EAFM LEAD Toolkit

Version: November, 2016

Materials are available on:

WWW.EAFMLEARN.ORG

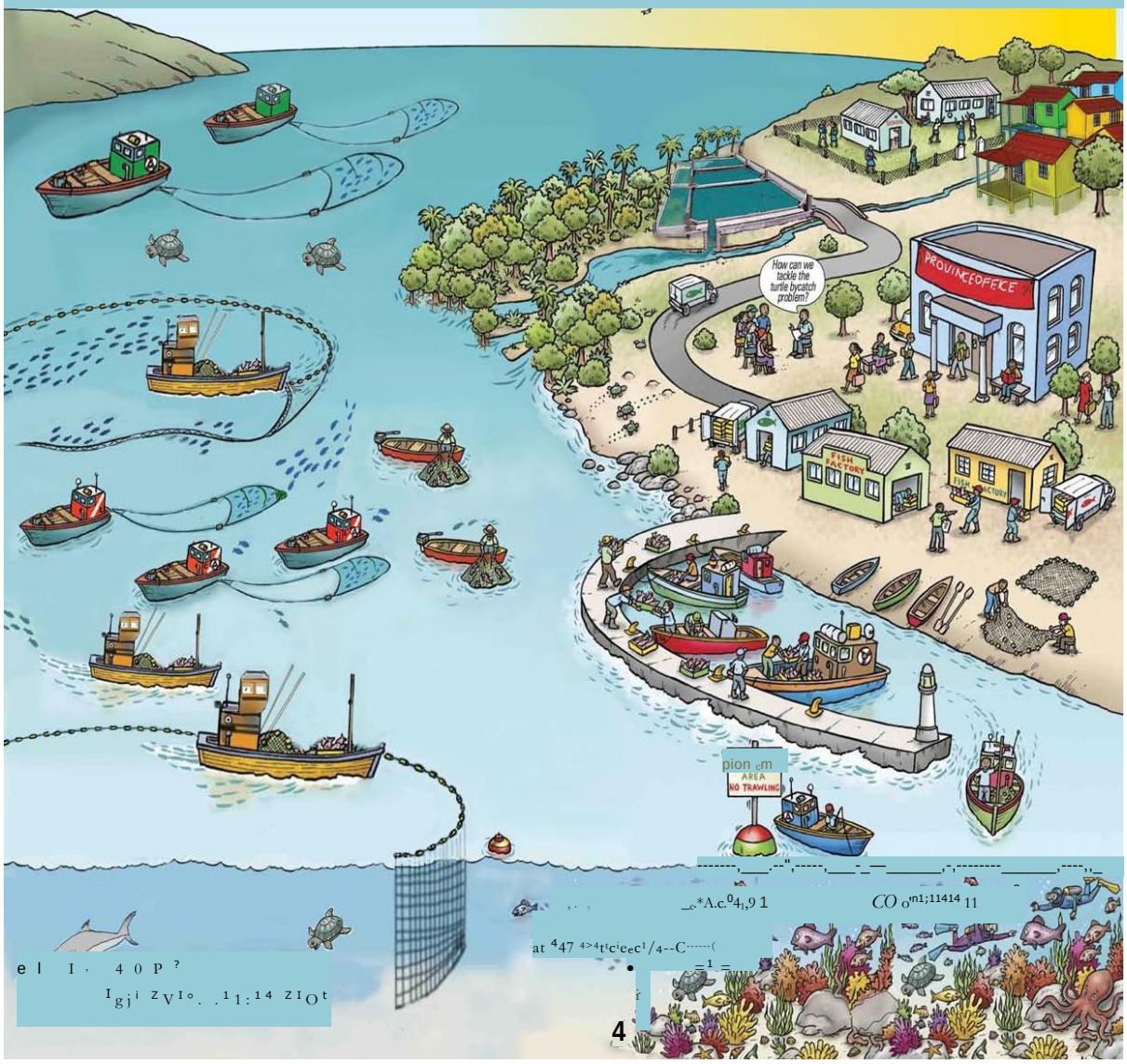
Contents

1. BROCHURES

EAFM brochure

The Ecosystem Approach to **Fisheries Management (EAFM)**

A better and more holistic way to manage complex marine capture fisheries



Essential EAFM flyer

Essential EAFM

Developing capacity in the Ecosystem Approach to Fisheries Management

Why EAFM?

The ecosystem approach offers a practical and effective means to manage complex fisheries.

It represents a move away from fisheries management that focuses on target species, towards systems and decision-making processes that balance environmental, human and social well-being within improved governance frameworks.

For many, these are new skills and the Essential EAFM course responds to the need for regional capacity development in this regard.

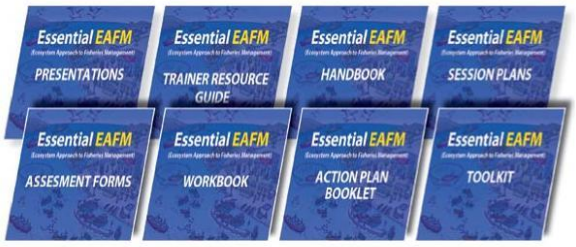
The **Essential EAFM training course**

The course focuses on the development of professional planning, analytical and interpersonal skills needed for better structured and more informed decision-making.

The Essential EAFM course will assist current and future fisheries managers to ensure that their approach to fisheries management is ecologically sound and properly accounts for human needs, while promoting good governance.

This course equips trainees to:

- develop and implement an effective EAFM plan
- manage fisheries more holistically
- better resolve fisheries issues and challenges
- reduce user group conflicts
- work cooperatively with all stakeholders
- help unlock financial resources



LEAD flyer

EAFM for Leaders, Executives & Decision-makers (LEAD)

By using the appropriate, situation-based tools, the users can help leaders to:

- understand the importance of, and why they should implement, an EAFM
- recognize and discuss human, ecological and governance issues and concerns and how moving towards an EAFM can help
- understand what an EAFM is
- understand in general how the EAFM planning process works
- recognize that they have the legal and institutional ability to engage in an EAFM
- communicate EAFM across sectors and throughout levels of government
- understand the need for developing capacity and taking steps towards the implementation of an EAFM (including making use of/ supporting the widespread application of the Essential EAFM training programme.

The Ecosystem Approach to Fisheries Management (EAFM) offers a practical and effective means to manage complex fisheries

EAFM LEAD provides leaders, executives and decision-makers with improved understanding of, and an ability to initiate and support the implementation of an EAFM on different levels of government and across sectors.

The LEAD toolkit is designed to assist EAFM champions and facilitators to acquaint leaders with EAFM, encourage leadership engagement in an EAFM and help leaders to empower their people to implement an EAFM.

2. CONVERSATIONS

A1: Conversation

One and two minute scripts for engaging with LEADers

PURPOSE

This tool is intended to provide guidance on how to engage an executive officer (typically senior Department of Fisheries, Fishery or Agriculture Minister or Secretary, or Provincial governor or equivalent) to promote the concept of EAFM as a tool to address a challenge in a fishery. It is expected that there is a narrow window of opportunity to engage an executive officer and to present a short outline of the challenge to be addressed and the proposed solution.

HOW TO USE THE DOCUMENT

This document should be used together with:

- "Hot news" and the LEAD course [A2: Conversations]
- Common issues in fisheries [B1: Reference material]
- How many EAFM-type actions are you already doing and how are they linked? [B3: Reference material]

KNOW THE TARGET

- Know the target for your communication
    - Google and/or talk with in-country representatives to learn more about the leader/minister to be approached
    - Identify topics of importance for them.
    - Know the current policies or initiatives and try to link these to how EAFM can deliver the outcome

DEVELOP A SHORT CHECKLIST OF TALKING POINTS

- Review the issues
    - What is likely to be of political interest to the intended target
    - What are the "hot topics" for the country/province

    - Be country/locality specific
- Explain what EAFM is good for
    - Link the status of the fisheries, habitats, human components and how fisheries are currently being managed
    - Apply 3 components of EAFM to discussion: human well-being; ecological well-being; good governance
    - Explain "why" EAFM is significant to the country (tying to hot topics and/or topics of interest) and how traditional fisheries management is failing
- Discuss how steps can be taken to initiate an EAFM approach or an EAFM plan

ENGAGE WITH THE EXECUTIVE

- Engaging the target
- Transitional statement (optional)
- Setting the stage
- What is the EAFM
- Why use the EAFM
- Wrap up

Example: " 1 min script" to include above information (should adapt depending on situation):

Engaging the Target:

YOU: Hello, Mr./Ms. Very Important Person. I understand that you have been recently briefed on a recent, violent conflict in Chumphon province between trawls and trap fishers.

VIP: Indeed/I know

Transition Statement:

YOU: I have been also working on this and believe that we have a way to address this issue in a manner that supports the mission of our ministry.

VIP: Really?

Setting the Stage:

YOU: Some people in the Ministry, including myself, have been trained to implement a process used to address ecosystem challenges.
It is called the Ecosystem Approach to Fisheries Management (EAFM).

VIP: What is EAFM?

What is EAFM

YOU: EAFM promotes sustainability by balancing the well-being of people with the health of the environment through good governance.
This is done by including extensive stakeholder participation.

VIP: But don't we do these things already?

Why use EAFM

YOU: Yes, but we are not doing them in a holistic integrated approach. The EAFM process can reduce conflict through a defined, holistic process that will help the stakeholders come to a solution.
A solution will also lead to better compliance of our laws.

Wrap Up

I would be happy to talk with you further or provide additional information. Thank you for your time.

Example: " 2 min script" to include above information (should adapt depending on situation):

Engaging the Target:
YOU: Hello, Mr./Ms. Very Important Person. I understand that you have been recently briefed on a recent, violent conflict in Chumphon province between trawls and trap fishers. This is an important issue for us to resolve in order to encourage the resumption of sustainable fishing and respect for the fisheries management plans.

VIP: Indeed/I know

Transition Statement:
YOU: I have also been working on/thinking about this and believe that we have a way to address this issue in a manner that supports the mission of our agency/ministry.

VIP: Really?

Setting the Stage:

YOU: Some people in the Ministry, including myself, have been trained to implement a process used to address ecosystem challenges. It is called the Ecosystem Approach to Fisheries Management (EAFM).

VIP: What is EAFM?

What is EAFM

YOU: EAFM promotes the sustainable development and a way to sustainably maximize the ecosystem benefits. It does this by balancing the well-being of people and the health of the environment through good governance. It is a process that involves 5 steps: Plan, Do and Check & Improve. This is done by including extensive stakeholder participation.

VIP: But don't we do these things already?

Why use EAFM

YOU: Yes, we are doing aspects of EAFM but not in a holistic approach. The EAFM process can reduce this trawl/trap conflict in Chumphon Province through a defined, holistic process that will help the stakeholders come to a solution. A solution will also lead to better compliance of our laws. EAFM has been introduced in the region and is an appropriate tool that supports participatory fisheries management.

Wrap Up

I would be happy to talk with you further or provide additional information. Thank you for your time.

A2: Conversation

"Hot news" and the LEAD course

PURPOSE

To have better engagement and understanding between the LEAD Course provider and the LEAD course participants in each country.

"Hot news" will

- Allow LEAD course providers to be aware of and able to discuss key current issues related to EAFM with decision makers(ministers/secretaries/LEAD course participants)
- Help LEAD course delivery for that country by linking these key issues to the courses and allowing course providers to prepare in advance.

The hot-news helps the LEAD course provider to understand better the context and issues for the participants. When the LEAD provider talks to them in the course, they might raise these problems for concerns. When we are briefing decision makers (ministers/secretaries/LEAD course participants) about LEAD and EAFM knowing the key issues in advance will help "sell" EAFM packages. It helps us to prepare and get win-win situation when we already prepared what the answer and link to EAFM. Also help to improve LEAD course more effective.
The examples below are for "hot-news" collected in many countries to help understand each country problem in fisheries. Sources can be personal contact, the press or government reports.

SOURCES OF HOT NEWS

- Hot news changes regularly
- It is recommended that" hot news" should cover the process by which news can be collected prior to any LEAD course.
- Hot news can often be found by an internet search of fisheries keywords for a certain country.
    - Examples of keywords that can quickly yield some hot news for a country are: fish; fisheries; fishing; fishers; illegal; ban; over fishing; impacts; management; trade etc.

- Hot news may not cover a major long term problem such as overfishing/over-capacity, unless it is becoming a political topic. This means that some serious underlying issues may not be in the news.

SOME COUNTRY LEVEL EXAMPLES OF "HOT ISSUES"

Human Well-being

Thailand	**Migrant fishing; trafficking of fishers; labour issues on fishing vessels** Trafficking of fisherman in Thailand (Action plan and implementation the DoF addressing Labour issues and promoting better working conditions in Thai fisheries industry)

Ecological well-being

Bangladesh	**Declaration of new (5th) Hilsa Sanctuary** The first time Government of Bangladesh declared close season for fishing by industrial trawler. The period is from 20 May to 23 July each year total 65 days
Indonesia	**Prohibition of the use of trawling** The next issue is the prohibition of the use of trawling in all Indonesian regions, moratorium on catching fish for the former, permitting foreign vessels (including many vessel from Thailand), the prohibition of transhipment of the catch of fish in the sea, and
	Conservation of Endangered, Threatened, and Protected (ETP) species The related IUU issues of conservation and endangered fish, especially turtle and shark and live reef fish.
India	**Controversy over permits to foreign fishing vessels in the deep sea zone** Controversy on the Report of the Expert Committee(headed by Dr Meenakumari) Constituted for Comprehensive Review of the Deep Sea Fishing Policy and Guidelines- fear of foreign and big domestic fishing industry taking over deepsea fishing, controversy on a new buffer zone suggested between 200m and 500 m depth and non-involvement of many fishing stakeholders in the decision making
Malaysia	**Consideration of prohibiting trawling** Malaysia is considering a trawl ban starting next year 2016.
Maldives	**Certification for pole-and-line caught tuna** Marine Stewardship Council (MSC) certification for the pole and line fishing of Tuna in Maldives (one year old positive story).

Governance

Bangladesh	**Lengthy process to confirm participation in IOTC as Cooperative Non-Contracting Party** At the 12th Session of the Compliance committee of IOTC held in Busan, Korea. Bangladesh became a Cooperating Non-Contracting Party (CNC).
	Measures introduced to limit impact of industrial fisheries First-time declaration of "closed season" for industrial trawling
India	**Transboundary fishing: trawling in Sri Lankan territorial waters (Palk Bay, Gulf of Mannar)** Indian trawler fishermen often cross into Sri Lankan territorial waters for fishing following which they are arrested and their boats are confiscated.
	Enforcement of fishing ban (closed season) Extension of the 45 days fishing ban on east coast and west coast to 61 days
Indonesia	**Illegal, unreported and unregulated (IUU) fishing** Foreign vessels dual flagged vessels and weak governance of the process of reflagging.
	Enforcement of the prohibition of transhipment
Malaysia	**Illegal, unreported and unregulated (IUU) fishing** IUU fishing. Malaysia have detained a suspected IUU foreign fishing vessel Perlon in Waters off Johor. Thus is the result of regional effort among the RPOA IUU member countries as part of their effort to combat IUU fishing.
Myanmar	**Illegal, unreported and unregulated (IUU) fishing by foreign vessels**
Sri Lanka	**EU ban of fisheries imports due to IUU fishing** EU Red card for IUU
	Transboundary fishing by Indian trawlers (Palk Bay) Indian trawler fishermen often cross into Sri Lankan territorial waters for fishing following which they are arrested and their boats are confiscated.
Thailand	**Outdated and inadequate legal frameworks or fisheries legislation; considerable time requirements in passing new legislation** EU issues yellow card to Thailand over illegal fishing (IUU). Thailand has expressed deep disappointment after the European Union (EU) issued a final warning, a so-called "yellow card" to the country, and gave Thailand six months to drastically improve measures against IUU.

A3: Conversations

Why EAFM?

PURPOSE

To provide a concise list of simple statements that can be used to sell EAFM to LEADers. For selling, "why" is often more powerful than "what" as the "why" statements provide incentives of EAFM that are relevant to them, their position and policies.

HOW TO USE THIS DOCUMENT

This list can be used in talking points, videos or when presenting material in the 1-day LEAD High-level Consultation. It is aim to convince LEADers that EAFM has something for them.

WHY YOU NEED EAFM

- EAFM is the way of the future. It breaks from conventional fisheries management that has not been very effective, especially in multi-species/multi-gear tropical fisheries.
- EAFM provides a vision that is more than just fisheries – it includes a healthy environment and habitats and improved well-being of the people.
- Fisheries in Asia are at a critical stage and urgently need a new approach to increase the potential benefits that can be derived from harvesting fish.
- EAFM helps improve the contributions of fisheries to food security, sustainable livelihoods, and economic growth through sustainable development that is ecological, social and economically sound.
- EAFM helps you meet the goal of equitable benefits through good governance of fisheries resources, now and into the future.
- EAFM will result in better management of the fisheries resources and best practices in your country, bringing international recognition. This recognition will increase demand for your fisheries products and secure a larger international market share. It helps your country stay away from (or get your country out of) the international bans of seafood imports.

- EAFM can help improve your image as a responsible and visionary leader and establish a legacy for introducing a fully integrated approach to fishery governance. It helps you to lead and plan ahead, even in an area of uncertainty like climate change impacts.

- EAFM helps you get more funding by
    - having well-designed plans that will influence your national budget allocation
    - attracting funding support from existing and new donors;
    - sharing finances and resources with other partners or sectors that strive for common goals;
    - providing support for reallocation of funds for more effective/efficient use

- The EAFM planning process provides an opportunity to break the short-term commitments associated with annual budgeting and short-term political appointments.

- EAMF encourages engagement with higher-level authorities that can increase political will to an EAFM plan and enable its recognition and institutionalization.

- Implementing an EAFM will require the allocation of rights in most, if not all, fisheries. EAFM can provide guidance on the needs for policy and legal reforms.

Possible catch phrases

- It is not just about fish and fishing.
- Fisheries management matters (not only to fishes, but) to all.
- To care not only about fish, but also about people.
- The value of EAFM is not just measured by how many more fish you catch, but by the quality of life of the people we care for.
- Not just good fishing, but also good living.
- Good living from good fisheries management.
- Better taking care of people by better fisheries management.
- There is a difference between managing fish and managing the ecosystem where fish are found.
- Fisheries can be managed differently and effectively.
- Be the fisheries management you want to be a part of (or to be proud to be a part of)

- EAFM helps fisheries managers figure how to succeed beyond what they thought possible.

Why is EAFM different from existing fisheries management i.e. what the fishery agency in your country/province/district is doing now?

- EAFM represents a move away from a management system that focuses mainly on the sustainable harvest of different fish species to a consideration of the major components in an ecosystem, and the social and economic benefits that can be derived from sustainable development.

- Existing fisheries management often deals only with a limited set of threats and issues. Often the real cause of the problem is not addressed, resulting in management being ineffective or creating negative unintended consequences.

- Participation and co-management are being practiced in an ad hoc, unplanned manner. EAFM integrates these principles and strengthens the principles such as adaptive management and precautionary approach that are needed in many situations at the moment.

- EAFM requires fisheries agencies to work more closely with other agencies and stakeholders that are responsible for managing other parts of the ecosystem which are critical for fisheries (for example mangroves and coral reefs) and for mitigating pollution and climate change impacts

- Looking at the bigger picture can provide many unexpected benefits such as being able to see the need for trade-offs in policies (e.g. increased value of harvested fish versus use in feed for animals).

- The process of EAFM is EAFM is adaptable and can be applied to other systems such as inland fisheries

A4: Conversations

What is EAFM?

PURPOSE

To provide a simple language version of what EAFM is without using technical terms.

HOW TO USE THIS DOCUMENT

These points can be used in the 1 or 2-minute conversations, videos and/or presentations.

WHAT IS EAFM?

- EAFM is an integrated management approach across land, water and natural resources that promotes both sustainable use and conservation of the systems that are already connected in the nature/environment;
- EAFM looks at the bigger picture. It recognises that fish and fisheries are part of a broader ecosystem that includes where fish live as well as the people who benefit from catching, trading and eating fish.
- EAFM recognizes the reality that fisheries depend on healthy ecosystems and that different components in an ecosystem, such as fish, habitats, fishers and other users are all connected and can impact each other.
- EAFM strives to find a balance between improving the well-being of the people and building or maintaining a healthy environment so that the benefits derived from fishing are sustained.
- EAFM strives to increase the benefits derived from catching fish without destroying the environment on which fish depend.
- EAFM considers the broader ecological, social and economic dimensions of sustainable development in fisheries and the interactions among ecosystem components. Examples include fish and fishing, post-harvest processing, habitats, pollution and other users;
- EAFM provides a framework to proactively address the underlying issues in a fishery by taking a more thoughtful long-term perspective to planning and management.

- EAFM provides a fisheries relevant framework to help you bring different management strategies/approaches/tools (e.g. co-management, coastal zone management, MPAs etc) together in a clear, logical and structured approach
- EAFM allows the threats to the long-term sustainability of the fishery to be viewed alongside shorter-term economic needs. Trade-offs and compromise agreements can be reached on actions to reduce impacts and enhance compliance.
- EAFM recognises that complex problems facing fisheries may require solutions outside the fishery sector. The use of an EAFM allows outside factors to be recognized and potentially opens the way for constructive dialogue. It also helps find solutions for mitigating negative impacts in different sectors, (e.g. labour and working conditions; vessel registration and licensing; interactions with tourism; improved sewage treatment; zoning of dredging to avoid nursery grounds).

A5: Conversations

EAFM Frequently asked questions (FAQs)

PURPOSE

To prepare facilitators to be able to answer frequently asked questions.

HOW TO USE THIS DOCUMENT

The facilitators should familiarize themselves with these questions and answers.

1. **How does EAFM differ from other approaches**

Q. How does EAFM differ from MSP, CRM, ICZM/ICM and conventional and/or existing fisheries management?

A. See A6: [Conversations] for answers to this question.

2. **How EAFM addresses specific issues and hot topics**

Q. How can EAFM help me with climate change?

A. The EAFM process can help you understand better how climate change is impacting your fisheries now and how it may potentially impact your fisheries and therefore your people, especially those who are directly dependent on fisheries for their livelihoods. EAFM brings together key stakeholders (who carry a range of knowledge and expertise) to examine ecosystem well-being (e.g. changes in habitats, changes in species health, composition, abundance and location), human well-being (e.g. increased costs of production, safety at sea risks, human migration, sustainable livelihoods), and governance (e.g. the need to adapt and work together with other stakeholders to develop more holistic fisheries management to address climate change impacts and potentially mitigate future impacts). The precautionary approach, which is one of the 7 key principles in EAFM, can help identify precautionary measures for adapting to changing climate, minimizing negative impacts, and taking advantage of new opportunities. By working together with other stakeholders, you can share and optimize resources (e.g. financial, personnel, research efforts, equipment and facilities) toward addressing climate concerns.

Q. How does EAFM fit into my country's national climate change planning?

A. The EAFM process can help you identify potential and existing climate change impacts nation-wide, assess vulnerability and develop national climate change adaptation plans. For example, by working together with key stakeholders, it can help you understand migration patterns of the key economic species or shifts in locations of their spawning areas and develop a plan that incorporates such information. It can help your country establish plans to be better prepared for impacts of ocean acidification or mass coral bleaching that could impact habitats of the fisheries resources. In addition, the EAFM process can help you gather data and knowledge to better understand the sources of greenhouse gas emissions and identify natural carbon sinks (such as mangroves) that the fisheries can protect. EAFM encourages working with relevant industries and communities to develop plans and policies that supports climate change mitigation at the national level (e.g. low-carbon aquaculture production systems, reduction of fishing fleet overcapacity and fossil fuel consumption). When appropriate, EAFM supports your country to take part in national climate change planning processes, such as through the United Nations Framework Convention on Climate Change (UNFCCC) Nationally Determined Contributions and National Adaptation Plans.

Q. How would EAFM help fishing communities to be better off?

A. Human well-being is one of the most important EAFM goals. Many of the major issues that impact fishing communities come from activities outside of their control such as habitat degradation, overfishing and IUU fishing by large-scale fishing vessels. The EAFM planning process includes fishing communities and others involved in fisheries to address these issues together. It engages and helps empower the fishing communities so that they have a voice to identify their priority issues, and together plan and implement agreed upon actions to improve food security, sustainable livelihoods and economic benefits. This will further result in multiple objectives being simultaneously addressed and reduced conflict. The EAFM process also included socioeconomic monitoring to ensure that the human well-being objectives and the management actions towards them are being achieved through adaptive management.

Q. How would EAFM help us combat IUU?

A. The EAFM process helps you explore the different components of IUU and their linkages. It helps identify the main causes of IUU – such as overcapacity/overfishing and weak monitoring, control and surveillance (MCS), address the underlying causes of these issues, and develop management actions that improve sustainable development. Addressing the causes of overcapacity/overfishing in an EAFM will require stakeholder-involved processes. For instance, to reduce fishing effort while maintaining socioeconomic benefits requires participatory EAFM planning, co-management,

awareness-raising and resource sharing, working together towards adaptive management. Strengthening MCS will also need strong participatory processes to ensure compliance and effective enforcement. Coordination and collaboration to address the underlying causes of IUU fishing, not just the symptoms, should result in better self-compliance, monitoring and surveillance, thereby making a more effective use of limited budgets (often wasted on large and expensive patrol vessels).

3. Scope of EAFM

Q. Is EAFM only about conserving ecosystems and biodiversity?

A. No, it is not only for conserving ecosystems and biodiversity. EAFM strives to balance both ecological wellbeing (including conserving ecosystems and biodiversity) with human well-being. It emphasizes the importance of the benefits that can be obtained through harvesting and processing fish, including increased food security, sustained livelihoods and employment, and increased national economy through trade. EAFM recognizes the reality that fisheries depend on healthy ecosystems, and that nature people are inter-dependent.

Q. How can EAFM fit into existing planning and governance frameworks?

A. EAFM can be used to evaluate, adapt, and enhance existing fisheries management plans as well as other types of natural resource management plans (e.g. coastal resource management) to make them more holistic and to encourage co-management. The EAFM planning process includes the following phases: Plan, Do and Check & Improve. These phases are best practices in any management efforts and focusing on fisheries issues means that EAFM will complement and add to other frameworks. The EAFM planning process will also help incorporate good practices such as those outlined in the key principles of EAFM (e.g. considering appropriate scale, cooperation and coordination, and balancing multiple objectives). Governance frameworks are necessary to successfully implement fisheries management and would result in greater outcomes.

4. Stakeholders & Engagement

Q. Are stakeholders from outside of the fisheries sector involved in EAFM planning?

A. Yes. EAFM is a holistic process which engages relevant stakeholders from different sectors. EAFM recognizes that fisheries activities can impact other sectors and vice versa. To effectively address many of the fisheries issues, it is essential that other sectors be involved. For example, habitat restoration often involves working with the forestry, coastal development, and tourism sectors. Aquatic pollution resulting from other sectors also often impacts negatively on fisheries and must be addressed by working with them,. Cooperation and coordination across sectors assists in reducing conflict and results in a sharing of resources (decreasing costs) and knowledge.

Q. Which organizations should take the lead in the EAFM planning process?

A. Typically, it will be the national ministry or bureau or provincial level agencies or governing units responsible for fisheries in the country and the provinces. In a fishing management unit that covers high seas, the national government is in charge because of

the UN Law of the Sea (UNCLOS)'s legal requirements which gave coastal nations the jurisdiction over the natural resources of an Exclusive Economic Zone (EEZ) that extends up to 200 miles off their shores. Within the EEZ each coastal State has jurisdiction to govern the use of its marine resources, and this is often specified in national legislation. In the high seas, regional organizations may assist the national governments in this effort. However, this does not mean that the leading authority in fisheries management has to lead every action that is developed in the EAFM plan that is jointly developed; this is where cooperation and coordination with other agencies and sharing of resources will strengthen fisheries management.

Q. Does EAFM help government and NGOs/CSOs work together?

A. Yes, NGOs/CSOs are important stakeholders and are an integral part of the EAFM process. In many fisheries management units, they also serve as important facilitators for the fishing and local communities to become successfully engaged in management planning and actions. Cooperation, coordination and co-management involving NGOs/CSOs helps harness important traditional knowledge, helps implement management actions, strengthens monitoring and evaluation (M&E), and reduces conflict.

Q. Should private sector businesses (not fishers themselves but the related businesses that support fishing) be involved in EAFM?

A. Private sector businesses, especially those engaged in the supply of fishing vessels and equipment, as well as those involved in post-harvest activities are critical to the success or otherwise of fishing and fishers. Through the participatory approach, their engagement in the EAFM process is essential. In conventional fisheries management their involvement is often ignored and many of the issues and their solutions are not included.

Q. How are stakeholders such as fishers, involved in the EAFM process?

A. As with all stakeholders, they are involved through a participatory process in all phases of the EAFM management cycle (Plan, Do & Check & Improve). In a fishery management unit, where fishers or fishing communities are socially or economically disadvantaged and lack the needed organization that allows for their adequate representation, a third party, such as NGOs or CSOs may be needed to facilitate their involvement. Through this process they are able to voice concerns, contribute knowledge, gain awareness, help improve their situation by providing practical solutions, and assist in implementing management actions (including compliance and enforcement) and later monitoring, while reducing conflict.

Q. How can EAFM help improve the lives of disadvantaged groups including women, poorer households and minority communities?

A. Through the processes of stakeholder analysis and developing human well-being goals and objectives in an EAFM, these disadvantaged groups are given equal consideration, and in certain cases even higher priorities, as all other stakeholder groups. The EAFM process gives disadvantaged groups a voice in the discussion. If carried out effectively, the process should result in enriched human well-being that includes improvements in gender equality, livelihoods, economic benefits and health.

5. Timing & Resources

Q. Is it expensive to implement EAFM?

A. The level of human and financial assets required can be scaled according to the management objectives, management actions and implementation strategies. Through EAFM, budget requirements can often be shared among the stakeholders and other sectors impacted by and/or benefitting from the EAFM plan. Personnel and other resources can also be shared, resulting in reduced expenses for any one agency. Reprogramming of funds from existing efforts that are no longer necessary can also take place. Having effective EAFM plans can also generate increased government budget, support from others countries and international organizations, and result in increased political will.

Q. How long does it take to develop a good EAFM plan?

A. It depends on the scale and complexity of the issue, especially the time it takes to identify and familiarize them with the EAFM process, and engage all the relevant stakeholders through the planning process. With familiarity of the EAFM process, and once the stakeholders are identified and the issues are defined, it may take 6 months (or more) to complete the planning phase. It is important that adequate time is taken to fully engage the stakeholders throughout the process and it is essential to take the time, to ensure stakeholders' ownership. In cases where sufficient time is not allotted (e.g a mandatory deadline/legal requirement must be met), it is critical that the process be revisited with the appropriate stakeholders and adapted accordingly.

6. Impacts/Outcomes/Examples

Q. Are there examples of EAFM working successfully in Asia?

A. Many countries are already doing aspects of EAFM. Introduction of EAFM, as a holistic concept and alternative way to manage fisheries started in 2009 and several countries in the region, including the Philippines, Indonesia and Thailand, have adopted the concept for their national fisheries management. However, although the concept of EAFM is not new, as of 2016, EAFM implementation in the region is still in its infancy. The Samar Sea in the Philippines – see Reference materials B6) and the regional fisheries management areas (or WPPs) in Indonesia have drafted their EAFM plans. The

management cycles, especially the “do: and “check and improve” phases of these plans are still to be completed and to allow for evaluation of their successes.

Q. How can the impact of EAFM be monitored and assessed?

A. The EAFM planning process requires that the stakeholders develop a monitoring and evaluation (M&E) plan. Indicators monitor the success of management actions and ways of collecting data or data sources are identified. The results of M&E will help the stakeholder to adapt their management as needed. This process of checking, improving and adapting is part of the continuous EAFM management cycle.

7. Application to other situations

Q. Can the EAFM be applied to freshwater fisheries areas and for aquaculture planning?

A. The EAFM planning process is independent of the type of fishery and method of production/harvest. The process for freshwater fisheries and aquaculture is the same as for marine species. The important requirement is that all relevant stakeholders must be engaged throughout the process.

Q. Can we modify EAFM to suit our local conditions?

A. The approach can be applied at any scale and should be modified to meet the needs of a given situation.

8. Information & Capacity Development Resources

Q. What organization(s) can deliver trainings on the EAFM Process?

A. This can be the government, a regional or international organization, or an NGO with responsibility for advising on fisheries management and/or capacity building or an organization that is willing to champion the holistic engagement required for successful EAFM.

Q. What EAFM training courses are available?

A. The Essential EAFM (E-EAFM) training course is the standard course that is being delivered in the region. This course is a complete package that includes comprehensive trainer and participant materials. The course materials are available in English, for free, at **www.eafmlearn.org,** which includes the most up-to-date materials. In addition to

the E-EAFM training course, the EAFM for Leaders, Executives and Decision-makers (LEAD) toolkit, can also be found at this website. The LEAD tools are designed to be used in a high level consultation for leaders to help inform leaders and other high level entities about EAFM, creating understanding and willingness to support an EAFM.

Q. Are E-EAFM materials available in other languages?

A. Course materials have been and are currently being translated in different languages. The responsibility for translation is often with the national governments and are supported by regional or international fisheries organization, such as the Southeast Asia Fisheries Development Center (SEAFDEC) or the Food and Agriculture Organization (FAO) of the United Nations. As of 2016, the E-EAFM course have been translated in Indonesian Bahasa and Thai.

Q. Where can we find trainers for EAFM?

A. E-EAFM trainers are those who have gone through the Essential EAFM training, have participated in a Training-of-the-Trainers (ToT) course, and/or developed the course itself. Most countries in the Southeast Asia and Bay of Bengal region have at least 1 person who has gone through an EAFM Training of Trainers (as of 2016) course. Larger organizations like SEAFDEC, and NOAA Fisheries (USA) have more trainers.
NOTE: The **www.eafmlearn.org** is planning to compile information on training resources.

Q. Where can we find funding to support EAFM?

A. EAFM, especially in the planning stage, can help you get more funding by

a) providing a convincing project outline and concept to support funding requests from donors;

b) having well-designed plans that will influence your national budget allocation and donor funding support;

b) sharing finances and resources with other partners;

c) providing support for reallocation of funds for more effective/efficient use

In cases where a Government is committing to EAFM as a way to manage coastal resources, domestic budgets may be available. This could include respective Department of Fisheries budgets but also source funds from other departments with an interest in coastal resources management, such as tourism.
The EAFM framework of balancing ecological well-being with human well-being through good governance can also be an effective way to frame new development projects. For example, sustainable coastal resources could be a project goal will three outputs, (ecological well-being, human well-being and good governance) as project outputs or objectives. Designing a project around an EAFM framework should ensure that the

project has a balanced approach and broad stakeholder participation and can be expected to attract significant donor funding as a result.
EAFM has broad international donor interest and support. As a result, national and regional projects should be able to justify the reallocation of funding for EAFM training, piloting and roll out, from within existing donor funded projects as well as government funding.

Q. Where can I get more information on EAFM?
A. Please see **www.eafmlearn.org.**

A6: Conversations

How is EAFM different from MSP, CRM, ICZM/ICM and conventional and/or existing fisheries management?

PURPOSE

To prepare facilitators to be able to answer why EAFM differs from some other existing management approaches.

MSP = Marine spatial planning

CRM = Coastal resource management

ICM = Integrated coastal management

ICZM = Integrated coastal zone management

HOW TO USE THIS DOCUMENT

The facilitators should familiarize themselves with the following questions and answers. Definitions of the approaches are at Annex 1.

BACKGROUND

Because many of the existing approaches are based on the "ecosystem approach" concept but were developed in parallel by different user groups with certain management interests, they share many of the same principles and have many commonalities and yet the management focus or coverage can be different. The main differences relate primarily to the target for management (e.g. coastal resources vs. fisheries). From an EAFM perspective, some can be considered as management tools (e.g. MSP and MPA). EAFM is an approach developed specifically for fisheries and will complement may of the other approaches, especially in addressing fisheries resource and fisheries governance issues such as overcapacity, overfishing, IUU fishing and use of destructive gears in a multi-user, multi-sectoral context.

Q & A

Q. How is EAFM different from conventional and/or existing fisheries management i.e. what the fishery agency in your country/province/district is doing now?

A. EAFM moves away from a management system that focuses mainly on the sustainable harvest of target species to a consideration of the major components in an ecosystem and their interactions, as well as the social and economic benefits that can be derived from sustainable management. EAFM recognizes that fish and fisheries are part

of a broader ecosystem that includes the habitats where fish live as well as the people who benefit from harvesting, trading and eating fish. There are also other users of the ecosystem and EAFM works to balance the multiple objectives that can impact the ecosystem and/or be impacted by how the system is managed.

Conventional fisheries management often deals with a limited set of threats and issues and often the cause of the problem is not addressed. Decision making is often guided by target species stock assessment, a process not well suited to multi-species, multi-gear fisheries and not factoring in influences from other users and sectors.

Existing fisheries management may be conventional fisheries management (depending on the country or area) or may have adopted some aspects of EAFM, but still also have some aspects of conventional management.

Q. What is the difference between EAFM and ICZM/ICM and CRM?

A. Integrated coastal zone management (ICZM), integrated coastal management (ICM), coastal resource management (CRM) and EAFM all apply the basic principles of an ecosystem approach. While ICZM and CRM use the ecosystem approach to manage land, water, and living resources in coastal areas and promote conservation and sustainable use in an equitable way, EAFM focuses on the fisheries component (including coastal and off-shore waters). Often the fisheries management units go beyond the coastal areas to cover part of the ocean and high seas.

Q. How are MPAs related to EAFM?

A. Marine protected areas or MPAs are clearly defined areas that are afforded greater protection than the surrounding waters for biodiversity conservation or fisheries management purposes. They may include fish sanctuaries or refuges, locally managed marine areas, and no-take areas. From an EAFM perspective, MPAs are an important tool for managing fisheries, but do not equate to EAFM as they cannot address all issues/elements that EAFM includes. Some key elements of fisheries management which MPAs do not usually address include control of fishing capacity, management of an area beyond the boundary of the MPA; and impacts of other uses on fisheries and/or the marine ecosystem.

Q: Is Marine Spatial Planning (MSP) the same as EAFM (or how are they linked)?

A: EAFM and MSP complement each other. EAFM is a process to balance ecological well-being with human well-being through good governance in a fisheries context. To achieve this goal, many tools, processes and approaches, including MSP, can be used. MSP is 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 (UNESCO, 2009). The

term covers both (i) a plan for users; and (ii) implementation tools – e.g. zonation that includes MPAs. MSP can be thought of as a management action for achieving EA objectives in fisheries and taking multiple sectors into consideration.

EAFM complements other approaches

All approaches are encompassed under the ecosystem approach (EA/EBM) (see diagram below). EAFM can incorporates conventional fisheries management and overlaps with co-management, ICZM and MSP.

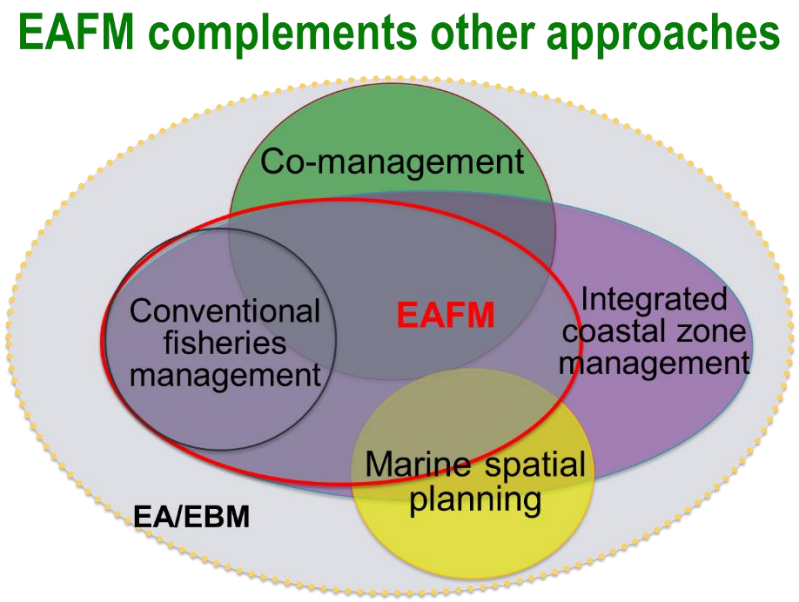


Table: Summary of differences among EAFM/CRM and ICM in the Philippines

	Management Approaches (may overlap)		
	EAFM	**CRM**	**ICM**
Ecosystem approach	Yes	Yes	Yes
Primary resource focus	Fisheries, multi-species	All coastal resources	All of the coastal zone
Primary area focus (spatial scale)	fishing ground, stock distribution range, stock habitats, that may include municipal, national, and	coastal zone, may include associated watersheds, river basins	coastal zone, including associated watersheds, river basins

	international waters		
Governance scale	single or multiple LGUs with jurisdiction covering the fishing ground, distribution range or habitats; complementary jurisdiction of BFAR	generally single LGU, but may be integrated across contiguous LGUs	necessarily multi-LGU, multi-agency, ridge-to-reef because of the scale and complexity of the impacts of coastal activities.
Primary management focus	Sustainability of fisheries, fish habitats, equitable distribution of benefits from fisheries	Sustainable use of all coastal resources, use conflicts among various users of coastal zone (generally users directly dependent on coastal resources)	Conflict management among various users in the coastal zone; minimize adverse impacts of users of coastal zone on the environment.
Relevant legal basis (PH)	Fisheries Code (in RA 10654)	Local Government Code (RA 7160)	ICM (EO 533)
Primary agency responsible	BFAR, LGU (for the most part, issues can be addressed by lead agency, but consults and coordinates with other agencies)	LGU (consults and coordinates with other agencies)	DENR, LGU Inter-agency coordination and collaboration critical since issues cannot be addressed by single agency.
Co-management arrangements	Yes	Yes	Yes
Zoning/ spatial planning as a tool for management	Yes	Yes	Yes

Annex 1: Definitions

Co-management

Partnership arrangements between key stakeholders (often including government) to share the responsibility and authority for the management of the fisheries and coastal resources, with various degrees of power sharing. Co-management is a fundamental principle of EAFM in that it encourages stakeholder participation, both in planning and implementation.

Conventional and/or existing fisheries management:

Fisheries management is a process designed to improve the benefits that society receives from harvesting fisheries resources. The main aim is to ensure the continued productivity of the target species (and sometimes the associated by-catch) through control of fishing effort, gear, and the total catch of target species. Conventional fisheries management, especially as was applied in temperate countries, does not consider the ecosystem as a whole, nor does it consider other factors, including competing objectives among different users and sectors, that may impact the ecosystem that the fish need to survive and thrive. It also does not consider impacts management (or lack thereof) may have on key user groups.

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 (CBD, 2000). Often used interchangeably with ecosystem-based management.

Ecosystem approach to fisheries management (EAFM): EAFM is a more holistic approach to management that represents a move away from fisheries management systems that focus only on the sustainable harvest of target species, towards systems and decision-making processes that balance ecological well-being with human and societal well-being, within improved governance frameworks, in order to achieve sustainable development. It 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).

Integrated coastal zone management (ICZM)/ Integrated Coastal Management (ICM):

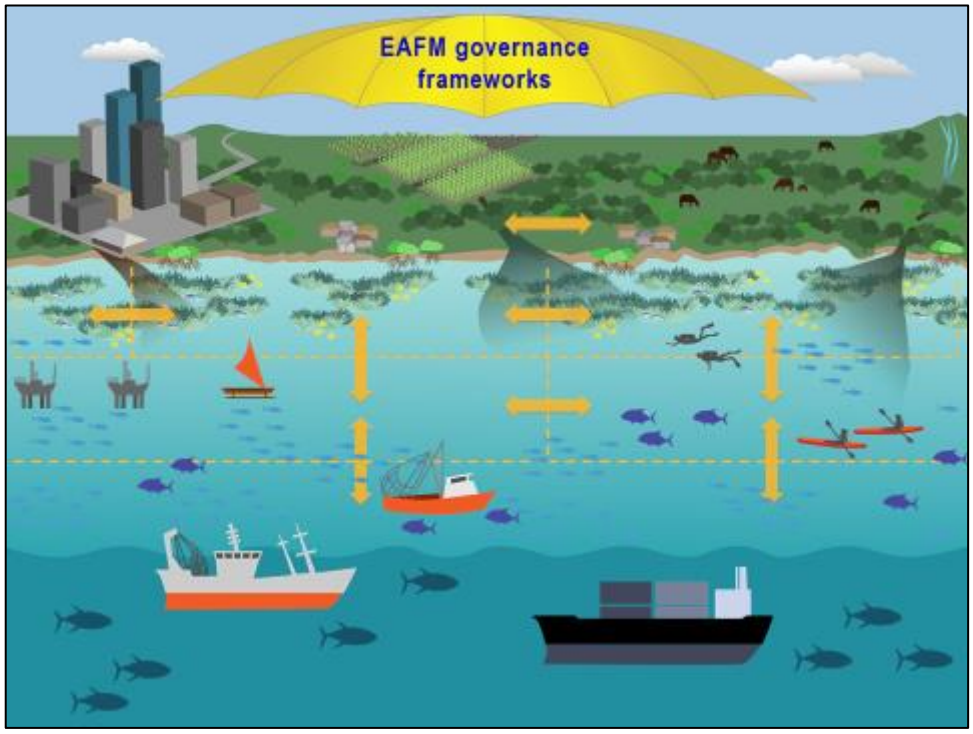
An ecosystem approach to managing a coastal area that involves a systematic process for managing competing issues in marine and coastal areas, including diverse and multiple uses of natural resources. Under ICM, decisions are taken for the sustainable use, development and protection of coastal and marine areas and resources.

Marine protected areas (MPA):
A clearly defined area managed and protected (usually by restricting human activities) to achieve conservation of nature, with associated ecosystem services and cultural values. This can be an important tool to address some of the threats and issues identified under EAFM.

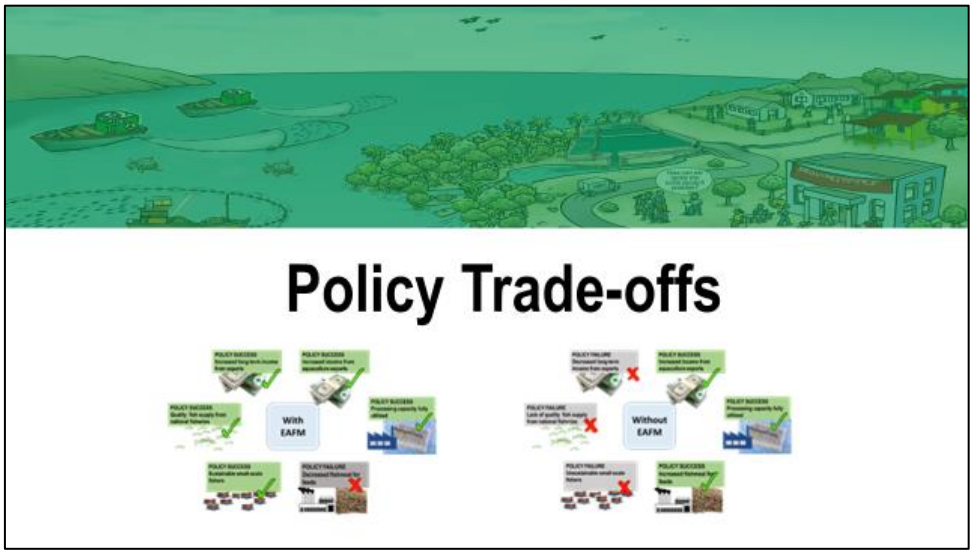
Marine spatial planning (MSP):
Planning that delineates user access based on the spatial and temporal distribution of human activities. Sometimes referred to as coastal and marine spatial planning (CMSP). This can be an important tool to address some of the threats and issues identified under EAFM through zoning.

3. ANIMATIONS

EAFM governance frameworks



Policy trade-offs



4. VIDEOS

Full EAFM video video

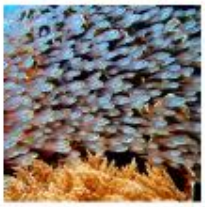
Short EAFM video (without principles and case study)

Principles of EAFM (extract)

Samar Sea Case Study (extract)

5. POSTERS

Posters 1 - 8



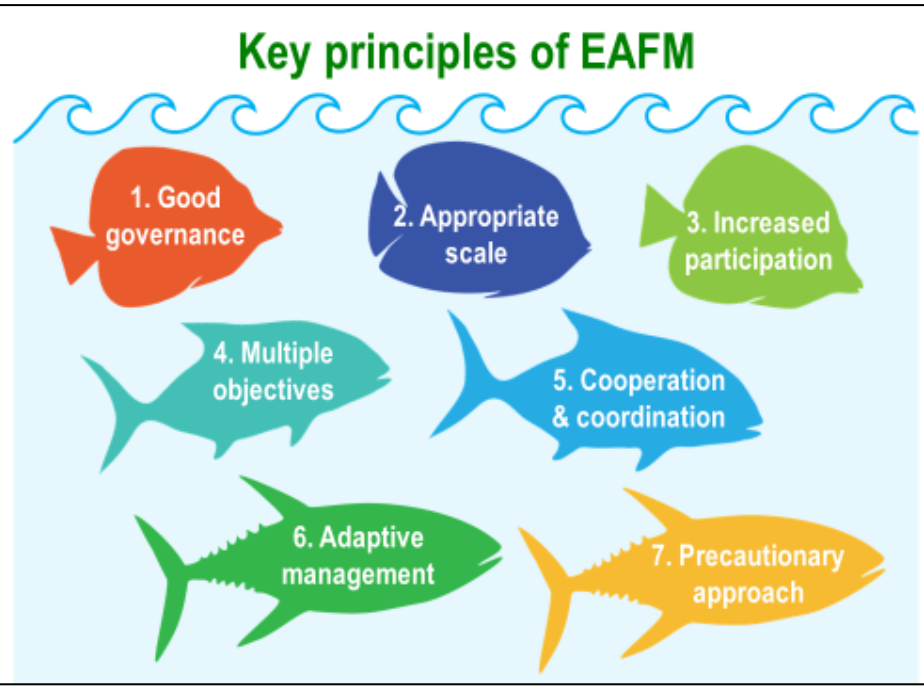
The future we want: our vision

- Well-governed fisheries sector
- Abundant fisheries resources
- Healthy environment and habitats
- Increased jobs, profits, and improved economy
- Improved human health and prosperity

A legacy for you, your children, and future generations


EA promotes sustainable development
GOOD GOVERNANCE
ECOLOGICAL WELL-BEING
HUMAN WELL-BEING
FOR FUTURE GENERATIONS


EAFM is the ecosystem approach (EA) applied to fisheries management (FM)
Image adapted from FAO EAF Nansen Project
EAFM
Bigger Picture


Key principles of EAFM
1. Good governance
2. Appropriate scale
3. Increased participation
4. Multiple objectives
5. Cooperation & coordination
6. Adaptive management
7. Precautionary approach

EAFM PLAN:
linking legislation/policy to action

Example

Sustainably manage fisheries → **Legislation/policy**

Limit fishing effort in the trawl fishery → **EAFM PLAN**

Control number of fishing boats/gears → **Management actions**

EAFM is based on PLAN → DO → CHECK & IMPROVE

EAFM complements other approaches

1. Essential EAFM training package
2. EAFM LEAD (leaders, executives, and decision makers) "tool box"
3. Regional trainers and training institutions

www.eafmlearn.org

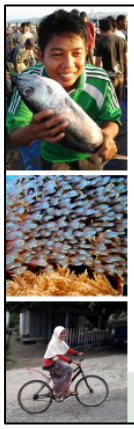
6. POWERPOINT

The why and what of EAFM

The why and what of an Ecosystem Approach to Fisheries Management (EAFM)

Why the ecosystem approach?

- Fisheries face many threats and issues that reduce their potential to contribute to sustainable development
- In the past, fisheries management has focused on fish and fishing, but not all the issues
- Issues and interlinked and need to account for the broader ecosystem impacts of fisheries and to manage more holistically (bigger picture)



The future we want: our vision

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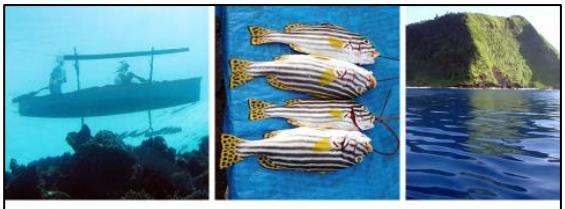


By maximizing ecosystem benefits, EAFM can result in increased food security & reduced poverty

- Fish for food
- Income
- Employment
- Livelihoods
- Trade
- Coastal protection

An ecosystem

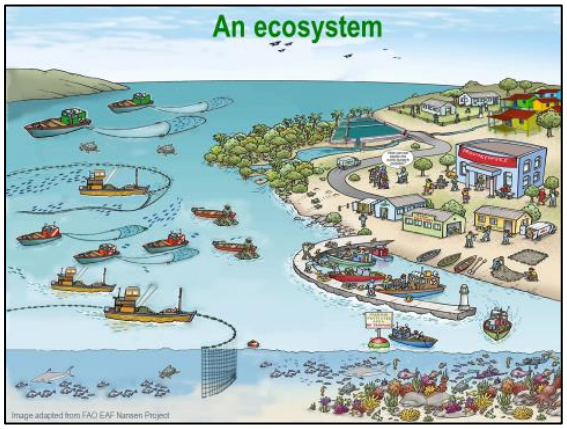


Image adapted from FAO EAF Nansen Project

EA promotes sustainable development

What is the Ecosystem Approach?

- The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

  Convention on Biodiversity (CBD 2000)

- Note: EA is often used interchangeably with ecosystem-based management (EBM)

EAFM builds on what is in place

- Builds on/improves existing management
- Strengthens agencies through better planning and cooperation
- Builds on and integrates co-management and other participatory approaches
- Uses the traditional and scientific knowledge that already exists
- Improves human capacity in skills needed for sustainable management

EAFM strengthens co-management

- Encourages stakeholder engagement
- Improves facilitation skills
- Requires effective negotiation
- Improves conflict resolution

What's in it for you and your agency?

- Helps link existing approaches through a logical and comprehensive framework
- Focuses on the real issues and their causes
- Increases trade opportunities and demand for fisheries products
- Reduces conflicts and political tensions
- Helps staff become more effective in natural resource management
- Helps leverage funding and leads to better reallocation of existing funds
- Results in sharing of responsibilities and human resources with other agencies

You and your agency WILL make a difference for the fisheries, the people, and the environment…

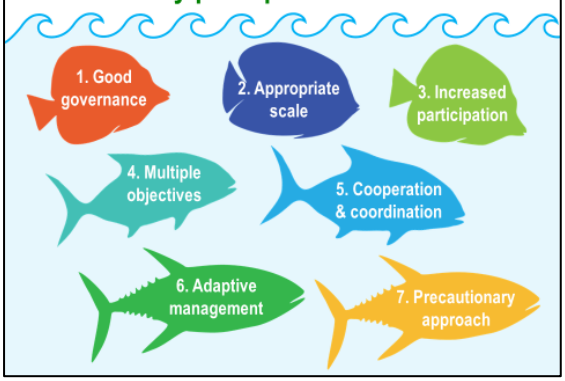
EAFM is based on PLAN → DO → CHECK & IMPROVE

EAFM PLAN: linking legislation & policy to action

	Example
Legislation/policy	*Sustainably manage fisheries*
EAFM PLAN	*Limit fishing effort in the trawl fishery*
Management actions	*Control number of fishing boats/gears*

EAFM complements other approaches

Key principles of EAFM



1. Essential EAFM training package
2. EAFM LEAD (leaders, executives, and decision makers) "tool box"
3. Regional trainers and training institutions

www.eafmlearn.org

7. CONSULTATIONS/MEETINGS

Checklist for organising a high level consultation

The following provides a checklist on how the organise a high level consultation (HLC). This needs to be used at least 1 month before the event.

- Clarify who is main person responsible for managing the LEAD event;
- Identify local partners and have a key point of contact and explain that you expect logistics support ahead of event;
- Find out who the likely audience will be (name, position, role) to understand if they are mid/ senior level;
- Discuss in your team what audience likely interests/ concerns are and think how you will address and manage these (include hot topic and country);
- Link up with EAFM resource persons and local partners if you want to brainstorm/ask questions (email/ skype);
- Develop agenda and outline based on time available and type of audience;
- Decide who will facilitate what sessions (allocate responsibilities);
- Discuss with local partner what is required for them to provide;
- Plan logistics and preparation of materials and send to local partner (see Excel checklist for 1 day consultation);
- Think about suggestions for follow up actions/ commitments;
- Ensure you record actions agreed, lessons learnt and future commitments;
- Circulate report (if expected) or other form of knowledge sharing; and

- Share feedback and insights on eafmlearn.org and with EAFM resource persons pool.

EAFM High-level Consultation for Leaders, Executives and Decision Makers (LEAD) 1-Hour Consultation Outline

Objective: In a one-hour high-level consultation (HLC), provide opportunities for leaders, executives and decision-makers (LEADers) to understand and support the Ecosystem Approach to Fisheries Management (EAFM) to achieve sustainable fisheries through improved holistic planning and implementation.

Audience: A small number (5-8) Heads of Ministries or Deputy i.e. Minister/Secretary depending on country.

Facilitators: Minimum 1 person plus support staff (recommend including well-known/well respected master of ceremony (MC)). The facilitator must have experience and knowledge of EAFM in the nation/region, be trusted and respected by leaders, have the ability to communicate well in relevant languages (possibly supported by a translator fluent in the EAFM vocabulary), (see facilitator profile in LEAD toolbox).

Output: Report on the Consultation

One-hour LEAD Process:

Based on a "hot topic" decided before the Consultation.

The 1-hour LEAD consultation is planned to cover the following sessions and objectives:

I. Opening and Introductions

To introduce participants and facilitators, set the stage on what will be covered and how the consultation will be conducted.

II. Overview of EAFM: What why EAFM

To understand why EAFM is needed for sustainable fisheries and development and what EAFM is.

III. How EAFM can help

To examine how EAFM can help with the “hot topic”

IV. Follow-up actions

To introduce LEADers to E-EAFM training course, LEAD toolkit and eafmlearn.org and to discuss next steps after the Consultation.

V. Closing

EAFM High-level Consultation for Leaders, Executives and Decision Makers (LEAD) Half-day Consultation Outline

Objective: In a half-day high level consultation (HLC), provide opportunities for leaders, executives and decision-makers (LEADers) to understand and support the Ecosystem Approach to Fisheries Management (EAFM) and to achieve sustainable fisheries through improved holistic planning and implementation.

Audience: A small number (up to 20) leaders, executives and decision-makers (LEADers) in the fisheries and other sectors (i.e. agriculture, forestry, academia, private, NGO) and throughout levels of government from national to community (including traditional leaders). Audience must be able to commit half a day to the Consultation.

Facilitators: Minimum 2 people plus support staff (recommend including well-known/well respected master of ceremony (MC)). Facilitators must have experience and knowledge of EAFM in the nation/region, be trusted and respected by leaders, have the ability to communicate well in relevant languages (possibly supported by a translator fluent in the EAFM vocabulary).

Output: Action plans for next steps in moving toward EAFM (individual, agency, country).

Half-day LEAD Process:

The half-day LEAD consultation is planned to cover the following sessions and objectives:

I. Opening and Introductions

To introduce participants and facilitators, set the stage on what will be covered and how the consultation will be conducted.

II. Threats, issues, and vision for the future

To begin thinking more holistically beyond fisheries and in the broader development context and envisage the future.

III. Overview of EAFM: What and why EAFM

To understand why EAFM is needed for sustainable fisheries and development, what EAFM is, and to recognize how much EAFM is already being carried out.

IV. Linking policies to action and the importance of EAFM Plans

To recognize that EAFM plans are needed to link policy to management actions and that EAFM needs to be included in national/ provincial/ district long term plans.

V. EAFM planning process

To introduce the EAFM management cycle and the EAFM planning process.

VI. Policy trade-offs

To understand that in looking at the broader ecosystem interactions, policy tradeoffs may be needed.

VII. EAFM-governance frameworks

To understand the importance of having effective governance framework in place and supported by a functional fisheries management infrastructure.

VIII. Developing capacity for EAFM: Next steps and action plans

- To encourage participants to support their staff/agency, influence their leaders and leaders of other sectors to develop capacity in EAFM;
- To agree on next steps, including action plans, to move towards EAFM.

IX. Closing

EAFM High-level Consultation for Leaders, Executives and Decision Makers (LEAD) 1-Day Consultation Outline

Objective: In a one-day high level consultation (HLC), provide opportunities for leaders, executives and decision-makers (LEADers) to understand and support the Ecosystem Approach to Fisheries Management (EAFM) to achieve sustainable fisheries through improved holistic planning and implementation.

Audience: A small number of middle managers (up to 30) that will be future Leaders, executives and decision-makers (LEADers) in the fisheries and other sectors (i.e. agriculture, forestry, academia, private, NGOs) and throughout levels of government from national to community (including traditional leaders). The LEADers will need to commit to a full day for the Consultation.

Facilitators: Minimum 2 people plus support staff (recommend including well-known/well respected master of ceremony (MC)). Facilitators must have experience and knowledge of EAFM in the nation/region, be trusted and respected by leaders, have the ability to communicate well in relevant languages (possibly supported by a translator fluent in the EAFM vocabulary).

Output: Expressed commitment and action plans for next steps in moving toward EAFM (individual, agency, country).

1-day LEAD Process:

The 1-day LEAD consultation is planned to cover the following sessions and objectives:

I. Opening and introductions

To introduce participants and facilitators, set the stage on what will be covered and how the consultation will be conducted.

II. Threats, issues, and vision for the future

To begin thinking more holistically beyond fisheries and in the broader development context and envisage the future.

III. Overview of EAFM: What and why EAFM

To understand why EAFM is needed for sustainable fisheries and development, what EAFM is, and to recognize how much EAFM is already being carried out.

IV. National roles, responsibilities, and existing frameworks

To recognize that global/regional frameworks support EAFM and that national legislation also often supports an ecosystem approach.

V. Linking policies to action and importance of EAFM plans

To recognize that EAFM plans are needed to link policy to management actions and that EAFM needs to be included in national/ provincial/ district long term plans.

VI. EAFM planning process

To introduce the EAFM management cycle and the EAFM planning process.

VII. Policy trade-offs

To understand that in looking at the broader ecosystem interactions, policy tradeoffs may be needed.

VIII. EAFM governance frameworks

To understand the importance of having effective governance framework in place and supported by a functional fisheries management infrastructure.

IX. Developing capacity for EAFM

To encourage participants to support their staff/agency, influence their leaders and leaders of other sectors to develop capacity in EAFM.

X. Next steps and action plans

- To identify challenges, opportunities, and benefits for country/locality in moving toward EAFM
- To agree on next steps, including action plans, for individuals, agencies and countries in moving toward EAFM.

XI. Closing

8. REFERENCE MATERIAL

General Reference Material

B1: Reference material

Common issues in fisheries

HOW TO USE THIS DOCUMENT

- It is to give some background to common issues
- It is intended to provide a menu of issues that, when taken together, would form the basis for developing EAFM management plan
- It is important to remember that EAFM will not address single issues, but is more effective in dealing with inter-linked issues, and combinations of issues.
- EAFM is a planning framework that provides the structure to understand the relationships between the issues and a risk and priority setting process to develop solutions.
- It is important that this information is "localized" into a country or sub-national context, and clearly not all of the issues will apply. This localization, will provide the specific country issues/challenge that EAFM could be applied to.
    - Overfishing: habitat degradation; loss of biodiversity/ecosystem changes; reduced catches of high value species; reduced profitability in some fishery segments; unsustainable livelihoods, might be linked to overcapacity in a particular gear; or use of a high impact gear
    - Gear related: by-catch of ETP; habitat impacts; loss of trade access
    - Conflicts between small and large scale fisheries: zonation; gear interactions; low profitability; IUU

- Development of protected areas: exclusion of small scale fishers; MPA siting may not provide fishery benefits: shifting fishing effort to other areas;
- Fuel subsidy policy: drives fishing effort; reduces costs but results in vessels fishing harder an d declining catches ; ecosystem level effects of over capacity; lack of investment in sustainable fishing ; vessel maintenance deteriorates; obsolete vessels and no actual economic profitability;

Once the issues are framed as in the examples above, also indicate that for the issue, there is a vision , or a better state that should be targeted. It is important that the EAFM approach is indicated as providing the approach or process to develop an effective solution.

EXAMPLE

- Issue: Conflict between artisanal and industrial blue crab fishers in nearshore fishery
- Vision of what is the desirable state to achieve: "A well managed crab fishery can deliver sustainable benefits to artisanal crab fishers"
- How EAFM can help: "An EAFM process that uses zoning & MCS mechanisms that has been adopted through stakeholder engagement"

Here are some examples of how issues can be broken down to build a story on diverse impacts:

ISSUE	**EAF LINKAGES**
Overcapacity in a coastal trawl and light attracting purse seine fishery	**<u>Human well-being</u>** Employment on commercial vessels and in processing plants, but low wages and low profitability Poor vessel maintenance and safety as sea issues Conflicts with small scale fishing sector
	<u>Ecological well-being</u> Overfishing Benthic impacts and impacts in nearshore zone Large amounts of low value small sized fish; capture of juveniles of commercial species
	<u>Governance</u>

	Encroachment of trawlers in to artisanal near shore exclusion zones Impacts to small scale fishing gears Use of illegal mesh sizes Can be driven by fuel , or other subsidies Foreign trade impacts
Poor labour conditions in the fishery	**<u>Human well-being</u>** Poor wages; unsafe working conditions, Abusive labour rights
	<u>Ecological well-being</u> High risk fishing behaviour and high fishing effort due to illegal or illegitimate nature of fishing activity Fishing is often IUU and vessels are unregulated, allowing destructive fishing or over-fishing and non compliance with existing management measures.
	<u>Governance</u> Weak regulation of labour on board- poor coordination between labour Ministry and fisheries department (e.g. competent agencies) Poor coordination between Maritime Transport Department and Fisheries Department on controls on vessels safety and registration and licensing Also enabled by corruption and rent seeking Illegal migration
Coastal fishery overcapacity and population growth	**<u>Human well-being</u>** Increasing numbers of fishers Stress on livelihoods and high coastal poverty in fishing communities
	<u>Ecological well-being</u> Increasing fishing effort Overfishing effects, declining catches, Habitat effects
	<u>Governance</u> Weak enforcement No effective fishing capacity or effort controls Poor participation by stakeholders and no allocation of exclusive fishing rights or effective zonation

	Supplementary and alternative livelihoods
IUU fishing	**<u>Human well-being</u>** Declining profitability in fishery
	<u>Ecological well-being</u> Impacts on fishery resources Habitat impacts
	<u>Governance</u> Limited enforcement Poor regulation of fishing vessels and gears International EEZ boundary conflicts
Promotion of sustainable fishery management	**<u>Human well-being</u>** Employment and sustainable livelihoods Needs income from fishing Address the needs of both small scale fishery and commercial fishery
	<u>Ecological well-being</u> Requires sustainable management of both habitats and fishery resources
	<u>Governance</u> Required effective regulation of fishing vessels and gears in both small scale and commercial fisheries. Effective inter-agency coordination Consideration of fishing rights approach for small scale fisheries (or zones) Licensing and registration Build appropriate catch certification , traceability and hygiene assurance systems
Issue: Conflict between artisanal and industrial blue crab fishers in nearshore fishery	**<u>Human well-being</u>** Conflict disadvantages artisanal fishers , which are typically the majority of the fleet and also the production/catch Impacts income and opportunity of those fishers with no other source of income (commercial fleet has other gears and target species options)
	<u>Ecological well-being</u>

	Due to intensity of conflict, juveniles are increasingly caught and retained as catches decline leading to impacts on recruitment and status of the resource.
	Governance Conflict reduces the effectiveness of fishery management planning and undermines conservation measures Tendency towards IUU

1.) Human well-being threats and issues

Population and economic growth

- High population growth rates have resulted in an increasing food requirement in the Asia-Pacific region and this includes demand for fish. This demand, and the increasing export pull from developed countries, is putting enormous pressure on the region's fisheries and coastal and marine resources.
- Economic development and improving lifestyles also result in increased demand. It also means that there is an increasing tendency towards using migratory labour in fisheries across the region. This is partly because fishing is becoming an increasingly unattractive livelihood in many areas and also because of reduced returns from degraded fisheries. Therefore, vessel operators try to reduce labour costs by using cheaper, foreign labour. This results in problems with migrants, poor labour conditions and uncertain short-term perspectives on resource use.

Fishing is increasingly unprofitable

- Economic development and declining catches mean that coastal fishers progressively need to increase fishing effort to sustain fish catches and incomes.

Food security

- There is a high level of dependence upon fishery production in coastal communities, often involving large numbers of people.

- These communities often have few viable livelihood alternatives to fishing or fishing related activities
- Capture fisheries have for the most part reached their limits, and left unmanaged, it is not reasonable to expect more production volume, yet human population and demand continues to rise and increased production targets are set in a number of countries.
- In the drive for increased fish production, against a backdrop of generally weak management, coastal fishing has reached high intensity (especially in the trawl sector), and this has caused significant fishing down of the food web to lower trophic levels and size classes. The consequence is that the quality and acceptability of fish landed is now reduced and a significant proportion of capture fishery production is being redirected into aquaculture feeds (both for fish feed and conversion to fish meal). This has impacts on fish for food in small-scale fisheries, as well as broader ecosystem impacts that affect the quality and resilience of the fishery at large.

Poor health infrastructure and vulnerability to HIV/AIDS

- Due to their physical and socio-economic isolation, many fishing communities often lack adequate sanitation, clean water and health care. The rates of HIV infection in fishing communities in Southeast Asia can be five to ten times higher than those in the general population. In Thailand, 20 percent of workers employed on fishing boats are HIV-positive, while the general rate in the population is 1.5 percent. Premature death robs fishing communities of the knowledge gained by experience and reduces incentives for longer-term and inter-generational stewardship of resources.

Gender

- Women play a prominent role in processing and marketing fish and are often highly engaged in reef gleaning and collecting of nearshore and aquatic fishery resources.

- Management actions which are introduced may impact on women's livelihoods and ability to provide income for their families/households.
- Women's views are important for achieving support for fisheries management planning and may be a strong force for advocating sustainable fishing and compliance with management actions.

Conflicts

- Ever increasing fishing effort results in conflicts between resource users over the declining harvestable stock and these conflicts are very pronounced between small-scale fishers and large-scale industrial fishing operations.
- Conflict among small-scale fishers is not uncommon. The clashes are not restricted to these groups and conflicts between and among various marine resource users (tourism, navigation, mariculture, coastal development, etc.) and jurisdictional authorities are becoming more frequent.
- There are also conflicts between local and migrant fishers, and between national and foreign vessels.
- Development of non-fishery Marine Protected Areas or marine managed areas. This can involve fishery stakeholders , but in many cases fisheries may be excluded from decision making. EAFM processes can ensure more equitable representation and also improve the performance of MPAs by taking fishery management measures into consideration.

Sustainable livelihoods

- Despite the widespread decline in fishery, many fishing households and communities remain dependent on fishery as their main livelihood. This is often due to the fact that they do not have alternative or supplementary livelihoods that are sustainable. The problems include:
    - limited access to needed resources, including microfinance and other financial services to start up;
    - inadequate skills, knowledge and adaptive capacity for other possible livelihoods, and the lack of long-term institutional support or market systems.
    - In some areas, people whose main livelihoods are not related to fishery may also turn to small-scale fishing as a way to survive, making it difficult to reduce pressure on local fisheries.

- Livelihood enhancement by moving up the value chain or value addition and diversification within the fishery sector or into other sectors through capacity building and accessible resources could contribute to solving the problems.

Equity

- Access and allocation to fishery resources and distribution of benefits are often not equal and fair among different fishery dependent groups. Those who are socially or economically disadvantaged (for example women, poorer people, indigenous people, older generations, and migrants) are most vulnerable. Natural resource management and conservation, and institutions

responsible for their governance, need to apply social safeguards to support more equitable distribution of benefits across different groups.

Cultural integrity and heritage

- For many people and fishing communities, fishing is a way of life and an occupational identity they take pride in. Cultural characteristics in small-scale fishing communities have been developed over many generations. Importance of fishing cannot be assessed only on economic grounds or as an income generating activity.

Climate related threats to resilience and vulnerability to natural disasters

- Coastal communities are vulnerable to natural disasters (storms/cyclones, tsunamis, etc.) and longer-term climate change and variability (e.g. sea level rise, ocean acidification, changes in sea circulation patterns, impacts on coastal infrastructure; changing agricultural production and water supplies) that could have significant long-term destabilizing impacts on socio-economic systems.
- Broader climate variability issues related to this include: destabilization of rural populations, increased migration and access to freshwater.

2) Ecological well-being threats and issues

Impacts on the fishery resources

- There is significant over capacity in the fisheries of Asia and excess fishing effort in many fisheries of the Asia-Pacific region.
- Overfishing often leads to the reduction, or even disappearance, of economically and culturally valuable target fishery stocks or groups of species.
- The overfishing of larger, long-lived high trophic level species (groupers, snappers, tunas, barracudas, sharks), has the consequence of driving the fishery towards smaller, faster recruiting species (small demersal and pelagic species, such as anchovies, sardines, scads, crustaceans, squids, etc.).
- Declining quality and hence economic or cultural value of catch (typically in trawl fisheries) leads to increasing quantities of low value or undesirable fish being caught. In some areas, bycatch fish are often discarded, but in the Asia-Pacific region there is strong demand for their use as aquaculture feed or

conversion to fishmeal. Trawl fisheries, in particular, may rely on this component of the catch to remain profitable.

Impacts on the ecosystem

- Issues relating to changes in the structure or composition of fish species in an ecosystem as a result of fishing are described above.
- Bycatch issues that result from the fishery are the capture of non-target species that may be highly vulnerable. Regional examples of these are sea turtles, shark and ray species and marine mammals (e.g. dolphin and dugong entanglement in set gears). In the case of sharks and rays, these may be target species and especially valuable for the fin trade fishery. Often collectors will incentivise local fishers to provide these and this can drive targeting.
- Habitat damage (use of explosives; use of heavy contacting gears, such as pushnets and bottom trawls) also changes the ability to sustain the original diversity of species and may lead to changes in the structure and function of the ecosystem and the ability of the ecosystem to provide services to society. Trawling can physically damage seabed habitats in ways that shift the composition of the bottom dwelling species towards fast growing invertebrates and fast recruiting fish species that can survive in these altered habitats. In many cases trawl gears are used with very small mesh sizes increasing impacts.
- Light attracting gear used in shallow waters may attract juvenile fish off the seabed and reefs and can be a highly effective fishing method. This can however lead to serious depletion of fish.
- Pushnets are highly contentious because they are typically operated in shallow, more sensitive, nearshore habitats. These gears often create conflict with artisanal fishers because they may use small mesh sizes and often catch juveniles of commercial species. They are contacting gears and their use in shallow waters can impact seagrass bed habitats which are important for some commercial nearshore species (e.g. some shrimp species).
- Marine ecosystems, once significantly impacted, may not have the capacity or resilience to return to their original state. This might be considered if the ecosystems are providing other ecosystem goods and services desired by coastal communities and with the application of actions that seek to reduce impact or ensure a higher degree of sustainability of the altered habitats and fish stocks.

Technological advances

- Technological advances, such as the introduction of more fuel efficient and easy to maintain engines, improved materials such as monofilament nets, cell phones and use of satellite technology, have enabled fishers to exploit inshore and offshore fisheries more intensively than was ever imagined a few decades ago.

- These advances have led to increased conflicts between large and small-scale fishers as larger boats, using more advanced technologies, can overfish nearshore waters.
- The use of fish finders and bright lights enable larger boats to find and attract more fish, to the detriment of small-scale fishing operations.

Other impacts that will affect the fishery and the ecosystem

- Climate change and climate variability and ocean acidification are already leading to changes in marine and coastal ecosystems and these changes are projected to increase in the coming years and decades. One of the most obvious examples of climate change impacts is modification of habitats by coral bleaching caused by ocean warming.
- Other slow onset climate effects are changing salinity regimes in deltas and estuaries, or the changing of the carbonate chemistry (i.e. ocean acidification) which will also lead to significant ecological changes in marine ecosystems. The various climate change effects will lead to changes in the biodiversity, abundance and distribution of fisheries resources and habitats in the ecosystem with associated changes in socio-economic benefits provided to coastal communities.
- Fish migration patterns may change and species can shift their ranges in response to changing temperature (tuna, sardines and squid are excellent examples of this). As a result, fishing areas may shift as fishers follow these stocks; or fishers and/or markets may need to change their fishery targets.
- Habitat loss in coastal areas as a result of agricultural or urban development is common. Less obvious are impacts, such as coastal development that lead to increasing nutrient run-off or impacts on beach habitats (e.g. sea turtle nesting sites).
- There is growing interest in offshore mining (although tin and copper mining and dredging and coral mining have a long history in the Asia-Pacific region). This can affect sediment loads and, in the case of tin and copper dredging, the release of heavy metals, resulting in the disruption of coastal habitats.
- Increasing pollution and organic run-off results from intensification of agriculture (fertilizer use) and increasing coastal populations (sewage).

- This nutrient pollution or oversupply is one of the main causes of harmful algal blooms, oxygen depletion and the development of hypoxic or dead zones in the ocean.

3) Governance threats and issues

Open access regimes

- Many coastal fisheries in the Asia-Pacific region are open access fisheries and there are few, if any, limitations on entry to these fisheries. However, most developed countries have moved to limited access to conserve the fishery resources.

Sustainable management conflicts with production promotion and revenue generation

- Local governments generate revenue based on trade and production, so their policies tend to support and drive greater production.
- This often results in decreased desire to limit or constrain fishing effort, which is usually in direct conflict with the longer-term sustainability of fisheries.

Decentralization of management of natural resources

- Many countries in the Asia-Pacific region have gone through or are going through decentralization processes, but for fisheries management these processes have often been poorly planned or ad hoc, and many important governance linkages have not been established.
- Although local governments have now become responsible for fishery and coastal resource management, they often do not have a broader vision and may not have the institutional and human capacity or be able to address issues that are external to their jurisdictions (e.g. fishing across boundaries, migratory stocks, climate change impacts).

Political and institutional planning horizons are short-term

- Fishery management plans, stock recovery efforts, legal/institutional changes often take several years before tangible results are achieved. Any failures in commitment or changing priorities can undermine these plans before they have sufficient time to achieve success.

Unintended negative consequences of subsidies

- Short-term fluctuations in cost of fuel or availability of fish stocks may lead to calls from the fishery for support to cope with the crisis. These “crises” are often a result of the fishery operating very close to a financial breakeven point.
- Since there is considerable employment and infrastructure linked to the larger-scale industrial fishing, governments often provide the support to help the fishery survive a short-term crisis.
- Unfortunately, this support may be sustained well beyond the original problem and thus often contributes directly to supporting overfishing or overcapacity of the fishing fleet or infrastructure. Fuel subsidies are possibly the most prevalent example of this. Other indirect subsidies include welfare schemes or infrastructure development that, once in place, support the argument for sustaining higher levels of fishing capacity or effort than the ecosystem can support.

Weak resource management

- Under decentralization policies, local governments often have responsibility for managing coastal natural resources and fisheries. In many cases, local government fishery offices may not have the technical skills or financial resources needed to plan and manage these fisheries adequately.

- Local fishery management may tend to be reactive, rather than proactive, meaning that problems are often resolved using short-term solutions that do not address the underlying causes.
- Fisheries statistical systems (in particular recording of fish catch/landings and effort and related documentation and analysis) are often weak and unreliable, so that this information is of little or no use in resource management.

Corruption and rent seeking

- Demands for illegal payments for fishing licenses, permits or access rights by authorities are probably the most pervasive form of alleged corruption in the fishery sector.
- Corrupt practices, such as permitting illegal fishing practices to occur and permitting illegally caught fish to be sold in the market, are also common.
- Some forms are more subtle, such as influencing the passing of laws and ordinances or government policies to benefit the vested interests of influential persons with fishing operations or companies.

Stakeholder participation in decision making

- Fishery and coastal resource management decision-making may not adequately involve fishers or other stakeholders, which often leads to lack of support for the management actions developed. These actions may be fishery focused (e.g. gear measures, spatial measures, etc.) or focused more generally on other ecological goals (e.g. biodiversity conservation, protection of critical habitats or species, etc.).

Structure of fishery management arrangements

- The Asia-Pacific region has a huge workforce in its fisheries/aquaculture agencies and research institutes that could be mobilized to provide better fisheries management.
- Unfortunately, in many areas this workforce and resources are being used mainly to provide welfare and subsidies and to resolve conflicts, rather than for pro-active planning and management.

Alignment of science with fisheries management needs

- A significant amount of research related to fisheries is not directly of use to fishery and coastal resource management stakeholders. Many researchers are not effectively linked to the fishery management systems and academic research may be poorly targeted.
- Lack of scientific integrity or independence in fishery research can result in a lack of trust by fisheries stakeholders.

Co-management

- With rapid decentralization taking place in the Asia-Pacific region, national governments have relinquished authority to “communities” where resource conflicts often exist.
- Conflict management goes hand in hand with co-management.

Compliance and enforcement

- Weak or lacking enforcement often undermines many initiatives and emphasizes the importance of having local government support to assist in enforcement (both within jurisdictions and between adjacent jurisdictions).

- Community-based and local (e.g. district level) management actions may be recognized under the authority of decentralized natural resource management, but do not have legal authority. This means that there may not be an effective system for enforcement and compliance, or even an ability to punish offenders.

Fishing rights

- A well-defined and appropriate system of access rights in a fishery produces many essential benefits, most importantly ensuring that fishing effort is commensurate with the productivity of the resource and providing the fishers and fishing communities with longer-term security that enables and encourages them to view the fishery resources as an asset to be sustainably managed through responsible stewardship.
- Basing fishing rights only on economic efficiency in resource use is not typically an acceptable approach in developing countries, since it often results in negative social impacts, particularly to livelihoods in the small-scale fisheries sector.
- For small-scale fisheries, the main tool to assure rights and support more effective management may be a system of community rights. These protect the rights of access by poor small-scale fishers and offer a degree of protection from the impacts of larger-scale commercial fishing.
- Equally, larger-scale commercial fishing operators who may have significant capital investments must have clear rights to operate, providing they are compliant with management actions and regulations.
- There are several different types of use rights.
    - Territorial use rights (TURFs) assign rights to fish to individuals or groups in certain localities.
    - Limited-entry systems allow only a certain number of individuals or vessels to take part in a fishery, with entry being granted by way of a license or other form of permit.
    - Alternatively, entry may be regulated through a system of effort rights (input rights – e.g. fishing days) or by setting catch controls (output rights). In the latter case, the total allowable catch (TAC) is split into quotas and the quotas are allocated to authorized users (noting that these can be difficult to implement where there are large numbers of fishers).
- These rights allocation systems are rare in the region, although some countries are trying to close new entry to segments of the fisheries and most

countries have forms of zoning that allocate fishing areas to particular segments of the fishery.

  - For example, a near-shore artisanal fishing zone may exclude larger-scale gears (and vessels), such as trawls and seine nets.
  - Compliance with these actions remains a significant obstacle to their effectiveness.

- Each type of use(r) right has its own properties, advantages and disadvantages and the ecological, social, economic and political environment varies from place to place and fishery to fishery. Therefore, no single system of use rights will work under all circumstances.
  - It is necessary to devise a system that best suits the general objectives and context for each case and this system may well include two or more types of use rights within an EAFM plan for a geographic area.
  - For example, a fishery that includes artisanal and commercial fishers could make use of TURFs (fishing zones), effort controls (fishing days and seasonal closures) and catch quotas to regulate access in the different segments of the fishery.
  - Input and output controls could be combined in a way that suits the nature of each and gives due attention to the productivity of the resources.
- Under decentralized government, local authorities may have the authority to legally recognize a fishery management plan, but this may not extend to excluding the right of others to fish in an area, merely that they must comply with the management actions of that area.

B2: Reference material

The seven principles of EAFM

PURPOSE

To provide a background for the seven principles of EAFM.

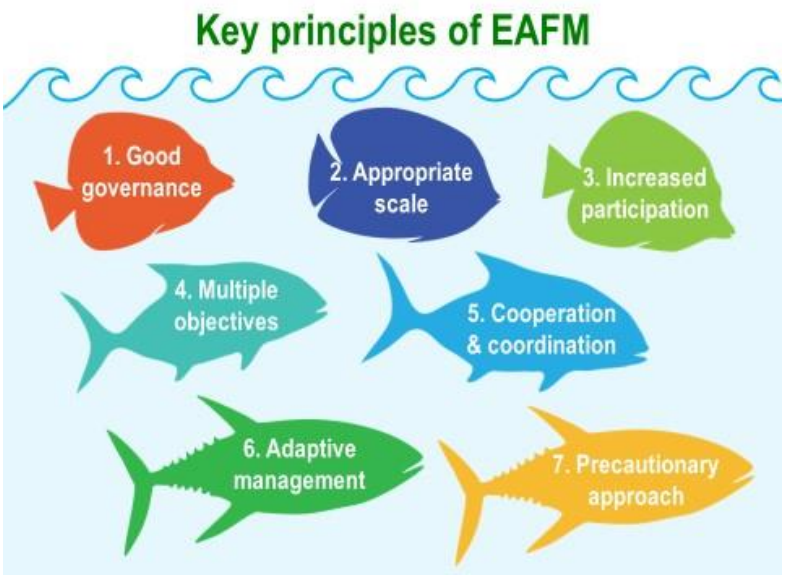
HOW TO USE THIS DOCUMENT

The principles are core to many of the other documents, videos and activities and these descriptions can be used in many settings.

THE PRINCIPLES

EAFM is based on seven principles. None of these are new; they are all covered in the FAO Code of Conduct for Responsible Fisheries and common across many approaches, including Integrated Coastal Management (ICM) and coastal and marine spatial planning (CMSP).

Under an ecosystem approach all these principles need to be strengthened.



1. **Good governance:** Process for developing rules and regulations for sustainable management and ensuring their compliance through a participatory process that improves acceptance, transparency and accountability;
2. **Appropriate scale:** Suitable levels and processes at which management is applied, taking into account the nature of the fishery and the people involved, as well as the issues being addressed. This can cover political, geographic, socioeconomic, and temporal scales;
3. **Increased participation:** The need for stakeholders to become involved and work effectively together in planning and implementation of EAFM;
4. **Multiple objectives:** Addressing multiple objectives takes account of the various objectives of different stakeholders and considers trade-offs. It also strives to balance the multiple, often conflicting, objectives relating to human and ecological well-being;
5. **Cooperation and coordination:** Voluntary but conscious and organized efforts of various stakeholder groups working together to achieve EAFM objective. ***Horizontal*** cooperation and coordination refer to efforts across sectors and agencies while ***vertical*** cooperation and coordination are across levels of government.
6. **Adaptive management:** Iterative and systematic process for continually improving management by learning from the outcomes of the previous management objectives and actions; and
7. **Precautionary approach:** Cost-effective measures to deal with uncertainty or risk without delaying action because of a lack of full information and being risk averse.

B3: Reference material

How many EAFM-type actions are you already doing and how are they linked?

PURPOSE

- To give leaders confidence that they are already doing some EAFM-type interventions/actions
- It shows how different actions relate to typical objectives of management
- It also helps to show how there are multiple objectives in fisheries and that some actions may contribute several outcomes.

HOW TO USE THIS DOCUMENT

This document is to be used in the LEAD one-day Executive course.

- Use the list to get leaders to identify the sorts of actions that are being taken under the three categories
- Note that the list does not show how these objectives or interactions often inter-relate and the linkages between them. This needs to be pointed out after the actions are identified
- So ask the question “Of these interventions, how many are linked at the fishery level?”
- Does one action give several outcomes?

TYPICAL OBJECTIVES AND ACTIONS

Objective	ACTIONS
Human well-being	
Improving livelihoods and food security	Development of other alternative economic activities such as aquaculture for the relocation of fishing effort/communities
	Compensation mechanisms during closed seasons or restricted gear periods
	Fishers insurance schemes
	Access to micro-finance/credit
	Small-scale fisheries promotion
	Securing affordable fish for national food security
	Contributing to nutritional quality and sufficiency
	Climate change related adaption actions
Improving income/market access	Promoting export income
	Fish post harvest quality improvement (small-scale fisheries and commercial fisheries)
	Hygienic fishing landing sites/ports programme
	Fishery eco-labelling & certification
Providing decent employment	Improved safety at sea programmes
	Minimum labour standards on board and inspection/accident reporting system
	Fishing crew monitoring
Reducing operational costs	Facilitating migrant labour
	Fuel subsidies
Reducing fishery conflicts	Establishment of zoning systems (e.g. artisanal fishing zones)
Ecological well-being	
	Conservation and rehabilitation of the marine ecosystem through the establishment of closed areas and Marine Parks.

Objective	ACTIONS
Protecting or limiting impacts on habitats	Reef, coastal habitat (e.g. nearshore zone, mangrove, delta, seagrass protection)
	ICZM planning (integrating fisheries)
	Sensitive ecosystem management plans (using ecosystem health indicators)
	Sanctuaries/management areas for shark/hilsa/threatened species
Conservation & protection of biodiversity	Limiting/managing by-catch (ETP, juveniles commercial species, low value/trash fish)
	Development & implementation of an NPOA Sharks/turtles
	Grouper Management Plan, protection of spawning aggregations
	Shark fishing ban
Managing impacts on fisheries resources for sustainability	Gear regulations to limit effort/impacts
	Development of zoning systems
	Seasonal closures
Managing fishing effort & capacity	Fishing vessel capacity reduction schemes
	Limit fishing effort through the issue of licenses for fishing gear and fishing vessels
	Fishing zoning systems, based on the type of fishing gear used, the tonnage of fishing vessels and the ownership
	Vessel fishing days schemes; fleet effort management schemes
	Removal of subsidy schemes
Governance	
Improved vessel & flag-state controls	Vessel registration and licensing coordination between agencies
	Installation of VMS
	Fisher registration and ID card programmes

Objective	ACTIONS
Combatting IUU fishing	Strengthening MCS capacity and implementation
	Improved MCS on industrial vessels (e.g. VMS systems)
	At sea patrols in IUU hotspots
	In-port inspections for compliance with management measures
	IUU reporting system
	Inter-agency coordination mechanism
Improved stakeholder engagement in management	Co-management
	Organization of fishers groups
	Promotion of fisher organizations and representation
Legal & institutional reforms	Ratification and implementation of international instruments (UNCLOS, UNFSA, PSMA, CBD, CITES)
	Strengthening legislative frameworks to improve management
	Legal reform to confer use(r) rights and/or tenure
	Reform of fishery subsidy programmes
	Development of zoning systems
	More effective sanction schemes for non-compliance
	Strengthen capacity of decentralized institutions to management fisheries under their mandates
	Development of inter-agency coordination mechanisms for fishing vessel management
Effective fishery information systems	Catch certification schemes
	Fishery resource assessment programme
	Catch landing monitoring
Trans-boundary cooperation	Special Area Management (SAM)
	Joint area management agreements between neighbouring countries

B4: Reference material

Terminology: legislation, policies and management plans

PURPOSE

The terms legislation/law/policies/regulations and rules/plans of often confused when talking about EAFM planning. This document provides some simple definitions that will help you ensure that everybody is talking about the same things.

HOW TO USE THIS DOCUMENT

The terms are used in several other documents and forms the basis for two activities in the 1-day LEAD High-level Consultation.

DEFINITIONS

Legislation

"Legislation" refers, in general terms, to the laws, regulations, decrees and other officially announced documents that provide the rules that governs the limits and obligations of people and institutions in order to provide the basis for a well-functioning society. “Legislation” in many countries refers to the Acts or Statutes that are enacted (approved/signed) by parliament. Because it takes a long time to get reach final approval (and to enter into force) laws and regulations should, ideally, be more general and written in a way that enable the development of supporting subordinate rules and regulations, sub-decrees and defined management actions and directives guiding compliance (see below), rather than containing specific management actions – and specific institutional responsibilities.

Rules and regulations

Often referred to as subordinate or subsidiary legislation, where a Minister or Ministry is given a mandate to issue rules and regulations on how the laws are to be implemented. Sector specific rules and regulations set out the specific details of management actions e.g. licensing to fish (usually part of the mandate of the Department of Fisheries) and fishing vessel registration (which is often the mandate

of departments related to transport and shipping) as well as other specific requirements, such as banned gears, mesh size limitations, seasonal closures etc

Gazette

A kind of newsletter through which the government can "post" formal notification of the laws and regulations that has been issued together with the date of entry into force.

Notification

Notification 1: Formal notification by the issuing authority on rules and regulations including information on date of entry into force. Could be part of requirements to ensure proper registrations and licenses to undertake specific activities (such as fishing).

Notification 2: A requirement to inform the public and/or parties to an agreement on planned activities including major (infrastructure) projects

Policies

A statement of intent by an entity (e.g. government or business) to guide future actions and decision making that address a particular issue. In some countries policies are implemented through legislation, while in others legislation includes the policies.

Management plans

Management plans are specific plans that defines how a policy is to be implemented and is an important tool for turning policy into action. A good management plan only addresses key issues and their causes. It normally contains objectives, management actions/measures and ways to monitor and evaluate whether the plan is achieving its objectives over time. As with laws, the management plan should be generic with the actual specifics of management actions/measures contained in the rules and regulations (e.g. specific closure locations and times, specific mesh sizes etc).

Compliance and enforcement

Agreed fishery policies, rules and regulations and plans need to be followed by people (complied with) to be effective. Ensuring compliance is often carried out through a combination of Monitoring, Control and Surveillance (MCS) and enforcement activities.
The components of MCS include (note: the FAO definition of MCS does not include enforcement and this important element needs to be defined separately).

- Monitoring – the collection and analysis of information on fishing activities that relate to management and illegal activities;

- Control – the rules by which the fishery is managed; and
- Surveillance – the degree and types of observations required to detect illegal activities.

Enforcement activities range from "bottom up" activities such as self-regulation to "top down" activities such as arrests and penalties. Note that institutional responsibilities for monitoring, control and surveillance, respectively, are often mandated to a broad range of institutions, which requires a high degree of cooperation and coordination, while the mandate of "enforcement" might rest with, or rely on the involvement of the navy, coast guard or other entity with special powers.

Participation in the development of controls, as well as peer pressure, can lead to people comply with the fisheries management controls without the need for heavy "top down" enforcement measures.

Monitoring, Control and Surveillance (MCS) plans

Detailed plans that specifies what type of M, C, S and enforcement activities that are going to be carried out and by whom (what agency, institution or public/private actor). To be effective the MCS plans should emphasize the necessity of inter-agency and regional/sub-regional cooperation and coordination mechanisms (form the basis for the development of MCS-networks).

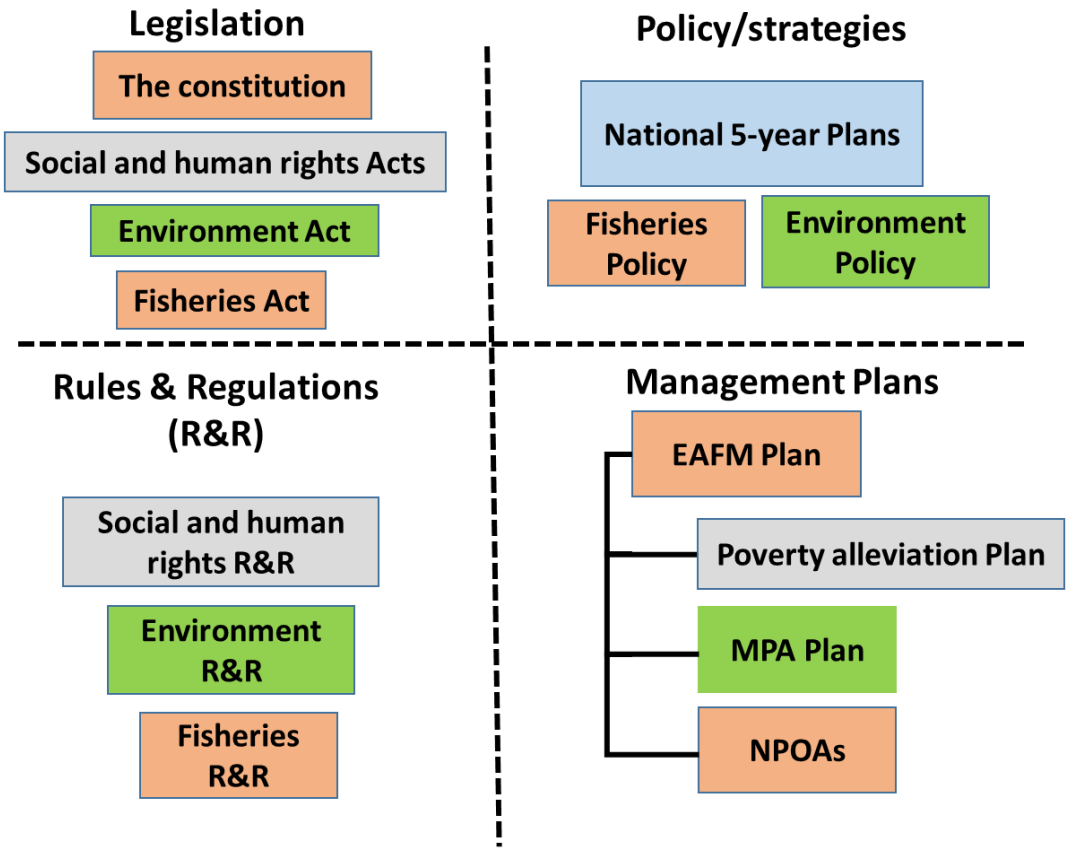
Plans to combat IUU fishing (e.g. National plan of action for IUU (NPOA-IUU)

IUU is an acronym for Illegal, Unreported and Unregulated fishing. The activities of illegal, unreported and unregulated fisheries activities as defined in the FAO International Plan of Action (IPOA-IUU) covers both national EEZs and the EEZs of other countries, as well as the high seas. A plan to combat IUU sets out what activities a country (State) intends to carry out to combat and reduce IUU fishing. To be effective plans to combat IUU fishing needs to be combined with improved national fisheries plans and national plans to manage fishing capacity (NPOA-Capacity) including sub-regional cooperation on the management of fishing capacity.

Legislation, policy and management plans framework

The diagram on the next page/below shows the connectivity of possible EAFM related legislation, policies and planning frameworks for a country at the national level. On the left-hand side is the legislation (using three components of the ecosystem approach in this example) and the linking Rules and Regulations. On the right-hand side are the overarching policies, which in turn link to a nested set of plans consisting of an EAFM Plan (that includes fisheries, environmental and human components, as well as governance), a specific environmental protection plan (MPA plan, refugia or conservation plans) and a poverty reduction plan.

Diagram of a possible national framework of legislation, policies and management plans.



Superimposed on this framework are the levels of government and administration with some examples of the types of legislation, policies and levels that may be available at each level.

The geographic dimension (examples given as dot points).

Global

- Legal instruments and agreements/ IPOAs

Regional

- **ASEAN Blueprints and SPAs/ SEAFDEC R&POA/ RPOA-IUU**

National

- National Constitutions
- 5-year national social and economic development plans/ Fisheries Act/

- National Fisheries Management Policy

Provincial

- Policies and plans

District

- Plans, traditional law and informal rules and regulations

Fisheries often cut across existing geographical jurisdiction as do environmental concerns. At the larger scale fisheries may be transboundary and involve two or more countries in its management. At the national level, fisheries often straddle two or more provinces and/or districts and require cooperation and coordination of rules and regulations as well as in developing networks for MCS and enforcement.

B5: Reference material

Policy trade-offs – when well-intentioned policies lead to conflicting outcomes

PURPOSE

To provide an opportunity for the participants on the LEAD Executive one-day course to review the major national policies and see how well they are integrated so that they support each other, and do not lead to conflicts or unintended negative outcomes.

HOW TO USE THIS DOCUMENT

This is a second activity to be included during the activity on the one-day executive course on "how many EAFM -type activities are you doing, and how well are they linked".

- Once the LEAD course participants have identified the EAFM-type activities, they will then go on to identify the linkages.
- They should also be given time to identify/describe the key national policies in fisheries and aquaculture, and also any national policy that has strong direct or indirect impact on the fishery sector.
- The examples of how policies may contradict, or conflict should be presented (see below).
- After the example is presented, the LEAD course participants then discuss how well their policies support each other, and where there may be contradictions.

EXAMPLES OF POLICY CONTRADICTIONS

Well-intentioned policies and interventions that intended to support fisheries or development, may sometimes have conflicting outcomes…

Promoting fisheries development and fish exports.

Export income from fisheries and aquaculture is seen as a way of increasing wealth, employment and contributes to national development. Accessing higher value export markets is generally considered as desirable

But.
Promoting production (through subsidies, technical development, development of fish processing and fleet capacity and effort increases, lack of limits/controls) may have negative consequences on resources, leads to overfishing and resource decline. This may directly affect the segment you are trying to promote, or may affect other segments of the fishery (e.g. small-scale sector)

Aquaculture development to promote the economy, rural development and provide alternative employment
Aquaculture development is often seen as a way of moving fishing capacity out of fishing, a way if increasing coastal employment and development, and also taps into export income markets (e.g. shrimp aquaculture)

But…
The demands for fish and shrimp feeds often drives demands for low value fish to convert to fish meal. This can drive fishing effort, and direct targeting of small fish and contributes further to resource declines and overfishing. This can impact the resource and again, can have the biggest impact in the coastal fishery.

Short term subsidies often become long term dependencies
Buffering the fluctuations in market price for fish and operational costs such as fuel price, or policies that assist fisheries to reduce operational costs (such as allowing cheap unregulated foreign labour) can lead to undesirable consequences.

Short term subsidies often become long term dependencies and the sector cannot get free of the need for the subsidy. It often distorts the real economic value of fishing and so leads to excess fishing capacity and fishing effort (enabled by cheap fuel), beyond the level that the fishery can really support. Resources decline, and profitability per vessel also declines.

Trying to reduce operational costs by use of migrant labour
The use of cheap foreign labour can depress the national labour market and lead to local conflicts; it also opens the opportunity for unscrupulous employers, rights and labor abuses and even human trafficking.

Support in small-scale fisheries without placing control or allocation of user rights to control or limit expansion

Policies put in place to support small-scale fisheries can also have negative outcomes. By not placing limits on the expansion and technological development of small scale fisheries, or by providing hidden subsidies, the small scale coastal fishery can develop and expand too far.

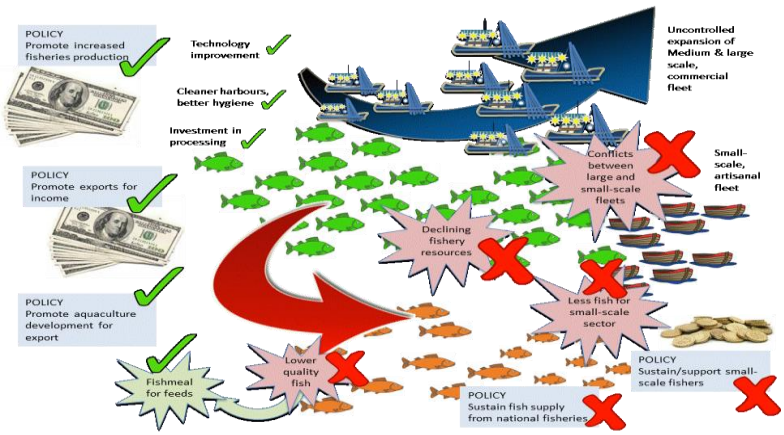
This can reach a point that resources degrade and fisher's incomes deteriorate. There are few alternatives for the fishers and this becomes a situations where is difficult reduce capacity and effort and leads to further subsidies.

Inviting foreign vessels or encouraging capacity movements to develop your own fisheries

Allowing the entry of foreign vessels or reflagging of foreign vessel is a common policy. It encourages in vessels to exploit resources which national fleet is not accessing. It is often part of an economic development plan or technical transfer policy (to "learn" from the foreign fleet and ultimately transfer to a domestic fleet)

This may lead to uncontrolled fishing, transshipping and "cheating or IUU by the foreign vessels. MCS is often inadequate to control their activity and instead of contributing to national economic development, the benefits end up in another country.

Examples of policy trade-offs. Policies shown with a tick can all result in declining fishery resources, increased conflicts between sub-sectors and less fish for the small-scale susector, which in turn contradict the policies shown with a cross.



B6: Reference material

EAFM Example

PURPOSE:

This document explains the current status of the country

- To help leaders understand the EAFM concept
- Demonstrate how the country adopted and applied the EAFM principle and moved toward EAFM (case study)
- It is to provide a local example or case study

HOW TO USE THIS DOCUMENT

- It is a handout to be present to the leaders
- For the briefer "EAFM concept is not new in our region, here is a local case study to show the experience"

CASE STUDY

Country: Samar Sea, Philippines (EAFM Samar Sea Fisheries Management Plan)

Situation before application of EAFM (issues): Conflict between large-scale and small-scale fisher; crowded fishing gears in the areas. There was an informal agreement issued by the local government unit of the Philippine Bureau of Fisheries & Aquatic Resources (BFAR) that targeted small scale fishers in order to allow for commercial fishers to fish in a certain area. The local government decided on a fisheries zone but it wasn't supported by science and the inventory of fishing gears.

Vision: A Sustainable and Equitably Shared Samar Sea Fisheries through Dynamic Management

Goal: To provide for a more sustainable fishery, the key goals are to reduce conflict between different scales and use of destructive fishing gears.

Prior management system: co-management, led by local governments with BFAR as a technical partner (when requested).

When did the process start: 2014

How did the process start: It started with the local government unit asking BFAR for assistance in addressing the conflict. Based on a visit by the REBYC II group, it was decided to further engage in the EAFM. The local unit of BFAR established Key Stakeholder, Technical Working Group (TWG), and National Advisory Group (NAG) as well as carried out socio-economic and trawl surveys. This information was used to populate the planning process.

Political level (scale) of the EAFM process: regional and national of government (BFAR), local government unit, and local academics & universities

Leader of the EAFM process: BFAR carried out the Essential EAFM program in 2014.

Facilitator of the EAFM process: Regional BFAR office in partnership with local universities

Plan Implementer: The plan will be implanted by the members of the Alliance thru a Unified Municipal Ordinances, TWG, and BFAR.

Description of stakeholders and how they are engage: 45 stakeholders from the Samar Sea area. These stakeholders represented the 11 local government unit; regional and national of BFAR; academia, commercial trawl fishing sector, artisanal fishing sector that

Current Step: Step 3 (Objectives, Indicators, Benchmarks & Management Actions). They will begin Step 4 (Do) in August of 2015.

Examples of management indicators and benchmarks: Number of cases of conflict. The expectation would be that under the EAFM, this number will be reduced. Benchmarks are the time frames by which it will be implemented.

How many of the 7 key principles are being applied:
They have practiced 4 key principles: P2 – appropriate scale; P3 - increased participation; P4 – multiple objectives; P5 – cooperation and coordination. [P1, P6 and P7 are assessed after Step 4 & 5.]

Outputs: Report of consultation/ Meeting; Report of studying on icthyoplankton; spawning seasons that will be part of the FMP and the results of data analysing of Socio-economic aspect.

Outcomes: Management plan will be applied in the Samar Sea

Lesson Learned: the involving of stakeholder is important including in the data collection stages. The TWG is an important institution that involves the stakeholders and government in assessing data and jointly making recommendations to the management committee.

D1: Qualifications

Profile for a LEAD facilitator

- Committed and passionate about EAFM = champion
- More Senior person
- Trusted and respected by leaders
- Impartial
- Knowledge of fishery/environment/NR/country investment plan/country strategy context
- Fluent in national language
- People skills
- Very skilled at thinking on the spot
- Local knowledge
- Ability to weave leaders' issues into main messages/ validate
- Need to be conversant with LEAD suite of products and EEAFM package (exposure to videos and materials)

D2: Qualifications

Guidelines for EAFM champions

(Definition of EAFM champion: anyone who is promoting EAFM; i.e. all of us)
Job of EAFM champion: to look out for/identify opportunities for promoting EAFM

- Map your own golden circle (circle of influence/concern)
- Watch Simon Sinek 'the golden circle' ; people buy why we do something, not what we do; communicate from the inside out (say WHY we believe in EAFM and why I believe it is good for you; WHAT EAFM is, and HOW to engage/ support EAFM… ie 1st step support EEAFM course)
- Identify your gatekeepers/ change agents (who controls/ influences knowledge)
- You need to be a people person; need to continually build networks and map these networks (mindset/ way of working)
- Do road shows (Micheal); link your salesmen
- Develop list of champions/gatekeepers/change agents; these lists need to be shared with whole group
- Need to know how to access the media
- Knowing how to identify opportunities for LEAD

D3: Qualifications

Criteria for EAFM LEAD facilitation

PURPOSE

To provide a concise list of criteria that can be used to assess the quality of any EAFM facilitations.

HOW TO USE THIS DOCUMENT

These criteria can help LEAD facilitators as they facilitate EAFM LEAD meetings and consultations, and can be used when giving feedback.

CRITERIA

The criteria are grouped into three main topics:

1) Content

- Knowledgeable of the EAFM subject
- Resourceful of relevant EAFM-related topics
- Conversant with LEAD Toolkit
- Able to deliver clear messages, (targeting objectives??)

2) Quality of facilitation/communication skills

- Able to interact appropriately with the audience/in the setting (culturally and socially), and understand the audience or partners
- Well-prepared and organized, (and understanding the communicating objectives?)
- Articulate and communicate clearly
- Present oneself confidently and professionally
- Express oneself fluently and spontaneously, including when answering questions or addressing an issue
- Able to validate and weave audience's issues into the main messages

- Persuasive
- Have good listening skills and engage with the audience
- Conscious of time constraints

3) Possible impact on further actions by audience

- Establish good will
- Able to awaken interest and influence future engagement/actions on EAFM
- Able to direct audience to EAFM resources

EAFM LEAD Modules for a 1-day training course

EAFM Modules 1 - 10


5. Moving towards EAFM
Version 1
CORAL TRIANGLE INITIATIVE
Norad
USAID | ASIA


6. EAFM plans the link between policy and action
Version 1
CORAL TRIANGLE INITIATIVE
Norad
USAID | ASIA


7. EAFM process overview
Version 1
CORAL TRIANGLE INITIATIVE
Norad
USAID | ASIA


8. EAFM Institutional and Management Structures
Version 1
CORAL TRIANGLE INITIATIVE
Norad
USAID | ASIA


9. EAFM Developing Capacity
Version 1
CORAL TRIANGLE INITIATIVE
Norad
USAID | ASIA


10. EAFM Next Steps
Version 1
CORAL TRIANGLE INITIATIVE
Norad
USAID | ASIA

9. KEY TERMS - LANGUAGES

C1: Language

Key words in EAFM: English

PURPOSE

To provide a concise list of key words used in talking about EAFM and their translation into different languages.

HOW TO USE THIS DOCUMENT

This list can be used to assist translators and facilitators in expressing the key words in different languages.

KEY WORDS

Adaptive Management
Benchmark
Buy-in
Co-management
Ecosystem Approach (EA)
Ecosystem Approach to Fisheries Management (EAFM)
Ecosystem Services
Fisheries Management Unit (FMU)
Governance
Human well-being
Ecological well-being
Facilitator
Indicator
Management Goal
Management Actions
Management Objective
Outcomes
Outputs
Precautionary Approach
Stakeholder
Sustainability

Trade-off

Vision

C2: Language

English meaning of key words in EAFM

PURPOSE

To provide a concise list of key words used in talking about EAFM and their meaning in English.

HOW TO USE THIS DOCUMENT

This list can be used as a glossary to look up the meaning of the key words in English.

Adaptive management: A systematic process for continually improving management policies and practices by learning from the outcomes of previously employed policies and practices. The basic steps of adaptive management are to implement actions, monitor their effectiveness; analyze, use and adapt; and then capture and share learning. Active adaptive management occurs where management options are used as a deliberate experiment for the purpose of learning (Millennium Ecosystem Assessment, 2006).

Benchmark: A standard against which something can be measured or judged. It can describe where you want to go (target), where you have come from (baseline) or where you do not want to be (limit).

Buy-in: The process that signifies the commitment of interested or affected parties to a decision (often called stakeholders) to 'buy into' the decision, that is, to agree to give it **support, often by having been involved in its creation.**

Co-management: Partnership arrangements between key stakeholders and government to share the responsibility and authority for the management of the fisheries and coastal resources, with various degrees of power sharing.

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 (CBD, 2000). Often used interchangeably with ecosystem-based management.

Ecosystem approach to fisheries management (EAFM): EAFM is a more holistic approach to management that represents a move away from fisheries management systems that focus only on the sustainable harvest of target species, towards systems and decision-making processes that balance ecological well-being with human and societal well-being, within improved governance frameworks i.e. it is a practical way to achieve sustainable development. It 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 services: 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.

Fishery management unit (FMU): The area of the ecosystem and fisheries that is the focus for management under an ecosystem approach to fisheries management. The FMU can be a particular type of fishing, e.g. trawl fishery, and/or a particular resource fishery, e.g. shrimp fishery or a geographic area.

Governance: Effective institutions and arrangements for setting and implementing rules and regulations. It includes the planning and implementation mechanisms, 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. Good governance includes (i) consensus, (ii) participation, (iii) accountability, (iv) transparency and (v) follows the rule of law and is (vi) responsive, (vii) equitable and inclusive and (viii) efficient and effective.

Human well-being: The state of the society in terms of health, education, food security, political voice and influence, living environment and economic security and safety.

Ecological well-being: The state of the ecosystem in terms of health, biodiversity, **supportive structures and habitats and food webs.**

Facilitator: A person who manages the interactions of other people to achieve an acceptable outcome for all.

Indicator: A variable, pointer, or index that measures the current condition of a selected component of the ecosystem. Indicators provide a link between objectives and action when they are compared to benchmarks.

Management goal: A broad statement of a desired outcome, often a specific theme (e.g. the environment or the fishing communities). Goals are usually not quantifiable and may not have established timeframes for achievement (see management objectives).

Management actions: Specific actions (sometimes called measures) applied to achieve the management objective, including gear regulations, areas and time closures (see MPA), and input and output controls on fishing effort, ecosystem manipulations or governance actions.

Management objective: What is intended to be achieved through management actions. 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. (See definitions of vision and goal).

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

Outputs: Tangible products produced by through the management process (e.g. EAFM Plan).

Precautionary approach (or principle): An underlying element of the broader framework of sustainable development. Where there are threats of serious or irreversible damage, lack of

full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation (UNCED, 1992).

The United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks (UN 1995) first articulated the principle for fisheries with the following definition:

“States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures (UN, 1995).

The two ramifications of the precautionary approach are:

1. Lack of data and information should not be used as an excuse for not taking action.
2. Where there is uncertainty, management actions should be more risk averse.

Stakeholder: Any individual, group or organization who has an interest in (or a “stake”), or who can affect or is affected, positively or negatively, by a process or management decision.

Sustainability: Short hand for **sustainable development** that promotes 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. This requires a balance of human well-being (often in the short-term) with ecological well-being (often longer term degradation).

Trade-off: Achieving a balance between two desirable but incompatible features; a compromise.

Vision: A vision is the top-level aspiration of what the future (20-30 years) will look like if management is successful. (See goal and objective).

C3: Language

Key words in EAFM: Bahasa Indonesian Kata kunci dalam

TUJUAN

Untuk menyediakan daftar ringkasan kata kunci yang digunakan dalam EAFM dan terjemahannya ke dalam bahasa asing (bahasa yang berbeda).

CARA PENGGUNAAN DOKUMEN INI

Daftar ini dapat digunakan untuk membantu penerjemah dan fasilitator dalam mengungkapkan kata kunci ke dalam beberapa bahasa asing (bahasa yang berbeda).

KATA KUNCI

Adaptive Management: Manajemen/Pengelolaan Adaptif
Benchmark: Tolak ukur
Buy-in: Kepercayaan, meyakinkan kepemilikan adanya tanggung-jawab
Co-management: Co-manajemen/Pengelolaan kemitraan
Ecosystem Approach (EA): Pendekatan Ekosistem
Ecosystem Approach to Fisheries Management (EAFM): Pendekatan Ekosistem dalam Pengelolaan Perikanan
Ecosystem Services: Jasa Ekosistem
Fisheries Management Unit (FMU): Unit Pengelolaan Perikanan
Governance: Tata kelola
Human well-being: Kesejahteraan Manusia
Ecological well-being: Kesejahteraan Ekologi
Facilitator: Fasilitator
Indicator: Indikator/petunjuk
Management Goal: Tujuan akhir pengelolaan
Management Actions: Aksi-aksi pengelolaan
Management Objective: Tujuan pengelolaan
Outcomes: Hasil
Outputs: Keluaran
Precautionary Approach: Pendekatan pencegahan dini
Stakeholder: Pemangku kepentingan
Sustainability: Keberlanjutan

Trade-off: Tarik-ulur
Vision: Visi

C4: Language

Key Words in EAFM: Khmer
ពាក្យគន្លឹះនៅក្នុង EAFM

នោលបំណង

នែេម្បីផ្តល់នូវបញ្ជីសនងេបននពាក្យគន្លឹះដែលបាននៀ្បក្នុងការនិយាយអំពី EAFM និងការបក្សួអត្ថន័យនៅក្នុងសាផ្ទផ្គងោនរបស់ពួក្គ។

រនបៀបនៀ្បឯក្រូននីះ

បញ្ជីននីះអាច្ត្រូវបាននៀ្បនែេម្បីជួយែល់អនក្សក្សួនិងអនក្សរ្រួស្រួលក្នុងការបង្ហាញពាក្យគន្លឹះនៅក្នុងសាផ្ទផ្គងោន។

ពាក្យគន្លឹះ **(key words)**

ការរគ្រប់គ្រងនោយបនសំនៅនលងផ្គនការណ៍ (Adaptive Management)

ការក្ំណត់ក្ ត្ថមក្នុងោល (Benchmark)

ការនលើក្ទលក្ទិត្ត ឬទាក្់ទាញឲ្យចូលរួម (Buy-in)

សហគ្រប់គ្រង (Co-management)

វិធីជ្រួសត្បព័នធនអក្ូឡូស៊ី (Ecosystem Approach (EA))

វិធីជ្រួសត្បព័នធនអក្ូឡូស៊ីនែេម្បីគ្រប់គ្រងធនធានជលផ្ល (Ecosystem Approach to Fisheries Management (EAFM))

នសវាក្ម្មព័នធនអក្ូ (Ecosystem Services)

អងគសាពគ្រប់គ្រងជលផ្ល (Fisheries Management Unit (FMU))

អភិបាលក្ិចច (Governance)

សុខុមាលសាពមនុសគ (Human well-being)

សុខុមាលសាពនអក្ូឡូស៊ី (Ecological well-being)

អនក្សរ្រួស្រួល (Facilitator)

សូចនាក្រ (Indicator)

នោលនៅគ្រប់គ្រង (Management Goal)

សក្មសាពគ្រប់គ្រង (Management Actions)

នោលបំណងននការគ្រប់គ្រង (Management Objective)

លទធផ្លចុងនាយ (Outcomes)

លទធផ្ល (Outputs)

វិធីជ្រួសតបង្ហារទុក្ជាមុន (Precautionary Approach)

អនក្ពាក្់ព័នធ (Stakeholder)

និរនតរសាព (Sustainability)

បិទសក្មសាពអវិម្មួយនែេម្បីដែរក្សលំនលង (Trade-off)

ទស្សនៈវិស័យ (Vision)

C5: Language

ການຈັກການການປະມົງແບບຄຳນຶງເຖິງຜົນກະທົບຕໍ່ລະບົບນິເວດ ແມ່ນຜູ້ນຳ, ຜູ້ບໍລິຫານ ແລະ ຜູ້ຕັດສິນໃຈ

Key words in EAFM: Laos

ຄຳສັບທີ່ສຳຄັນການຈັກການການປະມົງແບບຄຳນຶງເຖິງຜົນກະທົບຕໍ່ລະບົບນິເວດ

Purpose:ຈຸດປະສົງ

To provide a concise list of key words used in talking about EAFM and their translation into different language ເພື່ອຫຍໍ້ ລາຍລະອຽດຄຳສັບທີ່ໃຊ້ ກ່ຽວກັບວຽກງານ ການຈັກການການປະມົງແບບຄຳນຶງເຖິງຜົນກະທົບຕໍ່ລະບົບນິເວດ ແລະ ລວມທັງການການແປໃນແຕ່ລະພາສາ

How to use this document: ວິທີໃຊ້ເອກສານ

This list can be used to assist translators and facilitators in expressing the key words in different languages. ນີ້ແມ່ນລາຍລະອຽດ ຂອງຄຳສັບທີ່ໃຊ້ ເປັນໂຕຊ່ວຍໃນການແປ ເອກກະສານ

Key words: ຄຳສັບທີ່ສຳຄັນ

1. Adaptive management: ຄູ່ມືໃນການຈັດການ ແລະ ປັບໃຊ້ (ໃຊ້ເພື່ອຄ້ຳປະກັນການອານຸລັກຊັບພະຍາກອນໃຫ້ມີຄວາມ ຍືນຍົງ)
2. Benchmark: ເກນມາດຕະຖານ(ໃຊ້ໄວ້ເພື່ອເປັນໂຕສົມທຽບ ເວລາປະເມີນຜົນໂຄງການໃດໜຶ່ງ)
3. Buy-in: ການຍອມຮັບ (ການອານຸມັດ)
4. Co-management: ການຈັດການກິດຈະກຳໃດໜຶ່ງຮ່ວມກັນ (ໝາຍເຖິງ ມີການຈັດການຮ່ວມກັນຈາກຫຼາຍພາກສ່ວນທີ່ກ່ຽວຂ້ອງຕໍ່ວຽກງານນັ້ນໆ)
5. Ecosystem Approach(EA): ເນັ້ນແນວທາງການຈັດການແບບລະບົບນິເວດ(ໝາຍເຖິງ ການຮັກສາຄວາມສົມດຸນຂອງ ຂອງສິ່ງມີຊີວິດ ແລະ ຊີວະນານພັນໃນການຢູ່ຮ່ວມກັນໃນລະບົບນິເວດ ຄົງຢູ່ຕະຫຼອດໄປ)
6. Ecosystem service:ການບໍລິການຂອງລະບົບນິເວດ(ໝາຍຄວາມວ່າ ຄຸນປະໂຫຍດຂອງທຳມະຊາດມອບໃຫ້ໂລກເຮົາເຊັ່ນ:ອາຫານ,ນ້ຳສະອາດ, ແລະ ຊັບພະຍາກອນທຳມະຊາດທີ່ໃຊ້ໃນການຜະລິດສິນຄ້າ ແລະ ການບໍລິການຕ່າງໆລວມເຖິງການການດູດເອົາກາກບອນດຊ່ວຍບັນເທົາໂລກຮ້ອນແລະ ອື່ນໆ)ໃ
7. Ecosystem approach to fisheries management: ການຈັດການ ການປະມົງແບບຄຳນຶງເຖິງຜົນກະທົບຕໍ່ລະບົບນິເວດ (ໝາຍເຖິງ ການເຮັດປະມົງໃຫ້ມີຄວາມຍືນຍົງ ໂດຍການຮັກສາຄວາມສົມດຸນຂອງຊັບພະຍາກອນຂອງລະບົບນິເວດທາງນ້ຳ ຄື ການນຳໃຊ້ຊັບພະຍາກອນຂອງລະບົບນິເວດທັງລະບົບແບບຍືນຍົງ ຕົວຢ່າງ: ການກຳນົດປະລິນມານປາທີ່ຈັບຕໍ່ປີ, ການປັບປຸງຄຸນນະພາບນຳ, ມົນລະພິດ, ການປ່ອຍສັດນ້ຳ, ການຈັດການແຫຼ່ງທີ່ຢູ່ອາໃສ ແລະ ອື່ນໆ)
8. Fisheries Management Unit (EFM): ໜ່ວຍງານການຈັດການວຽກງານປະມົງ

9. Governance:ອົງການບໍລິຫານປົກຄອງຂອງລັດຖະບານ
10. Human well-being: ສະຫວັດດີການສັງຄົມຂອງມະນຸດ
11. Facilitator: ຜູ້ອໍານວຍຄວາມສະດວກ
12. Indicator: ໂຕຊີ້ວັດ (ດັດສະນີ)
13. Management goal: ເປົ້າໝາຍຂອງການພັດທະນາ
14. Management objective: ຈຸດປະສົງຂອງການພັດທະນາ
15. Outcomes : ຄາດໝາຍຜົນໄດ້ຮັບ (ໄລຍະຍາວ ຫຼືອານາຄົດ)
16. Outputs: ຜົນໄດ້ຮັບ(ຫຼັງແລ້ວປະຊຸມ)
17. Precautionary approach: ເນັ້ນວິທີການປ້ອງກັນໄວ້ລ່ວງໜ້າ (ກັນໄວ້ດີກວ່າແກ້)
18. Stakeholder: ຜູ້ມີສ່ວນຮ່ວມ (ໝາຍຄວາມວ່າ ຜູ້ມີສ່ວນໄດ້ສ່ວນເສຍກັບວຽກງານດັ່ງກ່າວ)
19. Sustainable: ຄວາມຍືນຍົງ ບໍ່ມີມື້ໝົດ)
20. Trade-off: ການແລກປ່ຽນ (ໄດ້ຢ່າງໜຶ່ງເສຍຢ່າງໜຶ່ງ)
21. Vision: ວິໄສທັດ (ການເບິ່ງກວ້າງເຫັນໄກ)

C6: Language

Key words in EAFM: Myanmar

PURPOSE

To provide a concise list of key words used in talking about EAFM and their translation into different languages.

HOW TO USE THIS DOCUMENT

This list can be used to assist translators and facilitators in expressing the key words in different languages.

KEY WORDS

Adaptive Management - လိုက်လျောညီထွေဖြစ်စေမည့်စီမံခန့်ခွဲမှု

Benchmark - စံတစ်ခုဖြင့်နှိုင်းယှဉ်ခြင်း

Buy-in - မဝယ်ယူ

Co-management - ပူးပေါင်းစီမံခန့်ခွဲခြင်း

Ecosystem Approach (EA) - ဂေဟစနစ်ဆိုင်ရာချဉ်းကပ်မှု

Ecosystem Approach to Fisheries Management (EAFM) - ဂေဟစနစ်ဆိုင်ရာချဉ်းကပ်မှုတို့ဖြင့်ငါး လုပ်ငန်းများစီမံခန့်ခွဲခြင်း

Ecosystem Services - ဂေဟစနစ်ဆိုင်ရာဆောင်ရွက်ပေးမှုများ

Fisheries Management Unit (FMU) - ငါးလုပ်ငန်းစီမံခန့်ခွဲမှုဧရိယာ

Governance - အုပ်ချုပ်မှုစနစ်

Human well-being - လူသားများအတွက် ကောင်းမွန်စေခြင်း

Ecological well-being - ဂေဟစနစ်ကောင်းမွန်စေခြင်း

Facilitator - လုပ်ငန်းအစဉ်ပြေအောင်ကြပ်ဆောင်ရွက်ပေးသူ

Indicator - ညွှန်ပြချက်

Management Goal - စီမံခန့်ခွဲမှုရည်မှန်းချက်

Management Actions - စီမံခန့်ခွဲမှုအရေးယူဆောင်ရွက်ခြင်း

Management Objective - စီမံခန့်ခွဲမှုရည်ရွယ်ချက်

Outcomes - အကျိုးရလာဒ်များ

Outputs - လက်ငင်းဆောင်ရွက်မှုများ

Precautionary Approach - ကြိုတင်ချဉ်းကပ်ဆောင်ရွက်ခြင်းများ

Stakeholder - လုပ်ငန်းရှင်များ

Sustainability - ရေရှည်တည်တံ့မှု

Trade-off - အပေးအယူလုပ်သည်

Vision- အမြင်

C7: Language

Key words in EAFM: Bahasa Malay

PURPOSE

To provide a concise list of key words used in talking about EAFM and their translation into different languages.

HOW TO USE THIS DOCUMENT

This list can be used to assist translators and facilitators in expressing the key words in different languages.

KEY WORDS

Adaptive Management – ***pengurusan mudah suai***
Benchmark – ***petanda aras***
Buy-in – no specific translation
Co-management – ***pengurusan bersama***
Ecosystem Approach (EA) – ***pendekatan ekosistem***
Ecosystem Approach to Fisheries Management (EAFM) – ***pendekatan ekosistem terhadap pengurusan perikanan***
Ecosystem Services – ***khidmat ekosistem***
Fisheries Management Unit (FMU) – ***Unit Pengurusan Perikanan***
Governance – ***tadbir urus***
Human well-being – ***kesejahteraan manusia***
Ecological well-being – ***kesejahteraan ekosistem***
Facilitator – ***pemudahcara/fasilitator***
Indicator – ***penunjuk/indikator***
Management Goal – ***matlamat pengurusan***
Management Actions – ***tindakan pengurusan***
Management Objective – ***objektif pengurusan***
Outcomes - ***hasil***
Outputs – ***output***
Precautionary Approach – ***pendekatan berwaspada***
Stakeholder – ***pihak berkepentingan***
Sustainability – ***mampan***
Trade-off – ***keseimbangan***

Vision – ***visi***

C8: Language

Key words in EAFM: Thai

PURPOSE

To provide a concise list of key words used in talking about EAFM and their translation into different languages.

HOW TO USE THIS DOCUMENT

This list can be used to assist translators and facilitators in expressing the key words in different languages.

KEY WORDS

Adaptive Management= การจัดการเชิงประยุกต์

Benchmark= เกณฑ์มาตรฐาน,เกณฑ์เปรียบเทียบสมรรถนะ

Buy-in = การเห็นชอบ, การยอมรับ

Co-management=การจัดการร่วม หรือการจัดการแบบมีส่วนร่วม

Ecosystem Approach (EA) = แนวทางเชิงระบบนิเวศ

Ecosystem Approach to Fisheries Management (EAFM) = การบริหารจัดการทรัพยากรประมงโดยใช้แนวทางเชิงระบบนิเวศ

Ecosystem Services = นิเวศบริการ, บริการของระบบนิเวศ

Fisheries Management Unit (FMU) =หน่วยจัดการประมง , หน่วยเฉพาะกิจจัดการประมง

Governance= ธรรมาภิบาล

Human well-being = ความเป็นอยู่ที่ดี ความสุข สวัสดิภาพ (ของมนุษย์)

Ecological well-being = สภาพที่ดีของระบบนิเวศ, สวัสดิภาพทางนิเวศ

Facilitator= ผู้ให้ความสะดวกต่างๆ แก่ผู้อื่น

Indicator= ตัวบ่งชี้, สิ่งชี้นา, ดรรชนี

Management Goal = เป้าหมายการจัดการ

Management Actions=การจัดการตามภารกิจ

Management Objective=การจัดการตามวัตถุประสงค์

Outcomes=ผลลัพธ์

Outputs=ผลผลิต

Precautionary Approach=แนวทางการระมัดระวังล่วงหน้า

Stakeholder=ผู้มีส่วนได้ส่วนเสีย

Sustainability=ยั่งยืน

Trade-off =**การที่เราต้องอยู่ในสถานการณ์ที่มีทางเลือกอยู่ ๒ ทาง ที่เราจาเป็นต้องเลือก และในการเลือกนั้น เราต้องยอมเสียบางสิ่งบางอย่างไป เพื่อที่จะได้บางสิ่งบางอย่างที่คุ้มค่ามา**
Vision=**วิสัยทัศน์**

C9: Language

Key words in EAFM: Vietnamese

(Những từ khóa trong EAFM)

PURPOSE (Mục đích)

To provide a concise list of key words used in talking about EAFM and their translation into different languages.

(Để cung cấp một danh sách ngắn gọn các từ khóa quan trọng được sử dụng khi nói về EAFM và bản dịch của nó sang các ngôn ngữ khác nhau)

HOW TO USE THIS DOCUMENT (Cách sử dụng tài liệu này)

This list can be used to assist translators and facilitators in expressing the key words in different languages.

(Danh sách này có thể được sử dụng để giúp những người phiên dịch và người hộ trợ trong việc thể hiện các từ khóa trong các ngôn ngữ khác nhau)

KEY WORDS (Các từ khóa)

Adaptive Management (Quản lý thích ứng)

Benchmark (Điểm chuẩn/ Tiêu chuẩn/Chuẩn mực)

Buy-in (Mua vào)

Co-management (Đồng quản lý)

Ecosystem Approach (EA) (Phương pháp tiếp cận hệ sinh thái)

Ecosystem Approach to Fisheries Management (EAFM) (Phương pháp tiếp cận hệ sinh thái với quan lý nghề cá)

Ecosystem Services (Các dịch vụ hệ sinh thái)

Fisheries Management Unit (FMU) (Đơn vị quản lý nghề cá/thủy sản)

Governance (Quản trị/ quản lý)

Human well-being (Hạnh phúc của con người/ đời sống con người/ phúc lợi con người)

Ecological well-being (Sự phong phú của hệ sinh thái)

Facilitator (Ngời hỗ trợ/người giúp đỡ)

Indicator (Chỉ số)

Management Goal (Mục tiêu quản lý)

Management Actions (Các hoạt động/hành động/ biện pháp quản lý)

Management Objective (Mục tiêu quản lý)

Outcomes (Các kết quả)

Outputs (Các kết quả đầu ra/ đầu ra)

Precautionary Approach (Biện pháp phòng ngừa)
Stakeholder (Các bên liên quan)
Sustainability (Sự bền vững/ tính bền vững)
Trade-off (Đánh đổi/trao đổi)
Vision (Tầm nhìn)

C9: Language

Key words in EAFM: Tagalog
Mga susing salita sa EAFM

PURPOSE LAYUNIN
To provide a concise list of key words used in talking about EAFM and their translation into different languages.
Upang makabigay ng maikling listahan ng mga pangunahing salitang ginagamit patungkol sa EAFM at sa pagsasalin nito sa iba't ibang wika.
HOW TO USE THIS DOCUMENT PAANO GAMITIN ANG DOKUMENTONG ITO
This list can be used to assist translators and facilitators in expressing the key words in different languages.
Ang listahang ito ay maaaring gamitin upang matulungan ang mga tagasalin at tagapangasiwa sa pagpapahayag ng mga susing salita sa iba't ibang wika.
KEY WORDS MGA SUSING SALITA
Adaptive Management Pangangasiwang bumabagay sa kasalukuyang sitwasyon
Benchmark Pamantayan
Buy-in Kasunduan upang suportahan ang isang desisyon
Co-management Magkaagapay sa pangangasiwa
Ecosystem Approach (EA) Pamamaraang Ekosistem
Ecosystem Approach to Fisheries Management (EAFM) Pamamaraang Ekosistem ukol sa Pangangasiwa ng Pangisdaan
Ecosystem Services Mga Serbisyong Ekosistem
Fisheries Management Unit (FMU) Sangay na Namamahala sa Pangisdaan
Governance Pamamhala
Human well-being Kapakanang pantao

Ecological well-being Kapakanang pang-ekolohiya
Facilitator Tagapagsagawa
Indicator Palatandaan
Management Goal Layunin sa Pamamahala
Management Actions Aksyon sa Pamamahala
Management Objective Tunguhin sa Pamamahala
Outcomes Kinalabasan
Outputs Mga ginawa
Precautionary Approach Maingat na pamamaraan
Stakeholder Taong may interest/epektado sa isang bagay
Sustainability Pagpapanatili
Trade-off Pagpapalitan
Vision Pananaw