Sub-Regional Plan for Managing Transboundary Fisheries in the Sulu-Sulawesi Seascape:

TAKING AN ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT

The USAID Oceans and Fisheries Partnership (USAID Oceans)
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About this Document

This document outlines a proposed sub-regional plan for taking an ecosystem approach to fisheries management (EAFM) within the Sulu-Sulawesi Seascape sub-region of Southeast Asia. This plan was developed through a collaborative, multi-national, multi-stakeholder process, beginning with the *U.S. Coral Triangle Initiative (CTI) Sulu-Sulawesi Seascape EAFM Planning Meeting* held on June 2-5, 2015, in Manado, Indonesia, followed by the *SEAFDEC/USAID Oceans Regional Fisheries Planning Workshop in Southeast Asia* held on August 23-25, 2017, in Bangkok, Thailand, and concluding with the *CTI/GIZ/USAID Oceans Sulu-Sulawesi Seascape Regional Convergence Meeting* held on July 3-6, 2018, in Cebu City, Philippines. During October and November 2018 on behalf of the CTI-CFF Regional Secretariat, USAID Oceans also conducted socialization and review meetings with National CTI Coordinating Committees (CTI NCCCs) and stakeholders in Indonesia, Malaysia, and the Philippines, with the finalized version of this plan submitted to the CTI-CFF Regional Secretariat and CTI EAFM Technical Working Group in late November 2018, in advance of the 17th Senior Officials' Meeting, December 9-15, 2018.

This document provides a framework for the Sulu-Sulawesi Seascape EAFM plan, proposed for adoption and implementation by relevant governmental agencies, non-governmental partners, and multi-lateral/regional organizations focused on fisheries management and biodiversity conservation in Indonesia, Malaysia, and the Philippines. This document may also be of interest to relevant technical, private sector, and academic partners working in the sub-region.

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Front cover photo: Outlook over a coastal fishing village in North Sulawesi, Indonesia.
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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CCRF	Code of Conduct for Responsible Fisheries
CI	Conservation International
CTI	Coral Triangle Initiative
CTI-CFF	Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security
EAFM	Ecosystem Approach to Fisheries Management
EO	Ecosystem Objective
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization
FMA	Fisheries Management Area
FMU	Fisheries Management Unit
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GEF	Global Environment Facility
GO	Governance Objective
GOT	Gulf of Thailand
IUU	Illegal, Unreported, and Unregulated (fishing)
MCS	Monitoring, Control and Surveillance
MPA	Marine Protected Area
NCCC	National Coral Triangle Initiative Coordinating Committee
NGO	Non-governmental Organization
NOAA	National Oceanic and Atmospheric Administration
RPOA	Regional Plan of Action
SDGs	Sustainable Development Goals
SEAFDEC	Southeast Asian Fisheries Development Center
SFMP	Sustainable Fisheries Management Plan
SSME	Sulu-Sulawesi Marine Ecoregion
SSS	Sulu-Sulawesi Seascape
SEAFDEC	Southeast Asian Fisheries Development Center
SO	Socioeconomic Objective
SOM	Senior Officials Meeting
TMP	Tun Mustapha Marine Park
TNC	The Nature Conservancy
USAID	United States Agency for International Development
USAID Oceans	USAID Oceans and Fisheries Partnership
USG	United States Government
WWF	World Wide Fund for Nature

GLOSSARY OF TERMS

Adaptive management – A systematic process for continually improving management policies and practices toward achieving articulated goals and objectives by learning from the outcomes of those previously employed. The basic steps of adaptive management are to conceptualize; plan actions and monitor; implement actions and monitor; analyze, use, and adapt; and capture and share learning. Active adaptive management is where management options are used as a deliberate experiment for the purpose of learning (Millennium Ecosystem Assessment 2006).

Coastal and marine spatial planning (CMSP) – A public process of analyzing and allocating the spatial and temporal distribution of human activities in coastal and marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process. Sometimes used interchangeably with marine spatial planning (MSP) (Ehler and Douvere 2009).

Co-management – A partnership arrangement between key stakeholders (e.g., communities of local resource users, such as fishers, tour operators, coastal developers, etc.) and government to share the responsibility and authority for the management of fisheries and coastal resources, with various degrees of power sharing.

Community based management (CBM) – Management planning and implementation carried out by the people and stakeholders in a community.

Ecosystem approach (EA) – A strategy for the integrated management of land, water, and living resources that promotes conservation and sustainable use in an equitable way. Often used interchangeably with Ecosystem-based management (EBM) (CBD 2000).

Ecosystem approach to fisheries management (EAFM) – An approach to fisheries management and development that strives to balance diverse societal objectives by considering the knowledge and uncertainties about biotic, abiotic, and human components of ecosystems and their interactions, applying an integrated approach to fisheries within ecologically meaningful boundaries. An EAFM is a practical way to implement sustainable development for the management of fisheries by finding a balance between ecological and human well-being through good governance. The purpose of EAFM is to plan, develop, and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems (Garcia et al. 2003; Food and Agriculture Organization 2003, 2011).

Ecosystem approach to fisheries management plan (EAFM plan) – The output of a planning framework that outlines the integrated set of management arrangements for a fishery to generate more acceptable, sustainable, and beneficial community outcomes.

Ecosystem goods and service – The benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services, such as spiritual and cultural benefits; and supporting services, such as nutrient cycling or waste degradation, that maintain the conditions for life on Earth.

Ecosystem-based fisheries management (EBFM) – Considered a component of ecosystem-based management, focused on the fisheries sector. EBFM considers both the impacts of the environment on fisheries health and productivity and the impacts that fishing has on all aspects of the marine ecosystem. Often used interchangeably with EAFM.

Ecosystem-based management (EBM) – A management framework that integrates biological, social, and economic factors into a comprehensive strategy aimed at protecting and enhancing the sustainability, diversity, and productivity of natural resources. EBM "emphasizes the protection of ecosystem structure, functioning, and key processes; is place-based in focusing on a specific ecosystem and the range of activities affecting it; explicitly accounts for the interconnectedness among systems, such as between air, land, and sea; and integrates ecological, social, economic, and institutional perspectives, recognizing their strong interdependencies." Sometimes used interchangeably with EA (McLeod et al. 2005).

Fisheries management – An integrated process to improve the benefits that society receives from harvesting fish consisting of (i) information gathering, (ii) analysis, (iii) planning, (iv) consultation, (v) decision making, (vi) allocation of resources, and (vi) formulation and implementation—with enforcement as necessary—of

regulations or rules which govern fisheries activities in order to ensure the continued productivity of the resources and accomplishment of other fisheries objectives.

Fishery management unit (FMU) – An area of the ecosystem and fisheries that is the focus for management under an EAFM. The fisheries can utilize any type of fishing (e.g., trawl fishery) and be for any resource (e.g., shrimp fishery).

Food security – The availability of consistent and sufficient quantities of food, access to appropriate and sufficient foods, and consumption or appropriate use of basic nutrition and food preparation.

Governance or governance system – The way formal and informal rules are set and implemented. It includes the planning and implementation mechanisms and the processes and institutions through which citizens and governing groups (institutions and arrangements) voice their interests, mediate differences, exercise their legal rights, and meet their obligations.

Indicator – A variable, pointer, or index that measures the current condition of a selected component of the ecosystem. The position and trend of the indicator in relation to a benchmark indicates the present status of the component. Indicators provide a bridge between objectives and action.

Integrated coastal management (ICM) – An ecosystem approach to managing a coastal area. A continuous mechanism that involves a systematic process for managing competing issues in marine and coastal areas, including diverse and multiple uses of natural resources. ICM puts into practice effective governance, active partnerships, practical coordinating strategies, sustainable financial resources, and strengthened technical institutional capacities. Under ICM, decisions are taken for the sustainable use, development, and protection of coastal and marine areas and resources.

Integrated management plan – The integrated management plan is both a process and a document. Its primary goal is to provide a planning framework to achieve healthy ecosystems and sustainable use of fisheries resources and the process by which a given area will be managed for a determined period.

Livelihood – "How we make our living, the things we use, and the choices we make to ensure that our lives run as we like." A sustainable livelihood, then, is a livelihood that "can continue into the future despite any changes and disasters and without losing that which makes the livelihood possible. This may include food production or being prepared for natural disasters. It is important to remember that income generation may be just one part of a livelihood" (Govan 2011).

Management area – The spatial extent of the land and/or water that is identified for management integration. Management areas, which should be as large as possible, may fall under the jurisdiction of one or more local communities, local governments, provincial or national governments, or a combination of all of these. Management areas are ideally defined by ecological boundaries, resource use patterns, and governance jurisdictions. Examples of management areas include seascapes, marine protected area (MPA) networks, and FMUs. Examples of zones within managed areas include various types of MPAs, various types of FMUs, various types of land-based protected or management areas, and others.

Management goal – A broad statement of a desired outcomes; are usually not quantifiable and may not have established timeframes for achievement.

Management measures – Specific controls applied to achieve the management objective, including gear regulations, areas and time closures (see MPA), and input and output controls on fishing effort.

Management objective – A description of a set of activities that, once completed, will achieve the desired outcome. Objectives can be quantified and measured and, where possible, have established timeframes for achievement.

Management plan – An explicit set of rules governing how to apply the principles and framework of natural resource management in a given area. This plan may be adapted to changes in the natural and social environment or upon the basis of new information about how a system functions. It may or may not have a legal basis for implementation.

Marine Protected Area (MPA) – A clearly defined geographical space—recognized, dedicated, and managed through legal or other effective means—to achieve the long-term conservation of nature with associated ecosystem services and cultural values. MPAs include a wide variety of governance types (including community-based areas) and include but are not limited to marine reserves where no extraction is permitted (Dudley 2008; IUCN-WCPA 2008).

Marine protected area network – A collection of individual MPAs or reserves operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve (IUCN-WCPA 2008).

Marine reserve – A type of MPA or zone within a larger MPA where no extraction is permitted and that is primarily established to "reserve" marine life for the future. Marine reserves are also known as no-take areas, fish sanctuaries, fish refuges, no-take replenishment zones, and fisheries replenishment areas (IUCN-WCPA 2008).

Milestone – A step or event that, if achieved, indicates progress toward the completion of an activity and/or objective. "Milestone" is sometimes interchanged with "benchmark."

Monitoring, control and surveillance (MCS) – The overall process and set of activities used to ensure laws, rules, and regulations are complied with.

Objective – What is intended to be achieved. An objective should be linked to indicator(s) against which progress can be measured. Positive or negative change resulting from the achievement of an objective is an outcome.

Operational objective – A short-term objective achievable through management intervention.

Outcome – The change in status, attitude, or behavior that results from a set of management activities. An outcome should be able to be tracked through measurement and/or observation over time.

Seascape – Large multiple-use marine areas, defined scientifically and strategically, in which government authorities, private organizations, and other stakeholders cooperate to conserve the diversity and abundance of marine life and promote human well-being.

Stakeholder – Any individual, group, or organization with an interest (or a "stake") in, or who/that can affect or is affected (positively or negatively) by a process or management decision.

Sub-national – A geographic or governance area that is smaller than the national level. Sub-national includes all designations of vertical governance structure between the community level and the national level. Examples include province or multi-province, local government unit (or regency) or multiple local governments working together, and other appropriate designations.

Sub-region - A space of planning smaller than a region but larger than a local authority, such as a nation, and is usually based on location.

Sustainable development – Development (improvement in human well-being) that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable use – The harvesting of natural resources that does not lead to long-term decline of the resource and biodiversity, thereby maintaining its potential to meets the needs of the present without compromising the ability of future generations to meet their own needs.

ACKNOWLEDGEMENT

In support the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), this proposed sub-regional EAFM plan uses an Ecosystem Approach to Fisheries Management (EAFM) with relevant goals, objectives, and management actions to support regional, national, and local fishery management efforts within the Sulu-Sulawesi Marine Ecoregion. The proposed sub-regional EAFM plan was developed through a collaborative, multi-national, multi-stakeholder process between 2015 to 2018. The Oceans and Fisheries Partnership (USAID Oceans) project thanks the CTI Regional Secretariat, the six CTI Member Countries, and the CTI EAFM and Seascapes Technical Working Groups (TWGs) for the opportunity and privilege of serving the peoples and communities of the Sulu and Sulawesi Seascape in facilitating this collaborative, multi-national, multi-stakeholder development process.

This sub-regional plan would not have been possible without the invaluable contributions of hundreds of stakeholders from Indonesia, Malaysia, and the Philippines who generously gave their time and effort to create and develop the plan (see Annex I). Development of this sub-regional plan began with the June 2015 U.S. Coral Triangle Initiative (USCTI) Sulu-Sulawesi Seascape EAFM Planning Meeting held in Manado, Indonesia, and was followed by the August 2017 SEAFDEC/USAID Oceans Regional Fisheries Planning Workshop in Southeast Asia held in Bangkok, Thailand. A third and final development workshop was convened in July 2018 jointly by CTI, GIZ, and USAID Oceans as the Sulu-Sulawesi Seascape Regional Convergence Meeting held in Cebu City, Philippines. Throughout this 4-year multi-stakeholder development process, consistent support and guidance was provided by the CTI EAFM and Seascape Technical Working Groups, along with bilateral and multilateral development partners and a number of regional and national non-governmental organization partners (see Annex I).

Following the completion of the proposed sub-regional plan in July 2018, the National CTI Coordinating Committees (NCCCs) and NGO partners from in Indonesia, Malaysia, and the Philippines offered technical review and critical national leadership throughout a series of "socialization and review" meetings to finalize the proposed sub-regional plan during October and November 2018. A list of the socialization meeting contributors is presented in Annex II. A summary of the socialization meeting results is presented in Annex III. The thoughtful feedback and useful inputs provided by NCCC members and NGO partners out of the socialization meeting process resulted in the finalization of the proposed sub-regional plan presented in this document. This finalized version was formally submitted by USAID Oceans to the CTI-CFF Regional Secretariat and CTI EAFM and Seascape TWGs in late November 2018, in advance of the 14th CTI Senior Officials Meeting during December 2018.

Funding support to convene the design workshops, socialization meetings, and related planning activities to develop this sub-regional plan was generously provided by a number of international development partners, including: the Asian Development Bank (ADB); Germany's Gesellschaft für Internationale Zusammenarbeit (GIZ); the United States Agency for International Development (USAID); the United States Department of the Interior; and the United States National Oceanic and Atmospheric Administration (NOAA).

EXECUTIVE SUMMARY

The establishment of appropriate fisheries management mechanisms is vital to ensure sustainable fisheries resources and achieving long-term food security in the Southeast Asian region. An ecosystem approach to fisheries management (EAFM) provides a broader framework for management of marine resources to achieve sustainable development goals through improved ecological well-being (e.g., habitat protection and restoration, pollution reduction and waste management, sustainable harvesting of fishery resources) and human well-being (e.g., food security, sustainable livelihoods, equitably distributed wealth). Applying an EAFM is considered the preferred option and best practice by most countries and regional organizations in Southeast Asia for the long-term sustainability of fisheries and the ecosystem services provided to society (e.g., food security, livelihoods, economic security, coastal protection, human health and well-being).

Development of a sub-regional EAFM plan can complement local, national and regional fisheries management priorities, and help to catalyze action at all levels that may otherwise not occur. A sub-region is defined as a space of planning smaller than a region but larger than a local authority, such as a nation, and is usually based on location. The Sulu-Sulawesi Seascape (SSS) can be considered a sub-region of Southeast Asia. In addition to the importance that the SSS sub-region serves for fisheries production, food security, and economic development in the region, it is also a globally significant priority area for biodiversity conservation. The sub-region is considered the epicenter of global marine biodiversity, with the highest number of coral reef, marine fish, seagrass, and mangroves species in the world. The deterioration of environmental conditions in the SSS indicates that the resource extraction has exceeded the natural capacity of this marine ecosystem for recovery. Shared boundaries, ecosystem dynamics and resources, as well as transboundary environmental issues (including human migration) justify a sub-regional approach to conserving the SSS. For this sub-regional plan, an EAFM planning approach has been undertaken.

The development of the SSS sub-region's EAFM plan commenced in 2015, when an initial vision and draft set of goals and objectives were generated during the *U.S. Coral Triangle Initiative (USCTI) Sulu-Sulawesi Seascape EAFM Planning Meeting* held on June 2-5, 2015, in Manado, Indonesia. During this USCTI-led a planning meeting, participants revisited the results of the Transboundary Diagnostic Analysis (Sulu-Sulawesi Marine Ecoregion Tri-National Committee, 2013), and prioritized and agreed on the key issues. They also defined the Fisheries Management Unit and established a common vision for the Sulu-Sulawesi Seascape. It was agreed that unsustainable exploitation of fish and fisheries resources, transboundary illegal, unregulated, and unreported (IUU) fishing, habitat loss, and community modification remained the main issues and threats in the region.

During August 2017, a second workshop was hosted jointly by SEAFDEC and USAID Oceans with fisheries management agency representatives from Indonesia, Malaysia, and the Philippines, as well as all other ASEAN member countries. During this workshop, the vision for taking an ecosystem approach to fisheries within the Sulu-Sulawesi Seascape sub-region was revised from the first workshop:

"By 2030, the transboundary fisheries of the Sulu-Sulawesi Seascape are ecologically healthy and deliver ecosystem services that provide equitable benefits to our people through collaborative, safe, and legal regional fisheries management."

Pursuant to this vision, the sub-regional plan calls for an immediate (near-term) focus on five species of high-value and economically-important transboundary small pelagic fisheries within SSS sub-region, and a longer-term focus on seven target species of high-value and economically-important transboundary large pelagic and neritic tuna fisheries within SSS sub-region, as well as six target species of coral reef-associated transboundary fish species.

The proposed sub-regional goals were developed based on the three pillars of the EAFM:

1. Ecological Well-being

Goal #1: Improved long-term health of living marine resources and their habitats through responsible regional fisheries management for optimal benefits to our communities.

There are two proposed phases for this regional fisheries management goal:

- An initial (in the immediate/near-term, from 2018-2023) phase that is more narrowly focused on a specified set of small pelagic fisheries shared among all three nations within the sub-region; and

- A later (initiated during the mid-term, from 2023-2030) phase with a broader/expanded focus that also encompasses transboundary large pelagic (including neritic tuna) and coral reef fisheries across the sub-region.

2. Human Well-being

Goal #2: Resilient, self-reliant, and empowered communities who benefit from inclusive, just, responsible, and economically- and socially-equitable fisheries management.

3. Good Governance

Goal #3: Improved governance and transboundary fishery policy capacity through a coordinated regional framework that is effectively implemented through a participatory, responsive, transparent, and adaptive process.

In July 2018, a third and final workshop was organized to complete the sub-regional EAFM plan, including: revisiting the plan's goals, objectives and management actions; developing strategies for compliance, data and information, financing, communications and monitoring and evaluation; and discussing possible governance mechanisms and next steps to move the proposed plan into tri-national implementation.

Through the series of the three design workshops, a number of sub-regional objectives were developed. In order to achieve these objectives, the sub-regional plan outlines a set of proposed management actions to be fully and effectively completed at the sub-regional level, including management actions that are: (i) currently being implemented by a participating country; (ii) currently being implemented through a regional or multinational agreement (e.g., CTI-CFF); or (iii) that are newly being proposed for future implementation, by at least one of the three participating countries. The objectives and management actions were structured around the three pillars of an EAFM—ecological well-being, human well-being, and governance. Under ecological wellbeing there are six objectives and 23 management actions; five human well-being objectives and 15 management actions; and seven governance objectives and 20 management actions.

At the request of the CTI-CFF Regional Secretariat, during October and November 2018 the USAID Oceans team conducted a series of "socialization" and final review meetings with National CTI Coordination Committees (NCCCs) and relevant NGO stakeholders in Indonesia, Malaysia, and the Philippines. Specifically, socialization meetings were conducted in Sabah, Malaysia with the Department of Fisheries Sabah, the Sabah Parks Department, and WWF Malaysia (partner NGO) on October 9-10, 2018, followed by meetings with the Malaysia NCCC and WorldFish Centre (partner NGO) on November 2, 2018. In the Philippines, the socialization meeting was conducted with representatives from both the Philippines NCCC and partner NGOs on October 16, 2018. In Indonesia, socialization meetings were held in Jakarta with the Indonesia NCCC and partner NGOs on November 12-13, 2018, followed by a socialization debriefing meeting with the CTI Regional Secretariat in Manado on November 15, 2018. Annex III provides a summary of the key highlights of tri-national feedback and suggestions raised during these socialization meetings. The socialized and finalized version of this proposed sub-regional EAFM plan was formally submitted by USAID Oceans during late November 2018 to the CTI-CFF Regional Secretariat and CTI EAFM and Seascapes TWGs, in advance of the 14th Senior Officials' Meeting (SOM), held December 9-15, 2018.

Under this plan, a sub-regional EAFM approach is to be cooperatively implemented by the three governments (led by their respective fisheries management authorities). Tri-national implementation will require careful coordination and cooperation at various levels and across multiple sectors relating to the marine ecosystem, including the institutions and ministries and institutions that have relevant management authority. Under this plan, recommendations have been provided on the establishment of a coordinating governance mechanism at the sub-regional level to support this plan's implementation and coordination, beginning in 2019.

1. VISION

The vision for taking an ecosystem approach to fisheries management (EAFM) within the Sulu-Sulawesi Seascape sub-region is proposed as follows:

> *"By 2030, the transboundary fisheries of the Sulu-Sulawesi Seascape are ecologically healthy and deliver ecosystem services that provide equitable benefits to our people through collaborative, safe, and legal regional fisheries management."*

Under this vision statement, the following definitions/clarifications apply:

- The "transboundary fisheries" include: (a) small pelagic fisheries; (b) large pelagic and neritic tuna fisheries; and (c) demersal (soft-bottom and hard/coral reef) fisheries.
- The "Sulu-Sulawesi Seascape" include the approximately 900,000 square kilometers (347,490 square miles) of waters geographically shared between Indonesia, Malaysia, and the Philippines within the Sulu and Celebes Seas as well as the Sulawesi Sea.
- The "benefits" to be provided equitably to the people of the sub-region include socio-economic and cultural benefits.
- "Our people" reflects multiple generations, including current and future generations.
- The term "sub-regional," frequently used in reference to the Sulu-Sulawesi Seascape, includes all socioeconomic, political, and cultural boundaries within the three countries (Indonesia, Malaysia, and the Philippines) of the sub-region.
- In terms of which transboundary fisheries the vision encompasses, an initial (immediate/near-term) focus on selected transboundary small pelagic species is being proposed under this vision, with an expanded focus later that will also include transboundary large pelagic/neritic tunas and coral reef fisheries.

Details relating to these specific definitions are discussed within this sub-regional plan.

This vision statement builds directly from an earlier vision statement (Annex I), crafted by Indonesian, Malaysian, and Philippines government agencies as an output from a 2015 workshop convened by the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF; see CTI-CFF *et al.* 2015).

While the earlier version of the vision statement was also focused on small pelagic fisheries, it did not identify any fisheries focus within the statement. As such, the intended target (transboundary fisheries) of the sub-regional EAFM plan's efforts has been added to the current version of the vision statement. This earlier version of the vision statement also did not reflect the priority human welfare interests, which has now been added (i.e., addition of the words "equitable," "collaborative," "safe," and "legal"). Finally, the original vision included an extended time horizon (out through 2035) that national representatives felt was too far off to be practical and encourage immediate action.

The representatives who crafted the updated vision statement emphasize its direct alignment with the economic development and sustainable management goals of Indonesia, Malaysia and the Philippines. These representatives underscore the critical importance for sub-regional planning efforts to support, as opposed to undermine or contradict, their nations' priorities and visions.

2. BACKGROUND

2.1 Transboundary Planning Context

In 1999, the World Wide Fund (WWF) for Nature and its partners launched the Sulu-Sulawesi Marine Ecoregion (SSME) Conservation Program, as one of WWF's 200 Global Ecoregions (Olson and Dinerstein 1998). The Program adopted a two-pronged approach: planning for the conservation of the SSME and the implementation of immediate conservation actions on the ground. The ecoregion planning process involves the formulation of a Biodiversity Vision—a 50-year conservation goal—and the development of a stakeholders' Ecoregion Conservation Plan (ECP) based on the ecoregion's Biodiversity Vision. Notable was a shift from a non-government organization-facilitated to a government-led planning process, and the

establishment of interim governance mechanisms to ensure coordination in the development of the ECP. These interim mechanisms that operate within country and across countries during the planning phase of the SSME Program are perceived to evolve into formal institutional arrangements that are appropriate for the implementation of the ECP (Olson and Dinerstein 1998; Miclat, Ingles, and Dumaup 2006).

In 2004, a tri-national ecoregion conservation plan was forged collaboratively by Indonesia, Malaysia, and the Philippines to address shared threats to SSME's diversity and productivity (SSME Sub-Committee 2009). These tri-national, government-led management efforts for the SSME formally commenced in 2006 (SSME Sub-Committee 2009), with support from several international non-governmental organizations (NGOs), including WWF, the Nature Conservancy (TNC), and Conservation International (CI). As a tri-national management framework to address regional threats to the SSME's biodiversity and productivity, an Ecoregion Conservation Plan was launched to implement three comprehensive action plans from 2010 through 2012 (Miclat, Ingles, and Dumaup 2006; Walton *et al.* 2014).

While these tri-national efforts were getting underway, a broader, region-wide agreement called the Coral Triangle Initiative on Coral reefs, Fisheries and Food security (CTI-CFF) was initiated in 2009 between the governments of Indonesia, Malaysia, Papua New Guinea, the Philippines, Timor Leste, and the Solomon Islands. The CTI-CFF initiative was also supported by international NGO partners already active in supporting tri-national SSME management efforts, including CI, TNC, and WWF. CTI-CFF is a multilateral partnership of six countries working together to sustain extraordinary marine and coastal resources by addressing crucial issues such as food security, climate change and marine biodiversity. In support of the launch of the CTI-CFF initiative, a 10-year Regional Plan of Action (RPOA) was implemented in 2009. Under this RPOA, the Sulu and Sulawesi Seascape sub-region was identified as a priority "seascape" for CTI-CFF action (CTI-CFF Regional Secretariat 2016; page 13). The Sulu-Sulawesi Seascape serves as a geographic focus for investments, and actions, towards sustainable fisheries, conservation of threatened species and climate change and related results under the CTI-CFF RPOA. In addition, Principle Six of the RPOA calls on the CTI member nations to "recognize the transboundary nature of some important marine natural resources," including "shared fish stocks" targeted by IUU fishing and the live reef fish trade (CTI-CFF Regional Secretariat 2016; page 8).

The regional attention and support provided through the CTI-CFF served as an important and complementary contribution to the tri-national SSME efforts already underway. For example, the CTI-CFF initiative contributed to the expansion of marine protected area (MPA) networks, including 'no-take' zones (fishery reserves) within three biological corridors of the Sulu-Sulawesi Seascape: (1) the Verde Island Passage; (2) the Cagayan Ridge; and (3) the Tri-national Sea Turtle Corridor (SSME Sub-Committee 2009; Walton *et al.* 2014). This expansion resulted in a total of 1,624 square kilometers of transboundary waters being allocated under tri-national management (SSME Sub-Committee 2009).

2.2 Overview of the Sub-Regional EAFM Planning Process

The development of an EAFM plan for the SSS sub-region commenced in 2015, led by CTI-CFF and supported through a number of implementing partners. Out of a 2015 workshop convened by CTI-CFF and NOAA in Manado, Indonesia, an initial vision and draft set of goals and objectives were generated. As documented in the workshop report that followed (CTI-CFF *et al.* 2015), a second, follow-on workshop to review and refine the outputs of this initial workshop was proposed as an important next step.

During August 2017, USAID Oceans and SEAFDEC convened a regional fisheries management workshop attended by fisheries management agency representatives from all ten ASEAN member countries in Bangkok, Thailand. As part of this workshop, attendees split into three teams to develop and propose sub-regional EAFM plans for three sub-regions across Southeast Asia: SSS; the South China Sea (including the Gulf of Thailand); and the Andaman Sea. Because of this, the 2017 workshop served as an opportunity to review, refine, and amend the outputs generated out of the 2015 workshop in support of developing a SSS sub-regional EAFM plan. Outputs generated by the SSS team members during the 2017 workshop are included within this document, as well as regional peer review inputs (completed during late 2017).

A Convergence Meeting was conducted in July 2018 in Cebu City, Philippines and brought together the Sulu-Sulawesi Seascape member countries to discuss regional concerns on implementation of the RPOA and explore possible actions and coordination mechanisms for the Seascape as well as to review and finalize the draft sub-regional EAFM plan. Routing options for adoption were also identified and discussed to ensure that the sub-regional plan would progress to adoption and implementation.

At the request of the CTI-CFF Regional Secretariat, during October and November 2018 the USAID Oceans team conducted a series of "socialization" and final review meetings with National CTI Coordination Committees (NCCCs) and relevant NGO stakeholders in Indonesia, Malaysia, and the Philippines. Specifically, socialization meetings were conducted in Sabah, Malaysia with the Department of Fisheries Sabah, the Sabah Parks Department, and WWF Malaysia (partner NGO) on October 9-10, 2018, followed by meetings with the Malaysia NCCC and WorldFish Centre (partner NGO) on November 2, 2018. In the Philippines, the socialization meeting was conducted with representatives from both the Philippines NCCC and partner NGOs on October 16, 2018. In Indonesia, socialization meetings were held in Jakarta with the Indonesia NCCC and partner NGOs on November 12-13, 2018, followed by a socialization debriefing meeting with the CTI Regional Secretariat in Manado on November 15, 2018. Annex III provides a summary of the key highlights of tri-national feedback and suggestions raised during these socialization meetings. The socialized and finalized version of this proposed sub-regional EAFM plan was formally submitted by USAID Oceans during late November 2018 to the CTI-CFF Regional Secretariat and CTI EAFM and Seascapes TWGs, in advance of the 14th Senior Officials' Meeting (SOM), held December 9-15, 2018.

2.3 Linking the Sub-Regional EAFM Plan to Other Fisheries Plans

The SSS sub-regional EAFM plan does not exist in geographic isolation of other, related fisheries management efforts. Because of this, the SSS sub-regional EAFM plan must be linked to other relevant international and regional ecosystem and/or fisheries management plans at the regional level, as well as to national and local plans within Indonesia, Malaysia, and the Philippines (Figure 1).

Figure 1. Diagram illustrating how the SSS sub-regional EAFM plan links to and supports (upward) relevant international, regional, and other sub-regional fisheries management plans and environmental management initiatives, as well as (downward) to in country management plans.

Some regional plans – including international treaties and agreements – are not strictly focused on fisheries and include or reflect other elements or concerns from other sectors, including integrated coastal management, biodiversity conservation, and environmental management. Relevant international agreements that are 'linked' to the SSS sub-regional EAFM plan include the 2009 FAO Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and the 1995 FAO Code of Conduct for Responsible Fisheries (CCRF). Other international agreements referencing fisheries management along with other cross-cutting themes include: the 1992 Convention on Biological Diversity; the 1992 Action Agenda for Sustainable Development (Earth Summit); the 1982 United Nations Convention on the Law of the Sea (UNCLOS, Article 123 – Regional); and the 1973 CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as the Washington Convention). The United Nations' 2015 Sustainable Development Goals (SDGs) include concerns relating to fisheries management, under SDG #14: Life Below Water (Conserve and sustainably use the oceans, seas and marine resources).

At the regional level, the SSS sub-regional EAFM plan needs to be linked 'upward' to the CTI Regional Plan of Action - (Goal 2 – Target 1: EAFM) and Southeast Asia's regional implementation of the FAO CCRF. Other regional plans that need to be taken into account include the 2007 Regional Plan of Action to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region (RPOA-IUU) and the Conservation and Management Measures of the Western and Central Pacific Fisheries Commission.
The SSS sub-regional EAFM plan should support existing, related management efforts also focused at the sub-regional level; for example: The Ecoregion Conservation Plan (ECP) for the Sulu-Sulawesi Marine Ecoregion

(SSME); the SSME Regional Strategic Action Program (GEF/UNDP/UNOPS); and the Comprehensive Action Plan for SSME (ADB 2011). More recently, the GEF identified the Large Marine Ecosystem (LME) approach as an engine for achieving SDG 14 (GEF LME: LEARN 2017). It specifically cited that for Sulu-Celebes LME, what needs to be addressed are: strengthening law enforcement through cooperation and exchange of information among marine law enforcers (trans-border); and improving bilateral or multilateral coordination to combat IUU fishing. The Sustainable Development Strategy for Seas of East Asia (SDS-SEA) has sustainable fisheries as a major component among its strategies, objectives and action programs.

This SSS sub-regional EAFM plan needs to be linked 'downward' to relevant national, provincial, and local fisheries management plans within each of the three countries implementing the sub-regional plan. For example, in Indonesia the SSS sub-regional EAFM plan should be linked to and support the National Tuna Fisheries Management Plan for Fisheries Management Area (WWP 716), as well as provincial fisheries planning within WPP 716, including implementation of provincial/local fisheries management efforts level within WPP 716.

Similarly, in the Philippines the SSS sub-regional EAFM plan should link 'downward' to and support national, provincial, and local fisheries management efforts, such as the 2015 Comprehensive National Fisheries Industry Development Plan (CNFIDP) and the National Tuna Management Plan (NTMP). At a local level—for example in the Southern Philippines—the SSS sub-regional EAFM plan should be linked to and support projects and programs of Region 12's Sustainable Fisheries Management Plan (SFMP), the Integrated Coastal Management Plan for General Santos City, and the Fisheries Annex of the Sarangani Bay Protected Seascape Protected Area Management Plan (2014-2019).

2.4 Implementation Considerations

The sub-regional EAFM approach recognizes the independent nature of each country and calls for implementation by each of the three governments (and their fisheries authorities). This will require coordination and cooperation among them at different levels and across multiple sectors affecting the fishery ecosystem, such as the ministries or institutions with management authority over fish, environment, coasts, and climate as well as associated sectors like economic development, livelihoods, agriculture, and tourism, among others. The primary agencies at the national level within the SSS sub-region will be the Ministry of Maritime Affairs and Fisheries in Indonesia, the Department of Fisheries in Malaysia, and the Bureau of Fisheries and Aquatic Resources in the Philippines.

Many of the issues threatening marine ecosystems are typically outside of the mandate of fisheries agencies, and governance under EAFM includes the coordination and cooperation between government agencies. This might include sharing data and information, supporting local implementation, and harmonizing work plans and budgets. In addition, support scaling up of best management practices and innovations that include efforts to align resource management actions in national policy and among neighboring countries that share fish stocks, as well as to share lessons and best practices. Management decisions matched to the spatial scale of the ecosystem; to the programs for monitoring all desired ecosystem attributes (ecological, social, and economic); and to the relevant management authorities (national to provincial to local) are likely to be more successful in achieving ecosystem objectives. Moreover, an EAFM should be integrated with other sectoral and environmental management approaches—such as integrated coastal management (ICM) and integrated watershed management (IWM)—that address terrestrial and terrestrial/marine management.

There are three important considerations regarding the adoption and implementation of this proposed EAFM plan for the SSS sub-region:

First, it is recommended that a voluntary coordinating governance mechanism should be established at the sub-regional level to support required coordination. An existing regional fisheries organization such as CTI-CFF, SEAFDEC, the Tri-National Committee for the Sulu-Sulawesi Marine Ecoregion (Miclat, Ingles and Dumaup 2006), or the SSME Sub-committee on Sustainable Fisheries (ADB 2011) could serve in this role. In July 2018, CTI-CFF conducted a Sulu-Sulawesi Seascape Convergence Meeting and a proposal was put forth to establish a Sulu-Sulawesi Seascape sub-regional coordinating mechanism. Under this proposal, the sub-regional EAFM plan could be coordinated through the CTI-CFF Seascape and EAFM working groups, and the National Coordinating Committees in Indonesia, Malaysia and the Philippines for the implementation of the plan's management actions/interventions. A SSS sub-regional working group would be responsible for consolidating all the activities (including but not limited to EAFM) that are happening in the SSS, addressing sub-regional issues, coordinating with other concerned CTI bodies, and reporting to the SOM according to

the CTI process. The sub-regional working group may have similar functions as the SSME tri-national committee. A "seascape manager," could be appointed or elected from existing members of the national working group in Indonesia, Philippines, and Malaysia. Following the SSME model, the manager position may be rotated among the three countries.

Second, the sub-regional would need to undergo formal regional review, discussion, negotiation, and approval to become formalized and adopted for sub-regional implementation through a relevant, binding, and regionally-sanctioned management process; for example, by the six CTI-CFF member nations via adoption out of a Senior Officials Meeting.

Finally, all proposed management actions (see Section 7) would be 'offered' (i.e., contributed) and 'maintained' at the discretion of each participating nation implementing the sub-regional EAFM plan. In other words, the management actions offered by Indonesia, Malaysia, and the Philippines would be national-level 'contributions' that would be voluntarily provided in support of the stated sub-regional objectives under each of the three goals. Each nation's control and sovereignty over which management actions it would contribute in support of the sub-regional EAFM plan would be preserved. The sub-regional EAFM plan would merely offer guidance on which contributions would be welcomed, under specified objectives. Country-level implementation of the plan will primarily be the responsibility of the EAFM TWG of each country, with oversight by the NCC. Each country's EAFM TWG will also be responsible for developing action plans (in coordination with other concerned country level TWGs as needed) to ensure on-the-ground implementation of the EAFM Framework Plan.

3. FISHERIES MANAGEMENT UNIT

3.1 Sub-regional Planning Area

The Sulu-Sulawesi Seascape (SSS) sub-region is one component of the wider Indo-Pacific Ocean Region (also known as the Coral Triangle Region) within Southeast Asia. The South China Sea (inclusive of the Gulf of Thailand) and the Andaman Sea are two additional sub-regions[1] within this wider region.

The SSS sub-region is geographically defined as the waters encompassed by the SSME, a marine area of over 900,000 square kilometers (347,490 square miles) bounded among three nations: Indonesia, Malaysia and the Philippines (ADB 2011; UNEP 2005; DeVantier, Alcala, and Wilkinson 2004). The SSS sub-region is also referred to as the Sulu-Celebes Sea Large Marine Ecosystem (Heileman 2009; TWAP 2005).

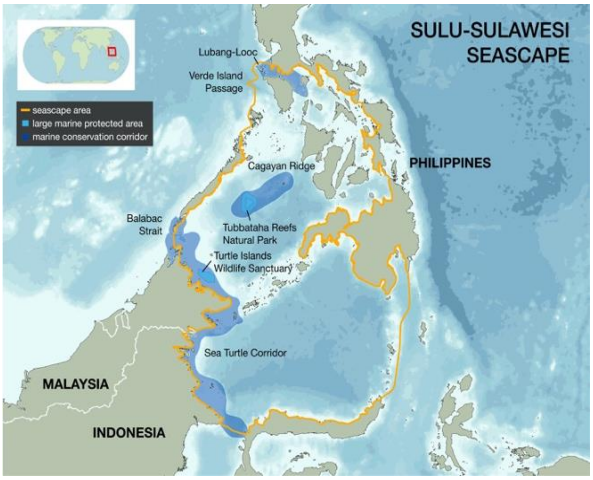

Figure 2. Map of the Sulu-Sulawesi Seascape, inclusive of ocean waters shared between Indonesia, Malaysia and the Philippines. (Source: CTI-CFF 2015)

Since 2009, the SSS sub-region has often been referred geographically as the Sulu-Sulawesi "Seascape," as represented by the CTI-CFF (see Figure 2).

In effect, the "Seascape" boundary (Figure 2) functions as the regional fisheries management unit (FMU) of the SSS Sub-regional EAFM Plan. In characterizing the FMU, it is important to include an explanation of how (delineation) and why (justification for the delineated area) the boundaries of the proposed sub-regional EAFM planning area were generated.

Previous geographic definitions of the SSS sub-region, including both the SSME (ADB 2011; UNEP 2005; DeVantier, Alcala, and Wilkinson 2004) and the Sulu-Sulawesi Seascape (CTI-CFF *et al.* 2015), have justified their definitions based on the results of the

[1] Proposed sub-regional EAFM Plans for both the South China Sea and Andaman Sea are under development with support from the USAID Oceans Activity and its partners.

UNEP Global International Waters Assessment, which identify the sub-regions boundaries based off of the geophysical delineation of the island drainage basins that flow into the Sulu and Celebes Seas (Figure 2; UNEP 2005). These boundaries include catchment/watershed topography from Northern Luzon, the Visayan Islands in the north and northeast, down along the Diuata mountain range of eastern Mindanao Island in the east, through to Northern Sulawesi in the south (UNEP 2005). The area is also bounded by East Kalimantan (Indonesia) and Eastern Sabah (Malaysia) in the southwestern part of the sub-region, and Palawan Island in the northwest (UNEP 2005).

All boundaries exclude catchments and rivers that feed into the South China Sea or Pacific Ocean (UNEP 2005). These geophysical boundaries overlap well with the WWF SSME definition and boundaries (Spalding *et al.* 2007; WWF 2009).

In addition to the boundaries of the FMU area, it is important to consider the associated history of how the transboundary marine ecoregion has been managed to date. The history for this sub-region is therefore described in the following section.

Two possible expansions have been proposed to the scope of the interventions, based on the focal species stock distribution and connectivity by the delineated SSS sub-regional planning area:

- Proposed revision #1: expand the geographic area of the sub-region to include the waters of the Northern Philippines, as well as perhaps the eastern waters where large marine protected areas (MPAs) are present; and

- Proposed revision #2: ensure that the full extent of the waters bounded by the Tun Mustapha Marine Park (TMP) and Shark Sanctuary, situated in the northern Sabah (Borneo), adjacent to Kudat, Sabah are included (Figure 3). TMP is the largest marine park in Malaysia, including nearly 1 million hectares (2.47 million acres) of waters containing the second largest concentration of coral reefs in Malaysia as well as other important habitats like mangroves, sea grass beds and productive fishing grounds. The western marine waters of TMP are technically not part of the previous Sulu-Sulawesi Seascape area (Figure 4).

Figure 3. Map and the geophysical boundary of the Sulu-Celebes (Sulawesi) region, based on the transboundary diagnostic analysis, watershed delineation and drainage basin topography between Indonesia, Malaysia and the Philippines.

It is also noted that due to the results of recent genetic studies, some stocks of small pelagic fisheries may be shared (transboundary) between Brunei, Sabah (Malaysia), and western Philippines. If so, then the geographic extent of the SSS sub-region may need to be amended to reflect/include the coastal waters of Brunei where such transboundary small-scale pelagic fisheries occur.

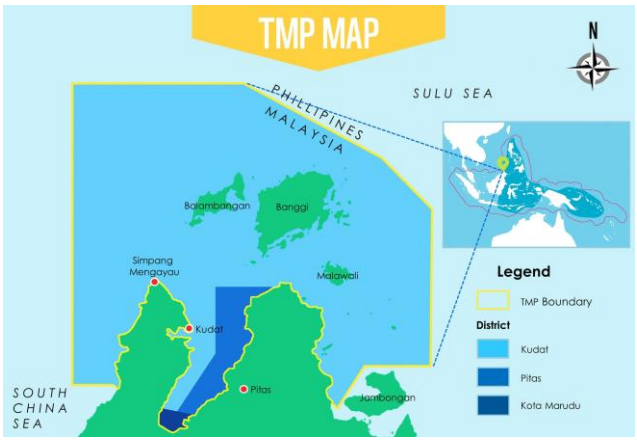

Figure 4. Map of the Tun Mustapha Marine Park in Kudat, Sabah, Malaysia. (Source: WWF Malaysia)

3.2 Target Fisheries

The sub-regional plan calls for an immediate (near-term) focus on five species of high-value and economically-important transboundary small pelagic fisheries within SSS sub-region: Indian mackerel (*Rastrelliger kanagurta);* round scad (*Decapterus macrosoma);* Japanese mackerel (*Decapterus maruadsi);* sardines (*Sardinella lemuru);* and short-bodied mackerel (*Rastrelliger brachysoma).* Table 1 presents these transboundary small pelagic target fisheries recommended for inclusion and management under the SSS sub-regional EAFM plan.

The sub-regional plan additionally calls for a longer-term focus on seven target species of high-value and economically-important transboundary large pelagic and neritic tuna fisheries within SSS sub-region, as well as six target species of coral reef-associated transboundary fish species.

The large pelagic and neritic tuna target transboundary fisheries to be managed under this sub-regional EAFM plan are: longtail tuna (*Thunnus tonggol*); eastern little tuna (*Euthynnus affinis*); frigate tuna (*Auxis thazard*); bullet tuna (*Auxis rochei*); striped Bonito (*Sarda orientalis*); Indo-Pacific king mackerel (*Scomberomorus guttatus*); and the narrow-barred Spanish mackerel (*Scomberomorus commerson*).

These large pelagic and neritic tuna fisheries are of high regional management interest by SEAFDEC throughout SSS and the wider Indo-Pacific (including the South China Sea/Gulf of Thailand and Andaman Sea sub-regions). Table 2 presents the transboundary large pelagic and neritic tuna target fisheries recommended for eventual inclusion and management under the SSS sub-regional EAFM plan.

The coral reef-associated target transboundary fisheries to be managed under this sub-regional EAFM plan are: giant bumphead parrotfish (*Bolbometapon muricatus*); Napoleon wrasse (*Cheilinus undulatus*); leopard coral trout (*Plectropomus leopardus*); humpback grouper (*Cromileptes altivelis*); reef manta ray (*Manta alfredi*); and whale shark (*Rhincodon typus*).

All coral reef-associated target fish species identified are threatened or endangered (and therefore of high interest within the international community for sustainable management) and represent species that are either transboundary or are otherwise believed (based on scientific evidence available) to be genetically connected throughout the sub-region. Transboundary coral reef fisheries targets were informed through CTI-CFF activities conducted within three EAFM project sites operating in the SSS sub-region (Dumanquillas Bay, Zamboanga; Semporna, Sabah; and Kwandang Bay, North Sulawesi), as supported by the Asian Development Bank and the Global Environment Facility (ADB RETA 7813/GEF ID 3589; implemented by PRIMEX).

Table 3 presents the transboundary coral reef-associated target fisheries recommended for eventual inclusion and management under the SSS sub-regional EAFM plan.

Common name	Species	Image
Indian mackerel	*Rastrelliger kanagurta*	
Round scad	*Decapterus macrosoma*	
Japanese mackerel	*Decapterus maruadsi*	
Sardine	*Sardinella lemuru*	
Short-bodied mackerel	*Rastrelliger brachysoma*	

Table 1. List of the proposed transboundary neritic tuna and large pelagic fisheries recommended for longer-term inclusion and management under the proposed SSS sub-regional EAFM plan. Images provided courtesy of SEAFDEC.

Common name	Species	Image
Longtail tuna	*Thunnus tonggol*	
Eastern little tuna	*Euthynnus affinis*	
Frigate tuna	*Auxis thazard*	
Bullet tuna	*Auxis rochei*	
Striped Bonito	*Sarda orientalis*	
Indo-Pacific king mackerel	*Scomberomorus guttatus*	
Narrow-barred Spanish mackerel	*Scomberomorus commerson*	

Table 2. List of the proposed transboundary small pelagic fisheries recommended for immediate (near-term) inclusion and management under the proposed SSS sub-regional EAFM plan. Images provided courtesy of SEAFDEC and Fishbase.

Common name	Species	Image
Giant bumphead parrotfish	*Bolbometapon muricatus*	
Napoleon wrasse	*Cheilinus undulatus*	
Leopard coral grouper	*Plectropomus leopardus*	
Humpback grouper	*Cromileptes altivelis*	
Reef manta ray	*Manta alfredi*	
Whale shark	*Rhincodon typus*	

Table 3. List of the proposed transboundary coral reef-associated fisheries recommended for longer-term inclusion and management under the proposed SSS sub-regional EAFM plan. Images provided courtesy of SEAFDEC, Fishbase, and IUCN.

3.3 Rationale

The following points are raised regarding the justification for the proposed SSS sub-regional EAFM planning focus on small pelagic fisheries within the near (immediate) term:

- Small pelagics are "food for the poor"; they ensure food security for our coastal communities, particularly those who are lower socioeconomic status.
- Small pelagics have a significant contribution and influence on local economics and to household income levels.
- Small pelagics play an important role within the wider marine ecoregion/ecosystem, they:
    - Serve as an important prey item (food) for our tuna species; and
    - By improving the management of small pelagics, we strengthen the management and sustainability of our tuna fisheries.
- Prior scientific research has been completed on small pelagic fisheries; we have sufficient information and science to support a focus on these fisheries under a sub-regional EAFM.
- Small pelagic species are often by-catch associated with purse seine and trawl operators; particularly where associated with catches around fish aggregation devices (FADs).
- Recent research suggests that SSS sub-regional small pelagic fisheries may have genetic/population connectivity with small pelagic fisheries captured in Brunei; if so, the western Sabah coastal waters, including along Brunei, may need to be considered for inclusion in the EAFM management area within the SSS sub-region.
- The current plan focuses on "small" pelagics; but in several years, we may simply focus on "pelagic" fisheries, inclusive of small, large, and neritic tuna.

The target large pelagic/neritic tuna and coral reef fisheries are not being immediately prioritized for sub-regional management attention within the immediate term for the following reasons:

- Focusing on a single set of transboundary fisheries in the near term instead of all three sets of transboundary fisheries is logical as doing so will allow a focused and strategic investment of the limited human and financial resources that are available sub-regionally;
- Demonstration of effectively managing transboundary small pelagic species at the sub-regional level prior to attempting to do so with large pelagics and neritic tunas is recommended;
- The neritic tunas are already of transboundary management attention and interest through relevant regional fisheries management councils and regional tuna fisheries management actors/organizations; and
- Additional scientific evidence of the genetic connectivity of identified coral reef-associated fisheries is advisable prior to sub-regional management efforts.

4. MAJOR ISSUES AND THREATS

Transboundary fisheries management efforts across Southeast Asia currently face many issues and threats. The following section highlights several of the most frequently cited and prioritized fisheries management issues and threats at the regional and sub-region contexts, as identified in both current fisheries management literature (e.g., SEAFDEC 2012; SEAFDEC 2017; FAO 2016; CTI-CFF Regional Secretariat 2016) and as prioritized by fisheries management representatives from across all ten ASEAN nations during the 2017 USAID Oceans/SEAFDEC Regional Fisheries Management Workshop.

4.1 Regional Context

Several issues and threats limit the effectiveness of transboundary fishery management efforts across Southeast Asia. This section provides a summary of input relating to regional issues and threats to fisheries management as reported by national fishery management agency officials/spokespersons from all ten ASEAN member countries during the 2017 USAID Oceans/SEAFDEC Regional Fisheries Management Workshop, as further validated within current fisheries management literature (e.g., SEAFDEC 2012; SEAFDEC 2017; FAO 2016; CTI-CFF Regional Secretariat 2016).

The most frequently cited ecological issues and threats facing transboundary fisheries management relate to depleted fishery resources or overfishing, illegal/destructive fishing methods and degraded coastal/fishery habitats. In terms of human concerns, the critical ones pertain to poverty (including low income and livelihoods), resource use conflicts and competition, as well as labor and gender (including welfare). The five most cited governance issues/problems include: limited institutional capabilities, inadequate/inconsistent fisheries policies, weak institutional partnerships, lack/limited community/public participation, and weak enforcement of fishery laws/regulations. Singapore has the least problem, citing solely the 'lack of fisheries stock information'. Also noted by regional partner organizations are the issues of fisheries by-catch and discards and coastal and marine pollution.

The following summary lists of issues and threats were identified and reported by ASEAN member country representatives during the August 2017 Regional Fisheries Management Workshop.

Table 4. Summary list of regional ecological issues/threats relating to national fisheries management.

Regional Ecological Issues and Threats	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
1. **Illegal/destructive fishing methods**	X	X	X		X	X	X		X	X
2. **Depleted fishery resources or overfishing**			X	X	X	X	X		X	X
3. **Degraded coastal/fishery habitats**		X		X			X		X	X
4. **Climate change**		X					X			

Table 5. Summary list of regional human (socio-economic) issues/threats relating to national fisheries management.

Regional Human (Socio-Economic) Issues/Threats	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
1. **Lack of alternative livelihoods**		X	X			X	X			X
2. **Resource use conflicts and competition**		X		X	X	X	X			
3. **Human welfare** (labor, gender issues)	X	X	X	X	X					
4. **Poverty** (including low income)						X	X			
5. **Uncompetitive/poor quality products**						X	X			
6. **Post-harvest losses**							X			
7. **High cost of fuel**					X					

Table 6. Summary list of regional governance issues/threats relating to national fisheries management.

Regional Governance Issues/Threats	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
1. **Limited institutional capabilities** (including overlaps or gaps in mandates)		X	X	X		X	X			X
2. **Weak enforcement of fishery laws/regulations**		X	X	X		X	X		X	
3. **Weak institutional partnerships**	X	X	X				X			
4. **Limited community/public participation** (including low awareness and compliance)		X	X	X		X				
5. **Inadequate/inconsistent fisheries policies**					X		X		X	
6. **Limited scientific research or studies**			X				X	X		
7. **Lack of or limited CDT**									X	X
8. **Poor decision-making capabilities**				X						
9. **Conflicting/overlapping maritime jurisdiction claims with neighboring countries** (boundary disputes)										X

4.2 Sub-regional Issues and Threats

Several issues and threats limit the effectiveness of transboundary fishery management efforts within the SSS sub-region. This section provides a summary of input relating to sub-regional (i.e., SSS-specific) issues and threats to fisheries management, as reported by national fishery management agency officials and spokespersons from Indonesia, Malaysia, and the Philippines during the 2017 USAID Oceans/SEAFDEC Regional Fisheries Management Workshop. These issues and threats are further validated within current sub-regional management literature (e.g., CTI-CFF Regional Secretariat 2016; ADB 2011).

The most urgent issues and threats facing transboundary fisheries management efforts the SSS sub-region include (listed in order of prevalence): overfishing; IUU fishing; destructive fishing; habitat destruction; coastal/marine pollution; declining fish stocks; transboundary crime; and unsustainable tourism. Overfishing is cited as the sub-region's most urgent (pressing) issue/threat facing fisheries managers, followed closely by IUU fishing. Destructive fishing and habitat destruction were also considered high priority, related issues/threats, but not as prevalent as overfishing or IUU fishing.

The remaining issues/threats identified relating to pollution, declining stocks, transboundary crime, and unsustainable tourism were secondary priorities to be addressed to those of the top four issues. Only the issues of transboundary crime and unsustainable tourism were not identified previously by workshop participants during the 2015 EAFM workshop (see CTI-CFF *et al.* 2015). When asked about this, it was noted by the 2017 participants that both newly-identified priority issues/threats had increased in intensity and impact since 2015, and therefore are now of higher priority and interest to address sub-regionally.

Not surprisingly, there is significant congruence between the issues and threats facing transboundary fisheries management across the Indo-Pacific region (widely) and the issues and threats facing transboundary fisheries management in the SSS sub-region (specifically). Typically, the issues and threats identified at the SSS (sub-regional) level were either specific examples of the wider, regional issue or threat with which it is correlated, or identical to the issue/threat identified at the wider, regional level. A comparative summary of the regional

versus sub-regional (SSS) issues and threats reported by the participants of the 2017 USAID Oceans/SEAFDEC Regional Fisheries Management Workshop is presented within Table 7.

Table 7. A comparison of the regional vs. sub-regional (SSS) transboundary fisheries issues and threats.

EAFM Category Regional Fisheries Issue/Threat *(reported)*	SSS Sub-Regional Fisheries Issue/Threat *(reported)*
Ecological Well-being	
1. Overfishing, depleted fisheries	Depletion of marine resources; and Overfishing
2. Illegal/destructive fishing methods	Illegal, unregulated, and unreported (IUU) fishing; Illegal fishing; and Pirate fishing
3. Degraded coastal/fishery habitats	Environmental destruction; Habitat destruction (e.g., coral reef habitat loss); and Loss of critical fish habitat (e.g., spawning grounds)
Human Well-being (socio-economic)	
4. Low level of awareness	Uneducated fishers; and Lack of community awareness of the issues/problems
Good Governance	
5. Limited institutional capabilities (including overlaps or gaps in mandates; funding limitations)	Funding limitations; Limited capacity of local leaders to promote sustainable resource management; and Available management funding not allocated properly
6. Inadequate/inconsistent fisheries policies	Appropriate strategy for managing fisheries; and Need for finding a balance between conservation and exploitation
7. Weak institutional partnerships	No/low bilateral cooperation; and Weak cooperation between neighboring countries in the SSS
8. Weak enforcement of fishery laws/regulations	Insufficient enforcement of existing fishery regulations; Lack of local compliance; and Corrupt enforcers
9. Lack/limited science, research or studies	Lack of data management

4.3 Primary Root Causes

Several underlying, 'root' causes drive the issues and threats that limit the effectiveness of transboundary fishery management efforts within the SSS sub-region. This section provides a summary of input relating to

sub-regional (i.e., SSS-specific) root causes to fisheries management, as reported by national fishery management agency officials and spokespersons from Indonesia, Malaysia, and the Philippines during the 2017 USAID Oceans/SEAFDEC Regional Fisheries Management Workshop. These issues and threats are further validated within current sub-regional management literature (e.g., CTI-CFF Regional Secretariat 2016; ADB 2011).

The primary drivers (root causes) of the top issues and threats facing transboundary fisheries management within the SSS sub-region are (listed in order of highest to lowest perceived level of influence): poverty; weak governance; high market demand (for sub-regional seafood products); income needs (driving fishing); insufficient or poor fisheries management; climate change impacts (on fish stocks); lack of monitoring and enforcement of fishing activities; and lack of data or information (relating to sub-regional fisheries management). Poverty was the highest, most influential root cause of transboundary fisheries management issues/threats identified. This was followed by weak marine governance, the growing demand (particularly internationally) for seafood products, and income needs as the next most influential set of root causes that drive fisheries issues/threats. The remaining root causes relating to poor management, climate change, lack of monitoring/enforcement, and lack of data/information were considered secondary influences to the others identified, at least within the SSS sub-region.

4.4 Cross-cutting Issues

Several additional cross-cutting issues that relate to the issues and threats facing sub-regional transboundary fisheries management in the SSS were identified, including:

- A lack of emphasis in the sub-region on gender equality and equity within fisheries;
- An inadequate level of stakeholder engagement and cooperation on sub-regional, national, and local fisheries management efforts;
- The role of culture on influencing social relationships and traditions that influence how fisheries are managed in each nation within the sub-region; and
- Limited inclusiveness of specific social groups (e.g., indigenous groups, youth) within fisheries management and decision-making.

4.5 Biodiversity Conservation Rationale

In addition to the importance that the SSS sub-region serves for fisheries production, food security, and economic development in the region, it is also a globally significant priority area for biodiversity conservation. The SSS sub-region is considered the epicenter of global marine biodiversity, with the highest number of coral reef, marine fish, seagrass, and mangroves species in the world (CTI-CFF Regional Secretariat 2016). The sub-region is characterized by a tropical climate and complex and wide-ranging biophysical characteristics and oceanography that contribute to its exceptionally abundant marine biodiversity (Miclat, Ingles, and Dumaup 2006; CTI-CFF Regional Secretariat 2016).

The deterioration of environmental conditions in the ecoregion indicates that the resource extraction has exceeded the natural capacity of this marine ecosystem for recovery (CTI-CFF Regional Secretariat 2016). Shared boundaries, ecosystem dynamics and resources, as well as transboundary environmental issues (including human migration) justify a sub-regional approach to conserving the SSS (Miclat, Ingles, and Dumaup 2006; CTI-CFF Regional Secretariat 2016).

Several reasons are cited regarding the importance for marine biodiversity conservation being successfully conducted within the SSS sub-region, including: food security; sustainable fisheries; human benefit (including for human well-being); economic security; to recover/restore depleted marine/fishery resources; and the intrinsic, unique value of region.

Food security and sustainable fisheries are viewed as the most important reasons for ensuring sub-regional conservation of marine biodiversity, followed secondarily by both human benefit/well-being and economic security. The value of marine biodiversity to recover/restore depleted marine/fishery resources and because of the region's intrinsic, unique value to the world were less important. Table 8 presents a summary of the consensus points across the SSS sub-region's issues/threats, root causes, and biodiversity conservation rationale.

Table 8. Summary of consensus points regarding fishery managers' perceptions of the primary threats and issues, root causes, and rationale for conserving marine biodiversity.

Top threats and issues?	*Primary root causes?*	*Why conserve marine biodiversity?*
▪ **Overfishing**	▪ Poverty	▪ Food security
▪ **IUU fishing**	▪ Weak governance	▪ Sustainable fisheries
▪ **Declining stocks**	▪ Poor management	▪ Restore depleted marine resources
▪ **Destructive fishing**	▪ Income needs	▪ Protect the food web (trophic levels)
▪ **Habitat destruction**	▪ High demand	▪ Human benefit (human well-being)
▪ **Pollution**	▪ Lack of monitoring, enforcement	▪ Economic security, livelihoods
▪ **Transboundary crime**	▪ Lack of data or information	▪ Intrinsic, unique value of region
▪ **Tourism**	▪ Climate change	▪ Cultural relationship, traditional knowledge

5. PROPOSED SUB-REGIONAL GOALS

5.1 Ecological Well-being

The proposed ecological well-being goal (Goal #1) is as follows:

> *Goal #1: Improved long-term health of living marine resources and their habitats through responsible regional fisheries management for optimal benefits to our communities.*

There are two proposed phases for this regional fisheries management goal:

- An initial (in the immediate/near-term, from 2018-2023) phase that is more narrowly focused on a specified set of transboundary small pelagic fisheries among all three nations within the sub-region; and
- A later (initiated during the mid-term, from 2023-2030) phase with a broader/expanded focus that also encompasses transboundary large pelagic (including neritic tuna) and coral reef fisheries across the sub-region.

5.2 Human Well-being

The proposed human (i.e., the socioeconomic) well-being goal (Goal #2) is as follows:

> *Goal #2: Resilient, self-reliant, and empowered communities who benefit from inclusive, just, responsible, and economically- and socially-equitable fisheries management.*

5.3 Good Governance

The proposed governance goal (Goal #3) is as follows:

> *Goal #3: Improved governance and transboundary fishery policy capacity through a coordinated regional framework that is effectively implemented through a participatory, responsive, transparent, and adaptive process.*

6. PROPOSED SUB-REGIONAL OBJECTIVES

6.1 Ecological Objectives

Under the Ecological Well-being Goal (Goal #1), six associated ecological objectives (EOs) have been identified for completion within the specified timeframe (i.e., 2018 through 2025). All EOs are to be fully completed by 2025.

Associated ecological objectives:

EO-1: Establish and maintain optimal sustainable exploitation rates for transboundary fish species
EO-2: Establish and maintain suitable water quality parameters
EO-3: Restore critical fish habitat and conserve *in situ* marine biodiversity
EO-4: Control and maintain fishery by-catch at an ecologically-acceptable level
EO-5: Minimize the negative impacts of fishing practices and technologies on the environment
EO-6: Create new scientific data and knowledge and improve regional information sharing

Relevant indicators associated with the EOs under the SSS sub-regional EAFM plan are listed below.

Key Ecological Indicators Identified: (a) total area (km2) of sub-regional waters under effective marine biodiversity conservation (EO-3); (b) % of total area (km2) of sub-regional waters with restored critical fish habitat (EO-3); and (c) # of actions or programs implemented to address the size and location/placement of fish aggregation devices (FADs) to minimize by-catch and/or landing of undersized/juvenile fish (EO-4; note: relates to EO-3 impacts on marine biodiversity).

6.2 Socioeconomic Objectives

Under the Human Well-being Goal (Goal #2), six associated socioeconomic objectives (SOs) have been identified for completion within the specified timeframe (i.e., 2018 through 2025). All SOs are to be fully completed by 2025.

Associated socioeconomic objectives:

SO-1: Enhance and stabilize income generation from regional fisheries
SO-2: Improve community resilience through livelihood diversification (including biodiversity-friendly enterprises)
SO-3: Improve human well-being (fishers) characterized by legal, just, and equitable conditions
SO-4: Strengthen equity and social benefit, to ensure access, participation, and decision-making
SO-5: Enhance and stabilize household dietary consumption for improved local food security

Relevant indicators associated with the SOs under the SSS sub-regional EAFM plan are listed below.

Key Socioeconomic Indicators Identified: (a) reported changes in gender equity associated with small pelagic fisheries (SO-4); (b) change in the presence and number of underrepresented stakeholders benefiting from small pelagic fisheries in the sub-region, including IPs, WPs, youth, and senior citizens (SO-4).

6.3 Governance Objectives

Under the Governance Well-being Goal (Goal #3), seven associated governance objectives (GOs) have been identified for completion within the specified timeframe (i.e., 2018 through 2025). All GOs are to be fully completed by 2025.

Associated governance objectives:

GO-1: Combat IUU/illegal fishing
GO-2: Strengthen local capacity to engage in and successfully undertake sustainable livelihoods, responsible fishing practices

GO-3: Develop resilient fisheries framework to address climate change impacts
GO-4: Strengthen regional monitoring, control, and surveillance (MCS) efforts associated with fisheries
GO-5: Improve judicial and enforcement capacity associated with small pelagic fisheries
GO-6: Enhance stakeholder participation in regional fishery management processes and decision-making, integrating local wisdom and traditional knowledge, as applicable.
GO-7: Strengthen regional coordination and governance (national, local, transboundary)

Relevant indicators associated with the GOs under the SSS sub-regional EAFM plan include:

Key Governance Indicators Identified: (a) total number of individuals and institutions with strengthened capacity, knowledge, and skills (GO-2; GO-6); (b) changes in reported fisher attitudes and behaviors relating to responsible fishing practices (GO-2; GO-6); (c) presence and integration of local wisdom in fisheries management and decision-making (GO-2'; GO-6).

Note: to be useful, all SSS sub-regional EAFM objectives must be SMART: specific (S); measurable (M); achievable (A); realistic (R); and time-bound (T).

7. PROPOSED MANAGEMENT ACTIONS

In order to achieve the specified SSS EAFM objectives, a set of proposed management actions must be fully and effectively completed at the sub-regional level. Representatives from relevant national and provincial fisheries management and marine policy government agencies in Indonesia, Malaysia, and the Philippines have identified and proposed several sub-regional management actions to support each of the proposed objectives (see Annex 1 for a complete list of these representatives). These proposed actions are listed in Table 9, by objective.

Each of the identified sub-regional management actions (Table 9) falls within one of the following three categories:

(1) Management actions that are currently being implemented by a participating country;
(2) Management actions that are currently being implemented through a regional or multinational agreement (e.g., CTI-CFF); or
(3) Management actions that are being proposed (new) for future implementation, by at least one of the three participating countries.

Table 9. Summary list of proposed management actions for the SSS Sub-regional EAFM Plan

Objective	*Management Actions*
EO-1: Establish and maintain optimal sustainable exploitation rates for transboundary fisheries	(1) Input/output measures (harvest strategy, seasonal closure) (also links to SO-1) (2) Collection of data/information (new investments needed) (3) Learning and sharing exchanges on sustainable fisheries (best practices)
EO-2: Establish and maintain suitable water quality parameters	(1) Controls on land-based pollution sources (upstream) (2) Education on upstream pollution impacts on coastal fisheries (3) Regular water quality sampling (4) Address regional red tide issues, including using remote sensing
EO-3: Restore critical fish habitat and conserve in situ marine biodiversity	(1) Establish new MPAs in under-represented habitats and for insufficiently protected fish species and associated endangered or threatened marine species

	(2) Strengthen the management effectiveness of existing MPAs (3) Restoration of degraded marine habitat that functions as breeding, recruitment, grow-out, and foraging habitat for specified transboundary fisheries
EO-4: Control and maintain fishery by-catch at an ecologically-acceptable level	(1) Input/output controls (harvest strategy) (2) Technical measures (also links to EO-1, SO-1, GO-1) (3) Placement (location) and sizing of FADs to minimize by-catch and catch of undersized/juvenile fish (also links to EO-3)
EO-5: Minimize the negative impacts of fishing practices and technologies on the environment	(1) Formulate and implement policy and regulations; example: control input/outputs; technical measures, including FADs (2) Exit plan for certain fishing gears
EO-6: Create new scientific data and knowledge and improve regional information sharing	(1) Conduct regional collaboration on ecological research and stock assessment; use regional database (CT Atlas) (2) Strengthen & link electronic Catch Documentation and Traceability System (eCDTS) to FIS (also links to SO-3) (3) Strengthen landing data collection (port only) (4) DNA tagging to illustrate products not traced to endangered species (5) Conduct larval dispersal studies regarding small pelagic species (6) Study MPA spillover effects on stocks (link to EO-3) (7) Larval/planktonic stage identification (8) Remote sensing and assessment of red tide impacts on small pelagic populations and habitats
SO-1: Enhance and stabilize income generation from regional fisheries	(1) Capacity building and technical assistance on production, processing, marketing, and enterprise development (also supports EO-1, EO-4, SO-2, SO-3) (2) Community-based entrepreneurship (community economic benefit, including community, family/household, individual)
SO-2: Improve community resilience through livelihood diversification (including biodiversity-friendly enterprises)	(1) Financial support by providing access to credit/financial institutions (2) Incentive system to promote community/local enterprise
SO-3: Improve human well-being (fishers) characterized by legal, just, and equitable conditions	(1) Enhance compliance with international labor laws, particularly aboard fishing vessels (2) Develop monitoring for labor law compliance in fishing (3) Implement eCDT system; (4) Track human well-being conditions within seafood supply chain via eCDT system
SO-4: Strengthen equity and social benefit, to ensure access, participation, and decision-making	(1) Conduct gender value chain analysis and sensitivity training

	(2) Incorporate gender components in program cycle from planning stage (3) Regulation or policies (legal instrument) formulated and implemented to promote gender equity (4) Share information/knowledge on how EAFM enhances plans and programs on social services (e.g., health, education)
SO-5: Enhance and stabilize household dietary consumption for improved local food security	(1) Conduct consumer awareness campaigns on importance of seafood traceability, safety and fraud; (2) Partner with stakeholders (wholesalers, importers, and retailers) to ensure products are safe, traceable, and sustainable (3) Measures to directly address nutritional, educational and health
GO-1: Combat IUU/illegal fishing	(1) Regional collaboration on compliance to common agreements (2) Initiation of traceability implementation (3) Support implementation of laws and policies in place to encourage compliance (e.g., RPOA IUU)
GO-2: Strengthen local capacity to engage in and successfully undertake sustainable livelihoods, responsible fishing practices	(1) Enhance existing capacity on sustainable livelihoods and responsible fishing practices (e.g., governance and law enforcement) (2) Increase awareness of sustainable livelihoods and responsible fishing practices modeling/piloting local community rights-based fishery management using behavior change tools at selected coastal communities (3) Exchange information regarding domestic laws and law enforcement procedures (see CTI-CFF lessons, efforts)
GO-3: Develop resilient fisheries framework to address climate change impacts	(1) Compile existing climate impact data (assessment of climate impacts) (2) Link/integrate region-wide early action plan for Climate Change Adaptation (CAA) (note all countries have existing CCA action plans)
GO-4: Strengthen regional MCS efforts associated with fisheries	(1) Improve VMS compliance aboard all commercial fishing vessels; establish inter-operable VMS (e.g., sharing information, communication) (2) Ensure national licensing and registration of all fishing vessels (3) Implement Port State Measures (4) Enhance local compliance and community-supported enforcement (5) Establish multi-lateral cooperation and coordination regarding MCS
GO-5: Improve judicial and enforcement capacity associated with regional fisheries	(1) Exchange of knowledge and experience to better understand enforcement, and information on domestic laws and law enforcement procedures

	(2) Capacity-building for the judiciary on fisheries management
GO-6: Enhance stakeholder participation in regional fishery management processes and decision-making, integrating local wisdom and traditional knowledge, as applicable.	(1) Stakeholder participation on regulatory development and implementation (2) Strengthen and apply local wisdom and traditional knowledge within regional fishery management decision making processes (3) Implementation of ecosystem and community behavior change-based adaptation in fisheries to address climate change impacts
GO-7: Strengthen regional coordination and governance (national, local, transboundary)	(1) Formulation of zoning plans at all levels (e.g., provincial, sub-national or FMU/FMA) (2) Coordination mechanism development (Multilateral cooperation and coordination)

8. GOVERNANCE AND COORDINATION

The SSS sub-regional EAFM plan is proposed to be implemented by the three neighboring national governments (i.e., Indonesia, Malaysia, Philippines), with their respective fisheries authorities, and will require the coordination and cooperation of various government levels, as well as multiple sectors involved in the fisheries and ecosystem management. These include the ministries or institutions with management authority over fish, coasts, environment, and climate, as well as associated sectors such as livelihoods, agriculture, and tourism, among others. Primary agencies involved at the national level within the SSS sub-region will include the Ministry of Marine Affairs and Fisheries of Indonesia, the Malaysia Department of Fisheries, and the Bureau of Fisheries and Aquatic Resources of the Philippines. Many of the transboundary marine resource issues threatening marine ecosystems are typically outside of the mandate of national fisheries agencies, thus governance under the sub-regional plan includes coordination and cooperation between multiple national government agencies. Such coordination and cooperative activities include sharing data and information, supporting activity implementation, and harmonizing work plans and budgets across all three nations.

"Scaling up" national best management practices and innovations includes efforts to align resource management and conservation actions in national policy and among neighboring countries that share fish stocks, as well as to share lessons and best practices. Management decisions are more likely to be successful in achieving sub-regional ecosystem objectives that are matched to the spatial scale of the ecosystem, to the programs for monitoring all desired ecosystem attributes (ecological, social, and economic), and to the relevant management authorities (national, provincial, and local). Moreover, EAFM in the SSS sub-region must be integrated with other sectoral and environmental management approaches that address terrestrial and marine management, such as integrated coastal and watershed management.

There are existing mechanisms that can support the future implementation of the SSS sub-regional EAFM plan, such as the CTI-CFF EAFM Technical Working Group. As the SSS is one of the priority seascapes of the CTI-CFF, there is ongoing discussion in the CTI-CFF Seascape Technical Working Group (STWG) regarding the need to put in place a sub-regional coordination mechanism for the SSS (e.g., a Sulu-Sulawesi Sub-group under the STWG). This sub-group could provide coordinated implementation of SSS projects whether the management actions are for EAFM, MPA networks, climate resiliency, or protection of endangered species and their critical habitats. Another implementation modality could be based on the experience of the Sulu-Sulawesi Marine Ecoregion which had a functional governance structure for program development and implementation called the Tri-National Committee during the ten-year (2006-2016) cooperation between Indonesia, Malaysia, and Philippines on biodiversity conservation and sustainable development. Some of these activities have been carried forward under the CTI-CFF umbrella. An alternative mechanism is to utilize existing CTI-CFF entities (i.e. the EAFM TWG, NCCs, Regional Secretariat, or project-specific management units) as a coordination mechanism or the Southeast Asian Fisheries Development Center (SEAFDEC), considering the existing MOU between SEAFDEC and CTI-CFF.

9. COMPLIANCE

The establishment of a compliance and enforcement legal mechanism is required to specify who is responsible for enforcement, the means of enforcement ('soft' preventive measures or 'hard' sanctions), and the penalties for non-compliance. MCS programs should be developed to support compliance and enforcement.

There is adequate national and regional legal basis to support the compliance and enforcement mechanisms of the plan (Table 10). Within national waters, the national compliance and enforcement mechanisms will be observed. The three countries have similar laws and policies to address compliance and enforcement. Agreements between nations will be observed for transboundary compliance and enforcement.

In response to global and increasingly regional demands to ensure the legal status of fish and fishery products is the "Regional Plan of Action (RPOA-IUU) to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated Fishing in the Region." The RPOA-IUU is endorsed by eight of the ASEAN countries. FAO, SEAFDEC, InfoFish, and the WorldFish Center provide technical advice to the RPOA-IUU.

Table 10. National and Regional/International Legal Mechanisms for Compliance and Enforcement

Indonesia	Malaysia	Philippines
CTI-CFF NPOA	CTI-CFF NPOA	CTI-CFF NPOA
Act 31 on Fisheries	Fisheries Act of 1985	RA 8550: Fisheries Code as amended by RA 10654
Act 32 on Marine Affairs	11th Malaysia Plan (Strategic Medium-Term Development Plan	Local Government Code
Act 23 on Local Government	EAFM National Framework; Fisheries Management Plan	Agriculture and Fisheries Modernization Act (AFMA)
Coastal and Small Islands	Sabah 3rd Agricultural Policy	Wildlife Act
		Philippine Biodiversity Strategic Action Plan (PBSAP); Biodiversity Act
		NPOA-Sharks
		NPOA-Napoleon Wrasse
Regional/International		
CTI-CFF SOM		
CTI-CFF Regional Plan of Action (RPOA)		
Western and Central Pacific Fisheries Commission (WCPFC) Agreements		
CTI-CFF Regional Early Action Plan for Climate Change Adaptation (REAP CCA)		
Convention on Migratory Species (CMS)		
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)		
Sustainable Development Goals (SDGs)		
Food and Agriculture Organization (FAO)		
Regional Plan of Action to Promote Responsible Fishing Practices including Combating IUU Fishing in the Southeast Asia Region (RPOA-IUU)		
Southeast Asian Fisheries Development Center (SEAFDEC)		
Regional Strategic Action Plan on the Unsustainable Exploitation of Fish (RSAP) (SCS FMP)		
Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP EAGA)		
United Nations Convention on the Law of the Sea (UNCLOS) Art 123 (call for multilateral cooperation)		
Bilateral agreements, e.g., the median line in the Sulu-Sulawesi Seascape (Indonesia and the Philippines)		

10. DATA AND INFORMATION NEEDS

Data and information are the basis of good management. They underpin all stages of the EAFM process, including formulating policy, developing management plans, and evaluating progress and updating policy and plans to provide for continuous improvement. Data and information is used to establish monitoring and evaluation on the relevant components of the ecosystem: fisheries and fish stocks, habitat, oceanographic and environmental conditions, households and communities, and human activities, amongst many others. Because EAFM is a broadening of current fisheries management practices, the data and information needs will by necessity be broader. However, it is important to stress that immediate action should be based, as much as possible, on data and information that already exist.

In some countries, much of the information will already be available in reports and statistics from various research institutes, agencies and ministries. In others, EAFM will have to be based on comparatively fewer data. However, in these cases there is often extensive traditional knowledge about the ecosystem and the fishery, which can be extremely useful if collected and validated from interviews with local fishermen and other stakeholders. In all cases, information about the local situation should be complemented by information from ecologically similar situations elsewhere. It is important to coordinate the collection of information across agencies and experts and non-governmental organizations to understand the ecological, social, and economic properties of the fisheries management unit, including the interactions between these properties. It is necessary to clarify where the data are to be found and who collects, analyses and uses the information.

Preliminary data and information needed to support the plan are described in Section 13.

11. FINANCING

Sufficient, timely, and sustained financial resources to support the plan are critical to achieve long-term sustainability of food security, livelihoods, and conservation in the SSS. Funds need to be available to support planning, implementation, coordination, monitoring and enforcement, among other activities. Upon adoption of the plan by the three countries, a financial strategy will need to be developed. The plan activities will need to be integrated into the workplans and budgeting of the relevant ministries/departments in each country. The plan will also need to be mainstreamed into the national government agenda/program of each country.

Three potential sources of funding are available to support the plan: government; development partners; and private sources. Government funds include the funds from relevant ministries (Fisheries, Environment, etc.), and counterpart funds to projects. These include funds from the Governments of China, Japan, South Korea, and Germany. As well, United States-funded programs like the International Visitors Leadership Program, Embassies Science Fellows Program, and the National Science Fund PEER Program can fund short to long term engagements for building capacity and establishing research and/or other collaborative partnerships. Opportunities can be leveraged out of US programs that fund individuals, such as the Young Southeast Asian Leaders Initiative or ASEAN-US Science Prize for Women.

Development funds can come also from relevant ministries in each country. Indonesia identified the BMZ-G2G (government to government) project while the body agrees that the Global Environment Facility (GEF) is an important source of development funds, especially through the Resilient Reef Project proposal. The Asian Development Bank (ADB) can be a source of development funds (through loans). The participants agreed on the potential of developing a system of Payment for Ecosystem Services which could provide not only a program for development but also funds of continued development work.

Private sources include foundations, trust funds and donations. These funds can be accessed through various means, as follows: (i) approved work and financial plan; approved project proposal, e.g., GEF-7 proposal on Resilient Reefs; (ii) mainstreaming EAFM in the national government agenda/program (to ensure a budget allocation for the program); (iii) inclusion in the NPOA/RPOA; (iv) public-private partnerships (PPP); and (v) working with embassies.

12. COMMUNICATIONS

Ensuring public awareness of the plan, particularly the management actions, is important to effect support and adoption. The plan, and all the associated management actions, must be clearly communicated to all stakeholders, especially those who will be directly impacted by it. A communication strategy should be prepared, including an audience analysis matrix identifying audiences and their characteristics, a strategy for how and where results will be delivered, a set of key messages to each stakeholder group, a timeline for release of key messages, and a strategy for adaptive changes to the communication strategy and the plan as feedback from stakeholders is received.

Potential target audiences for the plan include:

- CTI-CFF;
- National Coordinating Committees;
- Stakeholders in each country (including indigenous people, women, youth, people's organizations, national decision-makers, national government agencies, local government and local chief executives, academe and research institutes);
- Potential donors and development partners;
- Private sector, including fishing industry, BIMP-EAGA fisheries cluster (a cooperation initiative by Brunei, Indonesia, Malaysia and the Philippines involving parts of Indonesia, Malaysia, and the Philippines. They meet regularly to discuss common interests in the eastern ASEAN region (Borneo, Mindanao) and others;
- Regional frameworks including RPOA-IUUF, RFMO-WCPC, SEAFDEC; and
- Media and general public.

Topics for key messages about the plan, targeted at different audiences, may include:

- Sulu-Sulawesi Seascape feeds the world;
- Conserving marine biodiversity;
- The importance of transboundary management;
- Individual country and shared responsibilities for fisheries management (among the three countries and with the global community);
- The plan's contribution to the Sustainable Development Goals, CTI-RPOA, etc.;
- The importance of buying sustainably caught fish;
- Plan development as a result of collaboration between the three countries;
- Benefits of the plan to stakeholders (including livelihoods, food security); and
- Sustaining ecosystem services.

Potential communication channels for the plan include:

- National media in each country (television, radio, newspaper);
- Social media;
- National forums, for example, Fish Conservation Week (Philippines, annual), Tuna Forum (Indonesia, annual) and Tuna Congress (Philippines, annual); and
- International forums, for example, CITES, May 2019, Sri Lanka; Our Ocean Conference 2019, Norway; APEC 2018, November, PNG; World Ocean Summit 2019, March 2019, Abu Dhabi; East Asia Seas Congress; CTI-CFF Annual SOM (including pre-SOM); Coral Triangle Day (annual); CTI development partners' meetings; university partnerships; and SEAFDEC Regional Fisheries Policy Network (RFPN).

All materials for communicating/socializing the plan should be branded with the CTI-CFF logo.

13. MONITORING & EVALUATION

Managing fisheries resources is a continuous, adaptive, and participatory process comprised of a set of related tasks that must be carried out to achieve a desired set of objectives. Plans must be monitored if they are to be kept on track; and evaluated if there is to be learning from successes and failures. Evaluation consists of

reviewing results of actions taken and assessing whether these actions have produced the desired outcomes; this helps to adapt and improve by learning. Effective plan assessment and evaluation involves several steps: (i) preliminary appraisal; (ii) baseline assessment; (iii) monitoring; and (iv) evaluation. Information for each of these steps is essential to maximize chances that the plan will be effective for the adaptive management process and to acquire lessons learned.

To keep track of the results and the progress against the plan, a Monitoring and Evaluation (M&E) system will need to be developed. Structured around the goals, objectives, and management action specified in the plan, the M&E system provides a series of common indicators to track progress against and to inform the success of the Plan. This provides the opportunity to readjust actions and strategies to meet the defined goals and objectives. The M&E system also provides a clear information pathway from measuring data in the field to a high-level indicator of success.

M&E indicators for EAFM and fisheries have been developed in the region through the CTI-CFF that can serve as a foundation the sub-regional plan's M&E system. An M&E Operation Manual has also been prepared by CTI-CFF that provides an M&E framework; defines indicators for each of the five RPOA goals, as well as the three higher level outcomes; provides a comprehensive workflow to collect, analyze and report indicators against progress; and helps the six countries and the technical working groups to manage the M&E System for adaptive management. While the Operation Manual is designed for CTI-CFF, the thematic indicators for EAFM and the country level process tables can serve as a guide for development of an M&E system for the sub-regional plan.

Ecological. In the plan's development, six objectives were reviewed and agreed upon. The Ecological Objectives from the draft sub-regional for the Sulu-Sulawesi Sea were matched to the CTI-CFF indicators to ensure alignment.

Table 11. Ecological objectives and indicators

Management Objectives	Management Measures	Indicators
EO-1: Establish and maintain optimal sustainable exploitation rates for fisheries	1. Input/output measures (Harvest Strategies, e.g., Seasonal Closures)	• Change in conservation status (international) of commercially important fish species (demersal and pelagic) and threatened species • Change in catch per unit effort (CPUE) by gear • Change in exploitation status for selected pelagic and other species • Number harvest strategy/ seasonal closure sites
	2. Learning and sharing exchanges on sustainable fisheries (best practices)	• Number of learning exchanges conducted
	3. Collection of data/information (new investments needed)	• Change in conservation status (international) of commercially important fish species (demersal and pelagic) and threatened species • Change in catch per unit effort (CPUE) by gear • Change in exploitation status for selected pelagic and other species

Management Objectives	Management Measures	Indicators
		• Number harvest strategy/ seasonal closure sites
EO-2: Establish and maintain suitable water quality parameters	4. Controls on land-based pollution sources (upstream)	• Change in catch per unit effort (CPUE) by gear • Change in exploitation status for selected pelagic and other species • Number harvest strategy/ seasonal closure sites • Number of areas compliant with waste management policies/plans • Decreased volume of marine debris landings • Water parameters attained and maintained (e.g., Siltation Level at X%) to include micro plastics
	5. Education on upstream pollution impacts on coastal fisheries	• Number of educational programs implemented • Number of students educated
	6. Regular water quality sampling	• Monitoring at 2 times a year based on seasonality of the sub-region
	7. Address regional red tide issues, including using remote sensing	• Number of hotspots identified and uploaded data to Atlas
EO-3: Restore critical fish habitat and conserve in situ marine biodiversity	8. Establish new MPAs in under-represented habitats and for insufficiently protected fish species and associated endangered or threatened marine species	• Condition of coral reef • Extent of mangroves and seagrasses (Mudflats) • Fish biomass • Extent of coral reef and associated habitats in protected areas • Extent and status of resilient reefs
	9. Strengthen the management effectiveness of existing MPAs	
	10. Restoration of degraded marine habitat that functions as breeding, recruitment, grow-out, and foraging habitat for specified transboundary fisheries	
EO-4: Control and maintain fishery by-catch at an ecologically-acceptable level	11. Input/output controls	• Change in conservation status (international) of commercially important fish species (demersal and pelagic) and threatened species • Change in catch per unit effort (CPUE) by gear • Change in exploitation status for selected pelagic and other species
	12. Technical measures	
	13. Placement (location) and sizing of FADs to minimize by-catch and catch of undersized/juvenile fish (also links to EO-3)	

Management Objectives	Management Measures	Indicators
EO-5: Minimize the negative impacts of fishing practices and technologies on the environment	14. Formulate and implement policy and regulations, for example, control input/outputs and technical measures, including FADs	• Number of policies and regulations promoting EAFM at regional and national levels with regulatory framework and budget allocated for their operationalization • Amount of budget allocated to regional research for science-based policies • Enforcement: decrease number of violations relative to effort • Number of technologies to reduce by-catch
	15. Exit plan for certain fishing gears	• Number of policies and agreements among the CT6 for the management of fisheries • Number of policies and laws adopted on live reef fish trade to decrease level of destructive fishing practices linked to the trade
EO-6: Create new scientific data and knowledge and improve regional information sharing	16. Conduct regional collaboration on ecological research and stock assessment; use regional database (CT Atlas)	• Number of access to data and uploading of data on the Atlas
	17. Strengthen & link electronic Catch Documentation and Traceability System (eCDTS) to FIS	
	18. Strengthen landing data collection (port only)	
	19. DNA tagging to illustrate products not traced to endangered species	
	20. Conduct larval dispersal studies regarding small pelagics	
	21. Study MPA spillover effects on stocks	
	22. Larval/planktonic stage identification	
	23. Remote sensing and assessment of red tide impacts on small pelagic populations and habitats	

Human Well-Being. Five "broad and general" objectives cover the human wellbeing, noting that the challenge of implementation is at the site level." These indicators align with the CTI-CFF Indicators.

Table 12. Human Well-Being Objectives and Indicators

Management objectives	Management measures	Indicators
SO-1: Enhance and stabilize income generation from regional fisheries	1. Capacity building and technical assistance on production, processing, marketing, and enterprise development (also supports SO-2 on community livelihoods, SO-3 on seafood traceability)	• Number of skills trainings provided on marketing and enterprise development • Number of men and women trained/had access to livelihood trainings
	2. Community-based entrepreneurship (community economic benefit, including community, family/household, individual)	• Number of available operational local enterprises • Percent change in average income of coastal households
SO-2: Improve community resilience through livelihood diversification (biodiversity-friendly enterprises)	3. Financial support by providing access to credit/financial institutions	• Number of men and women who have access to financial/credit institutions
	4. Incentive system to promote community/local enterprise	• Number of men and women who have access to state funds for livelihood development • Number of incentive systems developed and implemented
SO-3: Improve human well-being (fishers) characterized by legal, just, and equitable conditions (from SO-2)/ Improve seafood safety and traceability to improve marketability, consumer trust, and transparency relating to human well-being issues along the supply chain	5. Enhance compliance with international labor laws, particularly on-board fishing vessels	• Policies developed to improve compliance
	6. Develop monitoring for labor law compliance in fishing vessels	• Number of monitoring system available
	7. Implement the eCDT system	• eCDT implemented
	8. Track human well-being conditions within the seafood supply chain via eCDT system	• Data fields/key data elements incorporated into eCDT
SO-4: Strengthen equity and social benefit, to ensure access, participation, and decision-making	9. Conduct gender analysis of fisheries value chain and sensitivity training	• Number of gender analysis/studies conducted and made available
	10. Incorporate gender components in program cycle from the planning stage	• Number of programs incorporating gender components

Management objectives	Management measures	Indicators
	11. Regulation or policies (legal instruments) formulated and implemented to promote gender equity	• Number of policies formulated and implemented to promote gender equity • Number of available, operational local enterprises for marginalized sectors
	12. Share information/knowledge on how EAFM enhances plans and programs on social services (e.g., health, education)	• Number of learning platforms that link between social services initiatives and EAFM actions
SO-5: Enhance and stabilize household dietary consumption for improved ~~local~~ food security	13. Conduct consumer awareness campaigns on importance of seafood traceability, safety and fraud	• Number of awareness campaigns conducted
	14. Partner with stakeholders (wholesalers, importers, and retailers) to ensure products are safe, traceable, and sustainable	• Number of partnerships established
	15. Management measures to directly address nutritional, educational and health status	• Impact indicators: o Percent of coastal population with improved health status o Percent of coastal population with improved nutritional status o Percent of school enrollment/graduate

Recognizing the tight links between fishermen and middlemen (or bosses) in the Sulu-Sulawesi Seascape, it is notable to consider the following:

- Establishing financial support mechanisms (might not have to be cash), including fishers' cooperative to reduce fisher's dependence on the middle man.
- Management actions that are beneficial to all players because they all have a role to play. Taking out the middleman is easier said than done.
- Most incentive schemes in the Philippines, e.g., through buyback schemes and cash for work programs, address only the short-term, immediate needs. For the medium and long term, we must think about the social security aspect.

Establishing social norms on pro-environmental behavior, e.g., to address the problem of marine debris, must also be considered. Finally, gender-related measures should be broadened so they include not only gender but also other marginalized, disadvantaged and at-risk communities, including children, differently-abled persons, and others.

Governance. Governance has seven objectives and 18 management actions. These must be cross-referenced across the EAFM goals.

Table 13. Governance Objectives and Indicators

Management objectives	Management actions	Indicators
GO-1: Combat IUU-fishing	1. Regional collaboration on compliance to common agreements	• Collaboration instruments (RPOA-IUU, Code of Conduct for Responsible Fisheries, ASEAN, etc.) • Number of violations/non-compliance reduced relative to effort • Regional management measures translated to national rules and procedures and local ordinances • Numberof best practices on fisheries management
	2. Initiation of traceability implementation	• Regional traceability scheme established
GO-2: Strengthen national and local capacity to engage in and successfully undertake sustainable livelihoods and responsible fishing practices	3. Enhance existing capacity on livelihood, responsible fishing	• Number of trainings conducted • Coastal household income increased by100% (X2) • Number of livelihood initiatives in place • Number of community rights-based fishery management plans
	4. Increase awareness of sustainable livelihoods and responsible fishing practices modeling/piloting local community rights-based fishery management using behavior change tools at selected coastal communities	• Number of communication, education and public awareness (CEPA) activities conducted
GO-3: Develop resilient fisheries framework to address climate change impacts	5. Compile existing climate impact data for fisheries (assessment of climate impacts);	• Vulnerability and risk assessment studies for fisheries, per country or preferably sub-regionally
	6. Link/integrate region-wide early action plan for CCA	• Actions identified in EAFM plan are aligned with REAP-CCA
GO-4: Strengthen regional MCS efforts associated with fisheries	7. Improve VMS compliance aboard all commercial fishing vessels; establish inter-operable VMS (e.g., sharing info; communication)	• Operational MCS system, including VMS, licensing and registration, etc.
	8. Ensure national licensing and registration of all fishing vessels;	
	9. Implement Port State Measures	• Enactment of PSM

Management objectives	Management actions	Indicators
	10. Enhance local and national compliance and community-supported enforcement.	• Number of violations reduced relative to enforcement efforts • Number of deputy fish wardens/local law enforcers • Number of best practices (fisheries)
	11. Establish multi-lateral cooperation and coordination regarding MCS	• Cooperation instrument for MCS • Regional database on fisheries stocks status • Number of regional conservation management measures • Regional compliance scheme (observation on the compliance to regional CMMS)
GO-5: Improve judicial and enforcement capacity associated with fisheries	12. Exchange of knowledge and experience to better understand enforcement; and exchange of information on domestic laws and law enforcement procedures	• Report of violations and documentation of judicial process (e.g., exchange of how fisheries cases are litigated and decided)
	13. Capacity-building for the judiciary on fisheries management	• Number of trainings on fisheries management (for the judiciary)
GO-6: Enhance stakeholder participation in regional fishery management processes and decision-making, integrating local wisdom and traditional knowledge, as applicable.	14. Stakeholder participation on regulatory development and implementation	• Number of stakeholders participating
	15. Strengthen and apply local wisdom and traditional knowledge within regional fishery management decision making processes	• Documentation of local wisdom and traditional knowledge on fisheries management
	16. Implementation of ecosystem and community behavior change-based adaptation in fisheries to address climate change impacts	• Documentation of ecosystem and community changes from implementation of CC adaptation actions/measures
GO-7: Strengthen regional coordination and governance (national, local, transboundary)	17. Formulation of zoning plans at several levels (e.g., provincial, strategic areas)	• Harmonized MSP/Zoning plans (across borders)
	18. Coordination mechanism development	• Coordination mechanism in place

14. NEXT STEPS

Three potential route options have been identified and discussed to ensure that the sub-regional plan progresses to adoption and implementation, these include routing through the CTI-CFF, SEAFDEC, or the GEF-7. Out of the July 2018 Convergence Workshop, the following next steps were identified by workshop participants for USAID Oceans, CTI-CFF, and relevant partners to complete between July and December 2018:

Milestone	Target Completion	Status (as of late Nov. 2018)
Convergence Meeting/Review of EAFM Framework Plan	July 3-6, 2018	Completed
Joint Communique from Convergence Meeting	July 6, 2018	Completed
Transmit Convergence Meeting Report to Regional Secretariat for distribution to working group focal points/NCCs	July 20, 2018	Completed
Revise and complete draft sub-regional plan incorporating results of the July review	August - September 2018	Completed
Transmit draft sub-regional plan to Regional Secretariat for distribution to EAFM focal points/NCCs, or if necessary, directly to EAFM focal points/NCCs	October 2018	Completed
Conduct of Socialization Meetings with NCCs (Indonesia, Malaysia, Philippines) and CTI Regional Secretariat	October and November 2018	Completed
Final review of sub-regional plan by NCCs and EAFM TWG	November 2018	Completed
Pre-SOM meeting of EAFM and Seascapes TWGs to prepare for sub-regional plan endorsement	December 2018	Pending
Plan endorsement provided during SOM14 for implementation to proceed (2019)	December 2018	Pending
Implementation Workshop for approved sub-regional EAFM plan convened with NCCCs to guide regional- and country-level implementation of management actions	Early 2019	Pending

Should SOM14 not endorse implementation of this sub-regional plan and therefore an alternate process be used to implement it, this might occur through SEAFDEC (via ASEAN Member States, including Indonesia, Malaysia, and the Philippines) and/or the GEF-7 Program

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ANNEX III. RESULTS OF SOCIALIZATION MEETINGS

The Proposed Sulu-Sulawesi Seascape Sub-Regional EAFM Plan:
Results of Socialization Meetings, October-November 2018

Background

In support of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), the *Sub-Regional Plan for Managing Transboundary Fisheries in the Sulu-Sulawesi Seascape* is an Ecosystem Approach to Fisheries Management (EAFM) plan focusing on enabling the Sulu-Sulawesi Marine Ecoregion (SSME) to achieve a common fisheries management vision by 2030. The proposed plan outlines a set of specific goals, objectives, and management actions to be undertaken by relevant governmental agencies, non-governmental partners, and multi-lateral/regional organizations focused on fisheries management and biodiversity conservation in Indonesia, Malaysia and the Philippines. The plan is an entirely voluntary agreement and all proposed management actions are 'offered' (i.e., contributed) and 'maintained' at the discretion of each participating nation implementing the plan.

The plan was carefully developed through a 4-year, collaborative, multi-stakeholder, and multi-country process, beginning with the *U.S. Coral Triangle Initiative (CTI) Sulu-Sulawesi Seascape EAFM Planning Meeting* held on June 2-5, 2015, in Manado, Indonesia; followed by the *SEAFDEC/USAID Oceans Regional Fisheries Planning Workshop in Southeast Asia* held on August 23-25, 2017, in Bangkok, Thailand; and concluding with the CTI/GIZ/USAID Oceans *Sulu-Sulawesi Seascape Regional Convergence Meeting* held on July 3-6, 2018, in Cebu City, Philippines.

The proposed sub-regional plan is to be submitted for possible adoption at the forthcoming CTI-CFF Senior Officials Meeting (SOM) during December 2018. In advance of this, the CTI-CFF Regional Secretariat requested USAID Oceans to conduct a series of "socialization" meetings in Indonesia, Malaysia, and the Philippines between October to November 2018 in order to review and discuss the proposed sub-regional EAFM plan with relevant national authorities and non-governmental partner stakeholders. Specifically, socialization meetings were conducted in Sabah, Malaysia with Department of Fisheries Sabah, Sabah Parks, and WWF Malaysia (partner NGO) on October 9-10, 2018, and with the CTI National Coordination Committee (NCC) of Malaysia and WorldFish Centre (partner NGO) on November 2, 2018. In the Philippines, the socialization meeting was conducted with representatives of the NCC Philippines and partner NGOs on October 16, 2018. In Indonesia, socialization meetings were held in Jakarta with the NCC Indonesia and partner NGOs on November 12-13, 2018, followed by a socialization debriefing meeting with the Regional Secretariat in Manado on November 15, 2018. This document provides a summary of the key highlights of tri-national feedback and suggestions raised during these socialization meetings.

Key Highlights of the Socialization Meetings

Indonesia Feedback (socialization meetings conducted on November 12-13, 2018):

- NCC Indonesia: Acknowledged that the proposed EAFM plan was developed with inputs from various stakeholders, and in the July 2018 workshop inputs was provided by NCC representatives in coordination with EAFM with Seascape focal points with inputs from RARE, WWF, WCS and others local partners.
- NCC Indonesia requested for additional time to able to conduct internal meeting with EAFM team at DGF and provide inputs to the plan by November 26. Initial inputs received were rewording GO-7 (i.e., Strengthen regional coordination), and language on the text under Goal 1 – Ecological to replace the phrase "shared among three nations" on page 19.
- CTI-CFF Regional Secretariat proposed that the proposed plan to be submitted officially to the CTI-CFF EAFM Technical Working Group (TWG), with Seascapes TWG and Regional Secretariat copied. Regional Secretariat requested that the CTI-CFF logo be included on the sub-regional plan.
- NGOs perceived the proposed sub-regional as being comprehensive. NGOs suggested that there are too many proposed indicators. They suggest that the sub-regional plan instead focus only on a few indicators, while synchronizing with CTI-CFF and national level monitoring and evaluation measures.
- A governance and coordination similar to Regional Fisheries Management Organization (e.g., WCPFC) was also proposed as an option. And on implementation consideration (Section 2.4), national sovereignty (national waters) and sovereign rights (waters up to EEZ) must be considered.

- On Figure 4 (map of Sulu-Sulawesi area), the dash-lines between Indonesia and the Philippines was proposed to be deleted. Refinements on language of the management objectives and actions were proposed for EO1, EO3 and EO4 and links to SO1 and SO3 were proposed.
- One NGO proposed that EO2 (on water quality) to be deleted, but it was explained that the EAFM plan has already subjected to three multi-stakeholder workshop and with EFAM framework, the water quality is a component of ecological well-being.

Malaysia Feedback (socialization conducted on October 9-10 and November 2, 2018):

- NCC Malaysia indicated that the proposed sub-regional EAFM plan is generally "acceptable" as currently proposed and provides NCC Malaysia with a strong foundation through which to contribute to the plan's implementation.
- NCC Malaysia suggested that the proposed plan be submitted through the appropriate CTI mechanism; specifically, that it be provided to both the EAFM and Seascape TWGs via the CTI Regional Secretariat, as well as the NCCCs.
- During the NCC Malaysia meeting, DOF Sabah voiced its interest and support to advance the proposed sub-regional plan through SOM14 review, through its role as the EAFM TWG Vice Chair.
- DOF Sabah indicated that the proposed plan is comprehensive, general, and "open-ended enough" that the majority (or all) interests of the CT3 countries (Malaysia, Indonesia, and the Philippines) could easily be reflected under the currently proposed vision, goals, objectives, and management actions.
- DOF Sabah: A proposed governance mechanism similar to SSME needs to be included in the plan (building on the discussion from the July 2018 Convergence workshop)
- Sabah Parks: the EAFM plan should link to establishment of marine protected areas in EO-3 (Restore critical fish habitat and conserve in situ marine biodiversity
- WWF Malaysia: the EAFM plan could be a framework or guidance for Malaysia; benchmark and standards should be included as part of the M&E; and to consider to include Ornamental fish in EO-5 (Minimize the negative impacts of fishing practices and technologies on the environment)
- WorldFish Centre indicated its support for the proposed sub-regional plan, and its interest and willingness to explore how the Centre could support the monitoring and evaluation of the sub-regional plan, if implemented, including conducting scientific research in support of the plan.

Philippines Feedback (socialization conducted on October 16, 2018):

- NCC Philippines (including both its government and NGO members) voiced its general support for the proposed sub-regional EAFM plan, indicating that it would benefit national management activities underway and proposed.
- NCC Philippines suggested that the current language under Section 2.4 reflect not just use "sovereignty" but also "sovereign rights" since the Philippines had fisheries rights over the EEZ and continental shelf and to avoid prejudice and open for country to support the goals and objectives.
- NCC Philippines recommended that a designated section in the plan be allocated relating to the proposed tri-national governance mechanism for the plan's implementation. This "Governance and Coordination" section should include a statement about how implementation of the plan will be overseen and monitored by an appropriate coordination mechanism, as agreed by the TWGs and NCCs. Proposed language for this section was provided by NCC Philippines under Section 8 of the proposed sub-regional plan).
- NCC Philippines members also proposed pathways for plan endorsement, through the EAFM or Seascape TWGs (jointly) and CTI Regional Secretariat as Pre-SOM activities.

Process and Next Steps

The final version of the proposed Sulu Sulawesi Seascape Sub-regional EAFM plan will be formally submitted to the CTI-CFF Regional Secretariat and CTI-CFF EAFM and Seascapes on November 27, 2018. This finalized version will reflect socialization meeting inputs from all three NCCs. The finalized version of the proposed sub-regional plan will then be advanced for possible endorsement by both the CTI-CFF EAFM and Seascape TWGs during the Senior Officials Meeting (SOM-14) in December 2018. At the request of the CTI–CFF Regional Secretariat, the CTI-CFF logo will be included within the finalized version submitted. USAID Oceans has been invited by the EAFM TWG to provide behind-the-scenes technical support to the EAFM and Seascape TWGs and CTI Regional Secretariat relating to this item during SOM-14.