



Food and Agriculture  
Organization of the  
United Nations

## ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT TRAINING COURSE (INLAND FISHERIES)

### VOLUME 3: TRAINING COURSE PRESENTATIONS & VISUALS



Cover image: Emmanuela D'Antoni, "Inland Fisheries" (FAO, 2003).

**ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT  
TRAINING COURSE (INLAND FISHERIES)  
VOLUME 3: TRAINING COURSE PRESENTATIONS & VISUALS**

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
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## PREPARATION OF THIS DOCUMENT

This Ecosystem Approach to Fisheries management (EAFm) inland fisheries training course is a development of the Essential-Ecosystem Approach to Fisheries Management (E-EAFm) training course, which was developed over several years starting in 2012. The consortium of institutions and projects which developed the course consisted of: the Food and Agriculture Organization (FAO) of the United Nations, the National Oceanic and Atmospheric Administration (NOAA) and IMA International.

The Essential-Ecosystem Approach to Fisheries management (E-EAFm) training course and E-EAFm Training of Trainers Course are rooted in, and closely follow the EAF Guidelines and Tools produced by FAO from 2003 onwards, through the EAF-Nansen Project (and tested and applied mainly in Africa and the Caribbean). In mid-2012, IMA International was invited to explore and coordinate the potential and opportunity for harmonizing or merging regional EAFm capacity development processes.

A first EAFm curriculum development ‘writeshop’ was held in November 2012 in Phuket, Thailand. This was followed by a second ‘writeshop’ in Manila, Philippines, in January 2013. A training package was produced and used as course material for a first “Essential EAFm” pilot-training and training-of-trainers in Kota Kinabalu, Malaysia, in June 2013. Based on the experience gained from this pilot training, the course material was further improved and finalized.

The drafting team for the original E-EAFm training handbook included Rusty Brainard (NOAA), Silvia Capezzuoli (IMA International), Simon Funge-Smith (FAO), Chris Grose (IMA International), Adel Heenan (NOAA), Rudolf Hermes (BOBLME), Paulo Maurin (NOAA), Megan Moews (NOAA), Chris O’Brien (BOBLME), Robert Pomeroy (USAID-CTSP) and Derek Staples (Fisheries Management Consultant). Nygiel Armada, Robert Pomeroy and Derek Staples drafted the original written modules for this course. Additional input was provided by Janna Shackeroff, Robert Schroeder, Jarad Makaiau and Max Sudnovsky (all NOAA) and Magnus Torell (SEAFDEC). Figures used and adapted with permission from the United Nations Environment Programme (UNEP) and the International Collective in Support of Fishworkers (ICSF).

The original coastal/marine-focussed E-EAFm has been modified for application in a number of countries and regions by FAO, SEAFDEC, The Nature Conservancy and USAID funded projects.

The modification for application of the E-EAFm handbook and training materials to inland fisheries contexts, was undertaken by Simon Funge-Smith (FAO), Rick Gregory (FAO), John Jorgensen (FAO) and Silvia Capezzuoli (IMA International) during 2018-19.

The EAFm Inland fisheries training course was piloted in Mangochi, Malawi in March 2019 and the material finalized in May 2019.

## **ABSTRACT**

This Ecosystem Approach to Fisheries management training course (Inland Fisheries) is designed as a complete training course for the sustainable management of inland fisheries using the ecosystem approach. It is targeted at middle-level fishery and environment officers, extension workers, facilitators and other stakeholders engaged in the planning and management of inland fisheries.

This training course is designed to be applicable to many inland fishery contexts around the world (including overlapping freshwater fishery and aquaculture systems). It is also intended to be adapted to suit specific local contexts.

This is the first of three volumes, developed for the training course:

VOLUME 1: HANDBOOK FOR TRAINEES

VOLUME 2: INLAND FISHERY CASE STUDIES

VOLUME 3: TRAINING COURSE PRESENTATIONS & VISUALS

VOLUME 4: TRAINING SESSION PLANS

This volume is VOLUME 3: TRAINING COURSE PRESENTATIONS & VISUALS and contains the presentations for the training course. It also includes a series of visual aids used in the training room during the course.

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## SESSION 1: ESSENTIAL EAFM COURSE OVERVIEW



### Session 1 Essential EAFm course overview

Essential EAFm training  
Date | Place

1



### Overall course objective

- Understand the concept and the need for an Ecosystem Approach to Fisheries management (EAFm)
- Learn skills and knowledge to more sustainably manage inland capture fisheries

## SESSION 1: ESSENTIAL EAFM COURSE OVERVIEW



**This course will equip you to:**

- Manage fisheries more holistically
- Resolve fisheries issues and challenges better
- Work cooperatively with other stakeholders
- Reduce user group conflicts
- Make financial resources available
- Increase political will and support



1. EAFm INTRODUCTION 3



**EAF or EAFm?**

- EAF: Ecosystem Approach to Fisheries.
  - Applies the ecosystem approach to fisheries
  - Broad concept that covers development, planning, food safety, etc.
- EAFm: Ecosystem Approach to Fisheries management.
  - Applies the ecosystem approach to fisheries management



*This course focuses on inland fisheries management  
i.e. EAFm*

1. EAFm INTRODUCTION 4

# SESSION 1: ESSENTIAL EAFM COURSE OVERVIEW



**For this course.....**

We will be looking at inland fisheries in Africa

**Note:** Ecosystem approach can be applied to other systems e.g. coastal and offshore marine ecosystems or even aquaculture systems



**1. EAFm INTRODUCTION** **5**



|                                    | DAY 1  | DAY 2   | DAY 3   | DAY 4  | DAY 5  |
|------------------------------------|--|---|---|--|--|
|                                    | What & why   | How   | Plan & check  | Do & check   | Present  |
| Morning<br>08.30 –10.10            | Registration<br>Introductions<br>Course overview<br>1. Threats and issues in fisheries | 5. Moving towards EAFm<br>Lake Victoria case study  | 10. Step 1: Define & scope the Fishery Management Unit (FMU)<br>1.1 Define the FMU<br>1.2 Agree on the vision<br>1.3 Scope the FMU  | 13. Step 3: Develop the EAFm plan<br>3.1 Develop management objectives<br>3.2 Develop indicators and benchmarks  | Quiz review<br><br>Participant work: refining EAFm plans & preparing presentations                     |
| Break<br>10.30 – 12.30             | 2. Fisheries management and the ecosystem approach<br><br>3. The what and why of EAFm? | 6. EAFm plans: the link between policy and action<br>7. EAFm process overview<br>8. Startup A<br>Preparing the ground | 11. Step 2: Identify & prioritize issues & goals<br>2.1 Identify FMU-specific issues<br>2.2 Prioritize issues<br>2.3 Define goals<br><br>12. Reality check I<br>Constraints and opportunities | 14. Step 3: Develop the EAFm plan ...cont'd<br>3.3 Agree management actions<br>3.4 Include financing mechanisms<br>3.5 Finalize EAFm plan<br><br>15. Step 4: Implement the plan<br>4.1 Formalize, communicate and engage | Participant presentations on EAFm key elements to illustrate learning<br><br>Feedback on presentations |
| Lunch<br>Afternoon<br>13.30 –14.45 | 4. Principles of EAFm  | 8. Startup A Preparing the ground cont.   | 12. Reality check I<br>Facilitation skills  | 16. Reality check II<br>Align to EAFm principles<br>Supporting environment   | Course review<br><br>Individual action planning  |
| Break<br>15.05 –16.30              | (4a) How much EAFm are you already doing?  | 9. Startup B<br>Engaging stakeholders   | 12. Reality check I<br>Conflict management  | 17. Step 5: Monitor, evaluate and adapt<br>5.1 Monitor and evaluate performance<br>5.2 Review and adapt the plan<br>EAFm QUIZ  | Course evaluation<br><br>Course closure and certification  |
| 17.00 wrap up                      | Homework: EAFm progress  |   |   | Homework: Presentation preparation   |  |
| <b>1. EAFm INTRODUCTION</b>        |  |   |   |  | <b>6</b>   |

## SESSION 1: ESSENTIAL EAFM COURSE OVERVIEW



### Materials and feedback

- Course Handbook, Workbook, Toolkit
- Take-home PowerPoint slides & resources
- Daily monitoring and review
- Course evaluation
- Certificates

**Navigating the Essential EAFm training package**

```

graph LR
    subgraph TRAINERS
        TRG[Trainer resource guide]
        SP[Session Plans]
        AS[Assessments]
    end
    subgraph PARTICIPANTS
        W[Workbook]
        H[Handbook]
        T[Toolkit]
    end
    PP[Power Points]
    VG[Visuals gallery]
    AP[Action Plan]

    TRG --> PP
    SP --> PP
    PP --> H
    VG --> H
    H --> W
    H --> T
    H -.-> AP
  
```

1. EAFm INTRODUCTION 7



### New ways of learning

- Learning new skills and elaborating on what you already know
- Reading, seeing, listening and questioning
- Hands-on activities and exercises and relating to your own experience
- Sharing tips and experiences
- Having fun!
- Useful resource for EAFm = FAO EAFNet online Toolkit  
<http://www.fao.org/fishery/eaf-net/topic/166272/en>

1. EAFm INTRODUCTION 8

## SESSION 1: ESSENTIAL EAFM COURSE OVERVIEW



### Turning your learning into action

- Daily action planning
- Working in groups
- Presentations on day 5

1. EAFm INTRODUCTION 9



### Group activity

- Discuss threats or issues relating to your fisheries and the associated ecosystem
- Write each issue or threat on a SEPARATE card, think of as many as you can
- Place the cards on the flipchart
- Move around so you can see other group's work

**Note:** You will be using these cards again later

1. EAFm INTRODUCTION 10

## SESSION 1: ESSENTIAL EAFM COURSE OVERVIEW



### Key messages

- Many threats and issues to sustainable inland fisheries
- You will already be familiar with many of these
- Issues are the same across many parts of the world
- Some are within the fishery, others come from outside
- Some are trans-boundary
  - Regional cooperation will help address the issues
  - Countries can learn from each other

## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### Session 2 Inland fisheries management and the ecosystem approach

Essential EAFm training  
Date | Place

1



### Session objectives

#### After this session you will be able to:

- Realize that a broader management approach is required to address the many threats and issues facing inland fisheries
- Recognize how ecosystems benefit human societies
- Describe the concept of the ecosystem approach (EA)
- Explain some of the benefits of using an EA

## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### What is Fisheries Management?

Fisheries management: “An integrated process that aims to control fishing activities to improve the benefits that society receives from harvesting fish”.

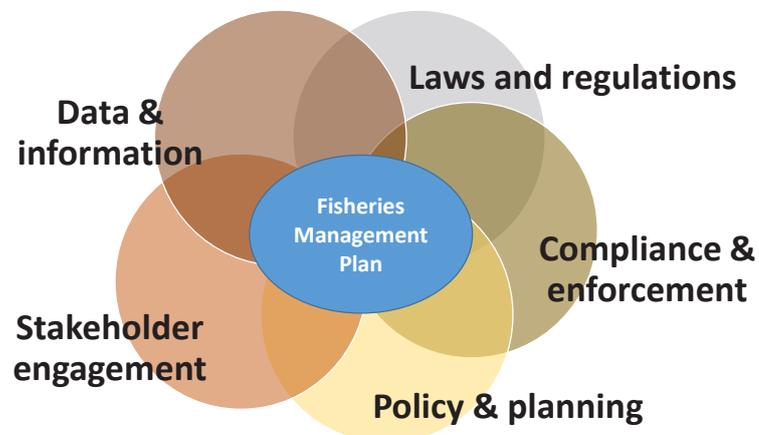
*Adapted from FAO*

The many threats and issues identified in Session 1 require management to:

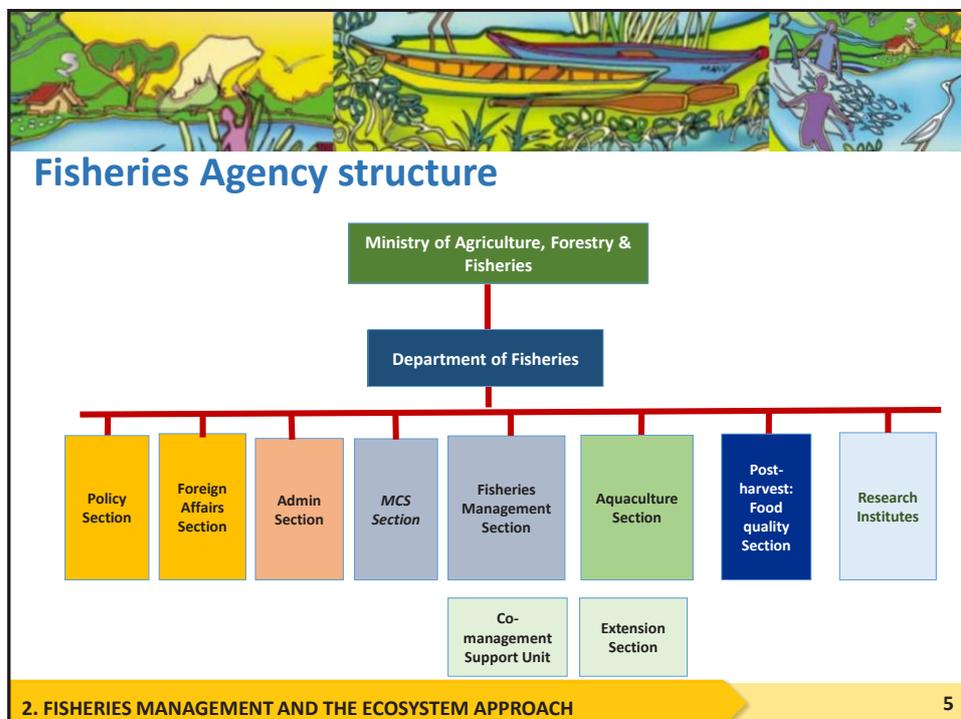
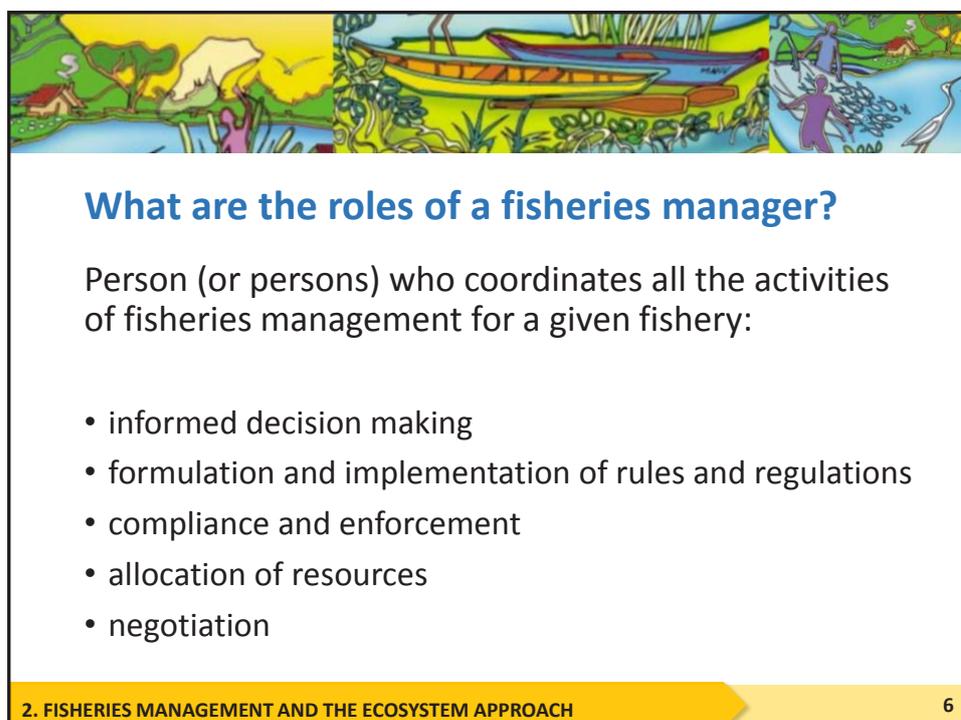
- minimize their impact and
- improve the benefits to society



### Components of fisheries management



## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH

**What are the roles of a fisheries manager?**

Person (or persons) who coordinates all the activities of fisheries management for a given fishery:

- informed decision making
- formulation and implementation of rules and regulations
- compliance and enforcement
- allocation of resources
- negotiation

2. FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH 6

## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### Typical, existing fisheries management

#### *Possible characteristics:*

- Mainly focused on target species & stock assessment
- Single sector specific (fisheries)
- Mainly control of fishing (e.g. gear restrictions, seasonal closures, conservation zones)
- Based on biological objective e.g. maximizing production



### Group activity

1. Discuss what you know about existing fisheries management in your country
2. Sort the threats and issues identified earlier into:
  - i. Those that can be addressed by existing fisheries management (e.g. with a tick); and
  - ii. others.

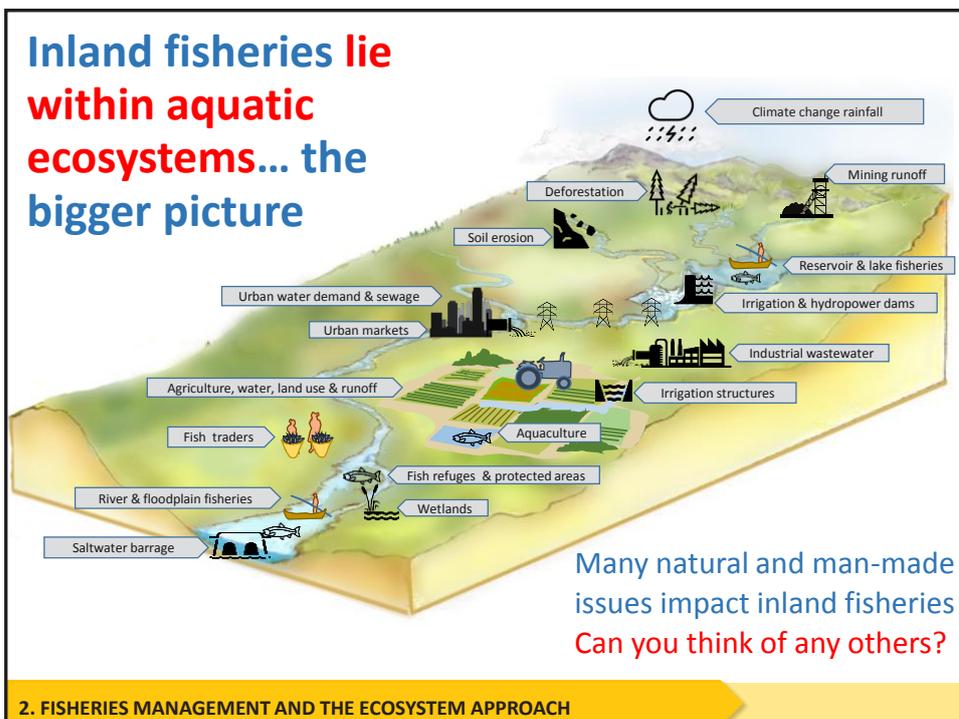
## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### Conclusions: existing fisheries management has some gaps

- Fishery resources are seriously degraded in the region with many issues
- Existing fisheries management does not cover all threats and issues and can often fail
- A broader and more inclusive approach is needed that builds on existing management

### Inland fisheries lie within aquatic ecosystems... the bigger picture



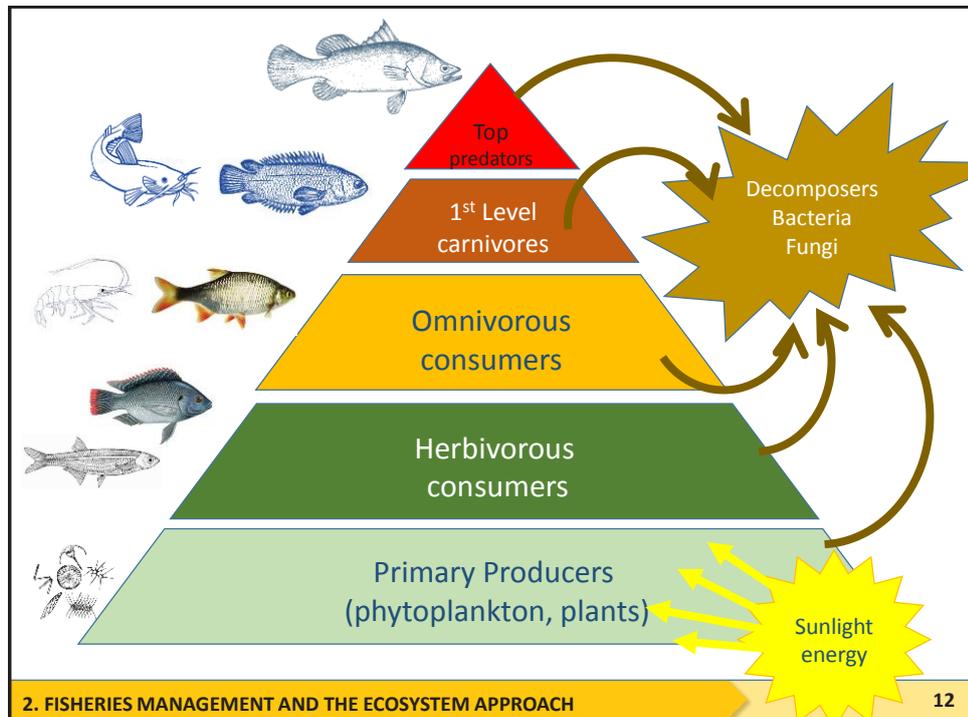
## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



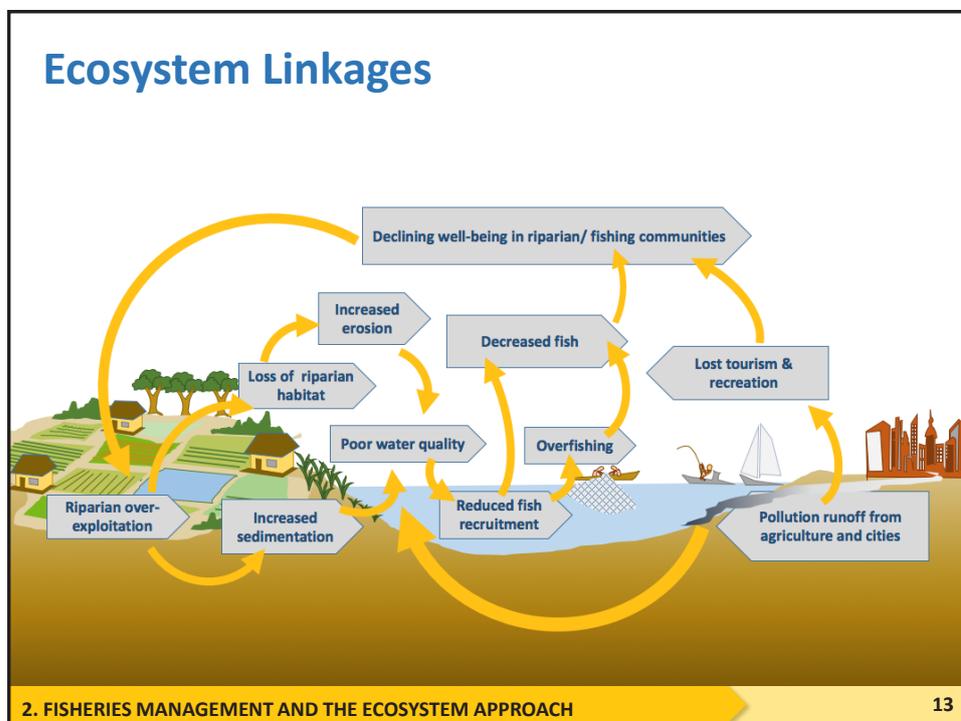
### What is an ecosystem?

“An ecosystem can be defined as a relatively self-contained system that contains plants, animals (**including humans**), micro-organisms and non-living components of the environment as well as the **interactions** between them.”

SPC (2010)



## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### Ecosystem services & benefits

- **Supporting** – e.g. food webs of plants and animals
- **Provisioning** – e.g. supply of fish for animal and human food
- **Regulating** – e.g. coastal protection and resilience against variability and change, as well as natural disasters
- **Cultural** – e.g. recreation, cultural and traditional heritage values

## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### Ecosystem approach (EA)

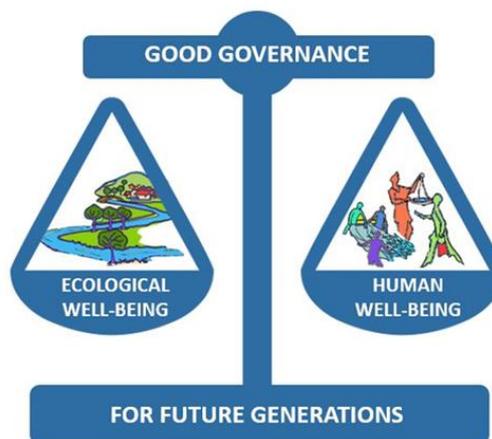
A strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (CBD 2000)

The balance of conservation with sustainable use in an equitable way underpins the concept of sustainable development

*Note: EA is often called ecosystem-based management (EBM)*



### Sustainable Development



## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### The 3 components of sustainable development

- **Ecological well-being:** e.g. healthy habitats, foodwebs, and sustainable fishing
- **Human well-being:** e.g. increased & equitable wealth, food security and sustainable livelihoods
- **Good governance:** e.g. effective institutions and arrangements for setting and implementing rules and regulations



### Sustainable development

“Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”

The **ecosystem approach** is a practical way to implement **sustainable development**.

## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### Activity

Plenary brainstorm:

What are the benefits of taking an ecosystem approach?

*Tip: keep in mind that we are trying to promote sustainable development*



### What are the benefits of an Ecosystem Approach?

- Integrated approach that allows trade-offs when balancing human and ecological well-being
- Allows adaptive management – leading to more effective planning
- Increase in stakeholder participation

## SESSION 2: INLAND FISHERIES MANAGEMENT AND THE ECOSYSTEM APPROACH



### What are the benefits of an Ecosystem Approach? (cont.)

- Provides a way to consider large-scale, long-term issues (e.g. climate change)
- Increased political support
- Access to finances resources



### Key messages:

- Threats and issues to sustainable fisheries are broad in scope
  - a number fall outside existing fisheries management
  - a broader approach is needed
- EA is about integrative management across land, water and living resources
- EA is a way of implementing sustainable development that promotes:
  - balancing ecological well-being with human well-being through good governance



## SESSION 3: THE WHAT AND WHY OF EAFm?



### Session 3 The why and what of EAFm?

Essential EAFm training  
Date | Place



### Session objectives

**After this session you will be able to:**

- Describe what EAFm is
- Explain the benefits of using an EAFm
- Explain how EAFm fits with other approaches
- Recognize the difficulty in dealing with multiple societal objectives

## SESSION 3: THE WHAT AND WHY OF EAFm?



**What is EAFm?**

**EAFm is the ecosystem approach (EA) applied to fisheries management (Fm)**

$$\text{EA} + \text{Fm} = \text{EAFm}$$

i.e. a practical way to implement sustainable development and sustainably maximize the ecosystem benefits of a fishery system

3. THE WHAT AND WHY OF EAFm 3



**EAFm helps to find the balance**

Sustainable Development

GOOD GOVERNANCE

ECOLOGICAL WELL-BEING

HUMAN WELL-BEING

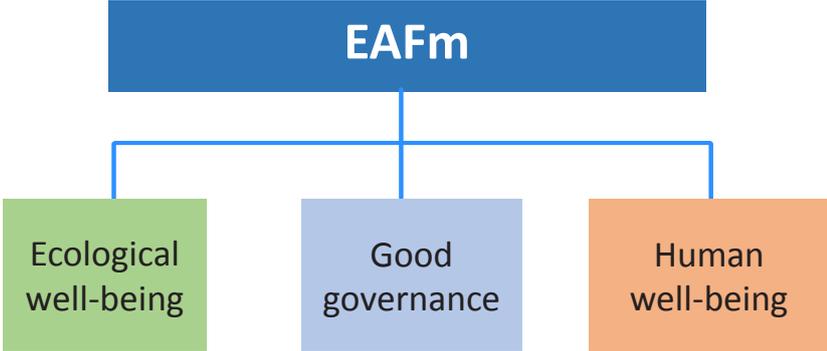
FOR FUTURE GENERATIONS

3. THE WHAT AND WHY OF EAFm 4

## SESSION 3: THE WHAT AND WHY OF EAFm?



### Components of EAFm



```

graph TD
    EAFm[EAFm] --> Ecological[Ecological well-being]
    EAFm --> Governance[Good governance]
    EAFm --> Human[Human well-being]
    
```

**Note:** Ecological well-being = fish + environment

3. THE WHAT AND WHY OF EAFm 5



### EAFm builds on existing fisheries management : “the move towards EAFm”

| EXISTING   | EAFm  | EA  |
|--|---|---|
| <ul style="list-style-type: none"> <li>• Fish focused</li> <li>• Target species</li> <li>• Production driven</li> <li>• Managed through control of fishing</li> <li>• Government driven</li> </ul> | <ul style="list-style-type: none"> <li>• All aquatic species</li> <li>• Considers habitats</li> <li>• Fishery impacts on the ecosystem</li> <li>• Threats to the fishery from external factors</li> <li>• Good governance/</li> <li>• Participatory/co-management</li> <li>• Socio-economic benefits</li> </ul> | <ul style="list-style-type: none"> <li>• Integrated management across sectors</li> <li>• Multiple use management</li> </ul> |

3. THE WHAT AND WHY OF EAFm 6

## SESSION 3: THE WHAT AND WHY OF EAFm?



### Why EAFm?

- Promotes broader consideration of the links between components in an ecosystem and fisheries;
- Facilitates trade-offs between different stakeholder's priorities, balancing human and ecological needs
- Increases stakeholder's participation – better communication and trust

3. THE WHAT AND WHY OF EAFm 7



### Why EAFm? continued...

- Enables recognition of larger-scale, longer-term issues and their solutions
- Increases support for better governance
  - Can lead to better compliance and enforcement
- Reduces conflicts, especially between different fishery sub-sectors and other sectors
- Helps access to financial resources for fisheries
  - Good planning and momentum fosters support from governments, donors and NGOs

3. THE WHAT AND WHY OF EAFm 8

## SESSION 3: THE WHAT AND WHY OF EAFm?



### Other management approaches

**Co-management:**

- a partnership arrangement between government and other stakeholders for management
- typically a key part of EAFm

**Freshwater Conservation Areas/Zone (FCA/Zs):**

- a clearly defined area to achieve conservation of nature (fish, aquatic resources and often water birds), with associated ecosystem services and cultural values
- another important tool for EAFm

3. THE WHAT AND WHY OF EAFm 9



### Other management approaches (continued)

**Integrated water (resource) management (IWRM):**

- an ecosystem approach to managing a watershed or irrigation system
- links with EAFm in rivers, watersheds and irrigation command areas.

**Integrated Land Management (ILM):**

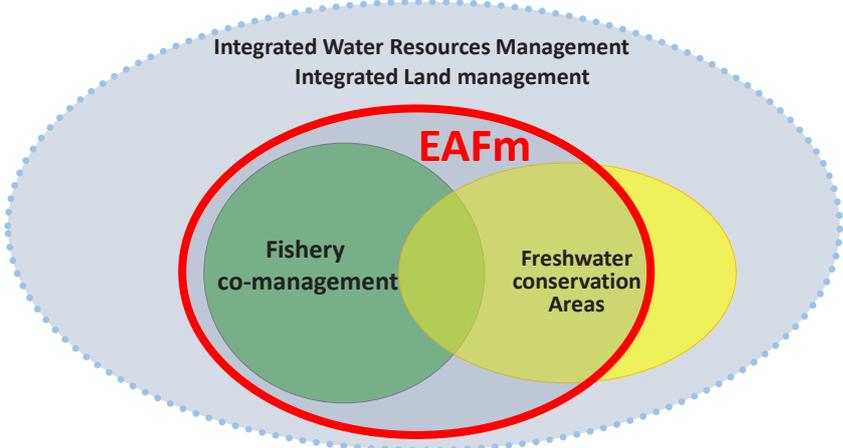
- planning that allocates user access based on the spatial and temporal distribution of human activities
- an important tool for EAFm (zoning)

3. THE WHAT AND WHY OF EAFm 10

### SESSION 3: THE WHAT AND WHY OF EAFm?



## EAFm complements other approaches



Integrated Water Resources Management  
Integrated Land management

**EAFm**

Fishery co-management

Freshwater conservation Areas

3. THE WHAT AND WHY OF EAFm 11

## REMEMBER EAFm IS FINDING THE BALANCE

**Priority: Ecological well-being**



“With the participation of stakeholders, allocate agreed areas as no-take zones to protect critical habitats.”

**Priority: Human well-being**



“We need to find the right balance.”

“Limit fishing effort to match the productivity of the resource (e.g. maximum sustainable yield).”

GOOD GOVERNANCE  
PARTICIPATORY DECISION MAKING  
CO-MANAGEMENT  
CONFLICT RESOLUTION

Adapted from ICSF (2013)

3. THE WHAT AND WHY OF EAFm 12

## SESSION 4: PRINCIPLES OF EAFm



### Session 4 Principles of EAFm

Essential EAFm training  
Date | Place



### Session objectives

**After this session you will be able to:**

- Examine the principles of EAFm and their link to the FAO Code of Conduct for Responsible Fisheries (CCRF)

## SESSION 4: PRINCIPLES OF EAFm



### Group Timelines

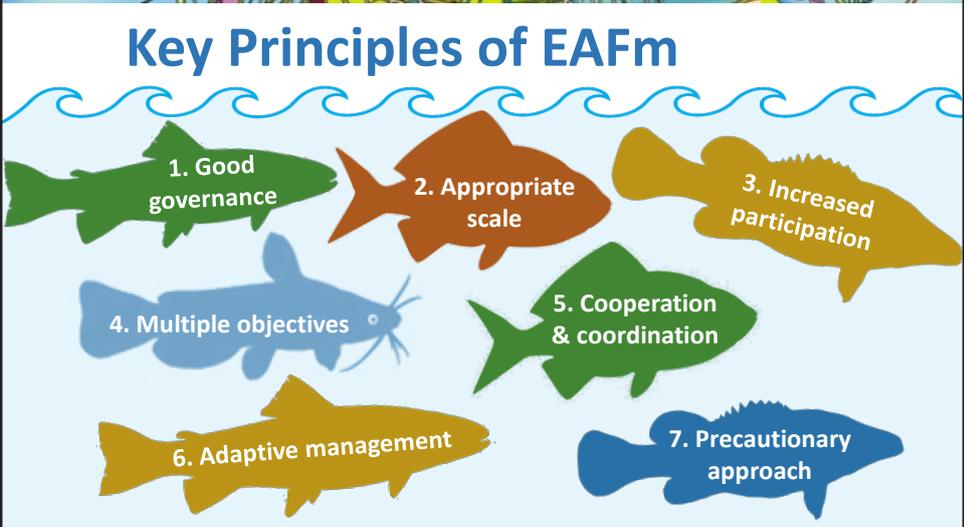
Horizontal line represent 'time'

1. Go back in time 30 – 40 years (e.g. 1980). Think of events that have affected or been affected by your fisheries (political, environmental, social, etc.) Events can be from local to national to global
2. Draw/write each event (with dates) on a separate card
3. Plot your cards onto the timeline

4. PRINCIPLES OF EAFm 3



### 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

4. PRINCIPLES OF EAFm 4

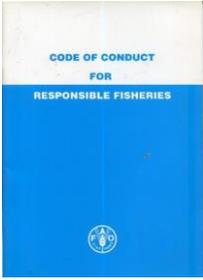
## SESSION 4: PRINCIPLES OF EAFm



### Principles are not new

The principles of EAFm are not new but were set out in the **FAO Code of Conduct for Responsible Fisheries (CCRF)**

- The CCRF was developed by Food and Agriculture Organization of the United Nations (FAO)
- All FAO Member countries agreed to CCRF in 1995
- Your country is a Member of FAO



4. PRINCIPLES OF EAFm 5



### Good governance

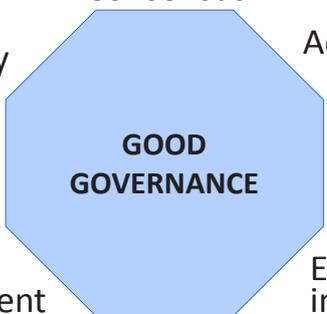


Participatory

Follows the rule of law

Effective and efficient

Consensus



**GOOD GOVERNANCE**

Responsive

Accountable

Transparent

Equitable and inclusive

4. PRINCIPLES OF EAFm 6

## SESSION 4: PRINCIPLES OF EAFm



### Appropriate scale

**Four dimensions:**

1. Ecological scales
2. Socio-economic scales
3. Political/governance scales
4. Temporal scales

Note: These align with the three components of EAFm



4. PRINCIPLES OF EAFm 7



### Scales – extremes

1. Single species → multiple species
  - Small areas → large areas (e.g. basin, watershed or transboundary water body)
  - Ecological
2. Socio-economic
  - Village → Floodplain/Lake/Basin (rural & urban)
3. Governance
  - Single jurisdiction → Multiple jurisdictions
4. Temporal
  - Short-term → Long-term

4. PRINCIPLES OF EAFm 8

## SESSION 4: PRINCIPLES OF EAFm



### Realities of scale

- Take a practical approach
- Begin working with what exists e.g. jurisdictional boundaries (district, province), or a particular water body or river

### Challenge:

Getting the scale correct for the four dimensions  
(Ecological, socio economic, political/governance & temporal)

This often requires increased cooperation and coordination across jurisdictions, agencies and stakeholders.



### Discuss

In many countries, fisheries management has been devolved down to the district/municipality level.

In your groups, answer the question:

*“Is the district/municipality the correct scale to manage all fisheries?”*

## SESSION 4: PRINCIPLES OF EAFm



### Increased participation



3. Increased participation

Participation is central to the process

4. PRINCIPLES OF EAFm 11



### Many stakeholders



1. Fishers and fisher associations
2. Governments (district – national)
3. Fishery related (e.g. boat owners, fish traders, money lenders)
4. Compliance and enforcement agencies (e.g. inspector)
5. Other users (e.g. tourism, irrigation, hydropower)
6. External agents (e.g. NGOs, researchers)

4. PRINCIPLES OF EAFm 12

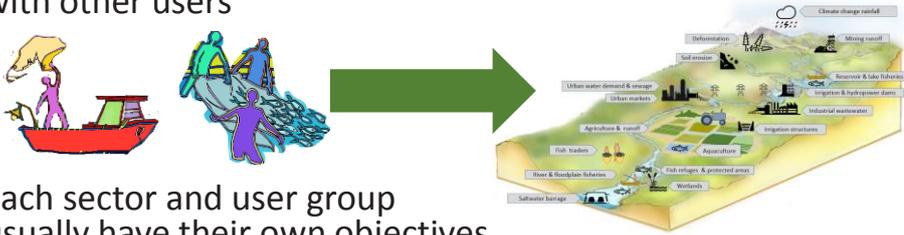
## SESSION 4: PRINCIPLES OF EAFm



**4. Multiple objectives**

### Multiple objectives

EAFm deals with interactions within the fishery sector and with other users



Each sector and user group usually have their own objectives

- Need to balance these objectives
- Requires stakeholder engagement and negotiation

4. PRINCIPLES OF EAFm 13



**5. Cooperation & coordination**

### Cooperation and coordination

EAFm involves cooperation and coordination among many stakeholders e.g.

**Fishers**  
Fisher associations

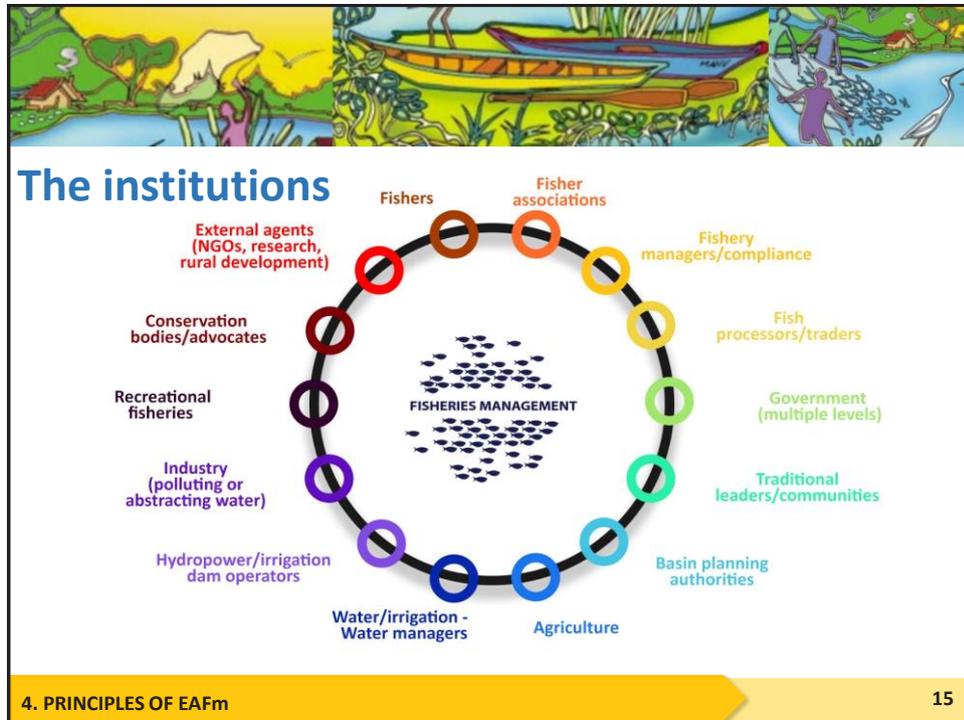
**External agents**  
Water managers  
Traders  
NGOs  
Researchers

**Government**  
National/regional/  
provincial/state/  
municipal/  
village

- within agency/institutions
- across institutions, both government and stakeholder and with non-fishery sectors
- from global to national to district levels

4. PRINCIPLES OF EAFm 14

## SESSION 4: PRINCIPLES OF EAFm



**Institutional cooperation and coordination**

**How do you achieve this?**

1. Talk to others
2. Link in with existing arrangements (e.g. IWRM, water user associations, etc.)
3. Share information
4. Develop a plan through a participatory process
5. Harmonize work plans/budgets
6. Memorandums of understanding/binding agreements

..... Any other suggestions?

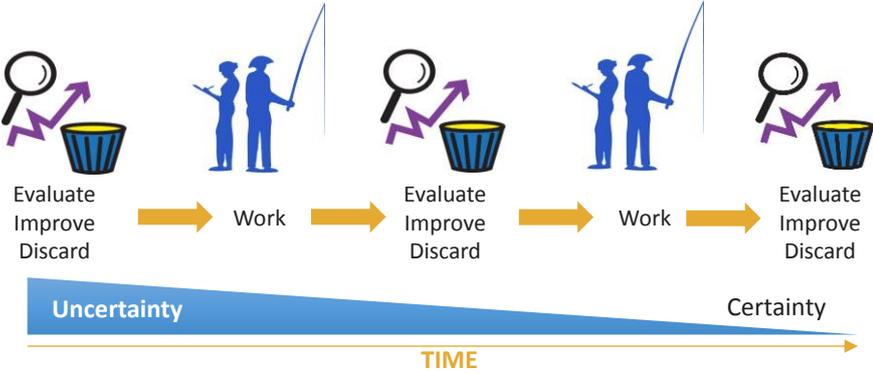
4. PRINCIPLES OF EAFm 16

## SESSION 4: PRINCIPLES OF EAFm



### Adaptive management

Learning while doing



Evaluate  
Improve  
Discard

Work

Evaluate  
Improve  
Discard

Work

Evaluate  
Improve  
Discard

Uncertainty

Certainty

TIME

4. PRINCIPLES OF EAFm

17



### The precautionary approach

“... 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)

**Where there is uncertainty, management actions should be less risky**

**Lack of information should not be used as reason to delay action**

4. PRINCIPLES OF EAFm

18

## SESSION 4: PRINCIPLES OF EAFm

### THE PRECAUTIONARY APPROACH

Source: Adapted from ICSF (2013)

IF THERE IS POSSIBILITY OF HARM, BE CAREFUL  
(PRECAUTIONARY APPROACH)

"We have observed that the fish catch reduces in areas where you fish. You also catch a lot of small fish."

"But there is no evidence or study to say that the gear we use is destructive."

"And that is the precautionary approach."

"We have seen all the small fish you are catching - you should stop using this gear or at least use a net with a much bigger mesh until you can prove that it is not harmful. Better to be safe than sorry."

4. PRINCIPLES OF EAFm 19

### Key messages

EAFm principles **are not new**

- based on the FAO Code of Conduct for Fisheries (to which your country is a member)

EAFm has seven principles

- These are all important for implementing EAFm

4. PRINCIPLES OF EAFm 20

## SESSION 4: (ACTIVITY) HOW MUCH EAFM ARE YOU ALREADY DOING?



### Session 4 (Activity) How much EAFm are you already doing?

Essential EAFm training  
Date | Place



### Session objectives

#### After this session you will be able to:

- Revisit your threats and issues and cluster them according to the three EAFm components
- Realize that you are already doing some aspects of an EAFm
- Analyze your current fisheries practices and identify what EAFm you are already doing
- Identify gaps in your EAFm practices and possible ways to move forward

## SESSION 4: (ACTIVITY) HOW MUCH EAFM ARE YOU ALREADY DOING?



### Activity 1

1. Revisit threats and issues from this morning. Do any more need to be added?
2. Now working as a group – start to group the threats & issues into the **three EAFm components**:

Ecological well-being

Good governance

Human well-being

4a. HOW MUCH EAFm ARE YOU ALREADY DOING? 3



### Activity 2: Analyze your current fisheries management approaches and practices

1. Individually: think which, if any, of the 7 EAFm principles are already being applied in your fishery, and to what extent?
2. Share these in your table groups. Keep notes.

4a. HOW MUCH EAFm ARE YOU ALREADY DOING? 4

## SESSION 5: MOVING TOWARDS EAFM



### Session 5 Moving towards EAFm

Essential EAFm training  
Date | Place



### Session objectives

#### After this session you will be able to:

- Recognize how other countries are moving towards EAFm principles (case study – linking fisheries, environment and socio-economic considerations)
- Determine your country progress towards EAFm
- Identify your country challenges to achieving this

## SESSION 5: MOVING TOWARDS EAFM



**Case Study**

Use selected case study

5. Moving towards EAFm 3



**Discussion in groups**

What key lessons (good or bad) for your country situation can you draw from the case study?

5. Moving towards EAFm 4

## SESSION 5: MOVING TOWARDS EAFM



### Activity 1

1. Each group receives a card that displays one EAFm principle (some groups may have to consider two principles).
2. In groups, discuss and score where you think your COUNTRY is along the continuum 0-5 for that principle (see Workbook p.5).
3. Using the lines set out on the floor, one representative for each principle paces out their score while holding the card.



### Activity 2: in groups

1. Identify the **challenges** your country might face in moving towards EAFm
2. Write each challenge on a card. (**ONE** challenge per card)
3. Now identify **opportunities** your country may have in moving towards EAFm (and in meeting the above challenges).
4. Write each opportunity on a separate card



## SESSION 6: EAFM PLANS: THE LINK BETWEEN POLICY AND ACTION



### Session 6 EAFm plans: **the link** between policy and action

Essential EAFm training  
Date | Place



### Session objectives

**After this session you will be able to:**

- Recognize the need for effective planning
- Understand how to translate policies into action

## SESSION 6: EAFM PLANS: THE LINK BETWEEN POLICY AND ACTION



### Why plan?

- Plans are needed to implement policies
- Promote resource use efficiency
  - Provides more certainty on the roles and responsibilities of the different players
- Facilitates resource (people and money) mobilization
- Encourages participation and ownership in the management process



### Management involves:



## SESSION 6: EAFM PLANS: THE LINK BETWEEN POLICY AND ACTION



**EAFm PLAN: linking legislation & policy to action**

**Legislation/policy**

↓

**EAFm PLAN**

↓

**Management actions**

**Example:**

*Sustainably managed fisheries*

*Limit fishing effort in lake nursery areas*

*Enforce closed season and control number of illegal fishing gears*

6. LINK BETWEEN POLICY AND ACTION 5



**EAFm PLAN: links legislation & policy to action**

**Example:**

*Healthy aquatic environment*

*Restore and protect habitats and biodiversity*

*Designate a conservation area to prevent fishing in selected areas*

**Legislation/policy**

↓

**EAFm PLAN**

↓

**Management actions**

6. LINK BETWEEN POLICY AND ACTION 6

## SESSION 6: EAFM PLANS: THE LINK BETWEEN POLICY AND ACTION



### Good planning

- Provides a clear sense of direction
- Promotes transparency
- Considers alternative options to achieve the goals
- Is based on the best information available (improves over time)



### Outputs from planning

Ideally, EAFm sits within broader planning:

- National five-year plan
- Basin Plan, Irrigation, Environment, Fishery Agency Development plans
- EAFm plan

**Work plans:** who, what, and when



## SESSION 6: EAFM PLANS: THE LINK BETWEEN POLICY AND ACTION



### Key messages

- High level principles and policies can not be implemented as they stand
- EAFm plans provide a link between higher level policy (e.g. National fisheries policy) and management actions on the ground
- In this way, management actions in EAFm will contribute to implementation of the high level policies over time



## SESSION 7: EAFM CYCLE OVERVIEW



### Session 7 EAFm cycle overview

Essential EAFm training  
Date | Place

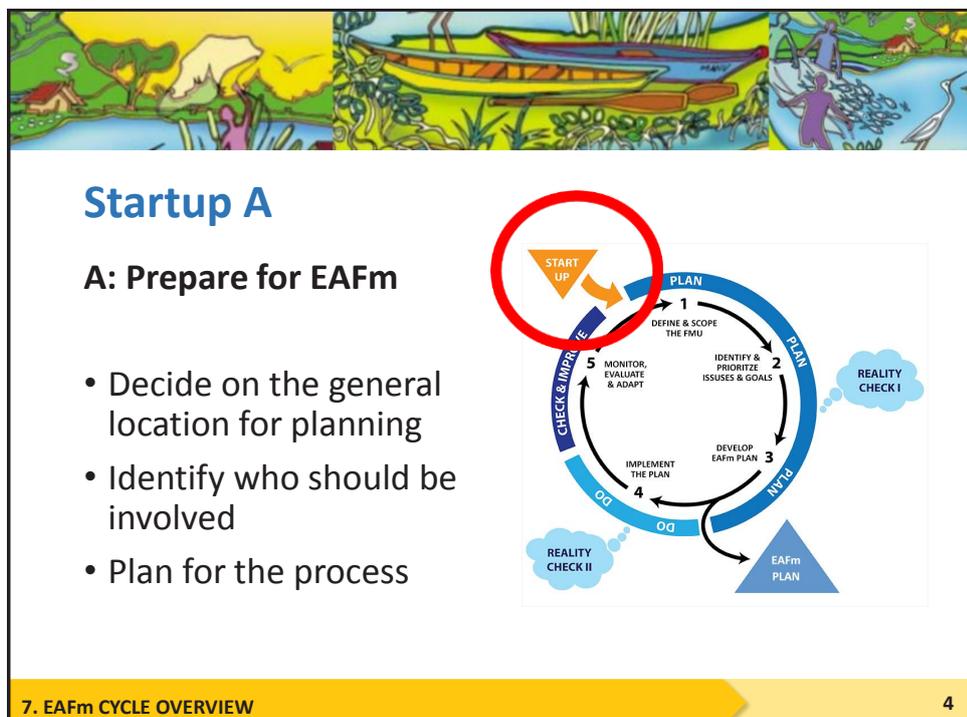
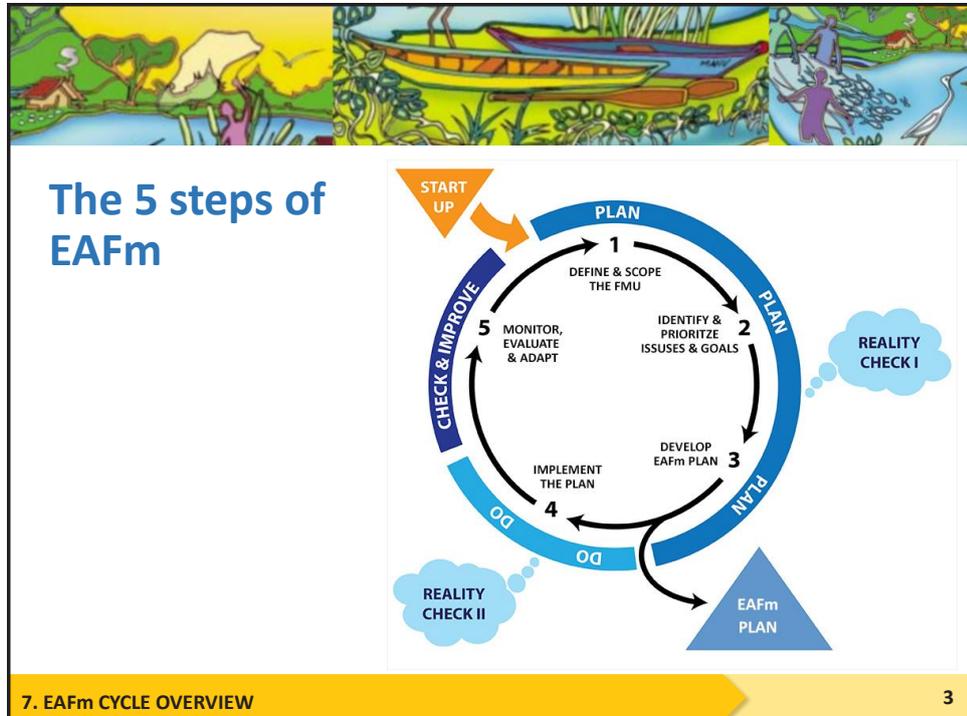


### Session objectives

#### After this session you will be able to:

- Describe the key steps of the EAFm cycle and how to plan, implement and monitor EAFm
- Identify the planning steps in EAFm cycle
- Describe the outline of an EAFm plan

## SESSION 7: EAFM CYCLE OVERVIEW



## SESSION 7: EAFM CYCLE OVERVIEW

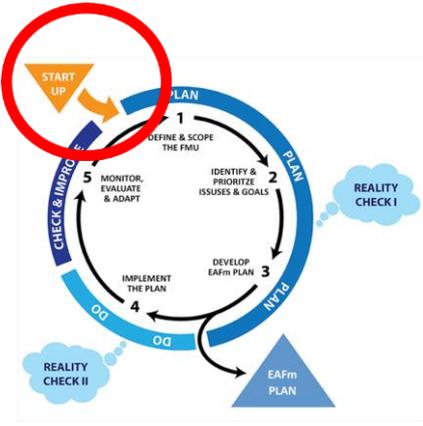


**Startup B**

**B: Stakeholder engagement**

Engage stakeholders for:

- Participatory planning
- Co-management



The diagram shows the EAFm cycle with five stages: 1. PLAN (DEFINE & SCOPE THE FMU), 2. PLAN (IDENTIFY & PRIORITIZE ISSUES & GOALS), 3. DO (DEVELOP EAFm PLAN), 4. DO (IMPLEMENT THE PLAN), and 5. CHECK & IMPROVE (MONITOR, EVALUATE & ADAPT). A red circle highlights the 'START UP' phase at the beginning of the cycle. 'REALITY CHECK I' and 'REALITY CHECK II' are shown as thought bubbles. An 'EAFm PLAN' triangle is at the bottom right.

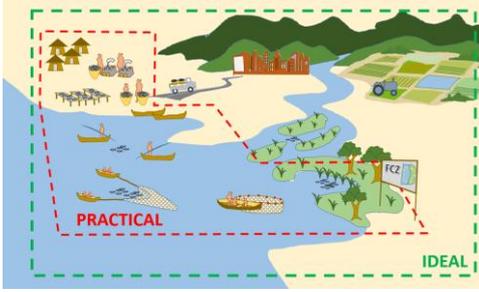
7. EAFm CYCLE OVERVIEW 5



**Step 1**  
**Define and scope the Fisheries Management Unit (FMU)**

1.1 Define the FMU  
1.2 Agree the FMU vision  
1.3 Scope the FMU

Provides background information and a vision

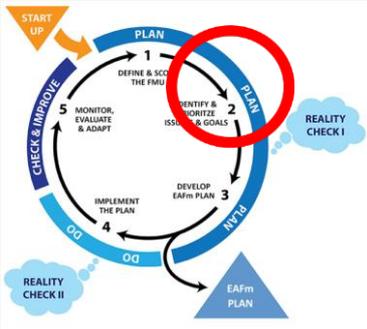
The 'Practical vs Ideal' diagram shows a coastal area with a red dashed box labeled 'PRACTICAL' containing a small area with a few boats and a green dashed box labeled 'IDEAL' containing a larger area with many boats, buildings, and a 'FCEZ' sign.

7. EAFm CYCLE OVERVIEW 6

## SESSION 7: EAFM CYCLE OVERVIEW



### Step 2 Identify & prioritize issues & goals



2.1 Identify threats & issues

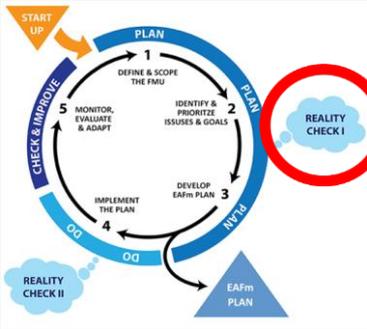
2.2 Define goals for EAFm plan

2.3 Prioritize issues

7. EAFm CYCLE OVERVIEW 7



### Reality check I



**Reality check I**

- Constraints & opportunities
- Facilitation / skills
- Conflict management

**Are the goals achievable?**

7. EAFm CYCLE OVERVIEW 8

## SESSION 7: EAFM CYCLE OVERVIEW



**Step 3**  
**Developing the EAFm plan**

- 3.1 Develop management objectives
- 3.2 Develop indicators & benchmarks
- 3.3 Management actions & compliance
- 3.4 Identify sustainable financing
- 3.5 Finalize the EAFm plan

**Develops the management framework**



The diagram shows a circular process with five steps: 1. PLAN (DEFINE & SCOPE THE FMU), 2. IDENTIFY & PRIORITIZE ISSUES & GOALS, 3. DEVELOP EAFm PLAN, 4. IMPLEMENT THE PLAN, and 5. MONITOR, EVALUATE & ADAPT. The cycle is labeled with PLAN, DO, CHECK & IMPROVE, and REALITY CHECK I and II. A red circle highlights the 'DEVELOP EAFm PLAN' step, which is also labeled 'EAFm PLAN' in a separate box.

7. EAFm CYCLE OVERVIEW 9



**EAFm plan template**

**EAFm Management Plan for FMU XX**

1. Vision (Step 1)
2. Background (Step 1)
3. Major threats and issues (Step 2)
4. Goals (Step 2)
5. Objectives, indicators and benchmarks (Step 3)
6. Management actions (Step 3)
7. Compliance (Step 3)
8. Data and info needs – source of data, etc. (Step 3)
9. Financing (Step 3)
10. Review of the plan – timetable for review

7. EAFm CYCLE OVERVIEW 10

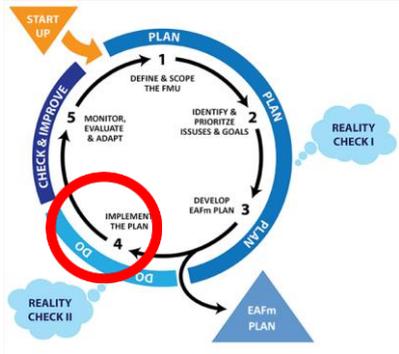
## SESSION 7: EAFM CYCLE OVERVIEW



**Step 4  
Implement**

**4.1 Formalize, communicate and engage**

Implements the plan through formalizing and communicating it



The diagram shows a circular EAFM cycle with five main stages: 1. PLAN (DEFINE & SCOPE THE FFMU), 2. PLAN (IDENTIFY & PRIORITIZE ISSUES & GOALS), 3. PLAN (DEVELOP EAFm PLAN), 4. IMPLEMENT THE PLAN, and 5. CHECK & IMPROVE (MONITOR, EVALUATE & ADAPT). A 'START UP' arrow points to the beginning of the cycle. 'REALITY CHECK I' is shown as a thought bubble connected to the transition between stages 2 and 3. 'REALITY CHECK II' is shown as a thought bubble connected to the transition between stages 4 and 5. An 'EAFm PLAN' triangle points to the implementation stage. A red circle highlights the 'IMPLEMENT THE PLAN' stage.

7. EAFm CYCLE OVERVIEW 11

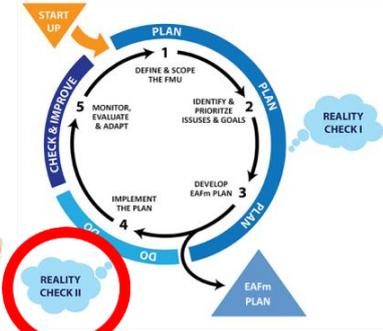


**Reality check II**

**Reality check II**

- Governance
- Co-management
- Supportive environment

Checks whether the governance and supporting structures are in place



The diagram is identical to the one on slide 11, but with a red circle highlighting the 'REALITY CHECK II' thought bubble, which is connected to the transition between stages 4 and 5 of the cycle.

7. EAFm CYCLE OVERVIEW 12

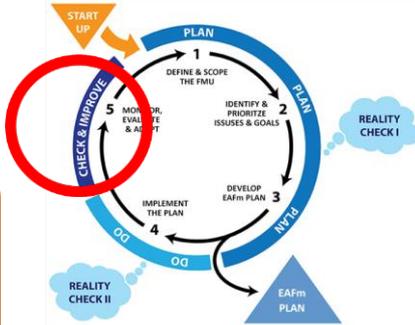
## SESSION 7: EAFM CYCLE OVERVIEW



**Step 5**  
**Monitor, evaluate, adapt**

5.1 Monitor & evaluate (M&E) performance of management

5.2 Adapt the plan based on M&E



**Completes the EAFm cycle with M&E and adapts the plan to start a new cycle**

7. EAFm CYCLE OVERVIEW 13



**Summary**

**Planning – Steps 1-3**

1. Define & scope
2. Issues & goals
3. Objectives, indicators, management actions & compliance, financing

**Doing – Step 4**

4. Implement

**Checking & improving – Step 5**

5. Monitor, evaluate and adapt



7. EAFm CYCLE OVERVIEW 14

## SESSION 7: EAFM CYCLE OVERVIEW



**Key messages**

- The EAFm cycle has **5 steps**
- Before the first step in the cycle, get organized in the **Startup A and B**
- The EAFm plan is written from the outputs of **Steps 1-3**
- In **Step 4** the plan is implemented
- In **Step 5** the plan is evaluated and adapted for the next cycle
- We do a **reality check** two times to make sure that we can really achieve the goals

7. EAFm CYCLE OVERVIEW 15



**Activity:**  
**The EAFm steps**

Move to the large circle and follow instructions

7. EAFm CYCLE OVERVIEW 16

## SESSION 7: EAFM CYCLE OVERVIEW



### Activity: Form working groups

- Form **working groups** (may be based on shared fishery/shared geographical area)
- You will work in these groups for much of the rest of the course, developing parts of the EAFm plan as you go through Steps 1–3
- On Day 5, each group will present their draft EAFm plan and receive feedback

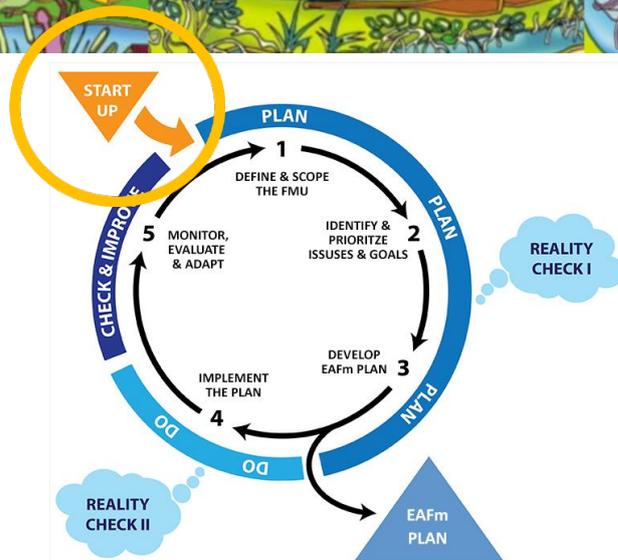


# SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



## Session 8 EAFm Startup A: Preparing for EAFm

Essential EAFm training  
Date | Place



## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



### Session objectives

#### After this session you will be able to:

- Define startup tasks needed to initiate the EAFm cycle and co-management
- Learn how to identify and prioritize stakeholders



### To prepare there are 8 tasks that need to be done:

- i. Form an EAFm team and facilitators
- ii. Identify the general location
- iii. Develop startup work plan
- iv. EAFm introduction
- v. Coordination with other agencies and government levels
- vi. Identify and prioritize stakeholders and organizations
- vii. Establish a key stakeholder group
- viii. Determine legal basis for EAFm (check legislation for EAFm)

## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



### EAFm Startup is a bit like baking a cake..

***Startup tasks are used to prepare the ground to do EAFm, it is a bit like baking a cake:***

- Before baking a cake, the cook must decide:
  - Who will bake the cake (EAFm team)
  - What recipe will we use (startup work plan)
  - Where will the cake will be cooked (general location)
  - Who will eat the cake (stakeholders)
  - Who will oversee the cooking and distribution of the cake to others (key stakeholder group)



### Identify the EAFm team and develop a startup work plan (Tasks i, ii and iii)

- Establish a core team to guide the EAFm startup
  - ideally to include key agencies
  - identify a Team Leader to lead the process
- Agree on what area the EAFm will focus on
- The team develops a start-up work plan to guide the rest of the start-up tasks.
  - This identifies: what, how, who and when (and budget)

## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



### Identify and prioritize stakeholders and organizations (Task vi)

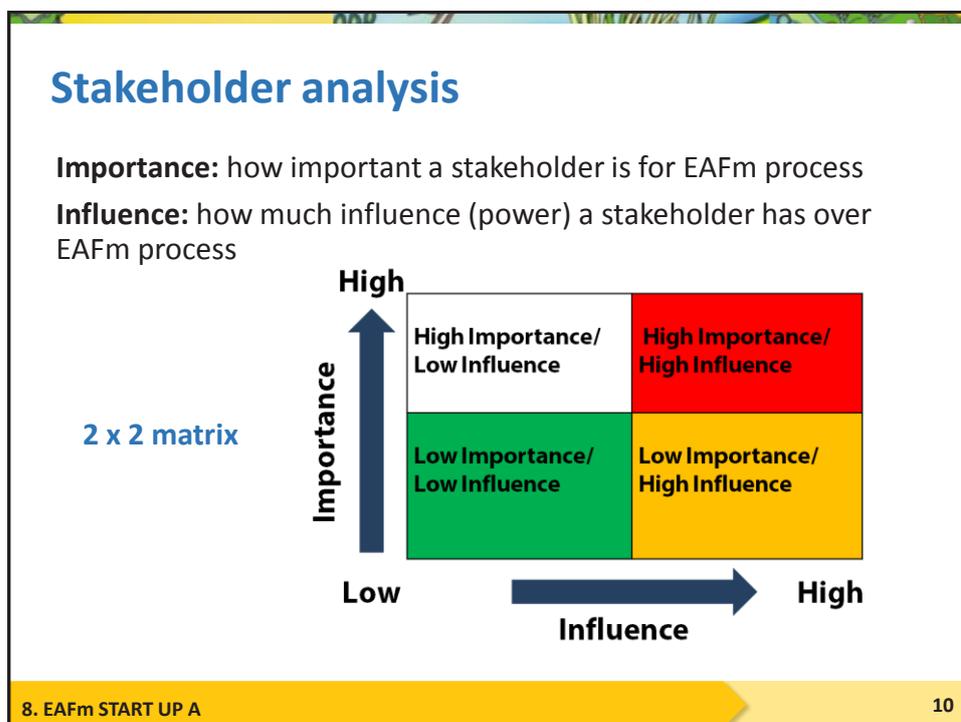
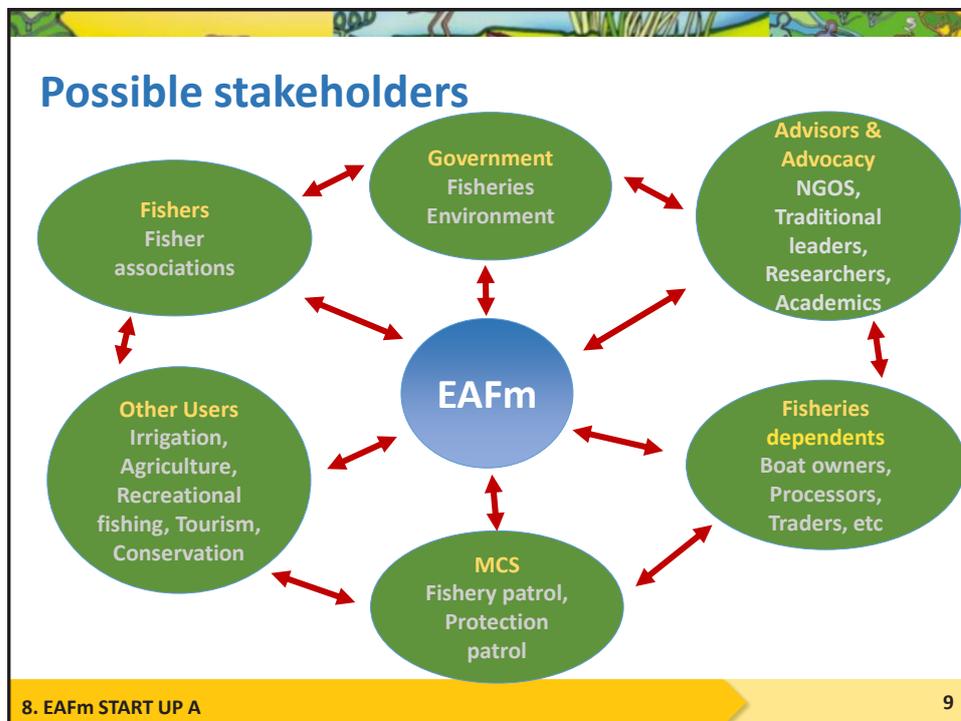
- Identify **ALL** stakeholders to begin with
- Prioritize stakeholders
- This is an initial identification of potential stakeholders and will be revisited
- **You will choose the EAFm key stakeholder group from this process**



### Who are your stakeholders?

“A stakeholder is any individual, group or organisation who has an interest in or who can affect or is affected, positively or negatively, by the EAFm process”

## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM

### Prioritizing stakeholders

| High Importance & Low Influence | High Importance & High Influence   |
|---------------------------------|--|
| Need to be represented          | <b>Key stakeholders for EAFm</b><br>Need to be included in the key stakeholder group |
| Not likely to be interested     | Need to get them to 'buy in' into EAFm process,'                                     |
| Low Importance & Low Influence  | Low Importance & High Influence  |

8. EAFm START UP A 11



### Activity: In your groups

1. List ALL possible FMU stakeholders. Write each stakeholder on a different card
2. Draw a 2 x 2 matrix with "Importance" on the Y axis and "Influence" on the X axis
3. Plot each stakeholder card onto one of the 4 boxes. You can move cards as you discuss

Based on **how important** each stakeholder is for the EAFm process and **how much influence (power)** each has over/in the EAFm process

8. EAFm START UP A 12

## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



### Venn Diagram

Useful for describing relationships as part of institutional analysis

- Dimension 1 = Size of circle (importance)
- Dimension 2 = Proximity of circle (frequency of contact)

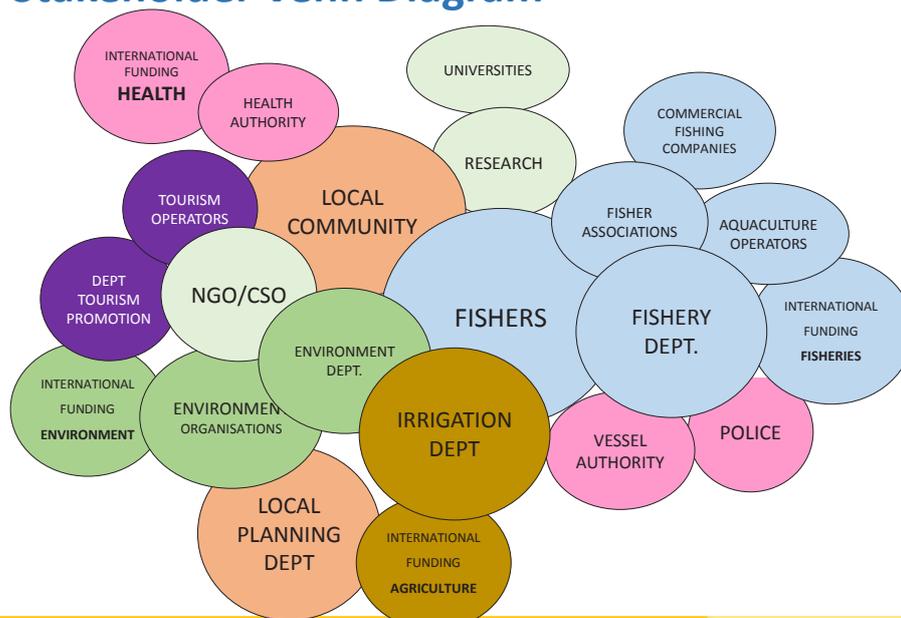
Separate circles = no contact

Touching circles = information passes between institutions

Small overlap = some cooperation in decision-making

Large overlap = considerable cooperation in decision-making

### Stakeholder Venn Diagram



## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



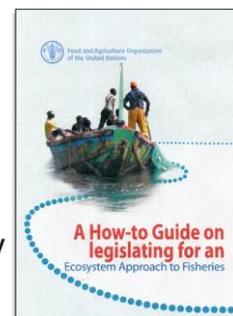
### Activity: In your groups

1. Plot the fishery agency and other stakeholders using Venn diagram technique
2. Identify the interrelationships and linkages between agencies and institutions
3. What could strengthen linkages and coordination?

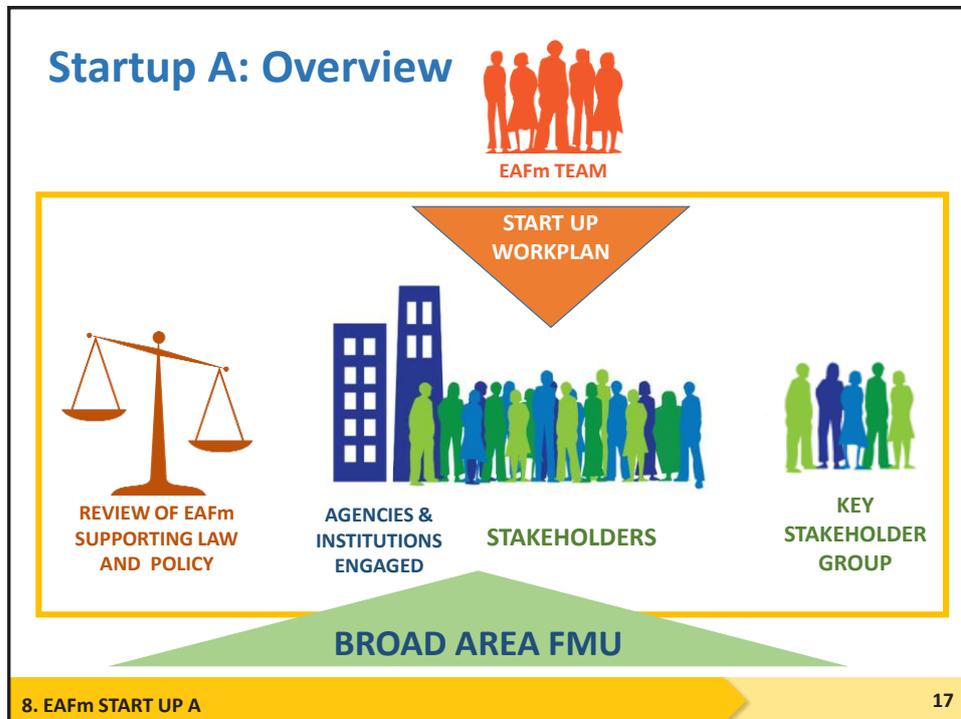


### Determine the legal basis for EAFm

- It is desirable to have a legislative or policy mandate
- especially for co-management so that local communities have legal authority
- Lack of appropriate existing legislation should not be used as a reason to delay
- Review the legal basis for EAFm



## SESSION 8: EAFM STARTUP A: PREPARING FOR EAFM



### Key messages

Before starting on the EAFm cycle there is some initial tasks to be done by the EAFm team to:

1. Get organized; and
2. Initiate stakeholder engagement
3. Undertake a legal review

8. EAFm START UP A 18

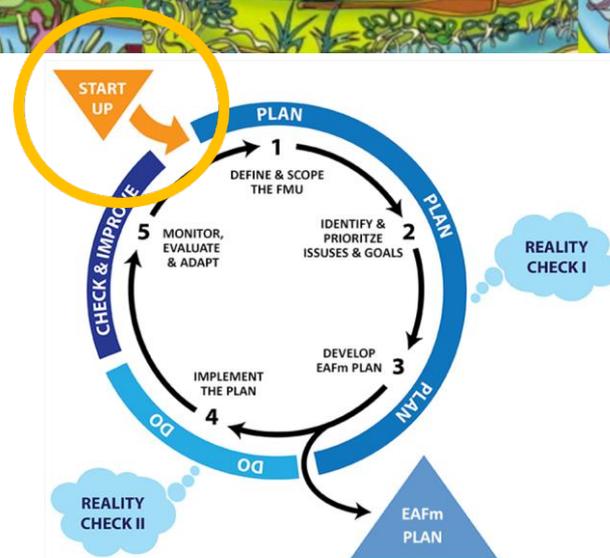


## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Session 9 EAFm Startup B: Engage stakeholders

Essential EAFm training  
Date | Place



## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Session objectives

**After this session you will be able to:**

- Apply participatory approaches for stakeholder engagement
- Organize and hold stakeholder meetings
- Describe the basic concepts of co-management



### Engaging stakeholders

- Important to engage stakeholders throughout the EAFm process
- Need to have them onboard from the beginning and maintain their interest
- EAFm team need people skills (e.g. facilitation, conflict management, etc.)

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Participation

The active participation of people is at the heart of EAFm

So what do we mean by participation?

9. EAFm START UP B 5



### Key principles of participation

- Let go of your own ideas and viewpoints
- Don't dominate
- Promote a process of learning, changing and action
- Respect of local customs, languages and experience
- Listen and build rapport and trust
- Believe in people and their abilities
- Work with stakeholders
- Be flexible
- Allow all people to be heard



9. EAFm START UP B 6

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Aim of participatory approaches


**Agree on issues and solutions**


**Identify trade-offs**

**Empowerment**  
**Awareness raising**  
**Ownership**



**Group trust**



9. EAFm START UP B 7



### Facilitating stakeholder input

Meetings → Many people involved

Workshops → Smaller group – technical issues

Focus group discussions → Small group – specific issues

Interviews → In-depth views of selected people

Questionnaires/surveys → Diverse views with large numbers

9. EAFm START UP B 8

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



**Activity: In your groups**

Group A: draw a very **GOOD** facilitator!

Group B: draw a very **BAD** facilitator!

**No words or writing allowed!**

9. EAFm START UP B 9



**EAFm involves ...**

- Coordination
- Consultation
- Cooperation
- Negotiation
- Joint decision-making

→ **Co-management**

9. EAFm START UP B 10

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



**Co-management ...**

**Partnership arrangements** in which stakeholders share the responsibility and authority for the management of the fishery, with various degrees of power sharing

9. EAFm START UP B 11



**Degrees of power sharing**

More

↑

↓

Less

- Community control
- Partnership
- Advisory
- Cooperative
- Consultative
- Communicative
- Informative

9. EAFm START UP B 12

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Key elements of co-management:

- Working together – power sharing
- Better dialogue and communication
- Reducing conflicts
- Learning together
- Sharing costs and benefits
- Sharing successes and failures



### Example: Cambodian Fish Refuges



- Increasing populations and open access fisheries in rice fields
  - Anyone can fish and tend to target water bodies in dry season
  - Loss of broodstock limited recruitment to fishery
- Pilot projects to promote community led refuges
- Common rules on fishing, agreement not to fish in refuge areas
- Now institutionalized and promoted as a national programme
- Fishery Department work with communities

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Preparing stakeholders to actively engage:

#### Awareness raising

- Knowledge empowers people and improves their ability to take part (awareness of environmental, social/governance issues)
- Methods can include:
  - training, focus group discussions, media campaigns, stories and policy briefs



### Preparing stakeholders to actively engage (cont.):

#### Community mobilization

- Stakeholders get organized to arrive at consensus on interests and concerns

#### Methods can include:

- environmental education
- building alliances and networks and
- human capacity development
- organizational planning

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Assess stakeholder interest and commitment

Stakeholders will have different levels of interest in the process

|               | Some awareness of problems with fisheries | Concern about these problems | Willingness and ability to take action to solve these problems | Action needed |
|---------------|---|------------------------------|--|---------------|
| Stakeholder 1 |   | X                            |  |               |
| Stakeholder 2 |   |                              | X  |               |
| Stakeholder 3 | X   |                              |  |               |

9. EAFm START UP B 17



### Key messages

- Stakeholder engagement is initiated in the Startup but continues through the whole EAFm process
- EAFm involves developing co-management arrangements, so stakeholders are involved in planning, implementing, as well as evaluating and adapting
- Stakeholder engagement requires people skills and there are a number of tools that can be used

9. EAFm START UP B 18

## SESSION 9: EAFm STARTUP B: ENGAGE STAKEHOLDERS



### Active listening in threes

1. Two of you discuss examples of co-management that you are familiar with/ have experienced/ know of (think about topics we have just discussed)
2. The 3<sup>rd</sup> person observes (can take notes) then feeds back. Rotate so you all get a chance to speak and observe

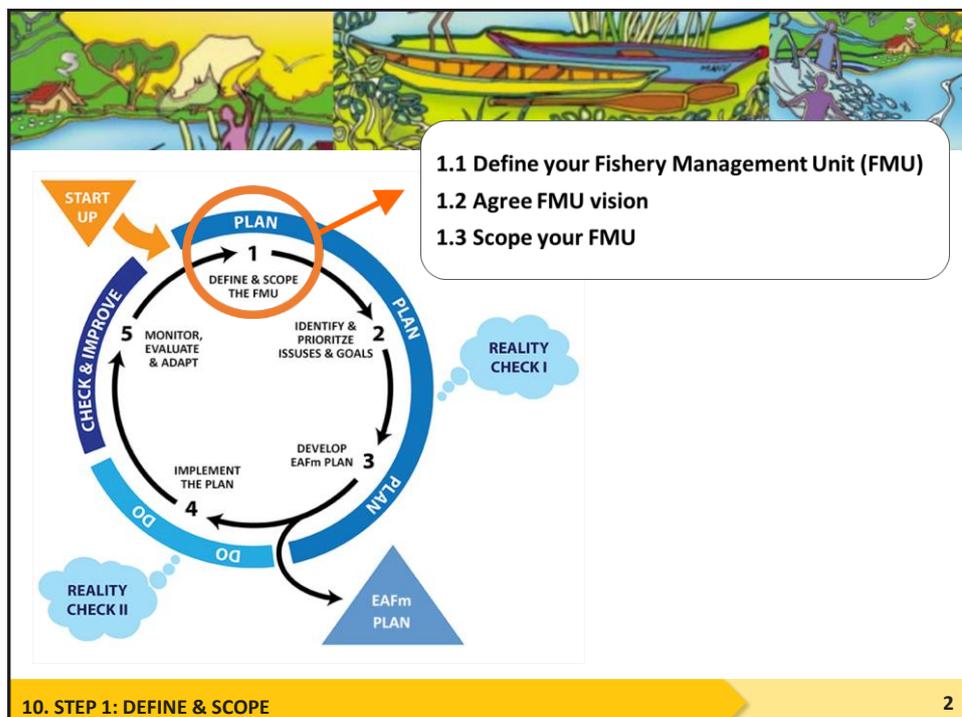
Practice active listening: 😊 *Paraphrasing* 😊 *Clarifying*  
😊 *Eye contact* 😊 *Body language*

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### Session 10 Step 1: Define and scope the Fishery Management Unit (FMU)

Essential EAFm training  
Date | Place



## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### Session objectives

**After this session you will be able to:**

- Describe FMU defining and scoping
- Undertake visioning and be able to agree on a vision



### Remember

The start up tasks (Startup A & B) prepared us for the 5 EAFm steps:

- Initiate stakeholder engagement
- Facilitate co-management
- Engage stakeholders

**Note** that this dialogue was initiated in the start up but it continues throughout the whole process

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



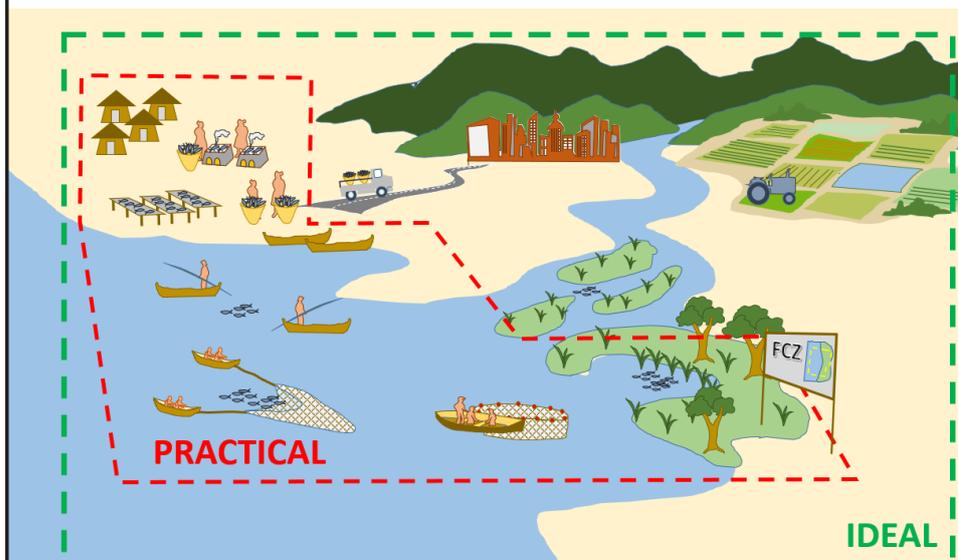
### 1.1 Define your FMU

#### Define your Fishery Management Unit (FMU)

i.e. the fishery and area you will manage.

- The FMU should be:
  - Multi-species
  - Multi-gear, if catching the same species
  - Multi-gear, if conflicts between them occur
  - Multi-jurisdictional, if different jurisdictions involved

### FMU: ideal versus practical reality



## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### Reality – dealing with what is not included

- Must recognize that FMU may not completely cover whole area and consider this in the planning
- Engage “outsiders” in planning process, especially:
  - a fishery/stock shared by two districts/provinces/countries
  - both small-scale & large-scale fishers operate on the same fishery/stock
  - Other water-users
- Look for more appropriate scales later on in the process (e.g. joint management over several districts).



### Activity: In your groups

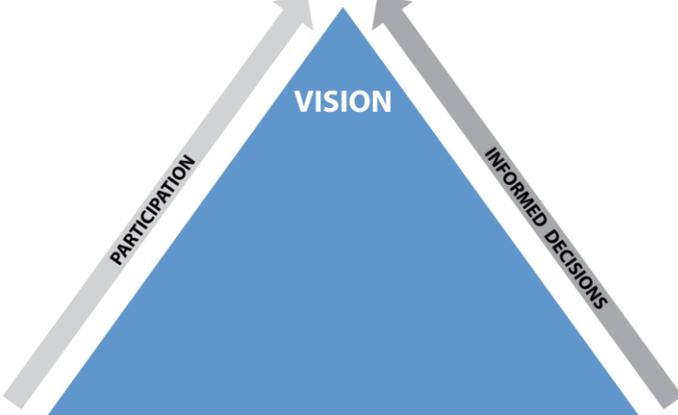
#### Create a map of your FMU area, including:

- Ecological boundaries
  - Barriers, flooding/dry-out areas, water inflows, sources of pollution
- Habitat areas
  - breeding grounds, spawning areas, conservation sites, deep pools/refuges
- Social boundaries
  - e.g. communities, landing sites, taboo areas, conflict points, etc.
- Political jurisdictional boundaries
  - including national/province/district jurisdictions

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### Building the EAFm plan



10. STEP 1: DEFINE & SCOPE 9



### Vision, goals and objectives

- **Vision:** long-term aspiration (20-30 years) of what you would like the FMU to be like (as a dream)
- **Goal:** Shorter-term view (5-10 years) of what you are aiming for in terms of a set of issues (theme)
- **Objective:** What you are trying to achieve in terms of a specific issue

10. STEP 1: DEFINE & SCOPE 10

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### The Hierarchy (levels)

**Vision**  
Aspiration for the future

**1 Vision**

**Goals**  
Goals for different set of issues

**3-4 Goals under the 1 vision**

**Objectives**  
Objective for each priority issue

**a number of objectives under each goal**

10. STEP 1: DEFINE & SCOPE

11



### 1.2 Agree on FMU vision

**What should FMU look like in 20-30 years (outcome of management)?**

- May include:
  - Increased benefits to stakeholders
  - Sustainable use of the resources
  - Increased ecosystem services

**Activity:**  
**Agree on broad management vision for your FMU**

10. STEP 1: DEFINE & SCOPE

12

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)

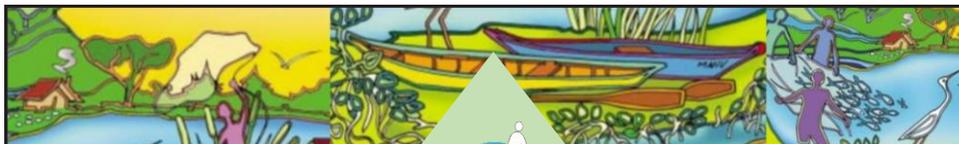


### 1.3 Scope the FMU: collate background information

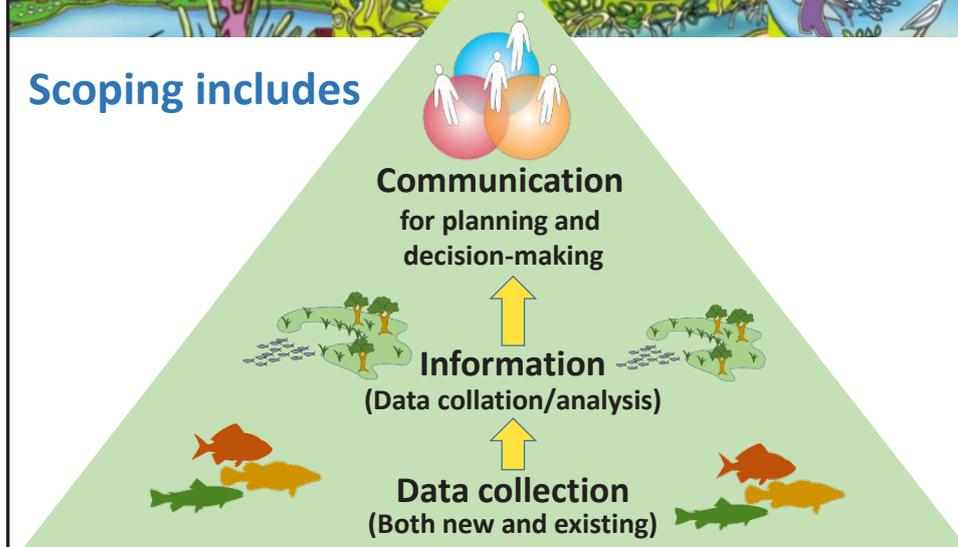
**You have defined the FMU and have a vision.**

Now, the FMU needs to be scoped for relevant and useable information to serve as:

- Basis for planning and management activities (as included in the EAFm plan)
- Baseline for future monitoring and evaluation (M&E)



**Scoping includes**



## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### Types of data

| Qualitative data (informal)   | Quantitative data (formal)  |
|---|---|
| <p><b>Analyze “how and why”</b><br/>e.g.</p> <ul style="list-style-type: none"> <li>• structured and semi-structured interviews (includes focus group)</li> <li>• surveys using open-ended questions</li> <li>• participatory methods</li> <li>• observation</li> </ul> | <p><b>Numerically measure “who, what, when, where, how much, how many, how often”</b><br/>e.g.</p> <ul style="list-style-type: none"> <li>• standardized interviews</li> <li>• biophysical surveys</li> <li>• surveys using closed questions</li> </ul> |

10. STEP 1: DEFINE & SCOPE 15

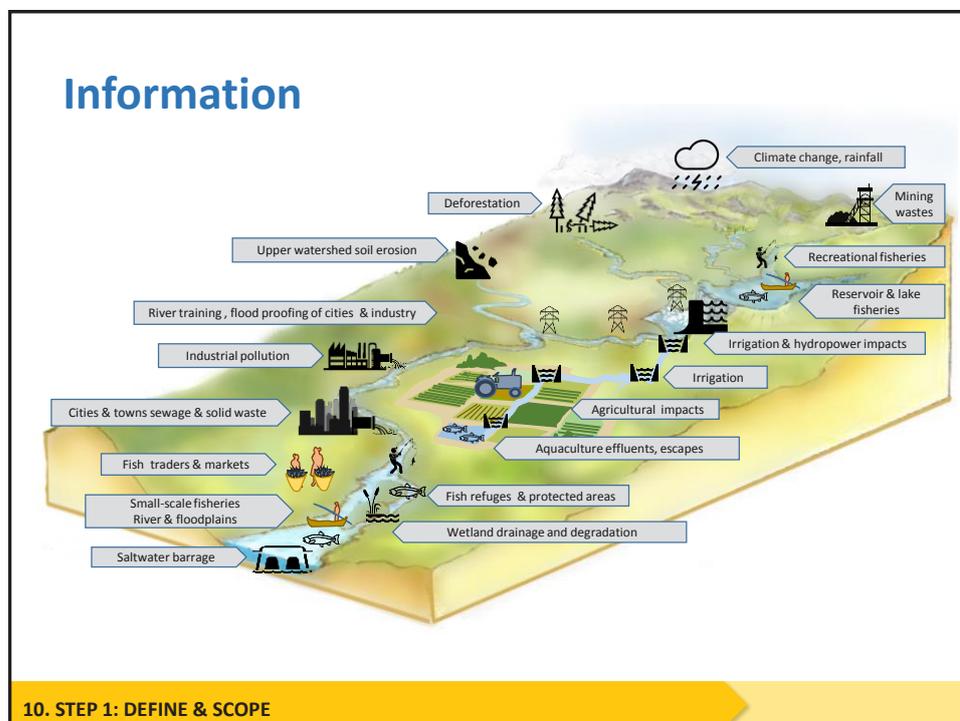


### Information needed for the three components

- Ecological (including the fish)
- Human (including socio-economic)
- Governance (including legal and institutional)

10. STEP 1: DEFINE & SCOPE 16

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### Existing and new information

Large amount of data and information already collected;  
need to know where to find it:

- **Fishery statistics**
  - catch, effort, stock assessment, economics
- **Research results**
  - biological/ecological, habitat, environment
- **Socio-economic data**
  - who and how people use the resource and how they benefit
- **Annual reports**
  - what the current governance arrangements are

May have to collect some new data

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### After scoping...

Share and check the findings with stakeholders

Stakeholders can provide valuable information that you have missed

*Remember this is not final and should be reviewed and added to periodically as more information is generated*



### Sharing with stakeholders

Share information on the FMU and stakeholders based on the start up work: map and Venn diagram → **Seek agreement on the FMU and the major stakeholders**

Share findings on fishery background → **Discuss the background information, asking stakeholders to identify mistakes and gaps**

Share vision → **Discuss the broad vision and adjust if necessary**

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



**Now finished Step 1.  
We can start writing an EAFm plan**

**EAFm Management Plan for FMU X**

1. Vision (Step 1)
2. Background (Step 1)
 

*Possible subheadings:*

  - The fisheries management unit
  - History of fishing and management
  - Current status of the fishery
  - Existing management arrangements
  - Socio-economic benefits
  - Special environmental considerations
  - Institutional aspects

10. STEP 1: DEFINE & SCOPE 21



**Key messages**

**In Step 1:**

- The fishery and boundaries of the unit to be managed are agreed (FMU)
- A common vision for the FMU is developed with stakeholders
- Background information on the FMU is collated and shared

10. STEP 1: DEFINE & SCOPE 22

## SESSION 10: STEP 1: DEFINE AND SCOPE THE FISHERY MANAGEMENT UNIT (FMU)



### In your groups

#### Identify:

1. Types of information you would collect for scoping

*Tip: Look at the different headings of the EAFm plan background section*

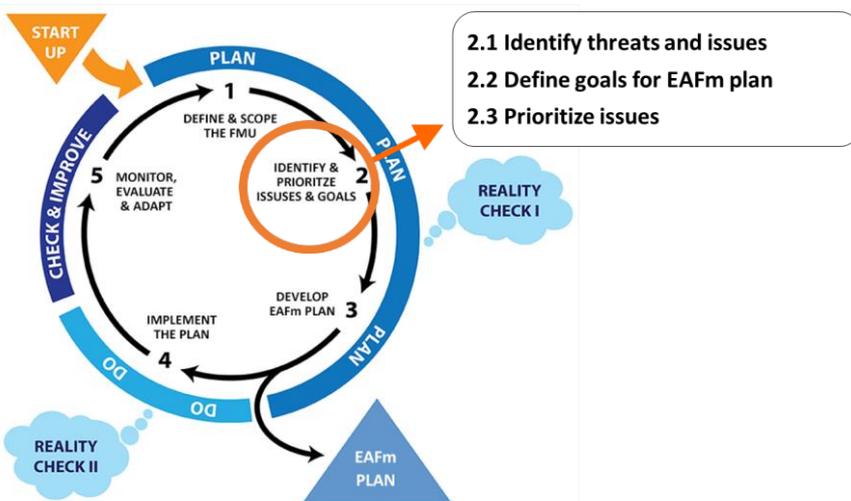
2. What methods might you use?
3. What sources of information would you use?
4. Record your outputs on a flipchart

## SESSION 11: STEPS 2.1 – 2.3 IDENTIFY AND PRIORITIZE ISSUES AND GOALS



Session 11  
Steps 2.1 – 2.3  
Identify and prioritize issues  
and goals

Essential EAFm training  
Date | Place



## SESSION 11: STEPS 2.1 – 2.3

### IDENTIFY AND PRIORITIZE ISSUES AND GOALS



#### Session objectives

**After this session you will be able to:**

- Identify your FMU-specific issues
- Prioritize issues through risk assessment
- Develop goals for the EAFm plan



#### 2.1 Identify threats and issues for the FMU

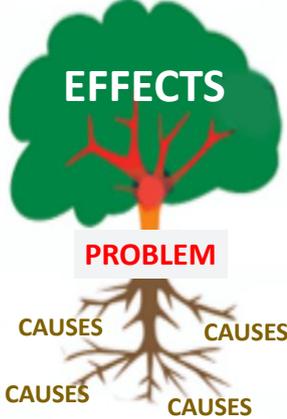
- What are the specific threats and issues for the FMU?
- Cover the 3 EAFm components

## SESSION 11: STEPS 2.1 – 2.3 IDENTIFY AND PRIORITIZE ISSUES AND GOALS



### Problems, causes and effects

- Wide variety of problems
  - Some are very broad (e.g. climate change, pollution)
  - Some are very specific (e.g. poison fishing, barriers)
- This is because there is a mixture of causes and effects of the issue
- One tool that helps separate out causes and effects is called a **Problem Tree**



11. STEP 2: IDENTIFY & PRIORITIZE ISSUES & GOALS 5



### Terms used in a problem tree

**Effect:** the effect created by the problem

- e.g. low household incomes; conflicts between fishers

**Core problem:** the actual problem

**Causes:** the cause of the problem. Can be further broken down into main causes and underlying causes

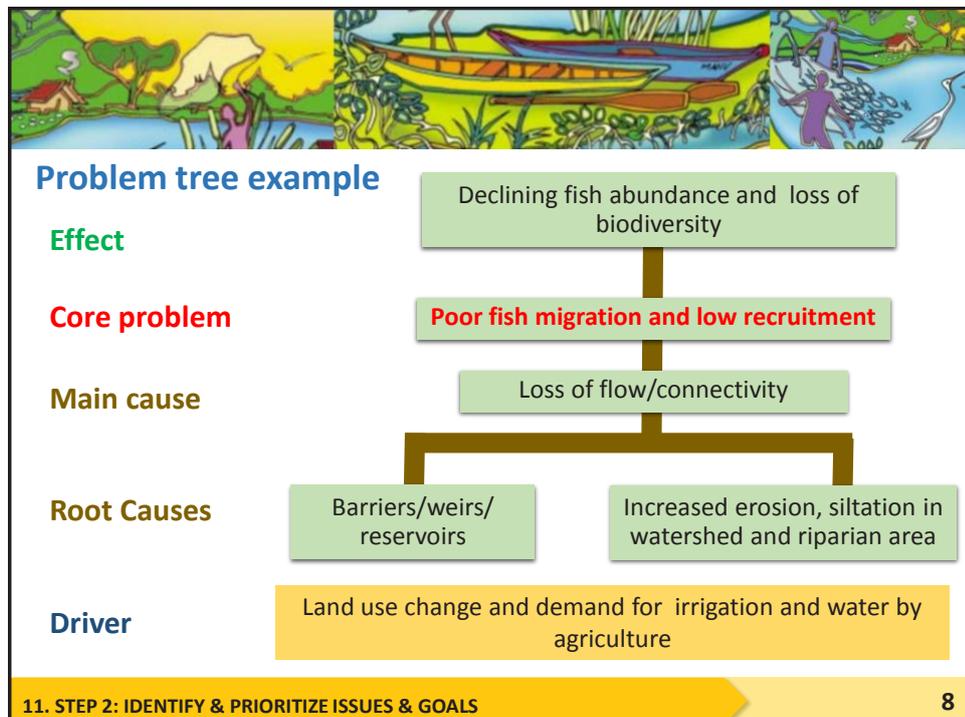
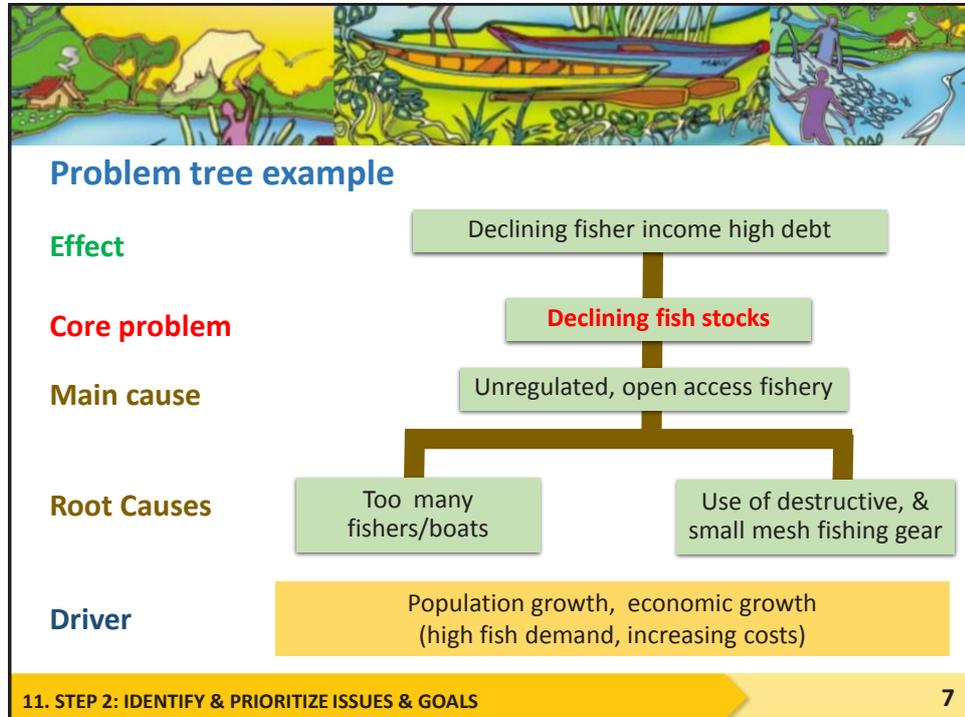
**Driver:** large-scale events that have a flow-on effect on many issues

- e.g. climate change; growth in population and wealth

11. STEP 2: IDENTIFY & PRIORITIZE ISSUES & GOALS 6

## SESSION 11: STEPS 2.1 – 2.3

### IDENTIFY AND PRIORITIZE ISSUES AND GOALS



## SESSION 11: STEPS 2.1 – 2.3

### IDENTIFY AND PRIORITIZE ISSUES AND GOALS



#### Activity: In your groups

Using the threats and issues related to fisheries and associated ecosystem develop on day 1

1. Add/remove issues to make them specific to the FMU.
2. Divide the issues into 4 levels on a flip chart – drivers, effects, core problem, and causes

**Note:** Some issues may be too broad (e.g. pollution, dams, climate change) and may need to become more specific.

*Don't worry too much if a given issue is hard to categorise. We will revisit later.*



#### Using the problem tree

You can use the problem tree to help:

1. Write section 3 of the EAFm Plan “Threats and Issues”
2. Identify drivers that can be put aside because they are out of our control
3. Sort out which are the real core problems and objectives
4. Identify causes that can be addressed by mgmt. actions

## SESSION 11: STEPS 2.1 – 2.3

### IDENTIFY AND PRIORITIZE ISSUES AND GOALS



**Using the problem tree to build the plan**

|                      |   |                            |
|----------------------|---|----------------------------|
| <b>Effects</b>       | ➔ | <b>Sets the goals</b>      |
| <b>Core problems</b> | ➔ | <b>Give the objectives</b> |
| <b>Causes</b>        | ➔ | <b>Management actions</b>  |

11. STEP 2: IDENTIFY & PRIORITIZE ISSUES & GOALS 11



### 2.2 Prioritizing core problems and causes

Identifying the causes which produce the core problems can result in a long list

Need to prioritize as they cannot all be managed at once

To prioritize them:

- Use a tool to sort them, for example:
  - Simple ranking
  - Risk assessment

11. STEP 2: IDENTIFY & PRIORITIZE ISSUES & GOALS 12

## SESSION 11: STEPS 2.1 – 2.3 IDENTIFY AND PRIORITIZE ISSUES AND GOALS



### Risk assessment

How likely is it to go wrong? (likelihood)

What would be the consequences of it going wrong? (impact)

$$\text{RISK} = \text{LIKELIHOOD} \times \text{IMPACT}$$



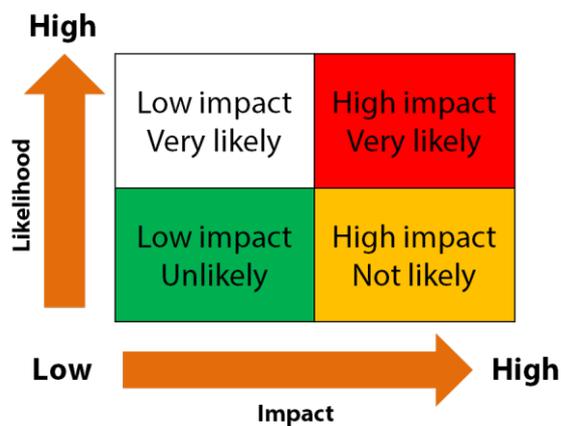
### Prioritization based on risk

#### Impact

-how much change would occur

#### Likelihood

-probability of it occurring



## SESSION 11: STEPS 2.1 – 2.3

### IDENTIFY AND PRIORITIZE ISSUES AND GOALS



#### Activity: In your groups

- Take core problems (and causes) and plot them on a 2x2 risk matrix and then identify the ones that are high risk.

Impact vs. likelihood (Hi/Hi – Lo/Lo)

- Take the Hi/Hi risk problems and group them under the 3 EAFm components



#### 2.3 Goals

Take the high impact, high likelihood problems and causes and use these to develop three (or more) goals, relating to the three components, social, ecological and governance) of the EAFm

*A goal paints a picture of what it you want different components of the FMU to look like in the future (5-10 years time)*

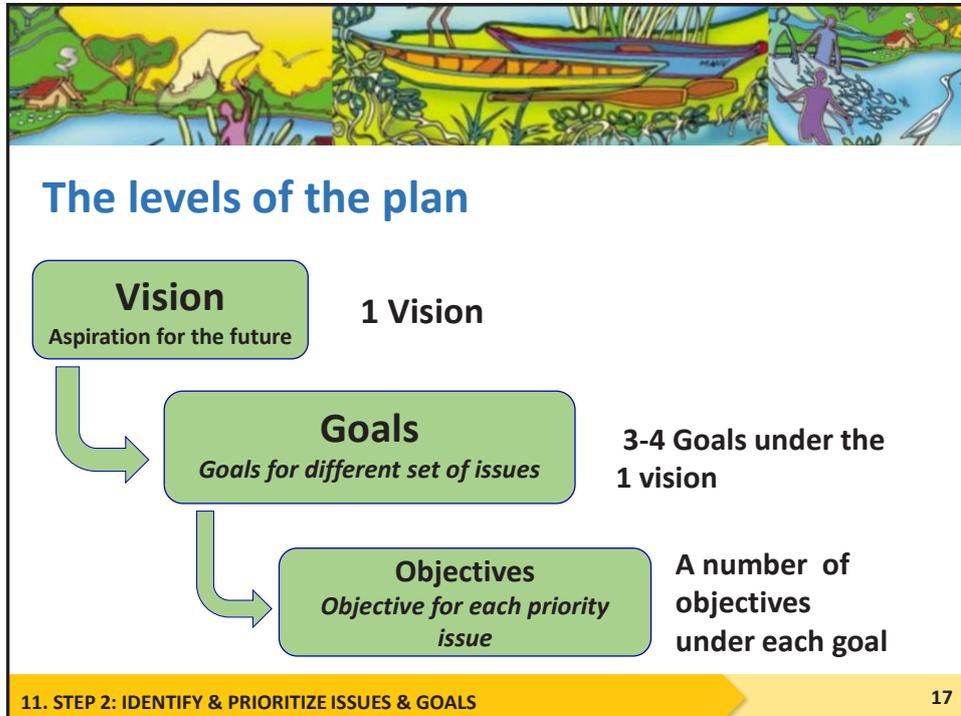
##### For example:

“Restored and sustainably managed fisheries and other living aquatic resources and habitats”

“Improved livelihoods of communities that are dependent on the fisheries resources”

“The FMU is well governed with good compliance and enforcement”

## SESSION 11: STEPS 2.1 – 2.3 IDENTIFY AND PRIORITIZE ISSUES AND GOALS



## SESSION 11: STEPS 2.1 – 2.3

### IDENTIFY AND PRIORITIZE ISSUES AND GOALS



#### Activity: In your groups

1. Remove drivers from the flip chart (these are out of our control)
2. Group the core problems and their causes within each of the 3 EAFm components
3. Set a goal, that addresses the effects, for each component

**Note:** Ecological well-being = fish + environment



#### EAFm Plan outline

We can use the results in the EAFm plan

#### EAFm Management Plan for FMU X

1. Vision (Step 1)
2. Background (Step 1)
3. **Major threats and issues (Step 2)**
4. **Goals (Step 2)**

*3-4 based on core problems and issues*

## SESSION 11: STEPS 2.1 – 2.3 IDENTIFY AND PRIORITIZE ISSUES AND GOALS



### Key messages

#### In Step 2:

- Identified: drivers, core problems and causes and effects
- Problems and causes were prioritized so that only the most important are addressed in the EAFm plan
- Set goals for the plan based on prioritized issues
- These will lead to setting objectives and effective management actions

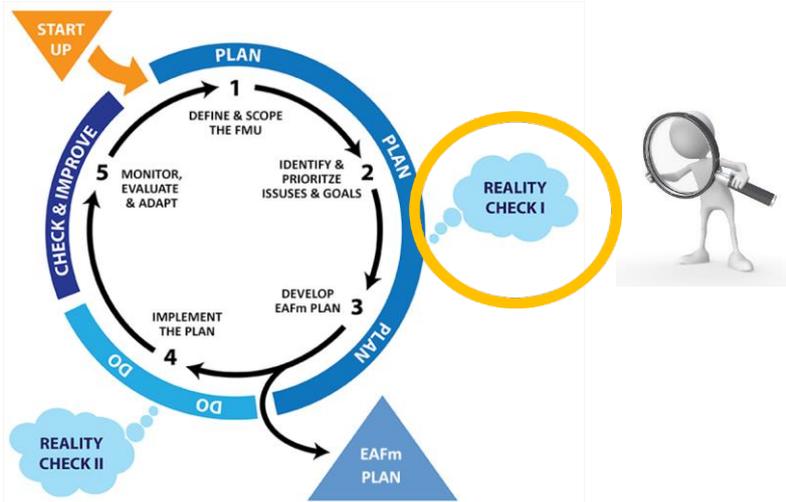


## SESSION 12: REALITY CHECK I



### Session 12 Reality check I

Essential EAFm training  
Date | Place



## SESSION 12: REALITY CHECK I



### Session Objectives

#### After this session you will be able to:

- Identify the constraints and opportunities in meeting your FMU goals
- Use facilitation skills with co-management partners in focus group discussions (FGDs)
- Use conflict management to resolve conflict in EAFm



### Constraints and Opportunities to Meeting the Goals

- For each goal you identified in step 2.3 there will be constraints and opportunities to achieving it
- These may include:
  - insufficient time
  - lack of human capacity/skills
  - cost
  - lack of data and information
  - lack of political, stakeholder and institutional support
- Some of these may have been already included in your threats and issues

## SESSION 12: REALITY CHECK I



**In your groups**

**Identify the constraints and opportunities to achieving your FMU goals**

**Output:**

- constraints on green cards
- opportunities on yellow cards

12. REALITY CHECK I 5



**In your groups**

**Revisit your FMU maps and plot**

- areas where conflicts are likely to occur and
- who the players are

12. REALITY CHECK I 6

## SESSION 12: REALITY CHECK I



### Focus Group Discussions (FGD)

- A tool to work with stakeholders to reduce conflict and identify opportunities
- Participants need to share experiences, ask questions and develop their own priorities
- Role of the facilitator:
  - Raise and agree on issues
  - Stimulate discussion and find solutions

12. REALITY CHECK I 7



### Facilitator expected to...

- Guide each session
  - Provide structure to discussion
  - Refocus the discussion as necessary
  - Guide discussion through a few general questions
- Not be too intrusive
  - Allow everyone to be heard and understood
  - Allow the discussion to flow freely
- If participants do not raise important issues, intervene
- Build rapport and trust (use active listening)

12. REALITY CHECK I 8

## SESSION 12: REALITY CHECK I



### Activity

**Hold a FGD on one topic from next slide. Feedback for all to learn from**

Process:

- Form groups each with 1 facilitator, 1 observer, others = respondents
- Pick one topic (in 30 seconds) then prepare silently for 3 minutes individually
- Facilitator to initiate the FGD for the given time
- Observer to silently monitor the process
- Feedback on the FGD process from observer, facilitator, trainer & others

12. REALITY CHECK I 9



### FGD Topic Options

1. EAFm plan exists but there is little political will; government lacks interest; it has not delivered on promises. Suggestions?
2. The government, fishery officers and police should enforce compliance – do they?
3. Rules and regulations have been set as a result of the EAFm Plan but one group of stakeholders is not doing what it is supposed to do. Suggestions?

12. REALITY CHECK I 10

## SESSION 12: REALITY CHECK I



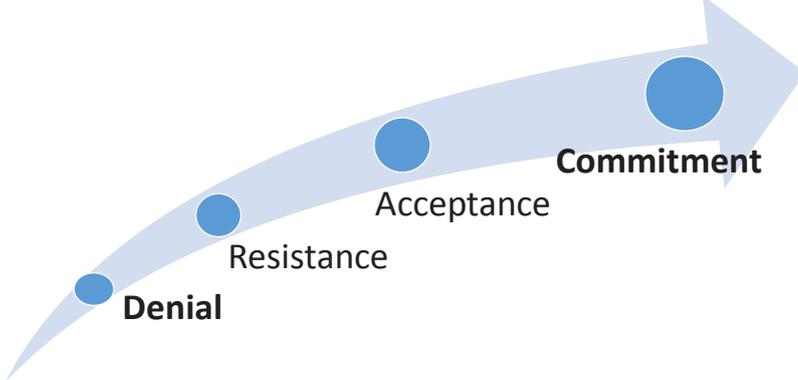
### Conflict in EAFm

- Many of the constraints and opportunities may involve conflict:
  - in views and opinions; and
  - of a more physical nature (fighting)
- Where is conflict likely to occur in the EAFm process? (remember your map)
- Is conflict always bad?
- People tend to resist change; conflict needs to be seen as part of change

12. REALITY CHECK I 11



### Conflict as Change Process



Denial

Resistance

Acceptance

Commitment

12. REALITY CHECK I 12

## SESSION 12: REALITY CHECK I



### Conflict Management

**WHAT?**  
A form of facilitated negotiation

**HOW?**  
Apply skills that help people express differences and solve problems for a WIN-WIN outcome

Negotiating

Questioning

Listening

Mediating

12. REALITY CHECK I 13



### Negotiation Strategy

Understand the conflict

- who, what, why, etc.

Act as the facilitator

Move towards a win-win outcome

1. Prepare & analyse
2. Discuss the options
3. Propose and seek solutions
4. Bargain

12. REALITY CHECK I 14

## SESSION 12: REALITY CHECK I



### Powerful Questioning

**Ask lots of questions and listen actively to the answers!!**

1. Questions to challenge assumptions
2. Questions to move forward (get out of stalemates)
3. Questions to stimulate thinking or convey a vision
4. Questions to float an idea



### Key Messages

- In Reality Check I, the constraints and opportunities to achieving the EAFm goals are assessed
- Facilitated focus group discussions and conflict resolution can help resolve many constraints
- Negotiated win:win outcomes are often possible

## SESSION 12: REALITY CHECK I



### 'Win-Win' Solutions Role Play

#### In groups:

1. Read your conflict scenario and decide which role you each will play
2. Prepare your role (arguments / character) for 5 minutes
3. Role play the scene
4. Provide feedback on conflict resolution

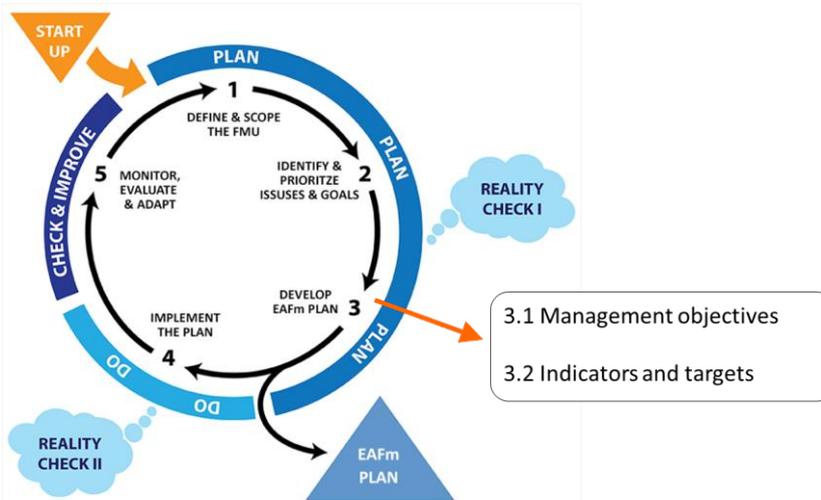


## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



**Session 13**  
**Steps 3.1 & 3.2**  
 Develop Objectives, Indicators and targets

Essential EAFm training  
 Date | Place



## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Session Objectives

After this session you will be able to:

- Develop management objectives
- Develop indicators and targets related to the objectives



### Building the EAFm Plan



## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### 3.1 Developing Objectives

Priority problem (core problem) → Management objective

**Ask:**  
For this problem: what do you want to achieve?

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 5



### Objectives

Management objective → Achievable through management actions

**What you want to achieve!**

 Management Objective = e.g. Reduce the % of juvenile fish that are caught

 Management Objective = e.g. Improve the health of the ecosystem

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 6

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### 3.2 What is an Indicator?

A measure of the current status at one point in time  
e.g. temperature, number of fish, area of conservation zone

**An indicator must be linked to the objective**

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 7



### Ecological (Fishery) Example

|                  |  |
|------------------|--|
| <b>Goal</b>      | Fish stock abundance increased                         |
| <b>Objective</b> | % of juvenile fish caught in the fishery reduced       |
| <b>Indicator</b> | % of juvenile fish caught by boats, or in catch landed |

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 8

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Ecological (non fish) Example

|                  |   |
|------------------|---|
| <b>Goal</b>      | <b>Quality of riparian habitat and breeding grounds restored</b>  |
| <b>Objective</b> | The amount of critical habitat is increased, to reduce siltation and improve breeding areas               |
| <b>Indicator</b> | Area of habitat recovered; Area of non-seining, or conservation areas established by co-management groups |

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 9



### Social Example

|                  |  |
|------------------|--|
| <b>Goal</b>      | <b>Fishing households have improved livelihoods</b>                |
| <b>Objective</b> | Incomes for fishers and fish workers increased                     |
| <b>Indicator</b> | Number fish workers employed full time in the harvest/post-harvest |

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 11

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Social Example

|           |  |
|-----------|--|
| Goal      | Fishing households have improved livelihoods                       |
| Objective | Credit and savings programmes established                          |
| Indicator | Number fish workers employed full time in the harvest/post-harvest |

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 12



### Governance Example

|           |  |
|-----------|--|
| Goal      | Improve compliance with FA and DOF rules and regulations                                   |
| Objective | Strengthened Fishers Associations and Beach Village Committees (BVC)                       |
| Indicator | Reports from FAs and BVCs indicate reduction in illegal fishing and non-compliant activity |

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 13

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Setting targets and limits for indicators

A baseline (or limit) and a target, provides a way to measure the change in an indicator

- Baseline = where you are now, or have come from
- Target = where you want to be
- Limit = where you do not want to be

e.g.

**Baseline:** Undamaged riparian area of in 1980

**Target:** Increase the area of conservation zones by 20%, by 2020

**Limit:** Not to allow for a decrease in area below 50% of Baseline



When an indicator is compared to the target and limit, it tells you how well you are meeting the objective

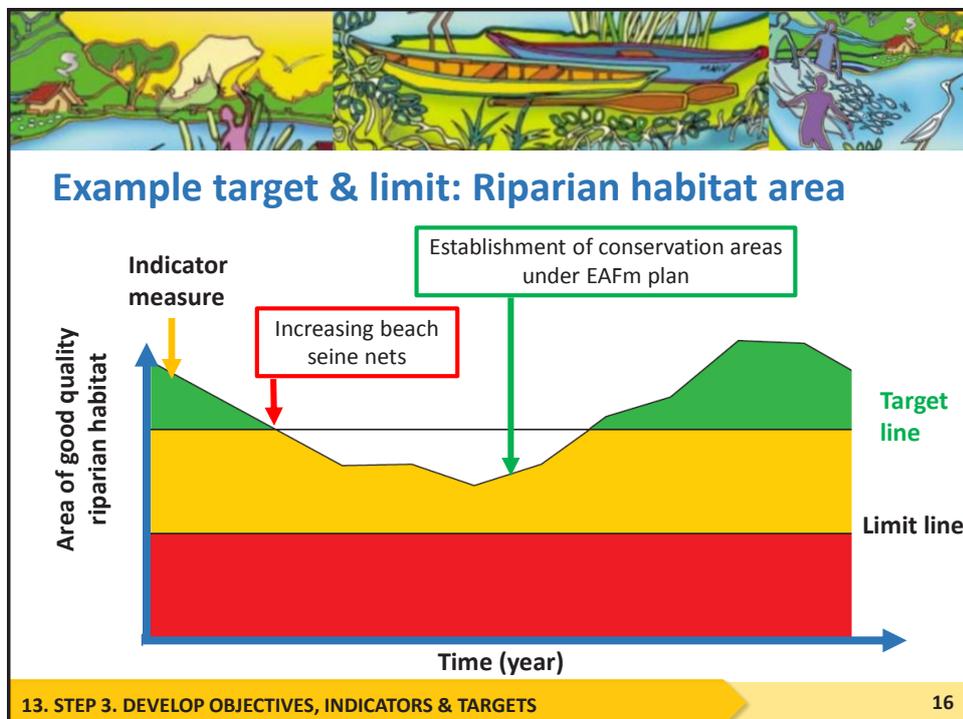


### Simple Example

- Objective:
  - Cure the infection in a sick patient
- Indicator:
  - The patient's body temperature
- Target (in this example, a target):
  - 37 degrees Celsius in 2 days



## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Data & Information for Indicators & Targets

Data & information are needed for the indicators & targets

- Use existing data, where available
- Collect new data, if necessary
- Use participatory approaches, if possible

**Note:** 'Data & information' is a cross-cutting theme. It was needed for scoping to set the background and now is needed for indicators and their targets and limits

13. STEP 3. DEVELOP OBJECTIVES, INDICATORS & TARGETS 17

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Indicators and Targets must be “SMART” ...

- **Specific** (in terms of quantity, quality and time)
- **Measurable** (easy to measure with acceptable cost)
- **Available** (from existing sources or with reasonable extra effort)
- **Relevant** (to objectives and sensitive to change)
- **Timely** (Information is up-to-date)



### Key Data and Information Questions

**What:** what needs to be measured?

**Who:** who will measure it/them?

**Where:** where will the data come from?

**How:** how will you collect the data?

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Involving Stakeholders (Participatory M&E)

- Stakeholders can be involved in:
  - developing the indicators and targets
  - collecting data
  - deciding on the methods to use
- Indicators developed locally have more relevance



### EAFm Plan Outline

We have now finished 1st part of Step 3.

#### EAFm Management Plan for FMU XX

1. Vision (Step 1)
2. Background (Step 1)
3. Major threats and issues (Step 2)
4. Goals (Step 2)
5. **Objectives, indicators and targets (Step 3)**

## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### Key Messages

#### In Step 3.1-3.2:

- Management objectives are developed. This involves agreeing on what is to be achieved for each high-priority issue
- Objectives are paired with indicators and targets to be able to assess whether the objective is being achieved



## SESSION 13: STEPS 3.1 & 3.2 DEVELOP OBJECTIVES, INDICATORS AND TARGETS



### In your groups

1. Choose 4 core problem/causes that were categorized as hi/hi (2 ecological (1 fish & 1 environmental)); (1 human & 1 governance).
2. Develop a management objective for each core problem
3. Select indicator(s) and target(s)/limit(s) for each management objective

**Core problem/cause:**

**Objective:**

**Indicator:**

**Target:**

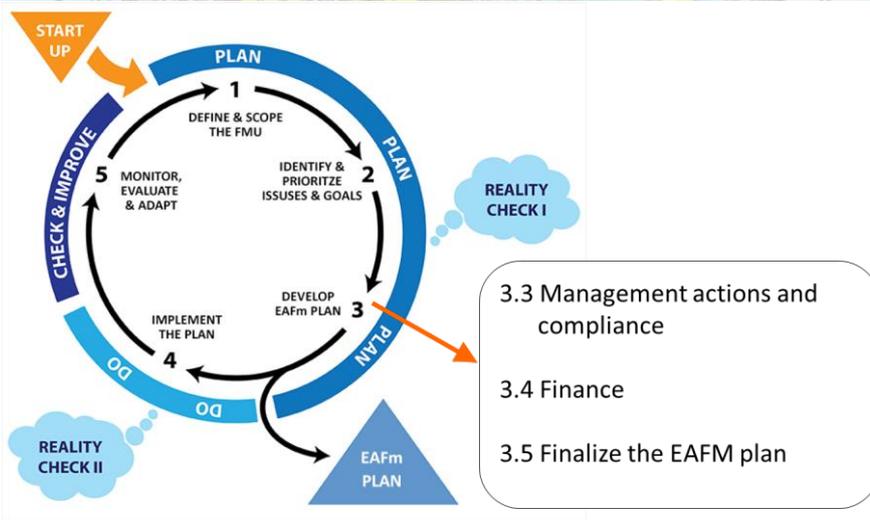
**Limit:**

# SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



**Session 14**  
**Step 3.3 – 3.5**  
**Management Actions,**  
**Compliance, Finance, Finalize EAFm**  
**Plan**

Essential EAFm training  
 Date | Place



## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Session Objectives

After this session you will be able to:

- Identify management actions and how stakeholders will comply with these
- Include financing mechanisms in the plan
- Bring it all together – finalize the EAFm plan



## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Management Actions

- An action that will help meet the objective
- Management actions could include:
  - Technical measures
    - Catch and effort controls (e.g. gear restrictions, limited entry)
    - Spatial and temporal controls (e.g. conservation zones, seasonal closures)
  - Ecosystem manipulation
    - Habitat restorations (e.g. plant riparian habitat, improve connectivity, modify water control structures, improve flows)
  - Community-based
    - Income diversification (e.g. alternative livelihoods skills)



### Management Actions (contd).

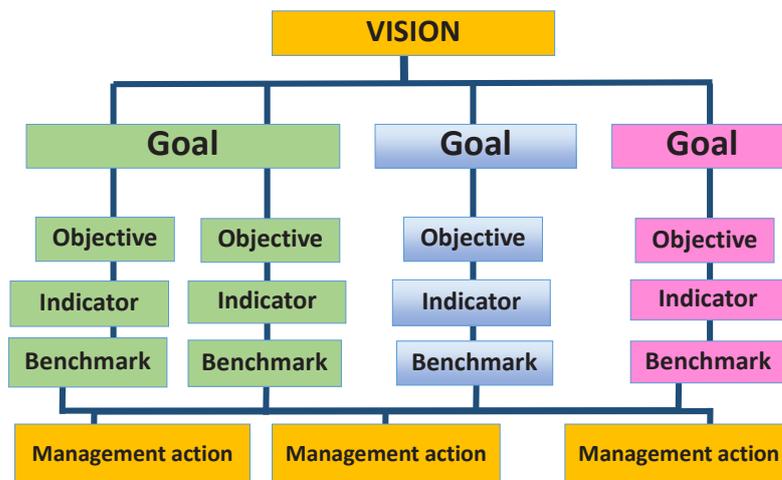
- Human capacity
  - Fishery management skills
- Strengthen institutions
  - Increase coordination (e.g. co-management BVCs, fisher associations, inter-agency task forces)
- Work with others to achieve objectives outside your mandate
  - Irrigation, water management, environment agency, pollution control, agriculture, etc.

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Grouping Management Actions

- The same management action (e.g. no-take conservation zone) may be linked to several objectives
- Duplicate management actions can be deleted, as long as the link to the specific management objective is not lost



## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Compliance & Enforcement

- When management actions are developed how to ensure they are complied with?
- Range of compliance methods available:
  - For fisheries we use the term monitoring, control and surveillance (MCS)
    - Monitoring - data/information gathering for compliance
    - Control - rules/controls applied to the fishery
    - Surveillance - patrolling/enforcement

**It is important to note, that Fishers Associations and even co-management groups (BVC) can conduct MCS, especially if they are authorized**



### Monitoring, Control and Surveillance

#### MCS needs:

- Cooperation and coordination across several agencies, fishers-groups and stakeholder “buy-in”
- Training & financial resources
- Education and awareness raising
- Surveillance
- Effective sanctions/penalties

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Top-Down

**Government MCS:**

- Fishery enforcement
- Limited capacity
- Corruption issues?



14. STEP 3. ACTIONS, COMPLIANCE, FINANCE & FINALIZE 11



### Bottom-Up

**Local MCS:**  
Co-management fish wardens and “eyes on the water” improves compliance.




**Builds trust**  
**Encourage stakeholders**  
**Acceptance of the rules**

14. STEP 3. ACTIONS, COMPLIANCE, FINANCE & FINALIZE 12

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Top-Down vs. Bottom-Up

- Often a combination of both is needed
- Developing the EAFm Plan with full stakeholder participation increases “buy-in”
- Stakeholder “buy-in” reduces the need for enforcement i.e. it generates self-compliance
- Need to develop appropriate incentives



### Landing site monitoring: catches/landings & gear

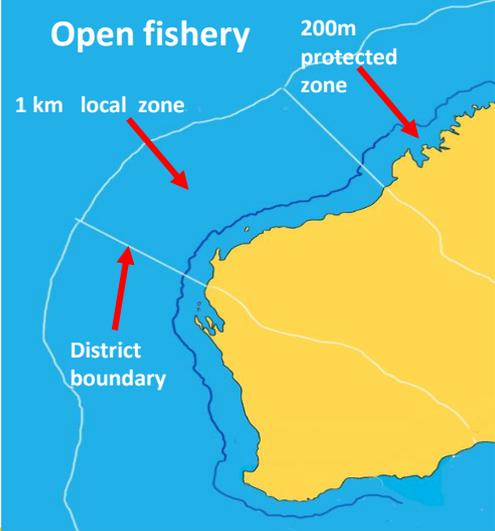


## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Example of MCS: Community monitoring of Fishing Zones

- VMS to track large vessels
- GPS for small boats
- Community fishery patrols
- FCZ wardens



**Open fishery**

1 km local zone

200m protected zone

District boundary

14. STEP 3. ACTIONS, COMPLIANCE, FINANCE & FINALIZE
15



### Another Example: boat markings




14. STEP 3. ACTIONS, COMPLIANCE, FINANCE & FINALIZE
16

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Finishing the EAFm Plan

- You have now completed most of the EAFm Plan
- Add “Data and information”
- Add “Financing”



### 3.4 Data and Information Needs

Data and information needs have been discussed previously in steps 1 & 3.

- The EAFm plan needs a separate section
  - Who is responsible for measuring the indicator(s)?
  - Where do the data come from (new or existing)?
  - If new, what method will be used?

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### 3.4 Financing

Plan needs to have a section on how it will be financed

- Budget
  - How much?
  - Where from? (Existing? New?)
  - Need to consider who will/can pay, equity, impacts
- A good EAFm Plan will attract funding from different sources
  - Ideally the plan should be supported from existing budget by including it in the budget planning cycle
  - Or revenues/landing fees generated by the fishery



### Sources of Funding

Preferably Government (part of the normal budget cycle)

- Other sources:
  - Government special grant
  - Donors (may cover startup costs but not ongoing)
  - Grants from NGOs
  - Fishing fee (e.g. licenses or fish landing fees)
    - Linked to access rights
  - Fines for non-compliance
  - Stakeholders (share the costs)

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### 3.5 Finalizing the EAFm Plan

You have now completed headings 1 – 9 of the EAFm Plan

- The last heading on “Review of the Plan” simply needs a timetable of suggested reviews
- We look at this in more detail in Step 5.



### The EAFm plan is now complete

#### EAFm Plan for FMU XX

1. Vision (Step 1)
2. Background (Step 1)
3. Major threats and issues (Step 2)
4. Goals (Step 2)
5. Objectives, indicators and benchmarks (Step 3)
6. Management actions (Step 3)
7. Compliance (Step 3)
8. Data and info needs – source of data, etc. (Step 3)
9. Financing (Step 3)
10. Review of the plan – timetable for review

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



### Key Messages

**In Step 3.3 – 3.5:**

- Management actions are decided for each objective
  - Compliance with the management actions is also considered
- Duplicate actions are removed
  - One management action can often address several objectives
  - The outputs from steps 1,2 and 3 are used to create the EAFm plan
  - Include references to communication and review

14. STEP 3. ACTIONS, COMPLIANCE, FINANCE & FINALIZE 23



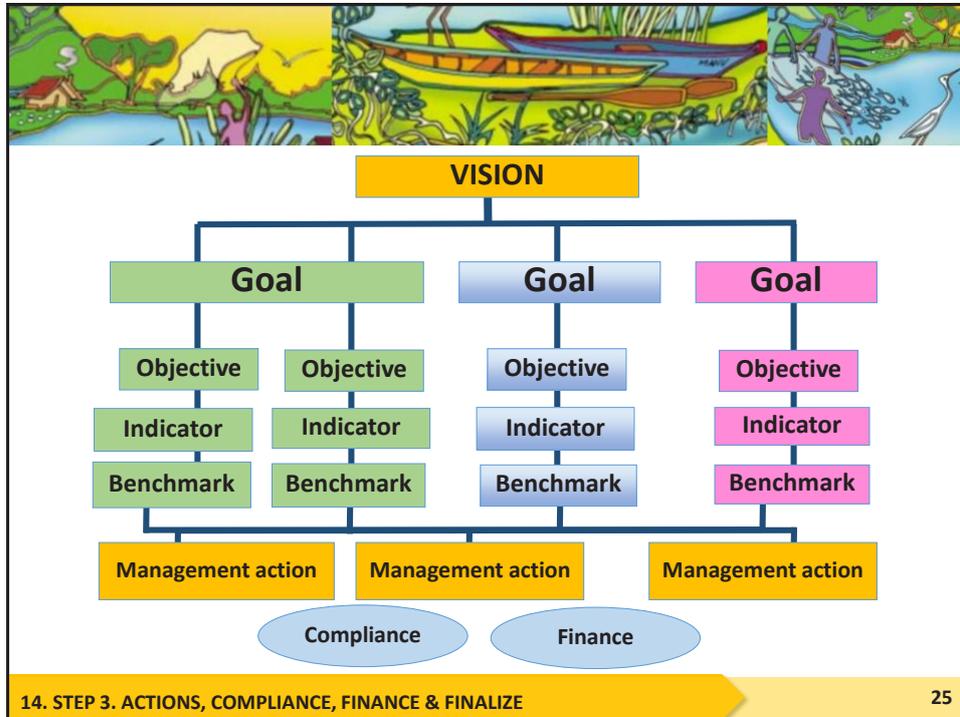
### In your groups

- Produce a set of management actions for the objectives you identified earlier
- For each action, consider appropriate compliance and enforcement actions, taking practicalities and costs into account
- Agree on financing mechanisms to support the management

**Output:** Next slide

14. STEP 3. ACTIONS, COMPLIANCE, FINANCE & FINALIZE 24

## SESSION 14: STEP 3.3 – 3.5 MANAGEMENT ACTIONS, COMPLIANCE, FINANCE, FINALIZE EAFM PLAN



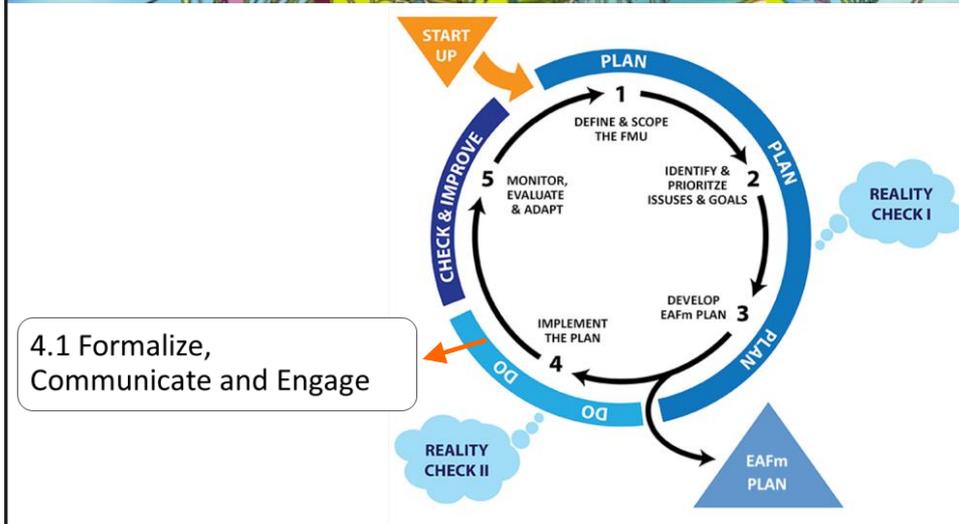


# SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



Session 15  
**Step 4.1**  
 Formalize, Communicate & Engage

Essential EAFm training  
 Date | Place



4.1 Formalize, Communicate and Engage

## SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



### Session Objectives

#### After this session you will be able to:

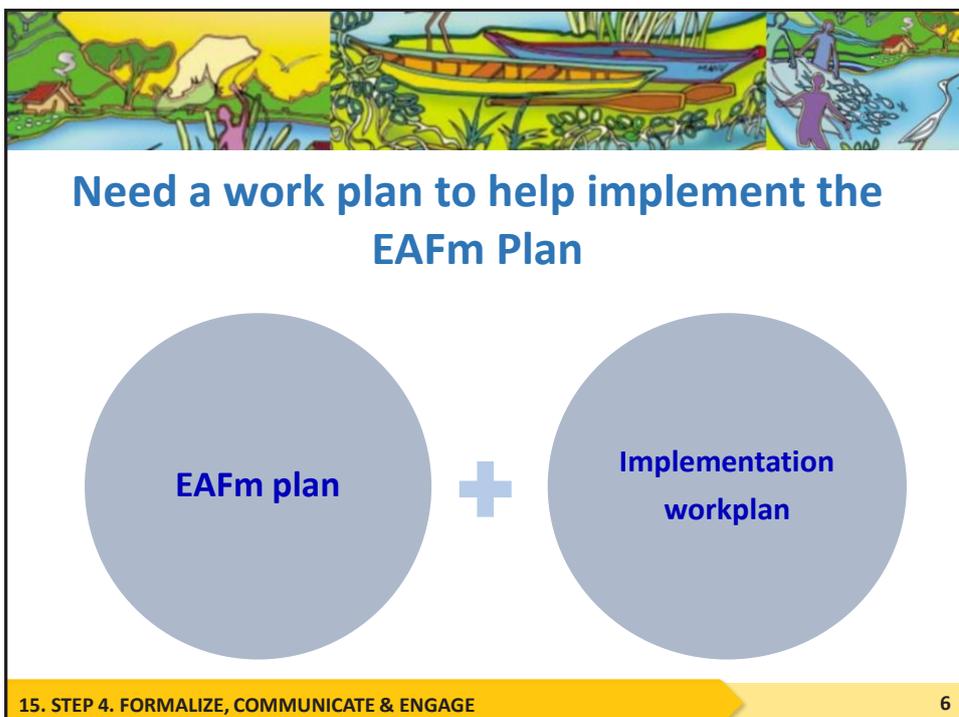
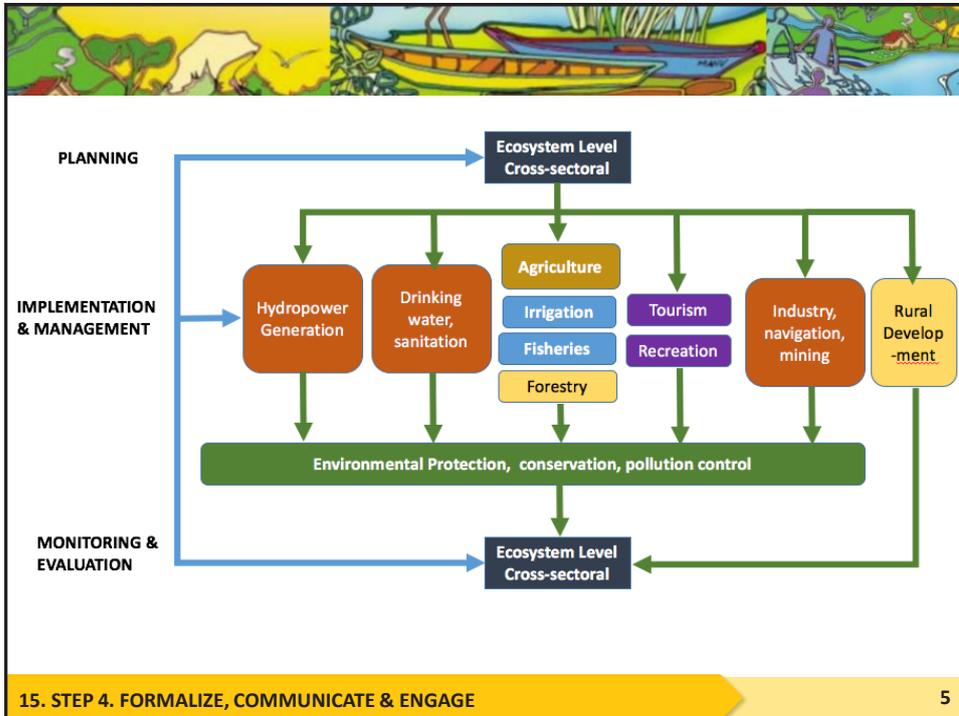
- Develop an implementation work plan
- Summarize what is meant by formal adoption of the EAFm plan
- Develop a communication strategy



### Implementing the EAFm Plan

- Usually governments are organised into sectors (e.g. agriculture/irrigation, fisheries, rural development)
- Implementation will require working with other sector agencies
- Each agency should have a clearly defined role and responsibility
- Implementation at the grass roots level (e.g. fishing communities, co-management groups) will be less sectoral, but will still require coordination and cooperation across agencies

## SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



## SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



### Implementation Work Plan

- Necessary to move ahead with implementing EAFm plan
- Most effective if mainstreamed into annual budget cycles and plans, but this may take time

- **WHAT** tasks need to be done?
- **WHO** does them?
- **WHEN** will they be done?

**NEED TO WORK WITH OTHER AGENCIES**

15. STEP 4. FORMALIZE, COMMUNICATE & ENGAGE 7



### Implementation Work Plan

- Includes how to formalize the EAFm Plan
- Includes how to communicate the Plan
- Includes how to implement the management actions

- **WHAT** tasks need to be done?
- **WHO** does them?
- **WHEN** will they be done?

**NEED TO WORK WITH OTHER AGENCIES**

15. STEP 4. FORMALIZE, COMMUNICATE & ENGAGE 8

## SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



### Formalizing the EAFm Plan

#### Legitimizing the Plan

- Validation and “buy-in” by stakeholders
- Endorsement and adoption of the plan
- Plan is legally and socially enforceable by the relevant authority or groups



### Formalizing the EAFm Plan

Formalization will be depend on the country

- Decree
- Ordinance
- Proclamation
- Local government acts

Important to link to existing legislation

e.g. Fishery Act, Local law

## SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



### Communicating the EAFm Plan

**Purpose** → Sharing the EAFm plan and results with target audiences

**How?**

- Identify target audiences
- Develop approaches for communicating with each
- Develop key messages
- Timing

15. STEP 4. FORMALIZE, COMMUNICATE & ENGAGE 11



### Other Considerations for Communication

**Depending on target audience**

- What is your budget for communication?
- What media will be suitable and effective?
- What languages?
- Timing and location?
- How will you know how well your message has been interpreted and understood?

15. STEP 4. FORMALIZE, COMMUNICATE & ENGAGE 12

## SESSION 15: STEP 4.1 FORMALIZE, COMMUNICATE & ENGAGE



### Communication Strategy

| Target audience | Communication method (how & where) | Key messages | Timing |
|-----------------|------------------------------------|--------------|--------|
|                 |                                    |              |        |
|                 |                                    |              |        |
|                 |                                    |              |        |
|                 |                                    |              |        |

15. STEP 4. FORMALIZE, COMMUNICATE & ENGAGE 13



### Key Messages

**In Step 4:**

- The plan is formalized (to avoid being just another document on someone’s desk)
- The EAFm plan needs to be communicated widely through a communication strategy
- An implementation work plan is needed to put the EAFm plan into action

15. STEP 4. FORMALIZE, COMMUNICATE & ENGAGE 14

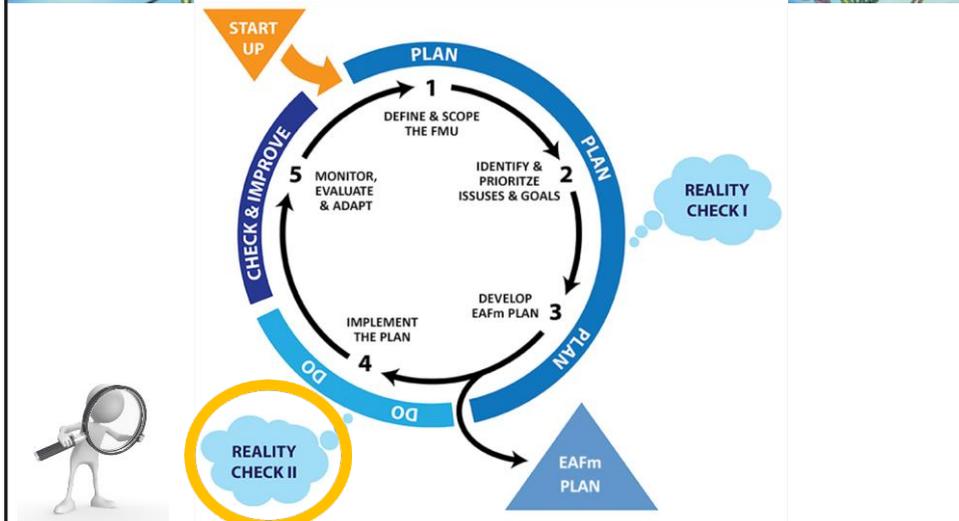


## SESSION 16: REALITY CHECK II



### Session 16 Reality Check II

Essential EAFm training  
Date | Place



## SESSION 16: REALITY CHECK II



### Session Objectives

**After this session you will be able to:**

- Check on the status of the EAFm plan implementation
- Consider whether implementation is in line with the principles of EAFm
- Check on the practicalities – is the supporting environment in place?
- Re-visit constraints and opportunities in meeting your FMU goals

16. REALITY CHECK II 3



### Reality Check II



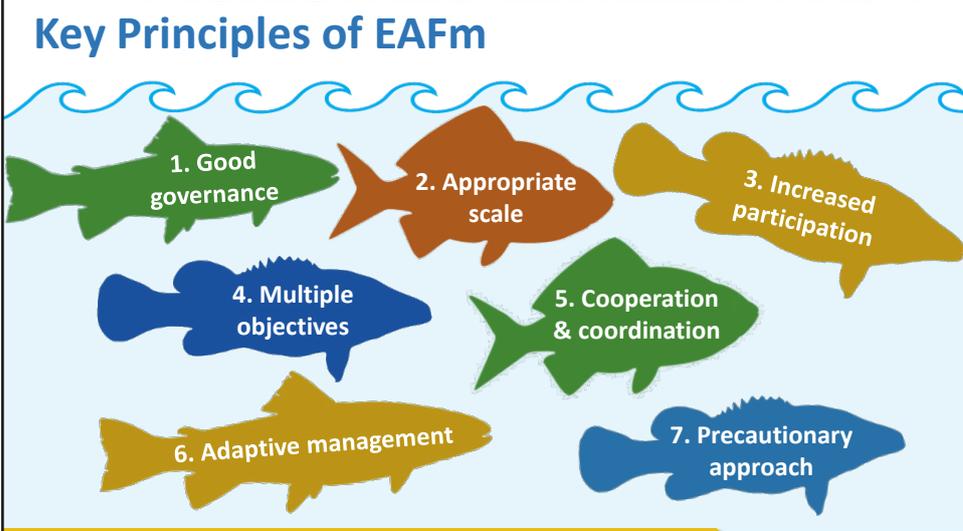
*Check on whether the main mechanisms, processes, resources and institutions for EAFm implementation are in place*

16. REALITY CHECK II 4

## SESSION 16: REALITY CHECK II



### 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

16. REALITY CHECK II 5



### The Key : Good Governance



**GOOD GOVERNANCE**

- Consensus
- Participatory
- Accountable
- Follows the rule of law
- Transparent
- Effective and efficient
- Equitable and inclusive
- Responsive

Source: <http://www.unescap.org/pdd/prs/ProjectActivities/Ongoing/gg/governance.asp>

16. REALITY CHECK II 6

## SESSION 16: REALITY CHECK II



### Governance Check List

1. Is the legal framework supporting EAFm?
2. Are rules and regulations in place and agreed to by stakeholders?
3. Do we have capacity for effective compliance and enforcement?
4. Are effective governance arrangements in place for coordination and cooperation?

16. REALITY CHECK II 7



### Check co-ordination & co-management Arrangements

Community: VC VC VC (VC = Village Management Committee)

District: MAC MAC MAC (MAC: Management Advisory Committee Fisher association)

Provincial: FMU MAC

National: Other sectors, Department of Fisheries, Police/Courts, Department of Environment

Council

16. REALITY CHECK II 8

## SESSION 16: REALITY CHECK II



### Other Success Factors

Checking against the other principles also help us ask important questions, such as:

- Does the plan cover multiple objectives?
- Are we working at the right scale?
- Is co-management with empowered stakeholders built into the plan?
- Do we have a system for learning through adaptive management?
- Are there any major risks with our proposed actions?

16. REALITY CHECK II 9



### Also need: a supporting environment

1. Adequate political will and support?
2. Adequate resources (personnel, equipment, finances) for EAFm?
3. Effective financing mechanisms?
4. Appropriate institutional arrangements

16. REALITY CHECK II 10

## SESSION 16: REALITY CHECK II



### Adequate Political Will

#### Key questions when checking on political will:

1. Have the politician/senior policy makers been engaged in the EAFm planning process?
2. Have clear messages for politician/senior policy makers been communicated and understood?



### Adequate Resources

#### Key questions when checking on human resources:

1. Do the staff responsible for implementing EAFm have appropriate experience and training?
2. Is the implementing team equipped with “people skills” to facilitate a process that maximizes the benefits of a having a truly participatory process?

## SESSION 16: REALITY CHECK II



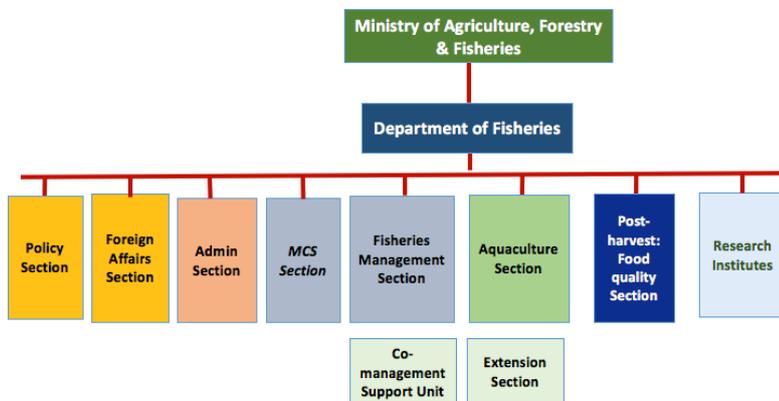
### Effective Financing Mechanisms

Key questions when checking on financing:

1. Has the implementation of the EAFm plan been mainstreamed into the activities and tasks of the relevant agencies
2. Has an annual budget been allocated?
3. Have other sources and models for funding (e.g. “user pays”) been adequately investigated?



### Is the Fisheries Agency Structure supportive?



## SESSION 16: REALITY CHECK II



### Key Messages

**In Reality Check II:**

- Check whether everything is in order before putting too much of the EAFm plan into action
- Consider whether the EAFm principles are being met, especially good governance
- Check whether the practical arrangements are in place (i.e. the supporting environment)

16. REALITY CHECK II 15



### Activity: As a Large Group

1. Take the “constraints” (challenges) and “opportunities” you developed earlier
2. Place the opportunities on the floor **inside** the circle and the constraints **outside** the circle
3. Can you move the constraints into the opportunity circle (i.e. change constraints into opportunity)?
4. For the constraints that still exist discuss what is needed to overcome them.

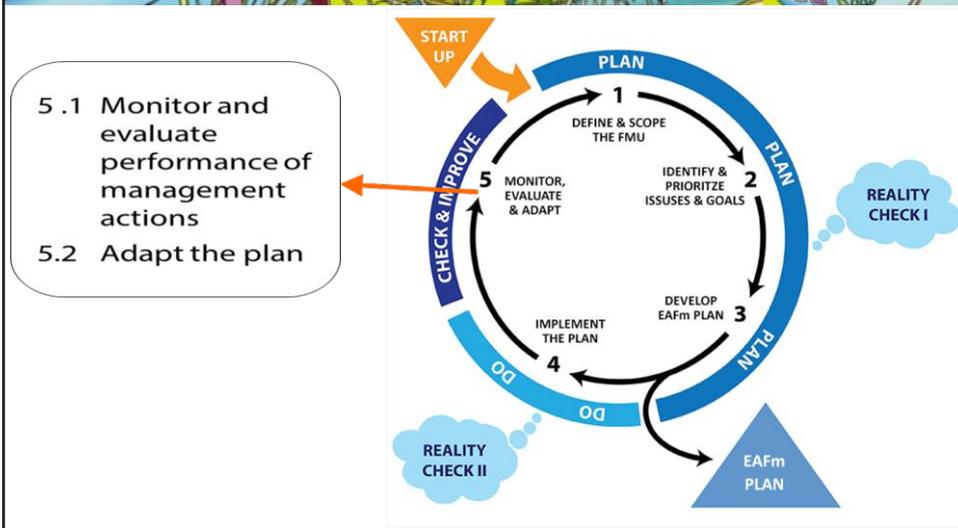
16. REALITY CHECK II 16

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



Session 17  
Steps 5.1 & 5.2  
Monitor, Evaluate and Adapt

Essential EAFm training  
Date | Place



5.1 Monitor and evaluate performance of management actions  
5.2 Adapt the plan

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



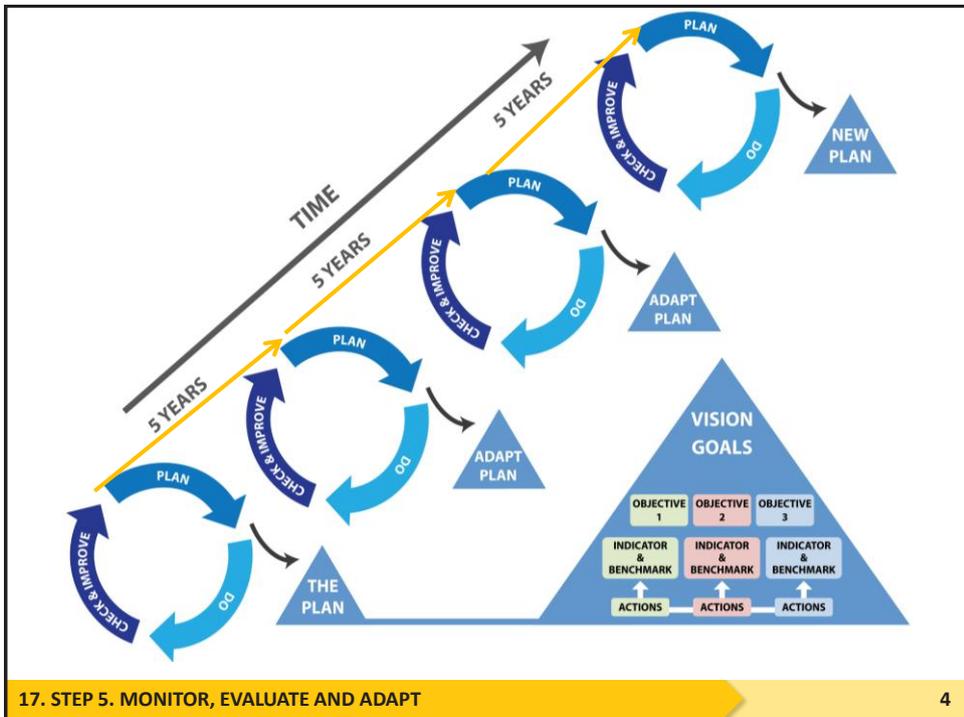
### Session Objectives

After this session you will be able to:

- Monitor how well management actions are meeting goals and objectives
- Plan what has to be monitored, why, when, how and by whom
- Evaluate monitoring information and report on performance
- Review and adapt the plan

17. STEP 5. MONITOR, EVALUATE AND ADAPT

3



17. STEP 5. MONITOR, EVALUATE AND ADAPT

4

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



**Step 5 is a critical step in the management cycle**

- Regular monitoring and reviews of management actions are required to assess progress towards achieving objectives
- Monitoring and evaluation (M&E) provides the critical information for adaptive management

**NOTE:** “MONITORING” IN MCS is only the monitoring of compliance with regulations, but monitoring for evaluation includes other data as there are multiple indicators, not just compliance.

17. STEP 5. MONITOR, EVALUATE AND ADAPT 5



**The Sub-Steps**

**5.1 Monitoring & Evaluation (M&E)**

- Monitor: Collect data (focus on indicators)
- Evaluate: Collate results of monitoring and evaluate management performance against targets/limits (and baseline) and report

**5.2 Review and adapt the EAFm plan**

- Review: Regular reviews of the plan
- Adapt: Adapt the plan as required

17. STEP 5. MONITOR, EVALUATE AND ADAPT 6

## SESSION 17: STEPS 5.1 & 5.2

### MONITOR, EVALUATE AND ADAPT



#### Monitor

- Collect data for each indicator
  - Avoid unfocussed data collection but do not ignore relevant information (e.g. fishermen observations, environmental change)
- Monitoring continues throughout the life of the plan
- Frequency of monitoring depends on the indicator
  - Some indicators will require monthly, some seasonal and some annual sampling



#### Participatory M&E

- Involve the stakeholders in:
  - collecting data
  - deciding on the methods to use
- Indicators monitored and evaluated locally have more relevance

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



### Evaluate Management Performance

Assess each indicator against its target/limits/baseline to measure the effectiveness of each management action.

**Example:**

|                      |   |   |
|----------------------|---|---|
| <b>Objective:</b>    | Increase area of freshwater fish refuge   |   |
| <b>Indicator:</b>    | Hectare of protected habitat  |   |
| <b>Baseline</b>      | 100 ha in 2010  |   |
| <b>Target</b>        | Increase 50% above baseline by 2020 (150 ha)  |   |
| <b>Progress 2014</b> | 50 ha<br>(50% decrease!)  | 125 ha<br>(25% increase)  |

17. STEP 5. MONITOR, EVALUATE AND ADAPT 9



### Evaluate Performance contd.

- Evaluate all indicators
- Collate, analyze and describe the overall performance of management actions
- Assess other sources of information that verify (confirm or refute) the indicator evaluation
- e.g. cross-check with stakeholder observations

17. STEP 5. MONITOR, EVALUATE AND ADAPT 10

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



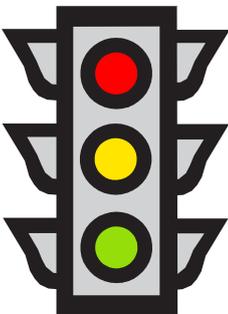
### Communicating and Reporting

- The evaluation needs to be communicated
- Different users will require different reporting styles
  - Brief and hard-hitting for policy makers
  - Simple and easy to understand for community stakeholders

17. STEP 5. MONITOR, EVALUATE AND ADAPT 11



### Example of a simple reporting system: Traffic Lights



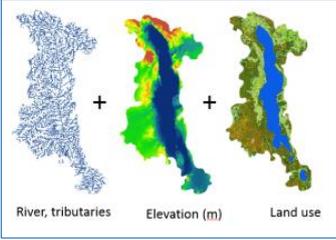
|               |  |
|---------------|--|
| <b>Red</b>    | performance is well below target, and close to limit |
| <b>Orange</b> | performance is close to target                       |
| <b>Green</b>  | performance is at or above target                    |

17. STEP 5. MONITOR, EVALUATE AND ADAPT 12

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



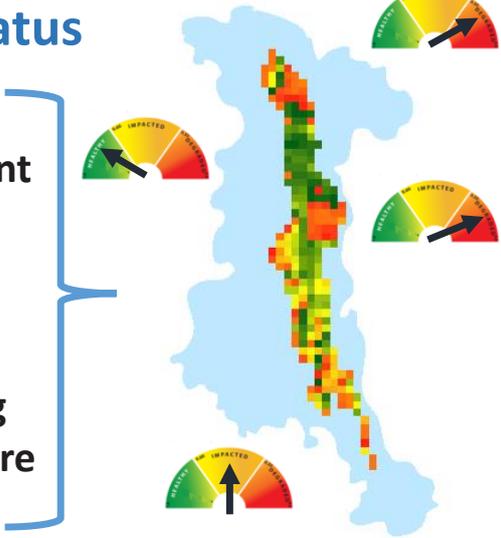
### Using colours to map status



River, tributaries + Elevation (m) + Land use

**Nutrient runoff**

**Fishing pressure**



17. STEP 5. MONITOR, EVALUATE AND ADAPT 13



### 5.2 Review and Adapt

The evaluation report provides the basis for the participatory review of the plan

- Reviews
  - Short-term (annual evaluation)
  - Long-term (3-5 years evaluation)

17. STEP 5. MONITOR, EVALUATE AND ADAPT 14

## SESSION 17: STEPS 5.1 & 5.2

### MONITOR, EVALUATE AND ADAPT



#### Short-term Reviews

- If the plan is not working, establish why
- Adapt the plan:
  - Management actions
  - Compliance
  - Governance arrangements



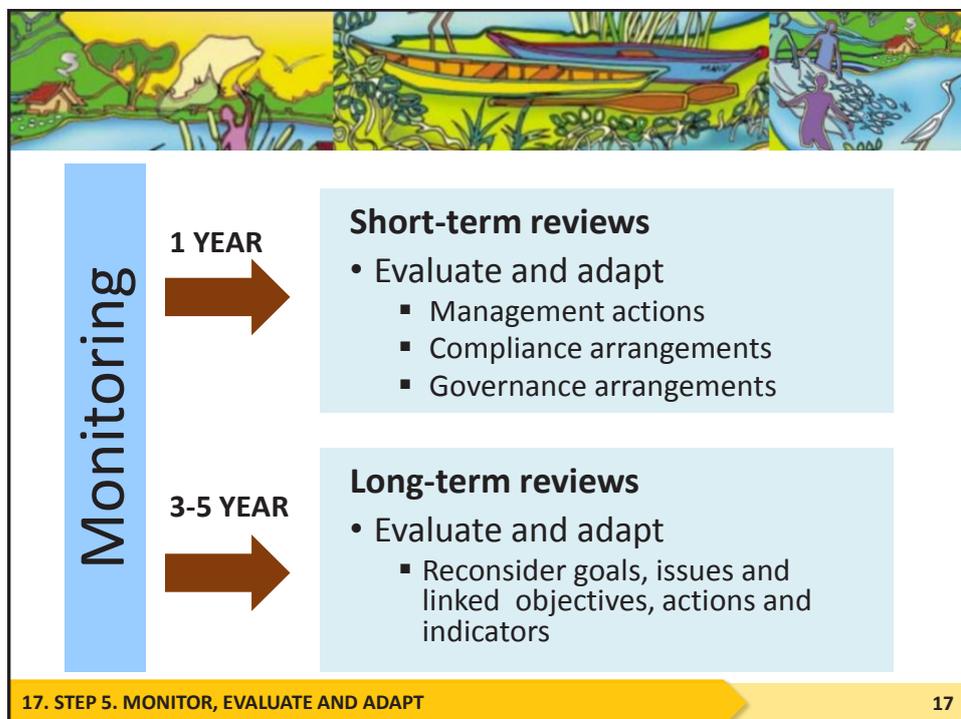
#### Longer-term Reviews

**Carry out a comprehensive review every 3-5 years.**

**It may be necessary to:**

- Reconsider goals, objectives, indicators, etc.
- May need to rethink the whole plan and management system
- Often carried out by independent auditor
- If the plan is working, celebrate!!

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



### Key Messages

**In Step 5:**

- Monitor, evaluate and adapt completes the EAFm cycle, ready to enter the next cycle
- Yearly review: are you meeting objectives?
  - if not, adapt the management actions and compliance arrangements, where necessary
- 5-yearly review: are you meeting objectives and goals?
  - if not, may be necessary to also revisit issues and goals as well

17. STEP 5. MONITOR, EVALUATE AND ADAPT 18

## SESSION 17: STEPS 5.1 & 5.2 MONITOR, EVALUATE AND ADAPT



**Home Work: Preparing presentations for Day 5**

- EAFm plans
- No PowerPoints
- Use flipcharts, cards ...be creative!
- Trainers need to see learning and applying EAFm concepts and tools
- Everyone participates
- Supportive environment – constructive feedback

17. STEP 5. MONITOR, EVALUATE AND ADAPT 19



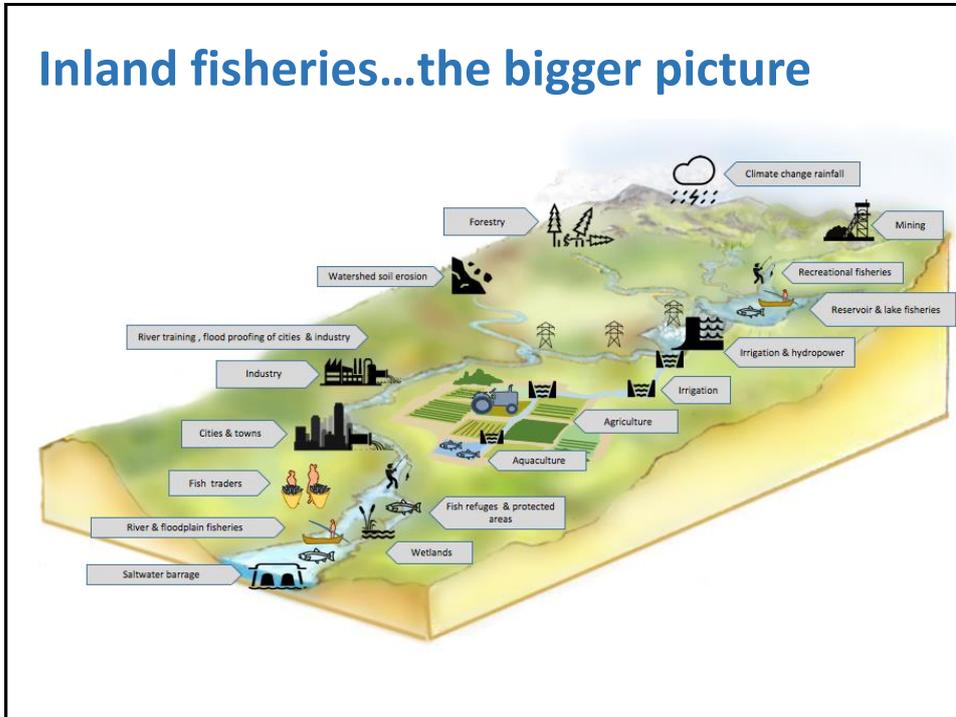
**EAFm QUIZ!**



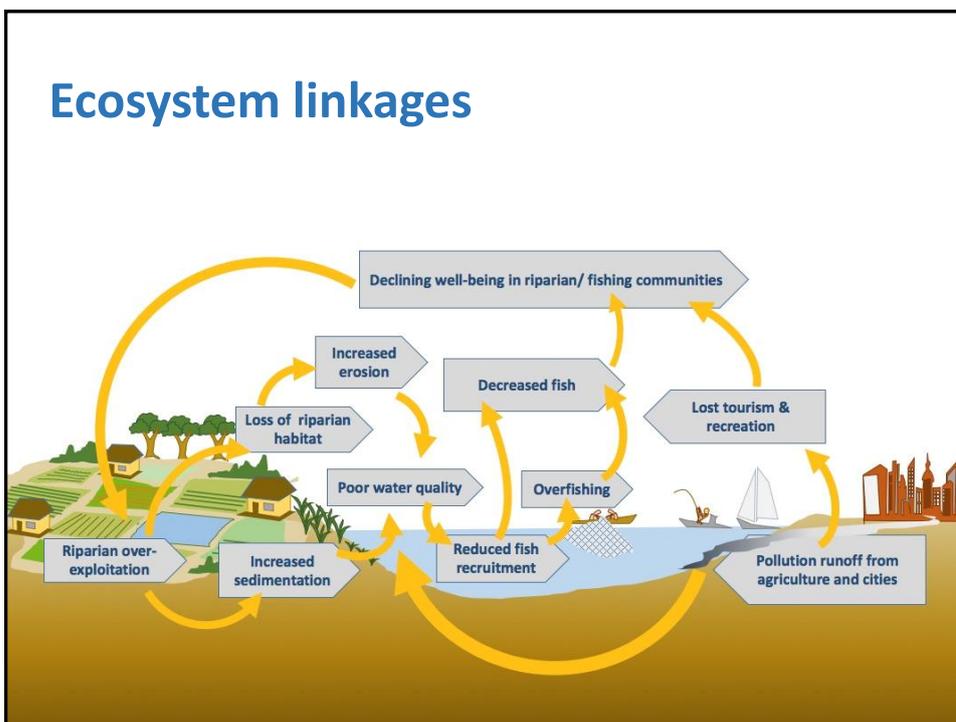
17. STEP 5. MONITOR, EVALUATE AND ADAPT 20

## VISUALS GALLERY FOR EAFM TRAINING ROOM

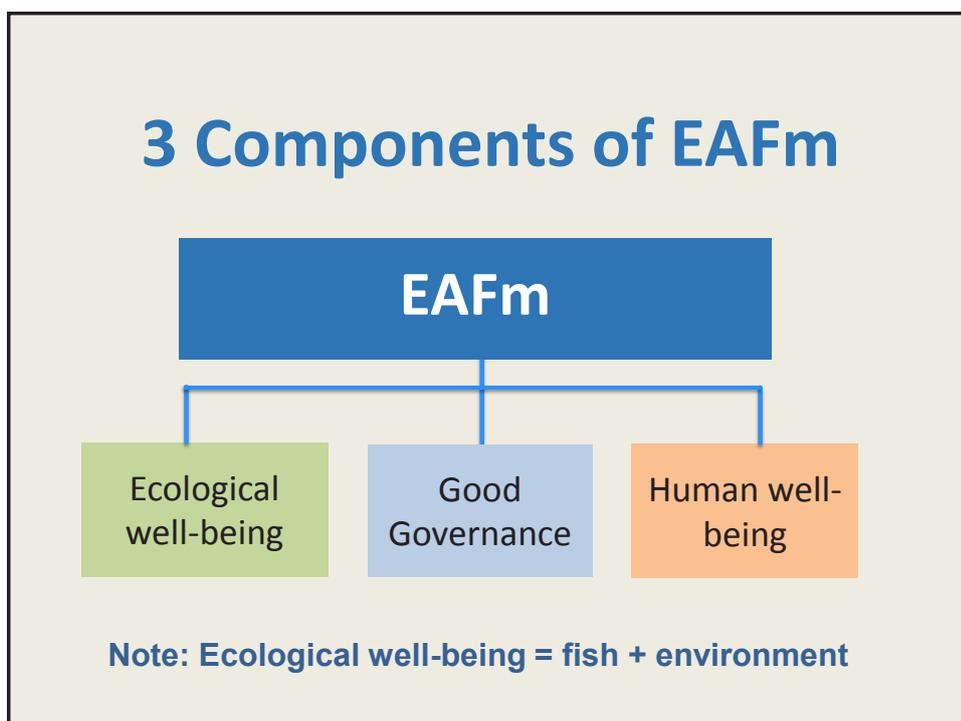
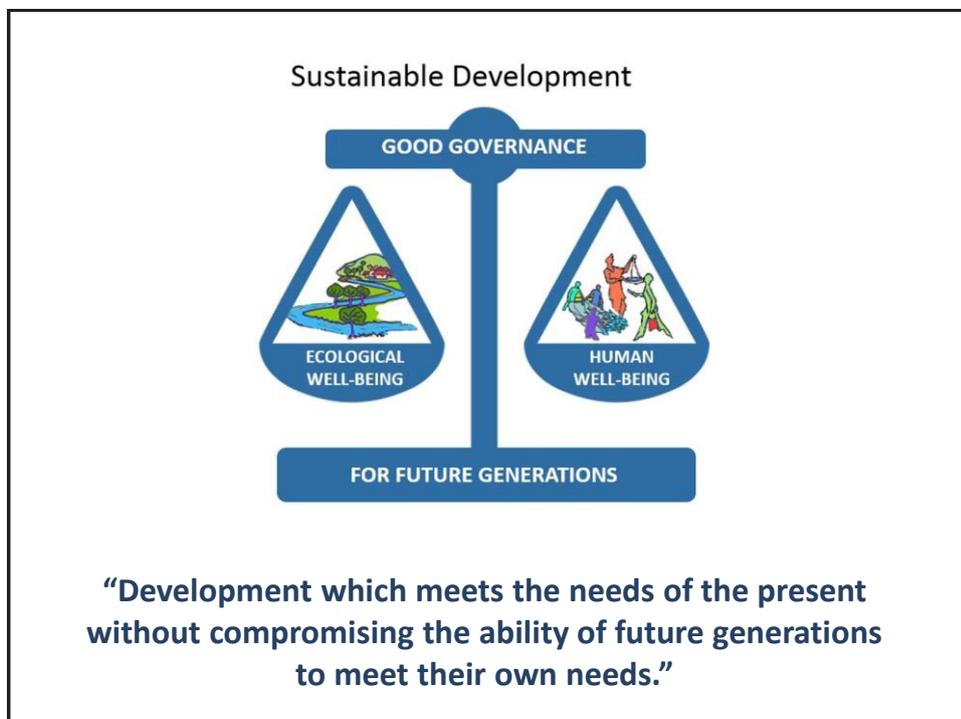
### Inland fisheries...the bigger picture



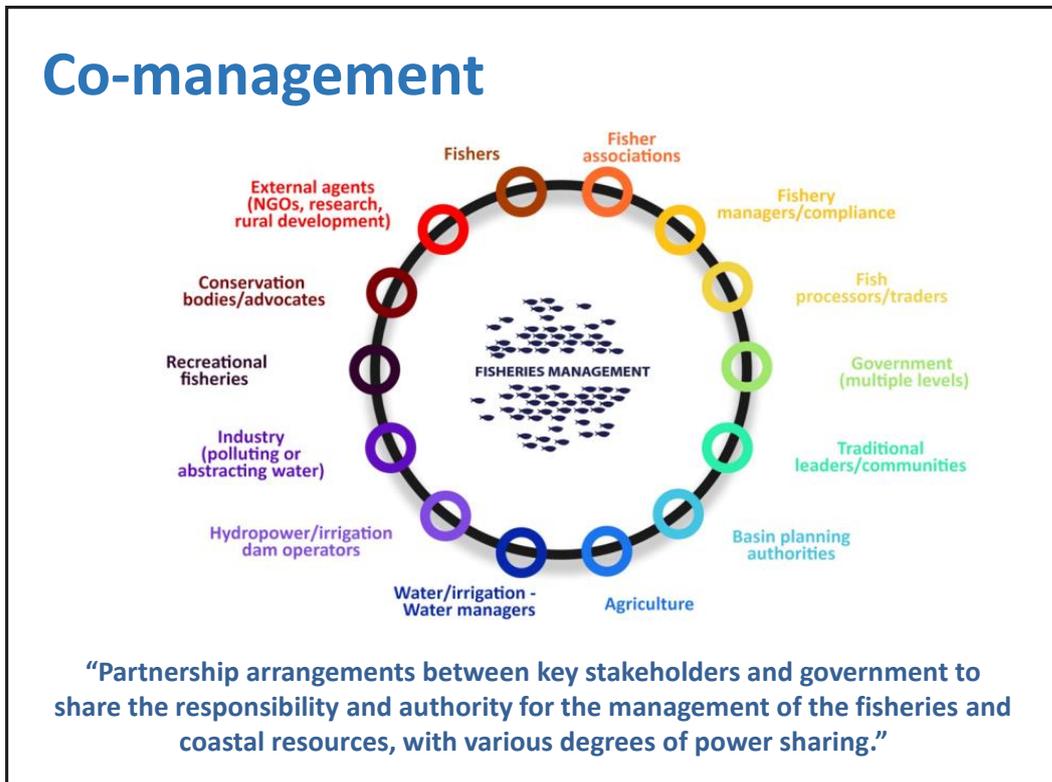
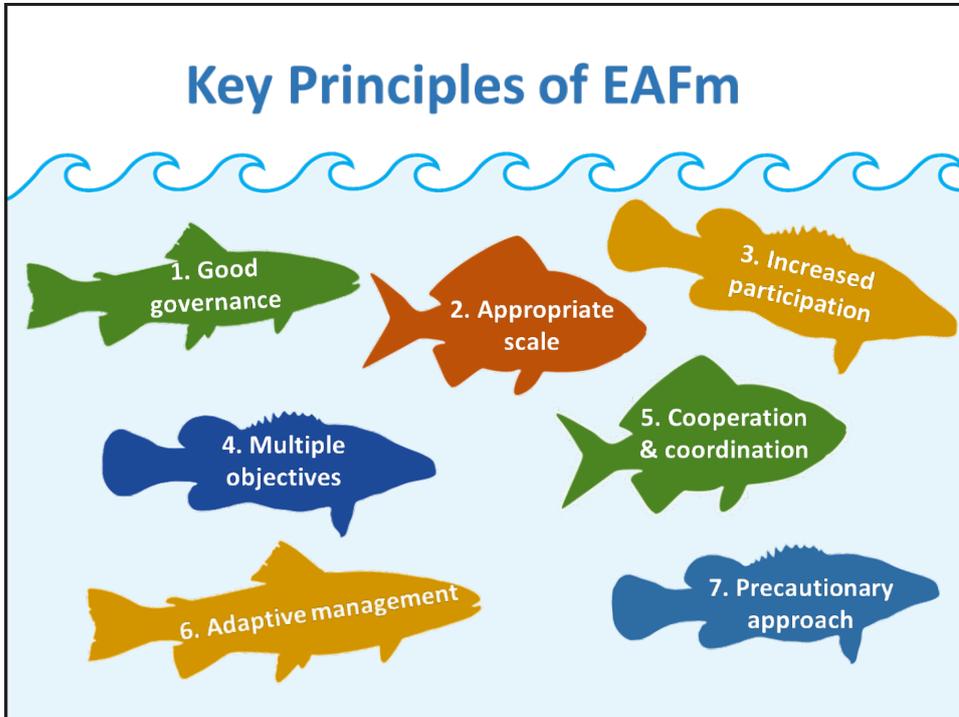
### Ecosystem linkages



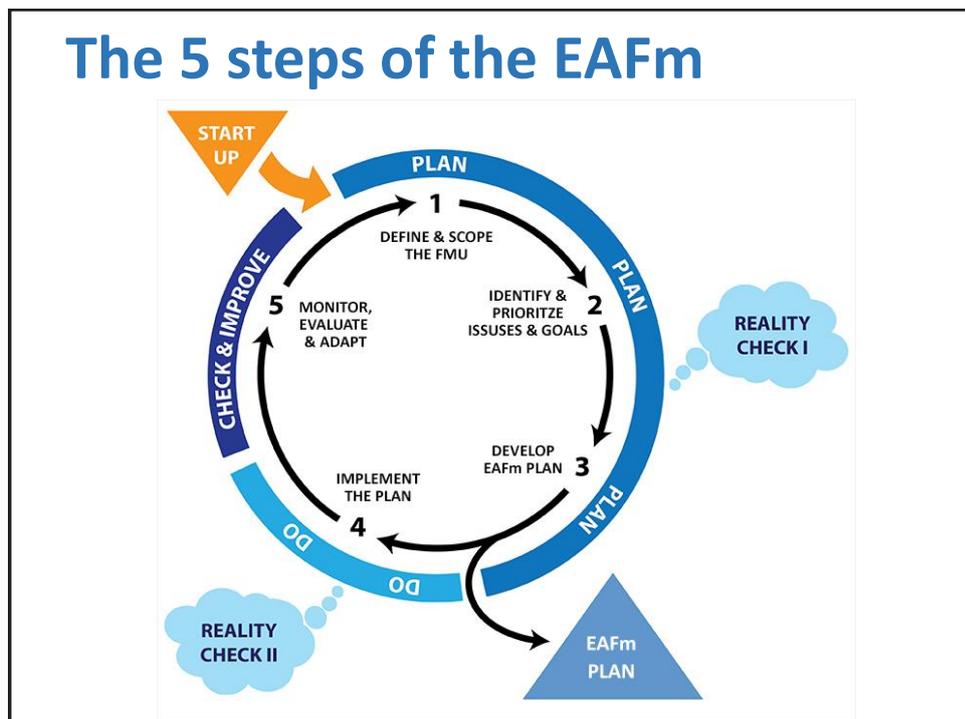
## VISUALS GALLERY FOR EAFM TRAINING ROOM



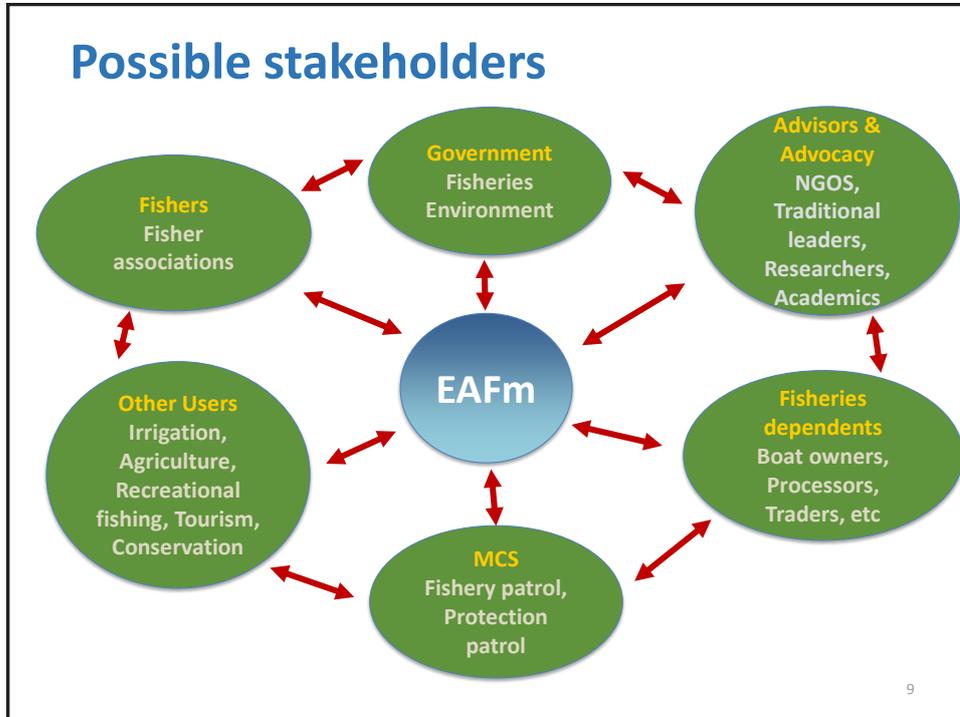
## VISUALS GALLERY FOR EAFM TRAINING ROOM



## VISUALS GALLERY FOR EAFM TRAINING ROOM



## VISUALS GALLERY FOR EAFM TRAINING ROOM



**The active PARTICIPATION of people is at the heart of EAFm**

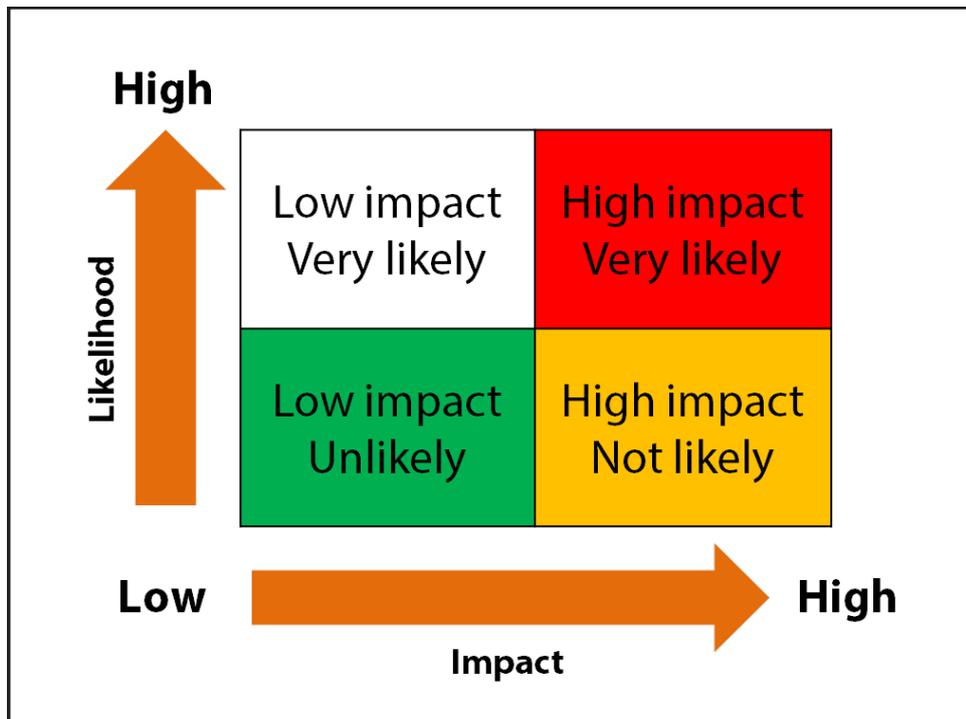
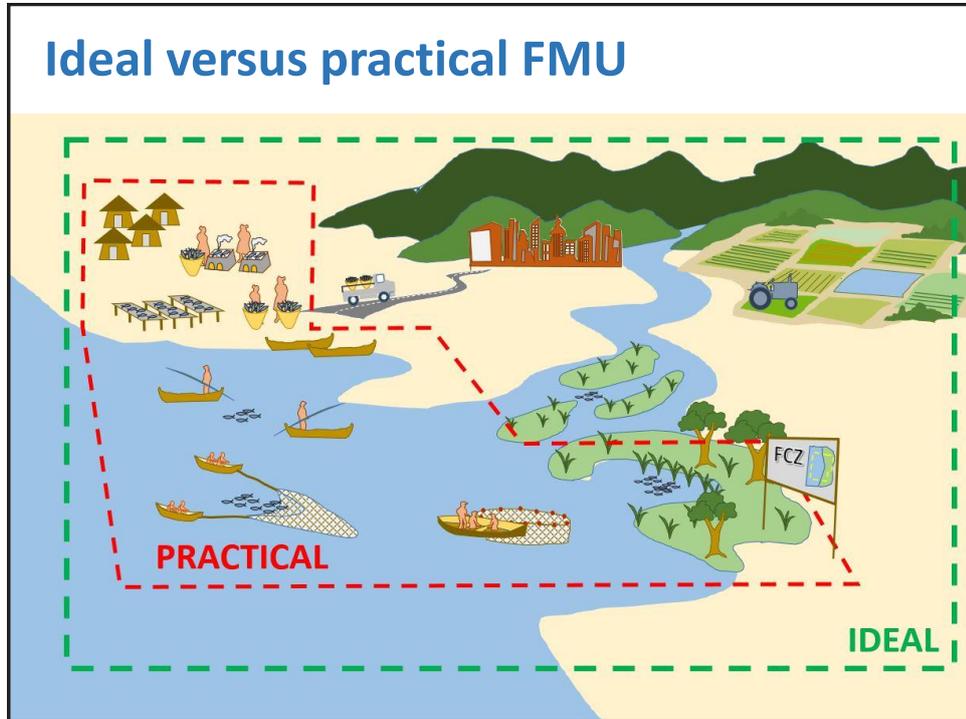
**Agree on issues and solutions**

**Identify trade-offs**

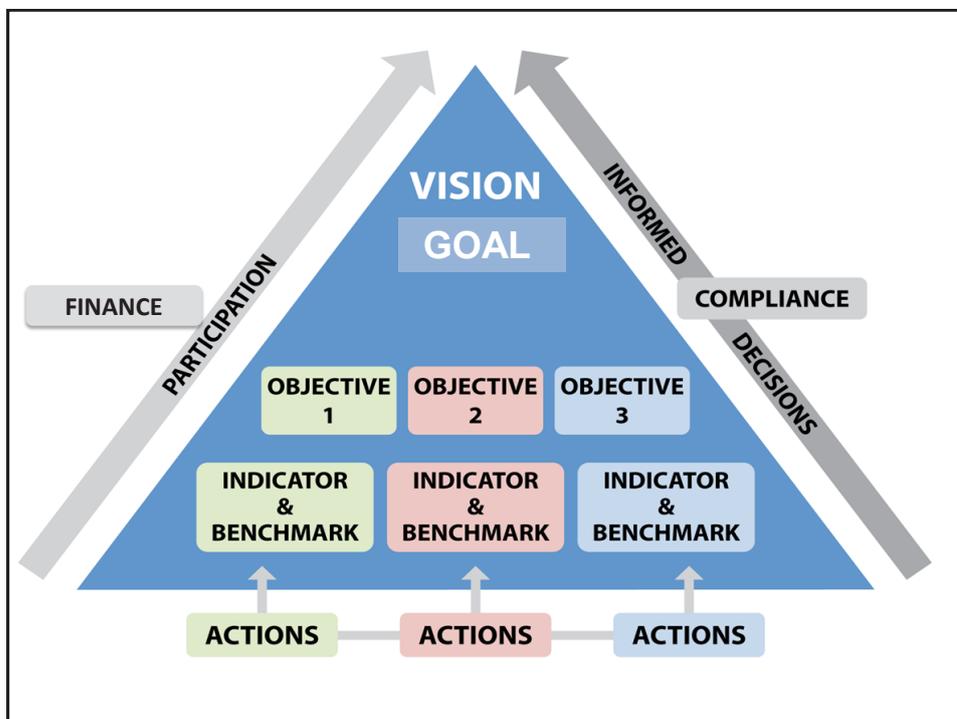
**Group trust**

**Empowerment  
Awareness raising  
Ownership**

## VISUALS GALLERY FOR EAFM TRAINING ROOM



## VISUALS GALLERY FOR EAFM TRAINING ROOM



### EAFm Plan outline

#### FMU name

1. Vision (Step 1)
2. Background (Step 1)
3. Major threats and issues (Step 2)
4. Goals (Step 2)
5. Objectives, indicators and benchmarks (Step 3)
6. Management actions (Step 3)
7. Compliance (Step 3)
8. Data and info needs (Step 3)
9. Financing (Step 3)
10. Review of the plan – frequency of reviews

This Ecosystem Approach to Fisheries management training course (Inland Fisheries) is designed as a complete training course for the sustainable management of inland fisheries using the ecosystem approach. It is targeted at middle-level fishery and environment officers, extension workers, facilitators and other stakeholders engaged in the planning and management of inland fisheries. This training course is designed to be applicable to many inland fishery contexts around the world (including overlapping freshwater fishery/aquaculture systems). It is also intended to be adapted to suit specific local contexts. This volume is **VOLUME 3: TRAINING COURSE PRESENTATIONS & VISUALS** and contains the presentations for the training course. It also includes a series of visual aids used in the training room during the course.

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