participatory maps Technical report Designated zones by barangay	Annual	Site Coordinator/s
	Specific mangrove species might dominate the area depending on the species planted	Conduct inventory of endemic mangrove species Use endemic , multi-species mangrove in the reforestation	List of mangrove species per site List of mangrove species in the nursery and plantation	Annual	Site Coordinator/s

		activities (site-specific)			
	Mangrove plantation could block water passage and navigational route	Designate zones for mangrove planting	Designated zones by barangay/municipal LGU	Annual	Site Coordinator/s
	Community policy regulates gleaning and fishing activities in plantation areas and this could result to economic displacement among fishers	Designate gleaning zone in the mangrove areas	Designated zone by management council	Annual	Site Coordinator/s
Mud Crab Fattening Enterprise	Feeds might increase level of pollution in the area	Use of semi-intensive feeding practice	Activity report	Annual	Site Coordinator/s
	Establishment of mud pond could encourage community to convert the mangrove areas into mud crab pond	Designate zone for mud crab fattening Develop developmental plan/zoning	Designated zone by barangay/municipal LGU	Annual	Site Coordinator/s
	Commercial crab species might compete with natural food supplies of wild and native crab species	Use of semi-intensive feeding practice Crab cage should be placed in a secured pond enclosed with net	Activity report	Annual	Site Coordinator/s
Eco-tourism Project	Presence of tourists/visitors in the mangrove area might increase disturbances	Create eco-tourism policies and guidelines with management council/barangay	Eco-tourism policies and guidelines	Annual	Site Coordinator/s
	Construction of ecotourism facilities (e.g. mangrove boardwalk, bird watching post) might damage the mangroves	Construction will be limited in clear areas adjacent to the mangrove areas	Facilities constructed Activity report	Annual	Site Coordinator/s
	There is a potential increase of wastes which will be generated as a result of eco-tourism	Set-up waste management system	Activity report	Annual	Site Coordinator/s

5. Reporting

The ECOFISH EMMP will be updated annually. Future updates of the EMMP shall be conducted concurrently with Annual Work Plans. This will ensure that environmental mitigation and monitoring are actively considered and integrated as the direction of ECOFISH evolves and specific activities begin to take shape.

The environmental review and compliance requirement for ECOFISH provides a comprehensive process for assuring that: (1) all potential environmental issues are identified in the course of project implementation, and (2) the appropriate levels of review and authorization take place within the Project and in USAID/Philippines before any activity is launched.

Prior to starting any activity classified as a “Negative Determination with Conditions (NDw/C)”, ECOFISH will follow a systematic approach to determine the Category and potential impacts of the activity. The activities classified as NDw/C are included under Task 3: Create Public-Private Partnerships and Task 6: Identify and implement Sustainable Financing Programs to Support EAFM.

ECOFISH staff and partners shall follow these procedures to determine the Category and potential impacts of such activities:

- (1) Undertake a Due Diligence investigation of the environmental record and practices of each partner in a Public-Private Partnership to include an analysis of the partner’s past record of environmental accountability and how it might affect the partner’s specific plans under the PPP (Appendix A).
- (2) Conduct a detailed screening of the proposed activity. ECOFISH will use an Environmental Screening Template (Appendix B) to determine the activity’s type and level of impact. Determine if Best Practices are included in all technical assistance, workshops, consultations, research and recommendations for program designs involving livelihood, enterprise or resource generation activities.
- (3) Any technical assistance for alternative livelihoods and enterprises will require the submission and approval of the filled up Environmental Screening Template. It shall include an evaluation of the environmental implications of the alternative livelihood or enterprise being developed. This document must be approved by the A/COR, and if deemed necessary by the A/COR, an IEE will be required.
- (4) If, during implementation, activities are considered other than those described in the filled up Environmental Screening Template, further environmental review will be conducted by the implementing partner, which shall then be cleared by USAID/Philippines prior to activity implementation.

6. Roles and Responsibilities

ECOFISH has identified the following positions to be involved in the EMMP as to meet USAID environmental compliance requirements:

- Chief of Party (COP)

- Deputy Chief of Party (DCOP)
- Monitoring and Evaluation (M&E) Specialist
- Senior Resource Economics Specialist
- PPP Specialist
- MKBA Site Coordinators

The COP is ultimately responsible for ensuring that the ECOFISH EMMP is implemented appropriately and in a timely manner for the Project. He will notify USAID whenever there is a need for designing an activity-specific environmental assessment and the corresponding environmental mitigation and management measures. The COP ensures compliance with USAID regulations. He is also responsible for supervising the DCOP, M&E Specialist, Senior Resource Economics Specialist, and the PPP Specialist.

The DCOP is responsible for planning, management and delivery of specific tasks and deliverables, including oversight of task schedules and costs. The DCOP will serve as the lead point of contact for contractors and partners under each Task or Deliverable including the field units in the eight (8) MKBAs. The Senior Resource Economics Specialist and PPP Specialist will screen grant and sub-contractor activities using the Environmental Screening Templates, prepare the Environmental Review Reports in consultation with the COP and M&E Specialist, and monitors environmental compliance by grantees.

MKBA Site Coordinators are responsible for environmental screening of grant applications, as well as environmental mitigation and monitoring in the field. Simple checklists and forms will be used to evaluate potential environmental impacts as well as collect data during the operational phases of funded projects. The completed paperwork will then be forwarded to DCOP for review on a quarterly basis.

Appendix A. ECOFISH Due Diligence Guidelines

ECOFISH will conduct due diligence checks on relevant partners. The due diligence investigation will be commensurate with the concerns, as indicated in the IEE document. The due diligence check will include confirmation of prior receipt of donor funds or engagement, particularly from USAID. If potential partners have not previously received USAID funding, ECOFISH will:

- Review their public information on the internet or other publicly available material;
- Hold a discussion with them regarding environmental “corporate” responsibility; and
- Check if a written environmental policy is implemented/in place, and if relevant records are available.

Appendix B. ECOFISH Environmental Screening Form

PARTNER:
Project Name:
Sub-grantee or Contractor:
Sub-project Name:
Duration (proposed start and completion dates):
Marine Key Biodiversity Area (MKBA):
General Description of Overall Activity and Purpose (paragraph/s describing purpose/outputs and potential environmental impacts):

Step 1. Determine Category of Activity.

Note: A number of grants will include more than one category of activities. Simply mark all that apply. The form will guide you to the appropriate steps.

Category 1: Categorical Exclusion

Does the activity involve (mark YES, where applicable):

	Provision of education, technical assistance, or training
	Controlled experimentation exclusively for the purpose of research and field evaluation confined to small areas (normally under 4 ha.) and carefully monitored
	Technical studies and analyses and other information generation activities
	Document or information transfers

	Small-scale sustainable natural resources management activities not involving the conversion of forest or mangroves into aquaculture, harvesting of wild animal, or impact on waterways
	Repair of facilities if total surface area to be disturbed is less than 10,000 sq.ft. (approx.. 1,000sqm) and when no protected or other sensitive environmental areas (such as wetlands) could be affected
	Studies or programs intended to develop the capability of recipients to engage in development planning
	Limited boardwalk or trail development that does not involve cutting of trees or mangroves, significant land leveling, impacts on waterways, shoreline, or disturbance of native vegetation
	Small-scale rearing of non-endangered species

Category 2: Negative environmental impacts possible, environmental review required (specific conditions, including monitoring, may be applied):

Note: Even for activities designed to protect or restore natural resources, the potential for environmental harm exists (e.g., re-introduction of species, controlled burning, fencing, wildlife water points, spontaneous human population shifts in response to activities undertaken, etc.). *If you do not find an exact match listed here for the activity that you are undertaking, and it is not in Category 1, or 3, then use the last item in Category 2 to describe the activity and treat it as Category 2 for purposes of environmental review.*

	A Category 1 training, other capacity building or technical activity that implements actions that impact on the environment
	Controlled experimentation exclusively for the purpose of research and field evaluation on areas of 4 ha. or more
	Small-scale construction of watch towers, kiosks or other not permanently inhabited structures
	Small-scale renewable energy installation
	Rehabilitation of facilities or structures in which undisturbed areas are disturbed
	Small-scale rehabilitation of shoreline, streambed or riparian areas from impacts of wave action or currents
	Technical studies and analyses and other information generation activities that could involve intrusive sampling of endangered species or critical habitats
	Tourist trail development involving tree/mangrove felling or limited but significant land-leveling (using hand-held tools only)
	Removal of dead matter or underbrush damaged by storm, fire or wave action
	Controlled fuel reduction or other use of fire
	Implementing a monitoring program that involves permanent vegetation or capture of animals/fish species
	Introduction of any non-native species, even as part of a restoration effort.

	Community-based certified (e.g. R.A. 8550 or Wildlife Act) use of non-endangered species
	Increased human presence in a natural or pristine area, even if temporary
	The introduction of chemicals or other man-made material to an area
	<i>Other activities not in Category 1 and not in Category 3. Please specify:</i>

Category 3: Significant environmental impacts likely. Environmental review required, and Environmental Assessment likely to be required:

Does the activity involve (mark YES, where applicable):

	Aquaculture or other natural resources management activities involving the conversion of natural or pristine coastal and marine waters into other categories of water-use
	Planned resettlement of human populations in the coastal zone
	Drainage of wetlands and other permanently water-logged areas
	Light industrial fish canning or processing
	Potential to significantly degrade coastal and marine protected areas, such as introduction of exotic plant or animal species
	Potential to jeopardize threatened and endangered species or adversely modify their habitat especially mangroves, seagrass beds, or wetlands
	Aquaculture involving the manipulation of natural or semi-natural ecosystems
	Planned colonization of mangrove forests; reclamation of wetlands
	Cutting mature trees, especially mangrove species
	Construction, upgrading or maintenance of extensive roads (including temporary haul roads) or trail systems, particularly in non-degraded wetlands or mangrove areas and other natural habitats
	Involve the use of pesticides at any level or extensive use of herbicides
	Large-scale construction in non-degraded land

Activities in Category 3 will need further environmental information development to assess the impacts, and the assessment will need to be approved by the COR. For activities in Category 2, the mitigation measures planned must be reviewed to ensure that they are adequate to address the impacts. Below is a list of questions that must be answered to ensure sufficient information for a determination of the environmental status of the proposed activity. All activities in Category 2 that are approved must include progress reports on their environmental mitigation with their regular reports about the overall project.

1. Activity identified under Category 2.
2. Possible environmental risks, problems and benefits from the activity.
3. Strategies and actions that will be taken to prevent negative impacts.
4. Strategies and methods that will be used to monitor the environmental impacts.
5. If environmental problems do occur, actions that will be taken to control and minimize those impacts.

Clearances: (for activities in Category 2 only)

Chief of Party or Designee: _____ Date: _____

COR: _____ Date: _____