

An illustration of a coastal town and fishing boats. The town has buildings, a school, and a shop. A speech bubble says "How can we tackle the turtle bycatch problem?". A sign says "PROTECTED AREA NO TRAWLING". Fishing boats are in the water, some with nets. A turtle is in the water. The background is a blue sky with birds.

1. Essential EAFM Coastal and marine

SEAFDEC 2019



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Overall course objectives

- Understand the concept and the need for an Ecosystem Approach to Fisheries Management (EAFM) for coastal and marine fisheries
- Acquire tools, knowledge and skills to develop, implement and monitor an 'EAFM plan' to manage coastal and marine capture fisheries more sustainably

This course will equip you to:

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



For this course...

Coastal and marine ecosystems in Southeast Asia

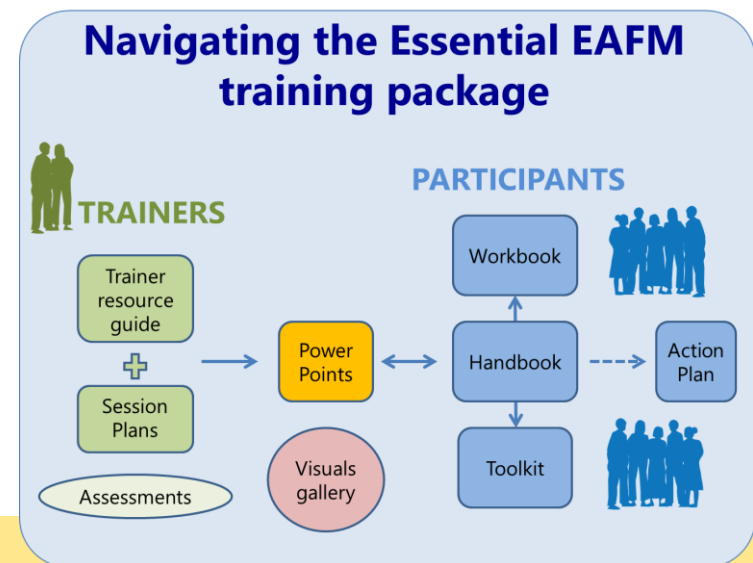


Note: Ecosystem approach can be applied to any other system, *e.g.* inland and offshore ecosystems or aquaculture systems

	DAY 1 What & why	DAY 2 How	DAY 3 Plan & check	DAY 4 Plan, do & check	DAY 5 Present
Morning 08.30 –10.10	Registration Introductions 1. Course overview	5. Moving towards EAFM	9. Step 1 Define and scope FMU	12. Steps 3.1 & 3.2 Develop objectives, indicators and benchmarks 13. Steps 3.3 – 3.5 Management actions, compliance, finance & finalize EAFM plan	Quiz review Participant work: refining EAFM plans & preparing presentations
Break					
10.30 – 12.30	Threats and issues in fisheries 2. Fisheries management and the ecosystem approach 3. The what and why of EAFM?	6. EAFM plans: the link between policy and action 7. EAFM process overview	10. Step 2.1-2.3: Identify and prioritize issues and goals)	14. Step 4.1 Formalize, communicate, engage & implement	Participant presentations on EAFM key elements to illustrate learning Feedback on presentations
Lunch					
Afternoon 13.30 –14.45	4.Principles of EAFM	8. Start up Preparing for EAFM	11. Reality check I Facilitation skills	15. Reality check II	Course review Individual action planning
Break					
15.05 –16.30. 17.00 wrap up	How much EAFM are you already doing?	8. Start up (contin) Engaging stakeholders	11. Reality check I Conflict and negotiation	16. Step 5.1 & 5.2 Monitor, evaluate & adapt EAFM Quiz	Course evaluation Course closure and certification
				Homework: Presentation preparation	

Materials and feedback

- Course Handbook, Workbook, Toolkit, Action Plan Booklet
- PowerPoint slides & resources
- Daily monitoring and review
- Course evaluation
- Certificates



Ways of learning

- Learning new skills
- Building on what you already know
- Reading, seeing, listening and questioning
- Hands-on activities and exercises relating to your own experience
- Sharing tips and experiences
- Having fun!



Turning learning into action

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





Activity 1

Identify threats and issues

1. Discuss threats or issues relating to your fisheries and the associated ecosystem(s).
2. Write each issue or threat on a SEPARATE card; think of as many as you can
3. Place the cards on the flipchart
4. Move around so you can see other groups' work

Note: You will be using these cards again later



Key messages

- Many threats and issues affect sustainable fisheries
- You are already familiar with many of these
- Many issues are similar across the region
 - Countries can learn from each other
- Some maybe trans-boundary
 - Countries need to work together

2. Fisheries management and the **Ecosystem** approach



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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 capture fisheries
- Recognize how ecosystems benefit human societies
- Understand the concept of the ecosystem approach (EA)
- Describe some of the benefits of using an EA



Fisheries Management

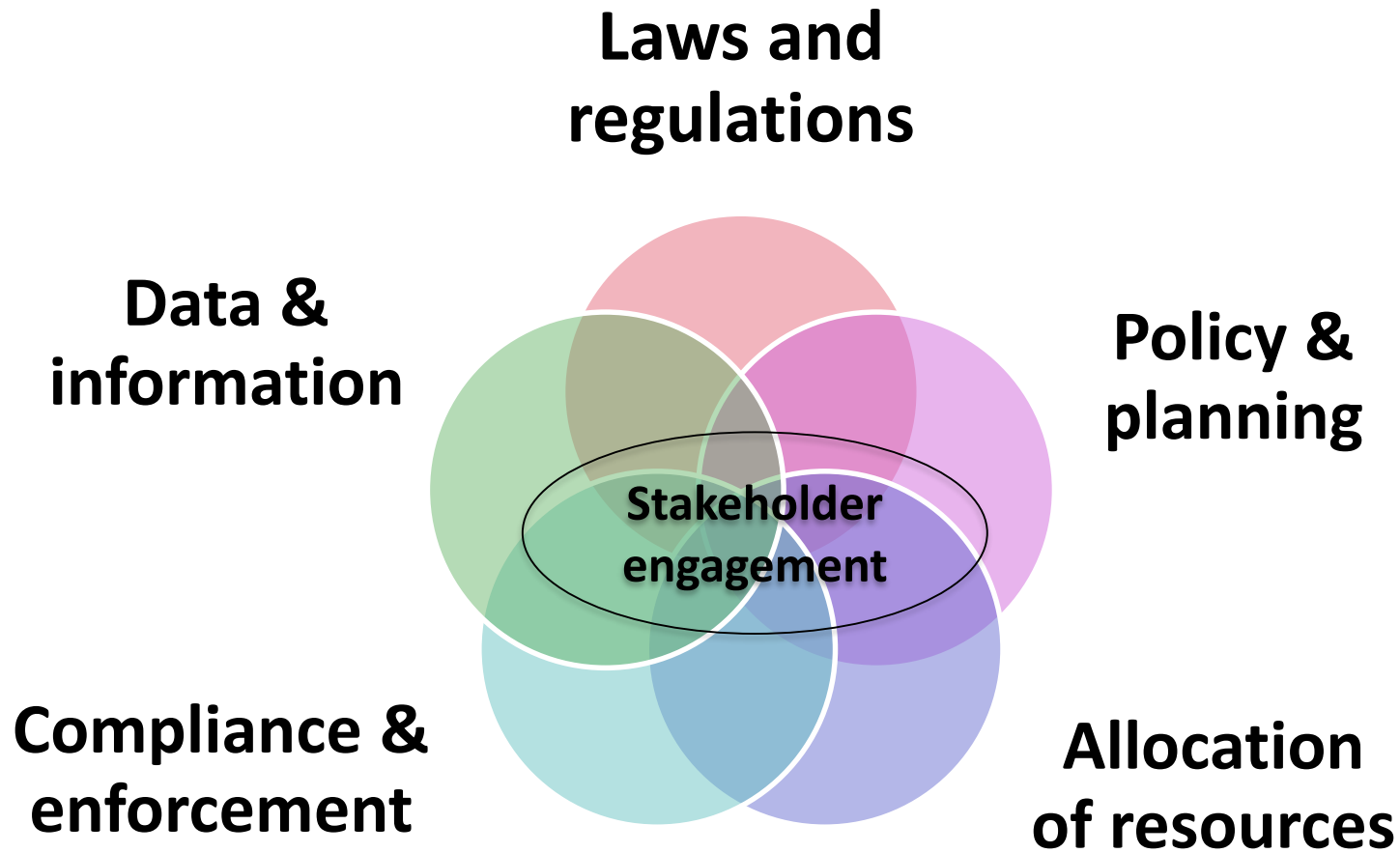
Fisheries management: An **integrated process** that aims to improve the **benefits** that society receives from **harvesting fish** while maintaining ecological health and balancing other societal needs.

Adapted from FAO

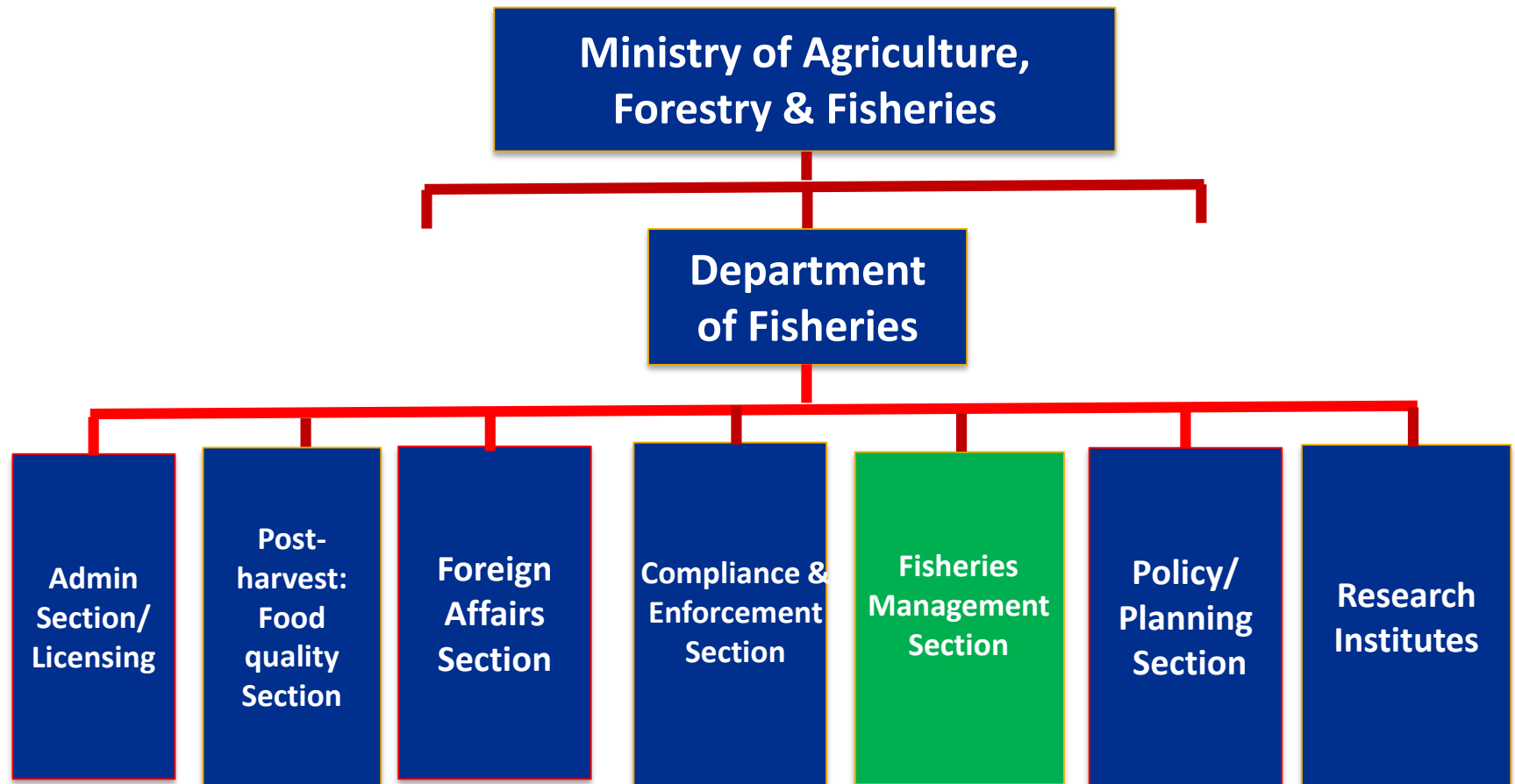
The many threats and issues identified in Session 1 require management to:

- Minimize their negative impacts
- Improve the benefits to society

Fisheries management



Fisheries agency structure




What is a fisheries manager?

Someone who coordinates all the activities of fisheries management for a given fishery including:

- Implementation of policies and laws
- Stakeholder engagement
- Fisheries management planning
 - Negotiation
 - Formulation and implementation of rules and regulations
 - Allocation of resources
- Day-to-day fisheries management
 - Informed decision making
- Monitoring and evaluation of management performance





Conventional/existing fisheries management

Common characteristics:

- Mainly focused on target species and stock assessment
- Single specific fisheries sector
- Mainly control of fishing (*e.g.* gear restrictions and zones)
- Based on biological objective (*e.g.* producing the maximum sustainable yield (MSY) of target stocks)



Activity 2

Conventional/existing fisheries management

1. Discuss what you know about conventional fisheries management in your country
2. For each threat and issue identified earlier, ask if it is being addressed by your fisheries management
 - Mark those being addressed by existing fisheries management (with ✓)

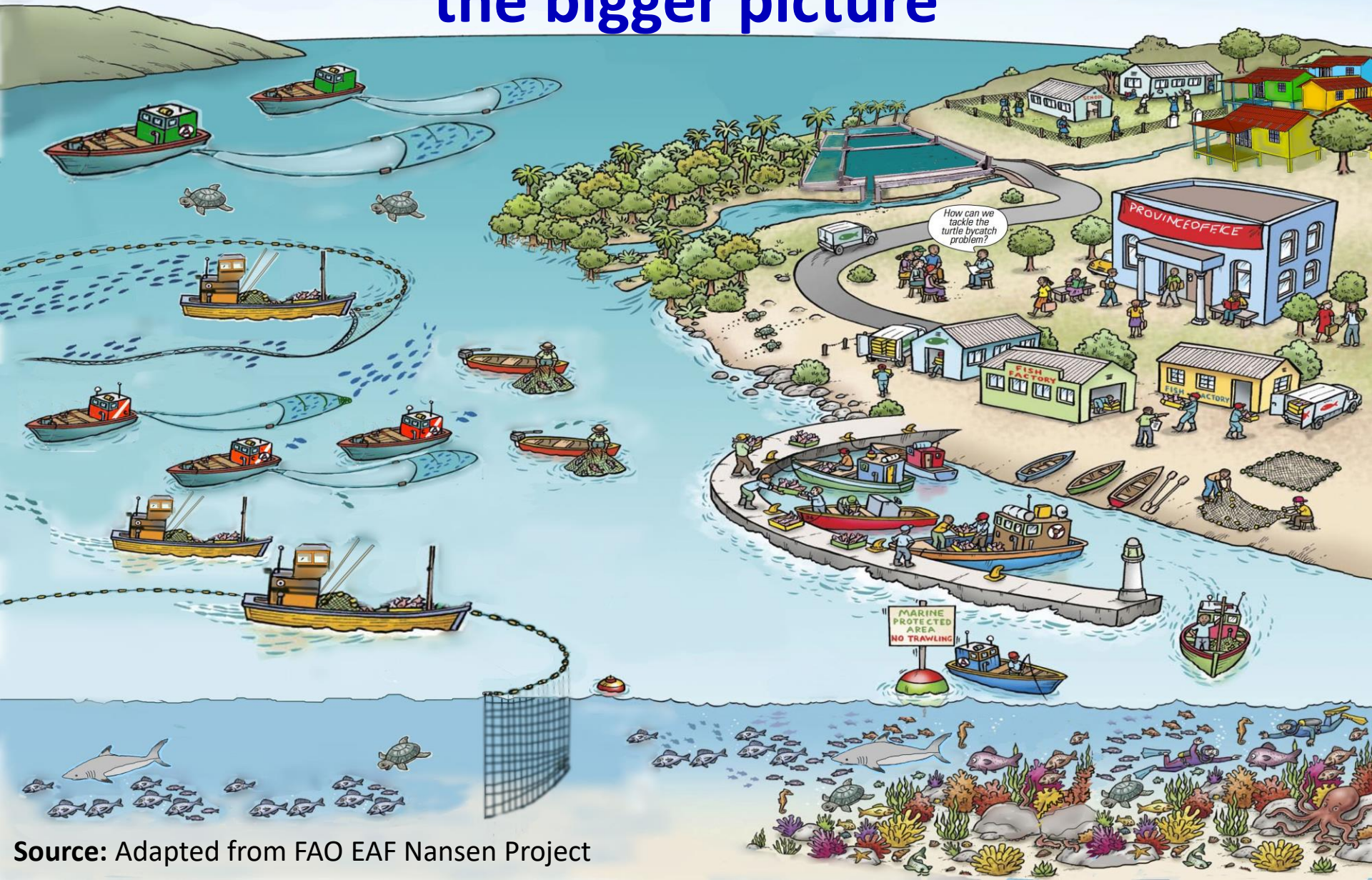


Summary

Conventional/existing fisheries management

- There are many threats and issues
- Conventional fisheries management does not cover all threats and issues and can often fail
- We need a broader and more inclusive approach is needed that builds on conventional management

Fisheries → Ecosystems... the bigger picture



Source: Adapted from FAO EAF Nansen Project

What is an ecosystem?

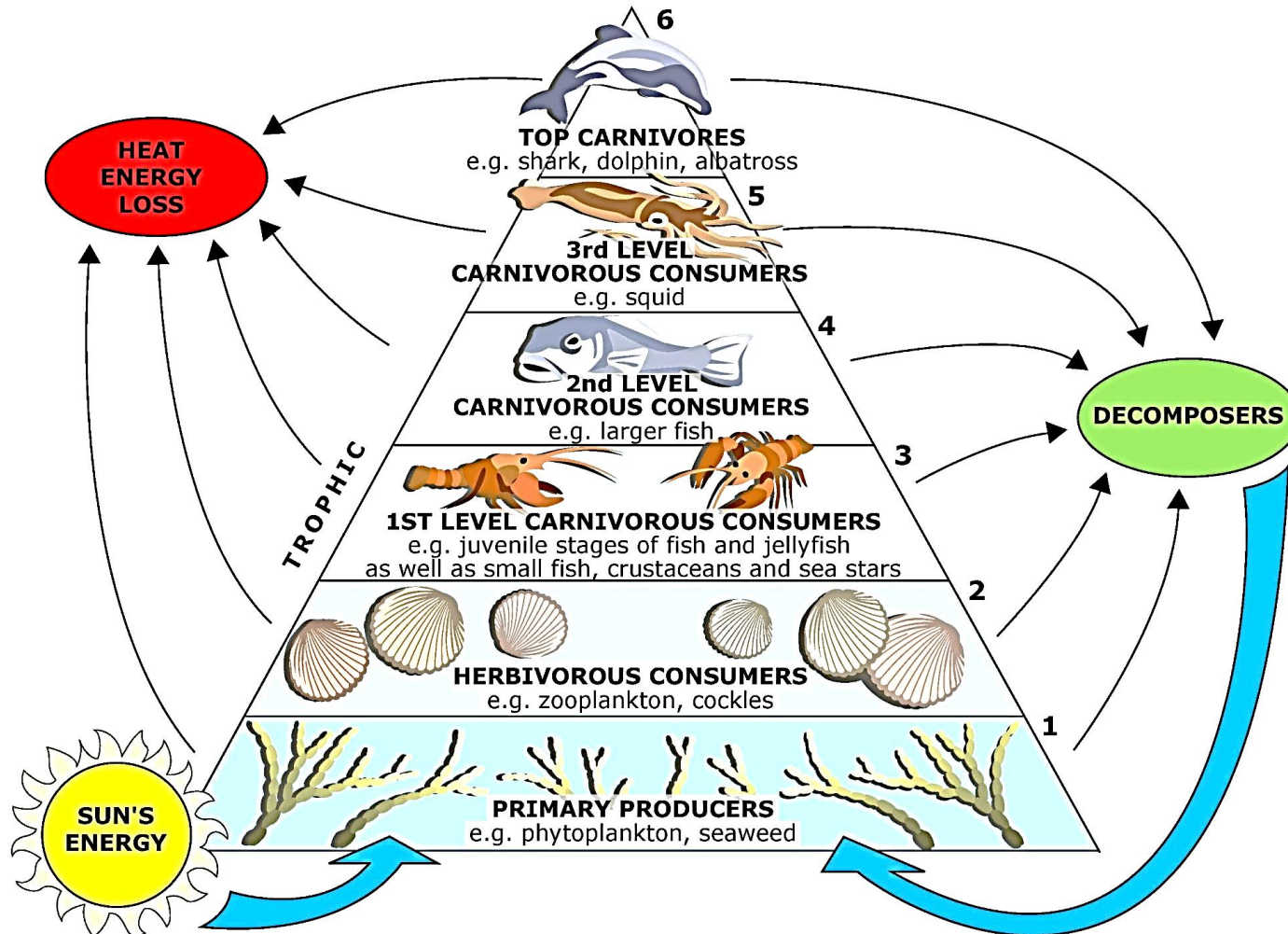
“An ecosystem can be defined as a relatively self-contained system that contains **plants, animals (including humans), micro-organisms and non-living components** of the environment as well as the **interactions** between them.”

SPC (2010)

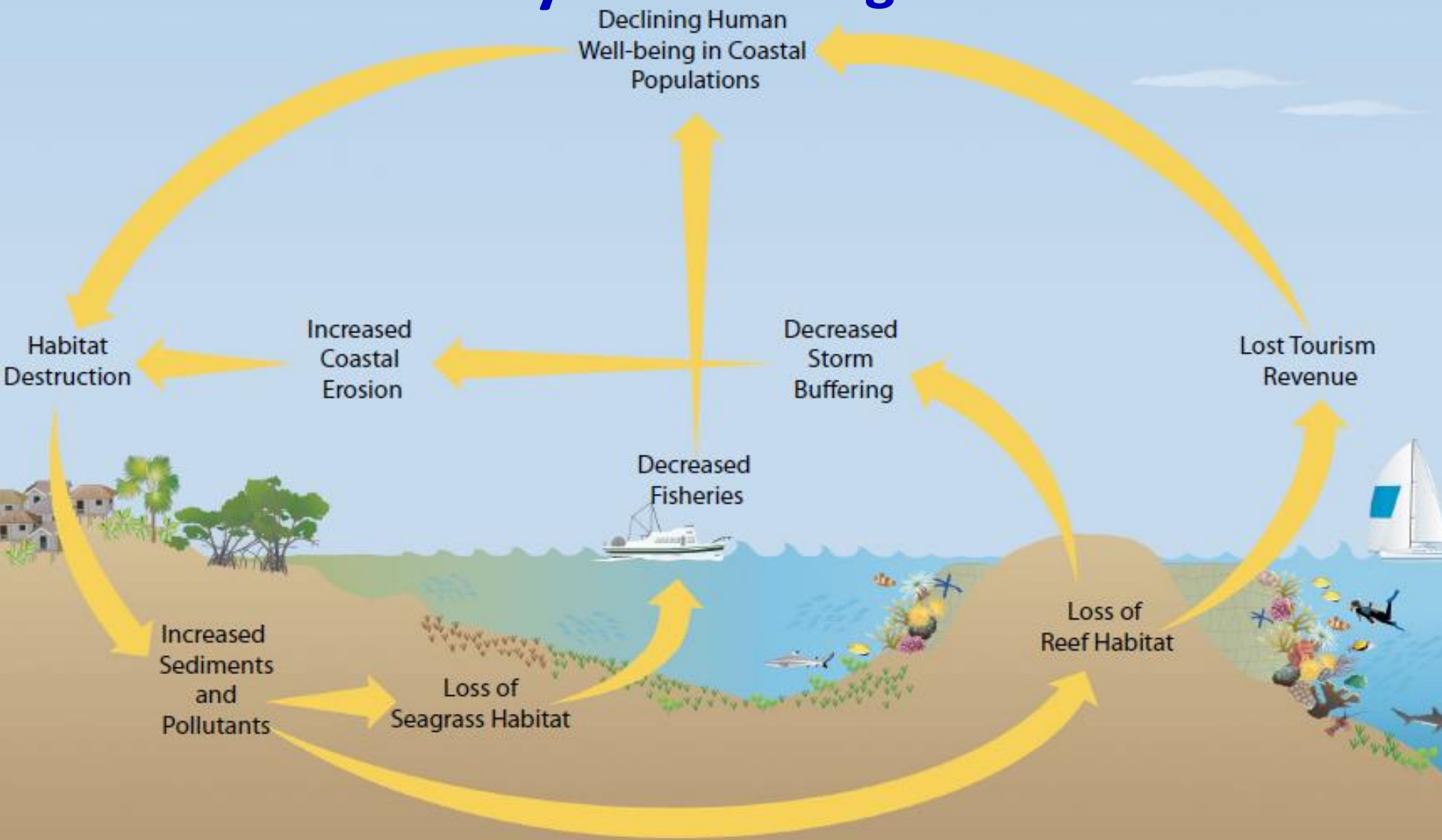


This is not the ecosystem we are talking about

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Ecosystem Linkages



Fisheries and the ecosystem

- Fish need healthy ecosystem to survive
- People need fish for food, income, and livelihood
- Managing fisheries with a narrow approach has proven to be ineffective and unsustainable





EA aims to maximize **ecosystem benefits** resulting in increased food security & reduced poverty

Ecosystem benefits

- Fish for food
- Income
- Employment
- Livelihoods
- Trade
- Coastal protection
- Recreation
- Cultural heritage

Ecosystem approach (EA)

“It is a strategy for the **integrated management of land, water and living resources** that promotes **conservation** and sustainable use in an equitable way (everybody benefits)”.

(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)



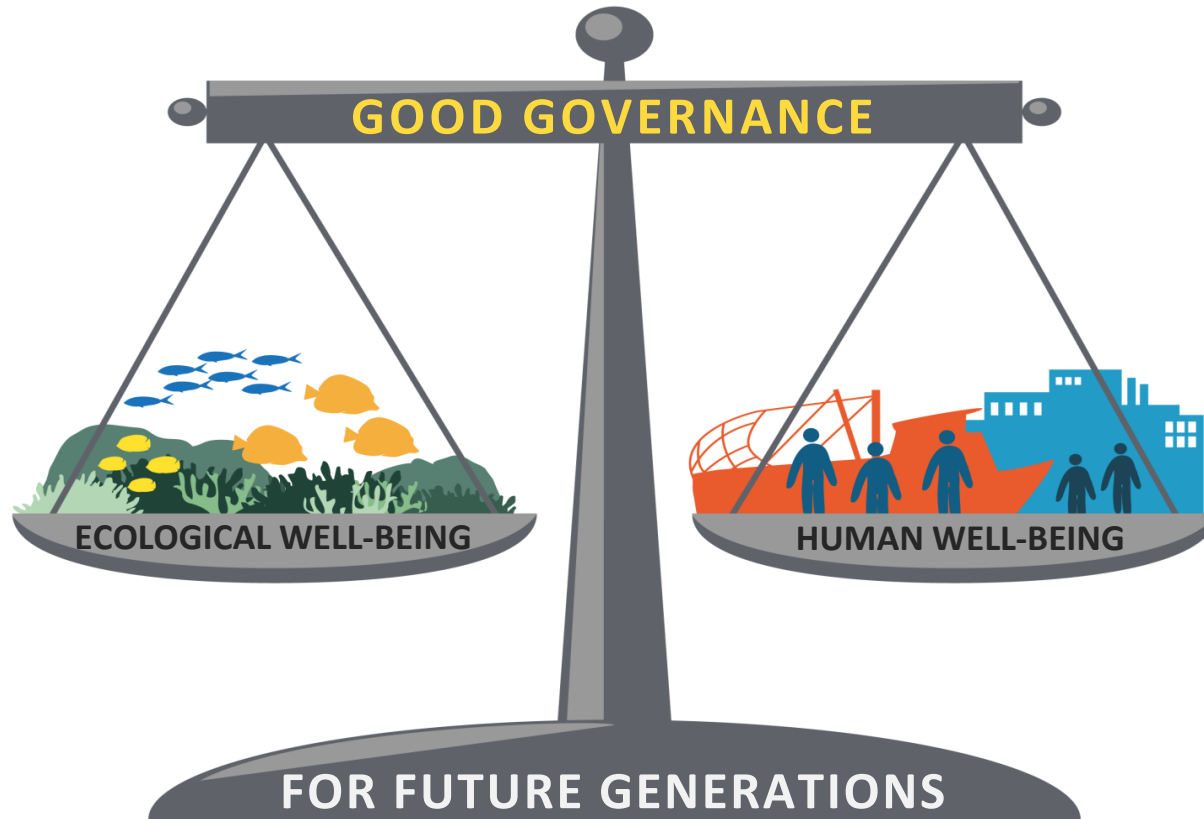
Sustainable development

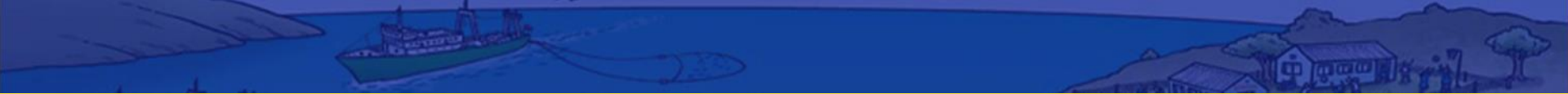
“Development which meets the **needs of the present** without compromising the **ability of future generations to meet their own needs**”

(Our Common Future, 1987)

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

Sustainable development





Activity 3

Plenary brainstorm on EA benefits

What are the benefits of taking an ecosystem approach?

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



Why an Ecosystem Approach?

What are the benefits?

- Integrated approach that allows trade-offs when balancing human and ecological well-being
- Leads to more effective planning
- Increases stakeholder participation
- Addresses large-scale, long-term issues
- Increases political support
- Provides access to finances resources



Key messages

- Threats and issues to sustainable fisheries are broad in scope
 - a number fall outside conventional 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



3. The what and why of EAFM?



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Session objectives

After this session you will be able to:

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



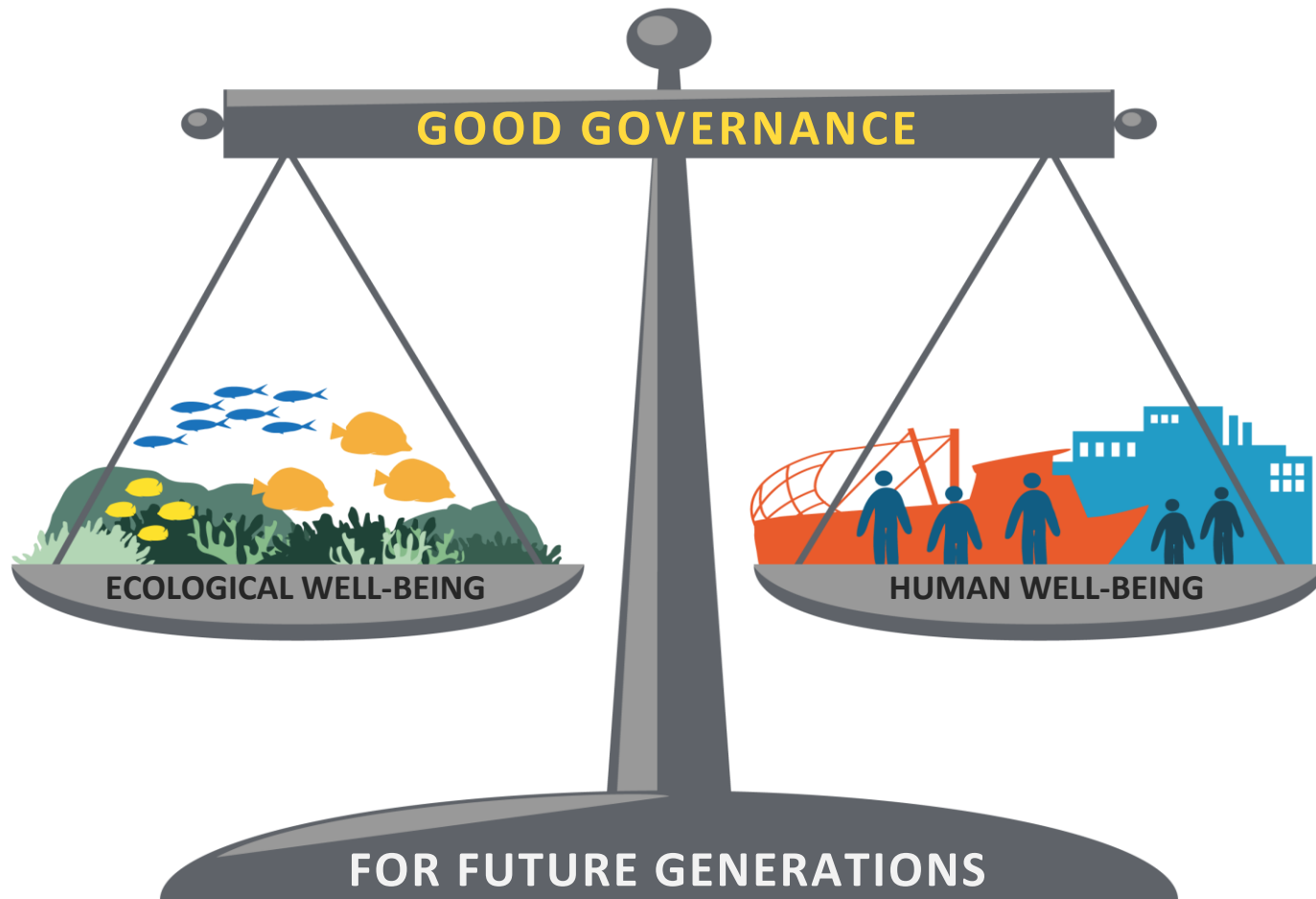
What is EAFM?

**EAFM is simply the ecosystem approach (EA)
applied to fisheries management (FM)**

$$\text{EAFM} = \text{EA} + \text{FM}$$

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

EAFM





The 3 components of EAFM

Ecological well-being

- healthy habitats, functional food-webs, and sustainable fisheries resources

Human well-being

- increased & equitable wealth, food security and sustainable livelihoods

Good governance

- effective processes, institutions and arrangements that oversees the way rules, norms and actions are structured, sustained, regulated and held accountable.

Activity 4

Grouping threats and issues

In plenary:

1. Revisit threats and issues from this morning.
Do any more need to be added?
2. Group the threats & issues into the **three EAFM components** on the flip chart

Do not worry if threats do not fit neatly into the boxes – put them across boxes

Ecological

Governance

Human



Broadening conventional fisheries management to include EA concepts

Conventional

- target species
- fish focused
- production driven
- managed through control of fishing
- government driven

EAFM

- target and bycatch
- considers habitats
- fishery impacts on the ecosystem
- threats to the fishery from external factors
- good governance/ participatory
- socio-economic benefits

EA

- integrated management across land, water and living resources
- multi-sectoral management

Why EAFM?

- Links fisheries management across jurisdictions and boundaries
- Helps gain political and stakeholder “buy in” to fisheries
- Increases support for better governance
 - Can lead to better compliance and enforcement





Why EAFM? (cont'd.)

- 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
- Promotes better communication and trust




Other management approaches and tools

Co-management

- management partnership among governments and other stakeholders
- forms part of EAFM

Integrated coastal management (ICM)

- an ecosystem approach to managing a coastal area
- links with EAFM in the coastal zone.



Other management approaches and tools (cont'd.)

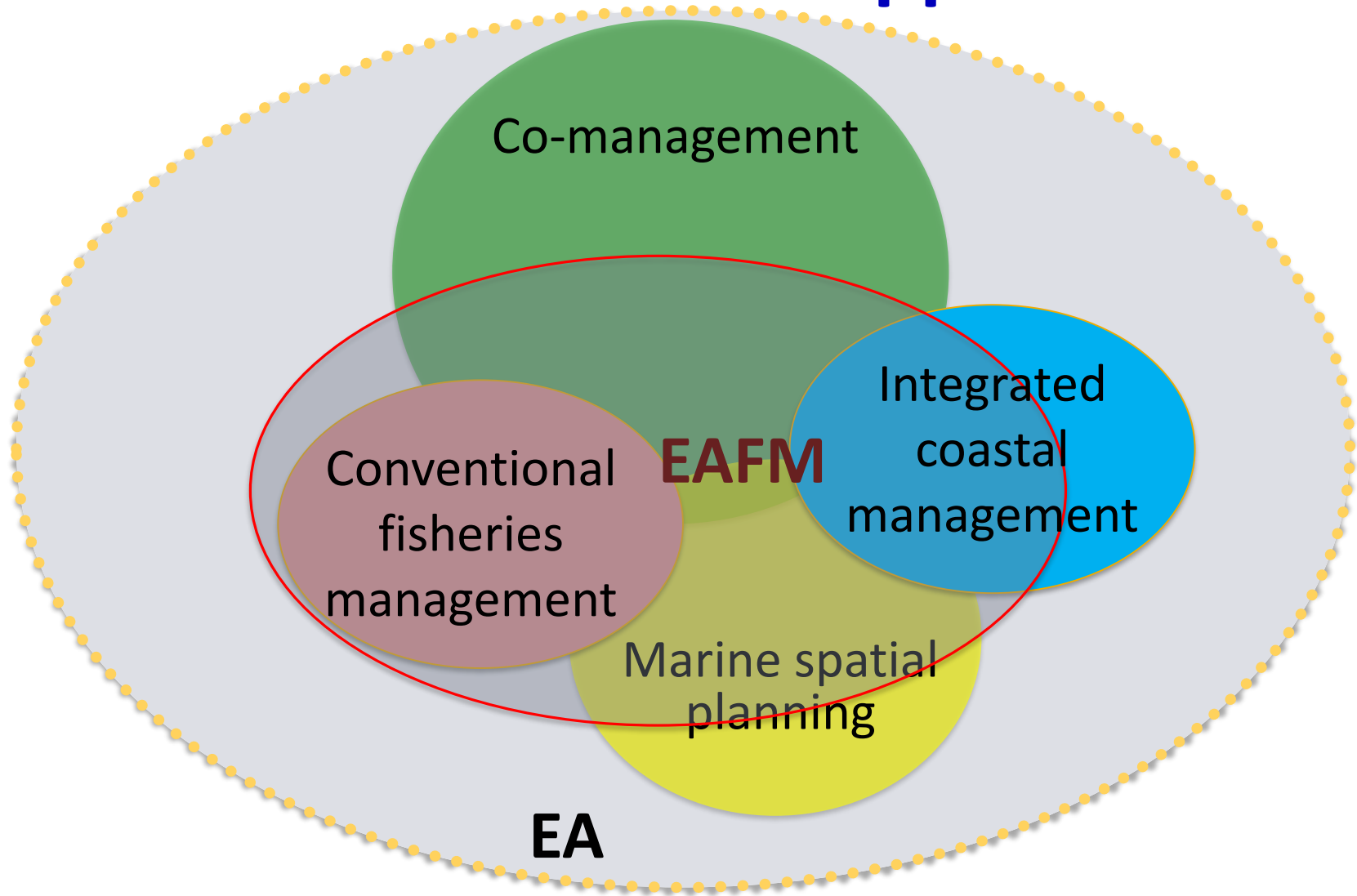
Marine spatial planning (MSP)

- planning that allocate user access based on the spatial and temporal distribution of human activities
- an important zoning tool for EAFM

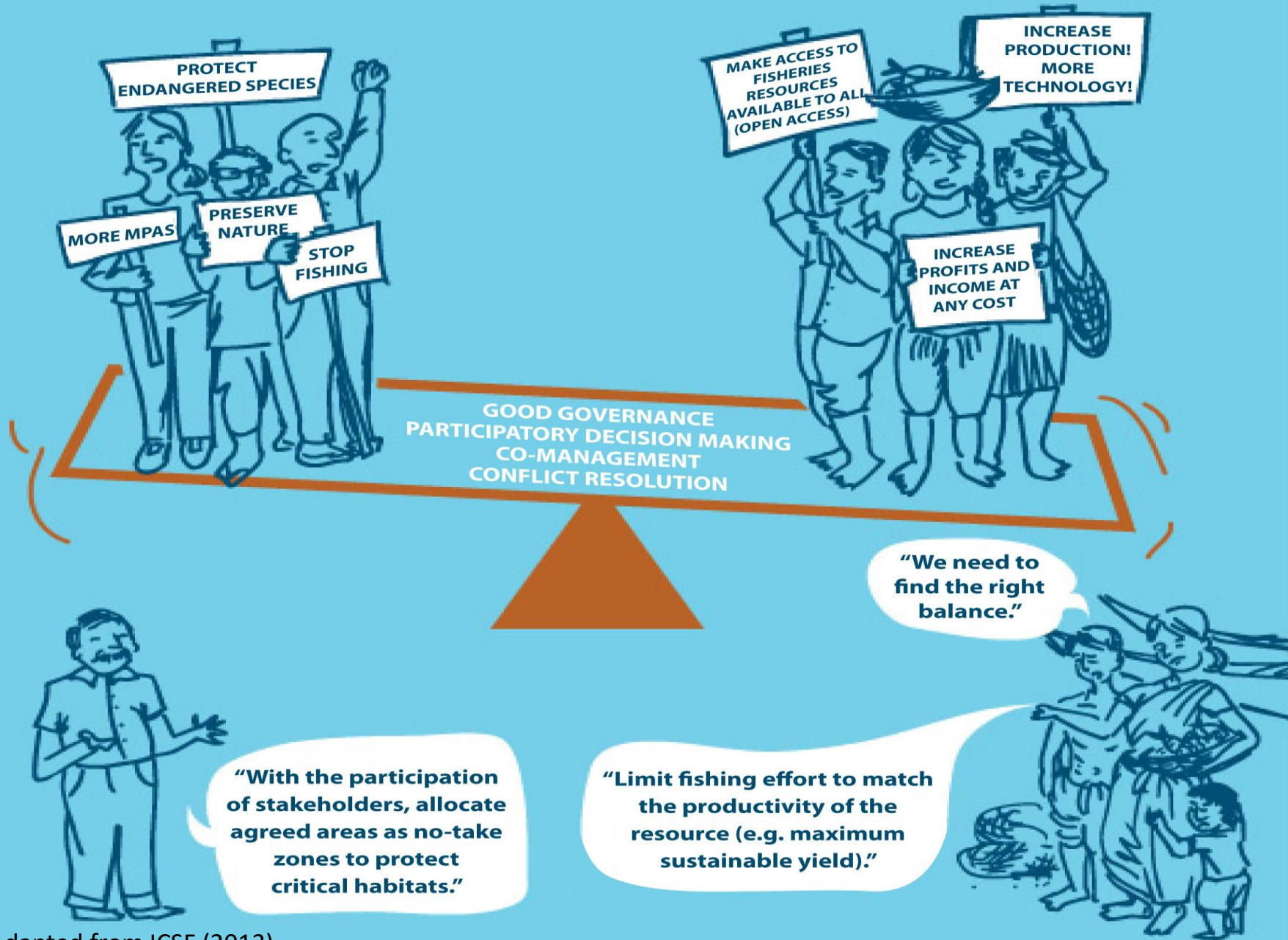
Marine protected areas (MPAs)

- designated area to achieve nature conservation, with associated ecosystem services and cultural values
- another important tool for EAFM

EAFM fits in with other approaches



REMEMBER EAFM IS FINDING THE BALANCE





Key messages

- **EAFM** is simply applying **EA** to fisheries management (**FM**)
- **EAFM has 3 components:**
 - Ecological well-being
 - Human well-being
 - Good governance
- EAFM is all about finding the balance
- Many benefits of using an EAFM
- Builds on conventional management (*i.e.* we move towards EAFM)
- EAFM fits in and overlaps with other forms of integrated management (*e.g.* ICM)



Activity 5

Balancing different objectives

1. Read the question(s) on the cards
2. Watch the video clip and discuss the question(s) in your group

<https://www.youtube.com/watch?v=rE1iZNYj29A>



4. Principles of EAFM



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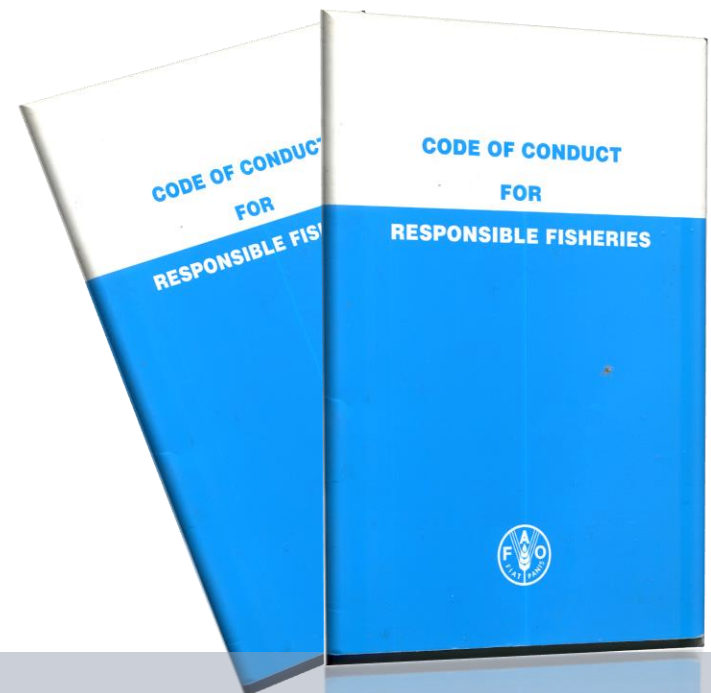
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Session objectives

After this session you will be able to:

- Understand the principles of EAFM and their links to the FAO Code of Conduct for Responsible Fisheries (CCRF)





Activity 6

Group timelines

Horizontal line represent 'time'

1. Think of events (local, national or global) over the past 20 – 30 years that have affected or been affected by your fisheries (political, environmental, social, etc).
2. Draw/write each event (with dates) on a separate card
3. Plot your cards onto the timeline

Key principles of EAFM



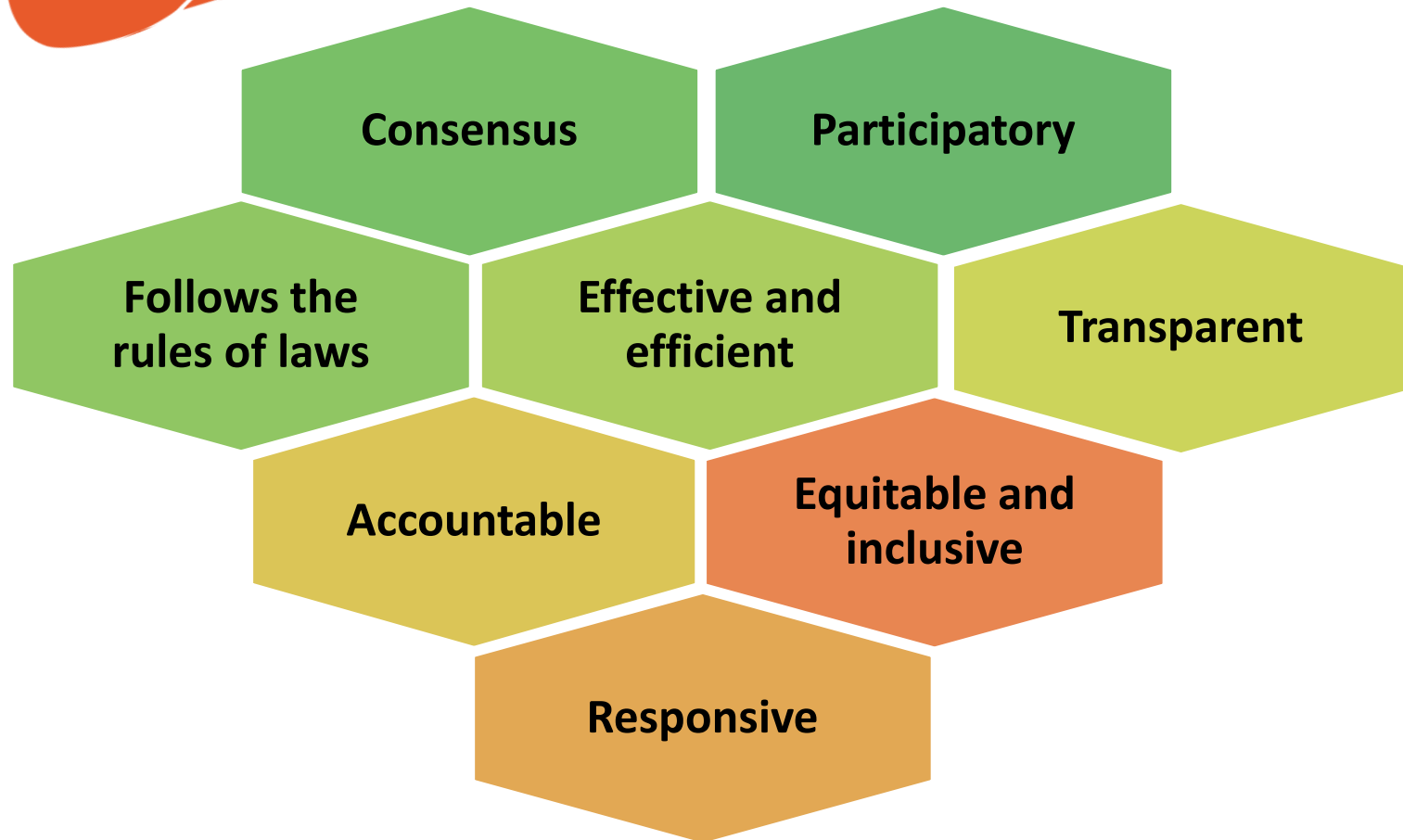
Principles are not new

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



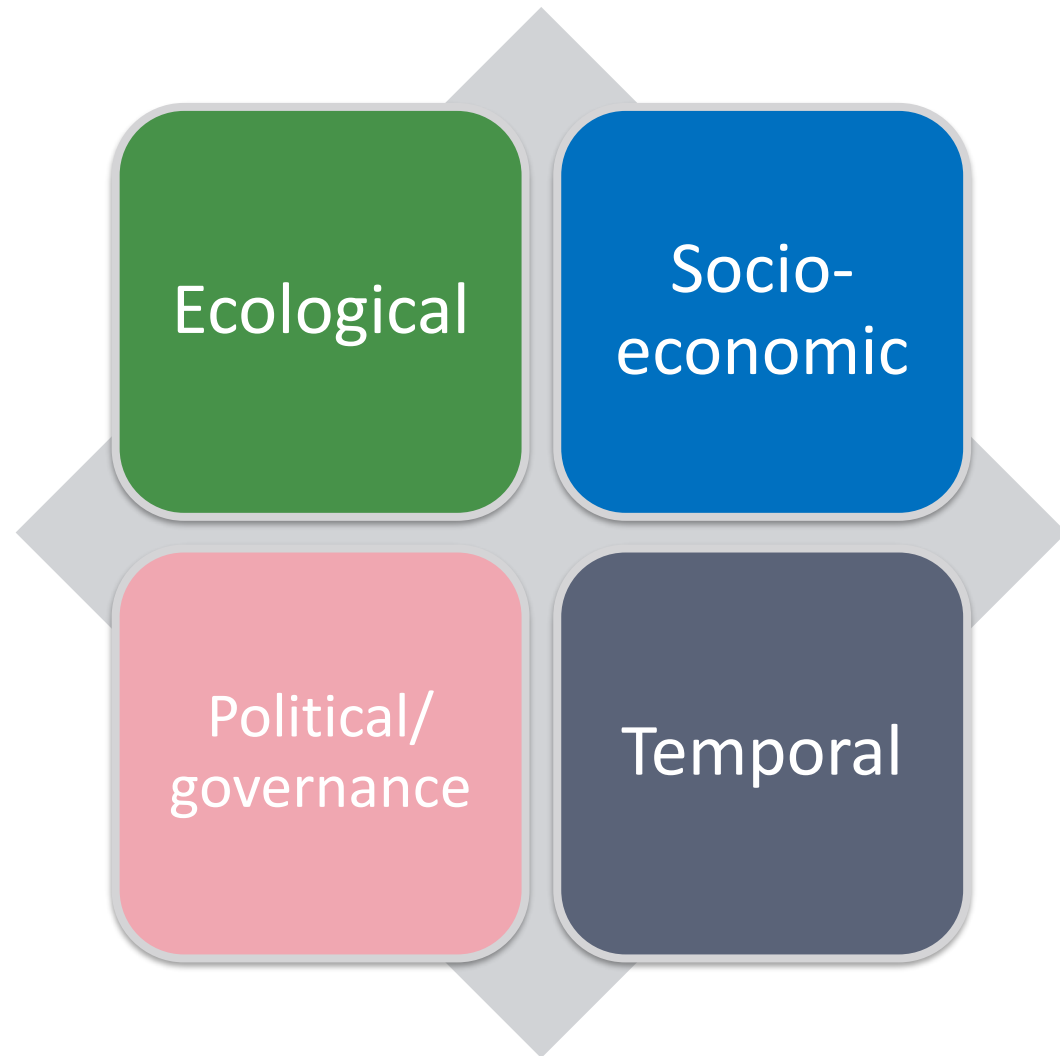
**1. Good
governance**



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

2. Appropriate scale

Four dimensions of scale



* Note: Three dimensions of scale align with the three components of EAFM



Scales : specific to broad examples

1. Ecological

Single species → multiple species

Small areas → large areas (*e.g.* large marine ecosystem)

2. Socio-economic

Village → Coastline (rural & urban)

3. Political/governance

Single jurisdiction → Multiple jurisdictions

4. Temporal

Short-term → Long-term



Realities of scale

- Take a practical approach – begin working with what exists, *e.g.* jurisdictional boundaries (district, province)

Challenge

- Getting the scale right in the four dimensions
- This often requires increased cooperation and coordination across jurisdictions, agencies and stakeholders



Activity 7

Scale of governance

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

In your groups, answer the question:

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

Discuss the reasons and how would you correct it?

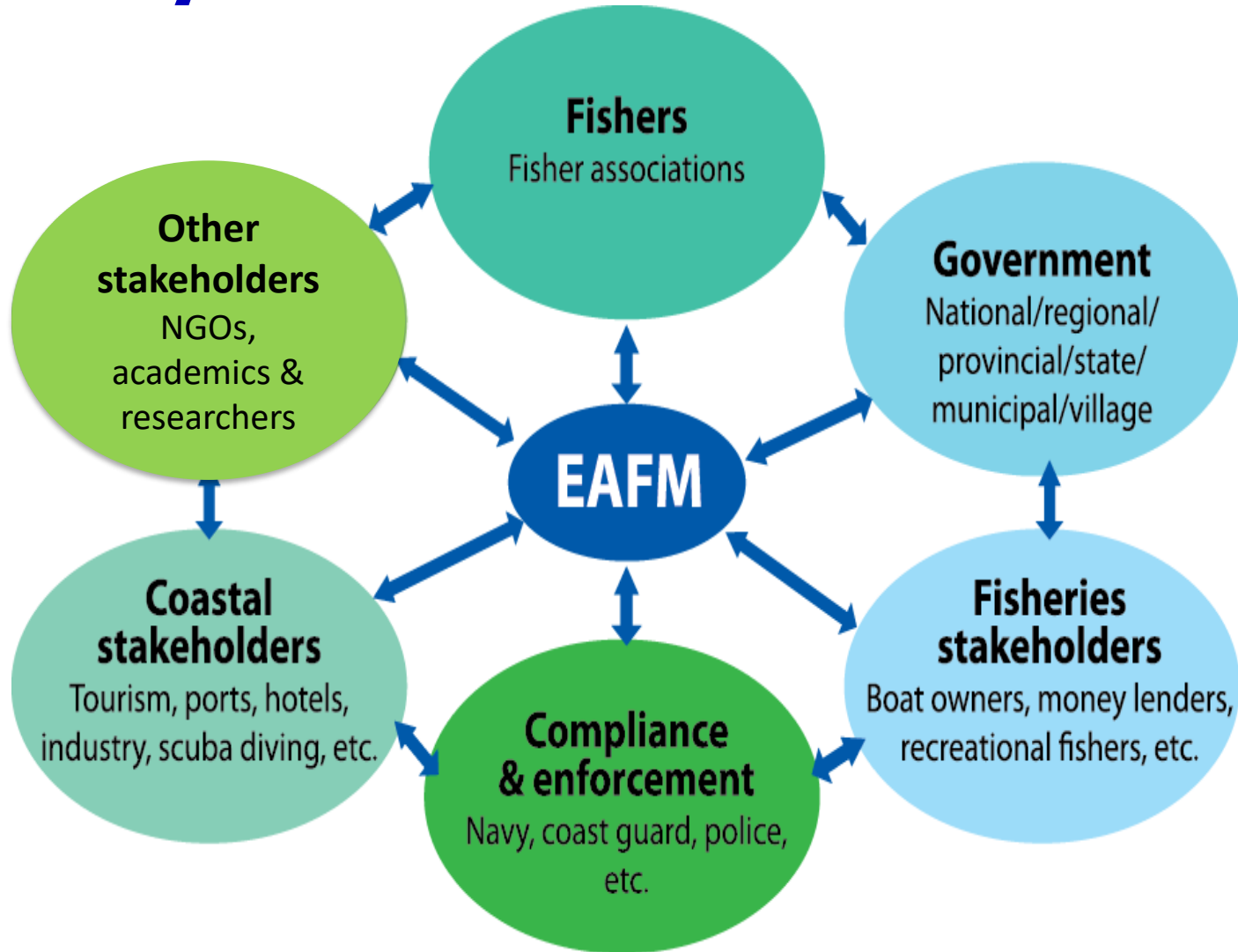
3. Increased participation



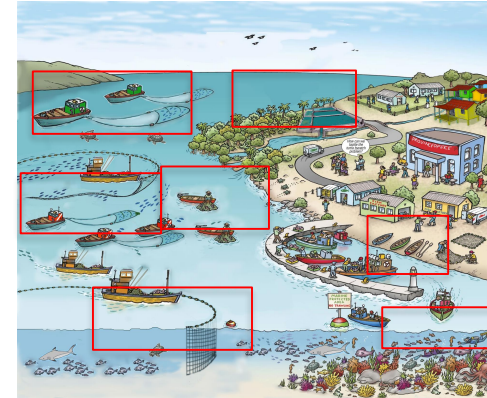
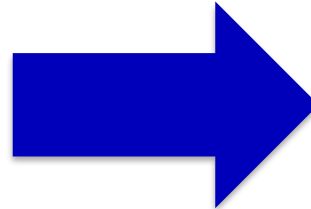
Participation is central to the process

Is this an ideal example of participation?

Many stakeholders



4. Multiple objectives



EAFM deals with multiple sectors, and user groups including fisheries and others (e.g. agriculture, tourism, development)

- Each sector has its own objectives that need to be balanced
- Stakeholder engagement, negotiation, and trade-offs are needed



5. Cooperation & coordination

EAFM involves cooperation and coordination among many stakeholders

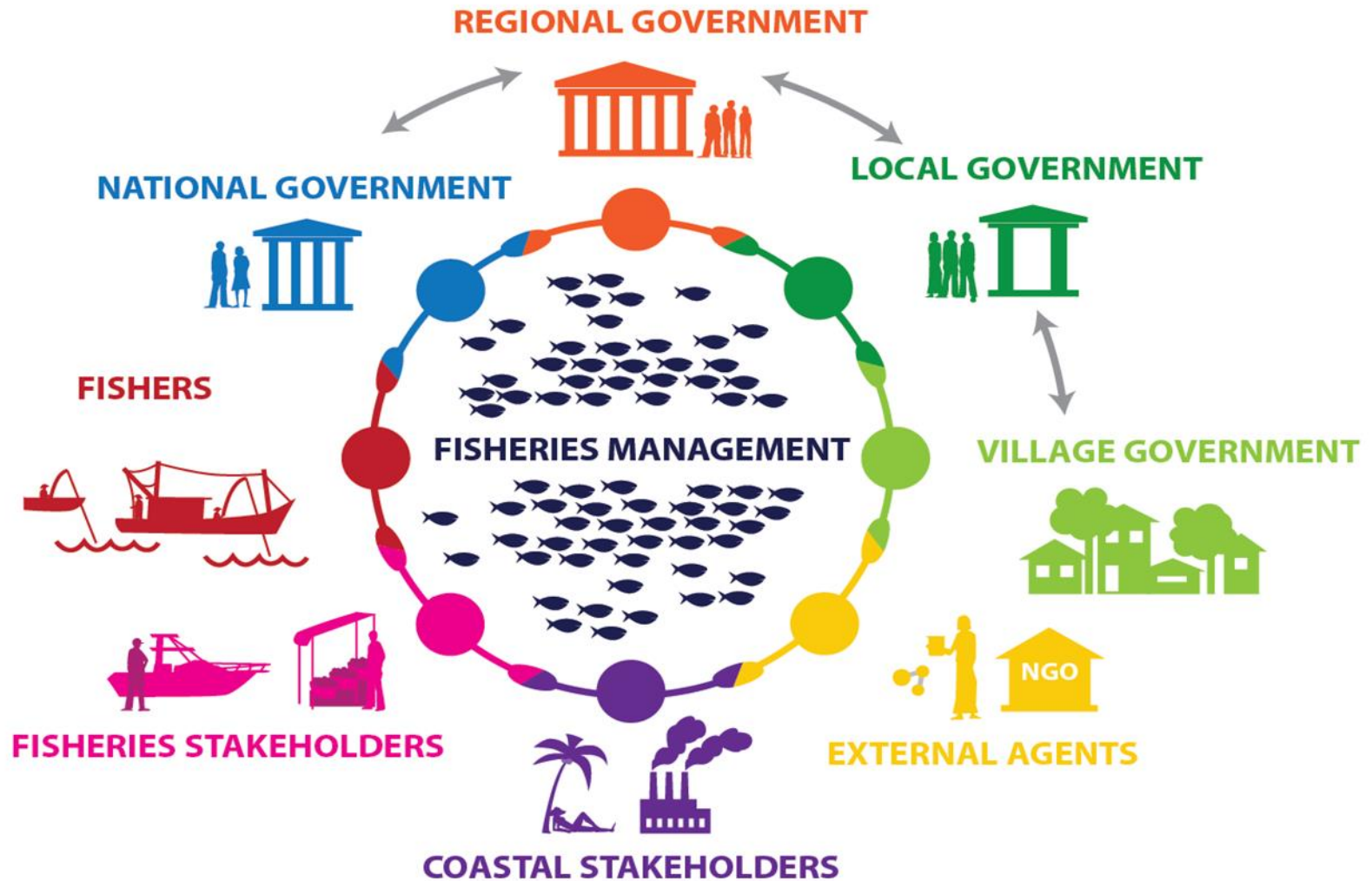
Fishers
Fisher
associations

External agents
NGOs,
academics,
researchers

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

- Within agencies/institutions
- Across institutions, both government and stakeholder, and with non-fishery sectors
- From regional to national to provincial and district levels

Example of possible institutions





Cooperation and coordination

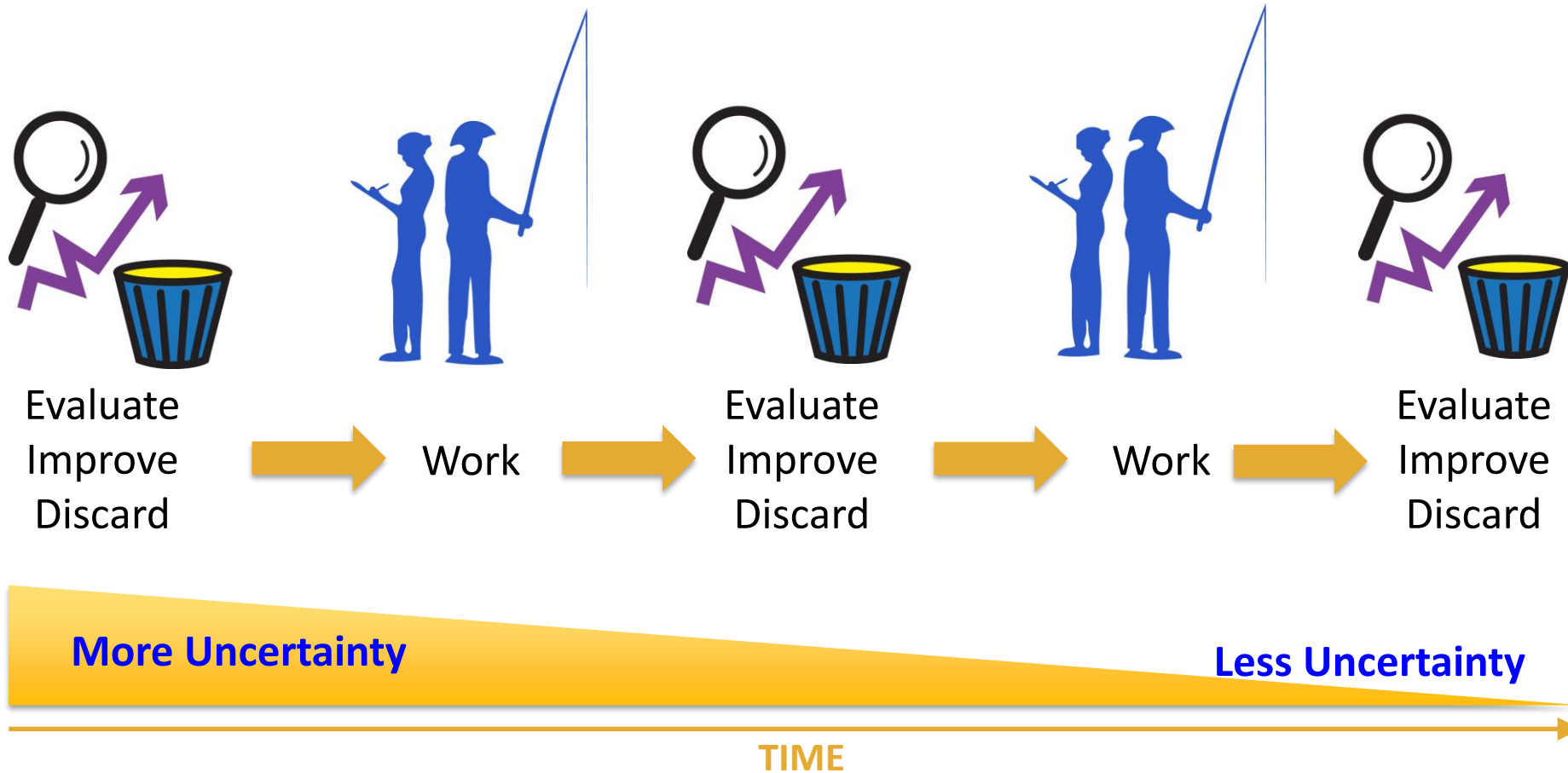
How do you encourage this?

- Communicate with one another
- Share information
- Link with existing arrangements
(*e.g.* ICM, inter-agency activities)
- Harmonize work plans/budgets
- Memorandums of understanding/binding agreements

Any other suggestions?

6. Adaptive management

Learning while doing





7. Precautionary approach

“... where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”

(UNCED, 1992)

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

***Where there is
uncertainty,
management
actions should be
more careful***

THE PRECAUTIONARY APPROACH

IF THERE IS POSSIBILITY OF HARM, BE CAREFUL

- LACK OF DATA AND INFORMATION SHOULD NOT BE USED AS AN EXCUSE FOR NOT TAKING ACTION
- WHERE THERE IS UNCERTAINTY, MANAGEMENT ACTIONS SHOULD BE LESS RISKY

"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"



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



"And this is the precautionary approach"

Source: Adapted from ICSF (2013)



Key messages

- EAFM principles are not new – based on the FAO Code of Conduct for Responsible Fisheries (to which your country is a member)
- EAFM has seven principles that are all important for implementing EAFM
- Your country is already doing a lot of EAFM
 - We will now do an activity to demonstrate this



Activity 8

How much EAFM are you already doing?

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 next slide for explanation of scoring

How much EAFM are you already doing?

EAFM principles	0.....5
1. Good governance	X.....>
2. Appropriate scalesX.....>
3. Increased participationX.....>
4. Multiple objectivesX.....>
5. Cooperation and coordinationX.....>
6. Adaptive management	X.....>
7. Precautionary approachX.....>

5. Moving towards EAFM



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Session objectives

After this session you will be able to:

- Describe a case study of moving towards EAFM
- Determine where your country is at in moving towards EAFM
- Identify challenges your country faces in moving towards EAFM



Case study

Choose and insert a case study that demonstrates moving towards EAFM



Activity 9

Challenges and opportunities

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



6. **EAFM** plans: The link between policy and action



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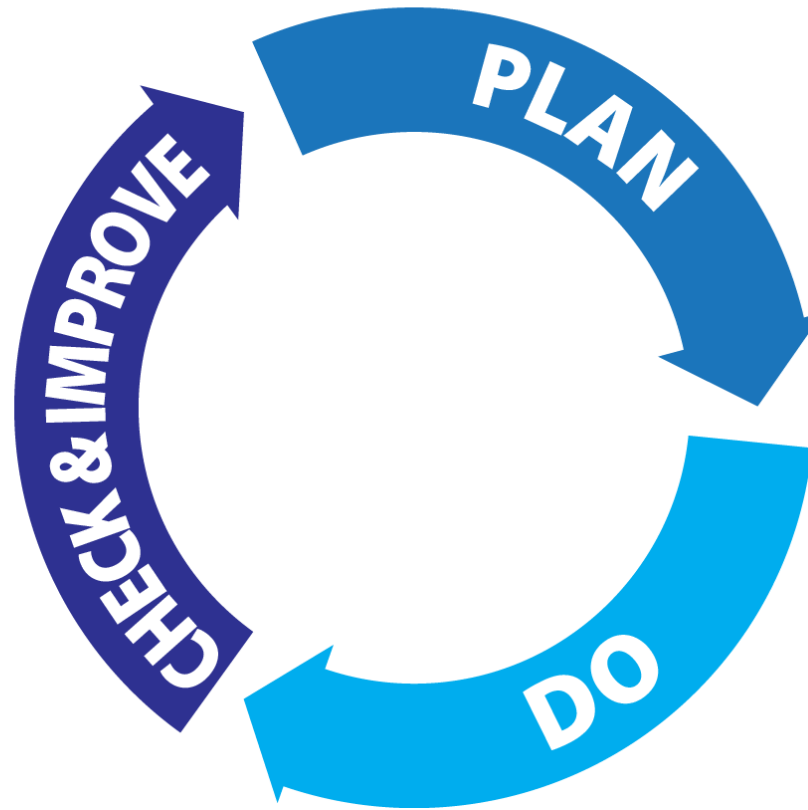


Session objectives

After this session you will be able to:

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

Management cycle





Why plan?

- Implements policies
- Promotes resource use efficiency
 - Provides more certainty on the roles and responsibilities of the different players
- Facilitates resources mobilization (people and money)
- Encourages participation and ownership of the management process

Linking policy to action



Example:

Restore fisheries resources

Policy

Limit fishing effort

EAFM Plan

Control no. of fishing boat, fishing gears, etc.

Management actions

Linking policy to action



Example:

Healthy environment

Policy

Restore and protect
seagrass

EAFM Plan

Allocate a no-take area
to prevent fishing in
selected seagrass areas

Management actions



Good planning

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

*A goal
without a plan
is just ...*

A WISH

Pugster Jewelry

Outputs from planning

Ideally, a set of linked plans:

- National five-year plan
- Agency strategic plan
- EAFM plan
- Work plans
 - who, what, and when





Key messages

- High level principles and policies can not be implemented without a plan
- 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



7. EAFM process overview



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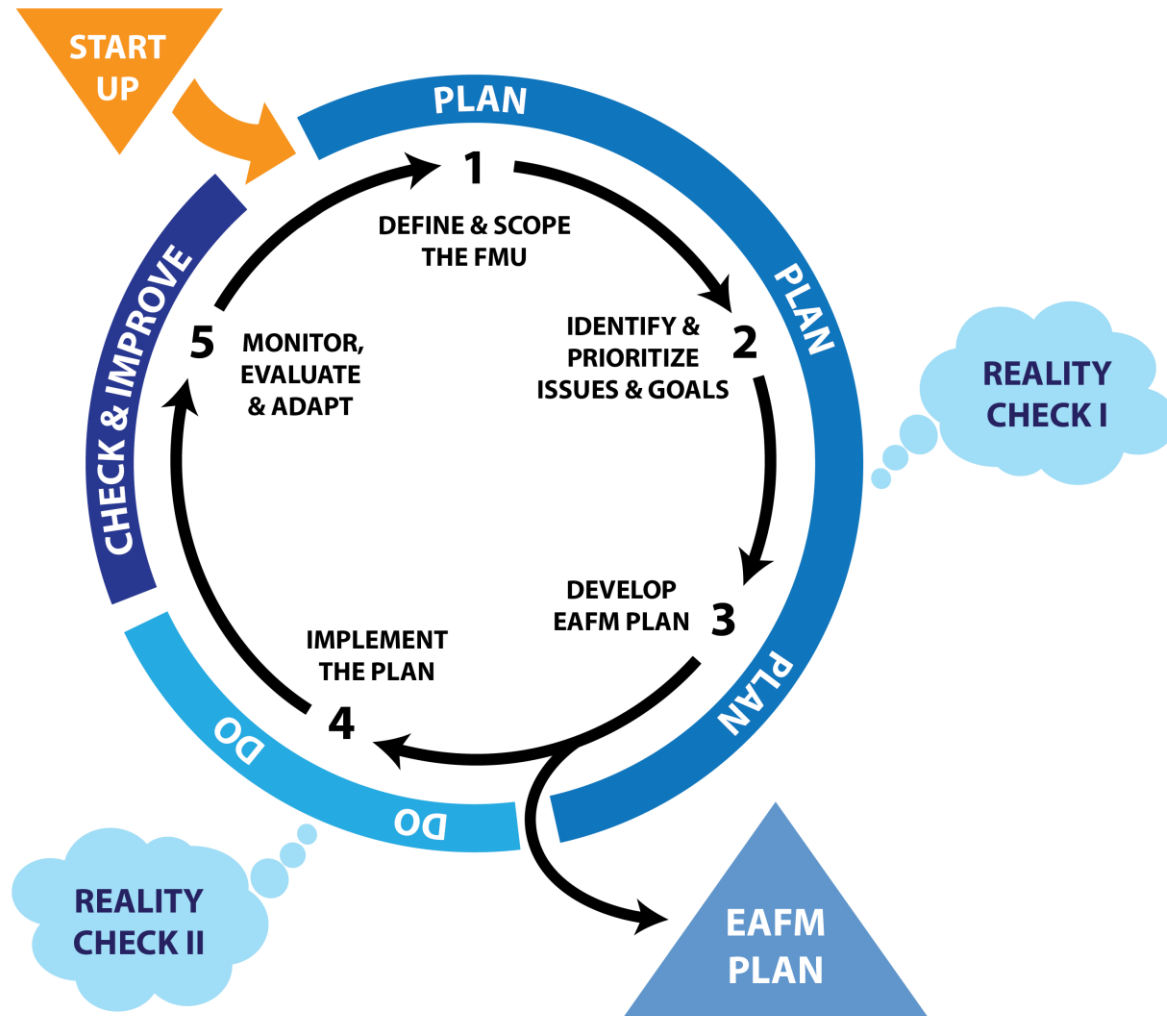


Session objectives

After this session you will be able to:

- Describe the key steps of the EAFM process and how to plan, implement and monitor EAFM
- Identify the planning steps in EAFM process
- Familiarize yourselves with an EAFM plan

The 5 steps of EAFM



Start up

Prepare for EAFM

- Decide on the general location for planning
- Identify who should be involved
- Plan for the process

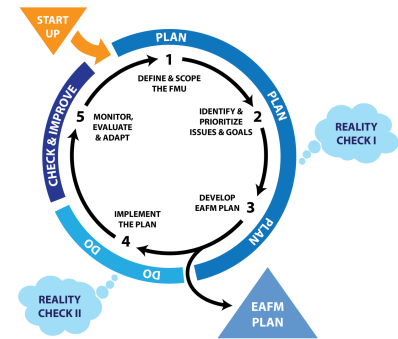


Stakeholder engagement for

- Participatory planning and implementation
- Co-management

Step 1

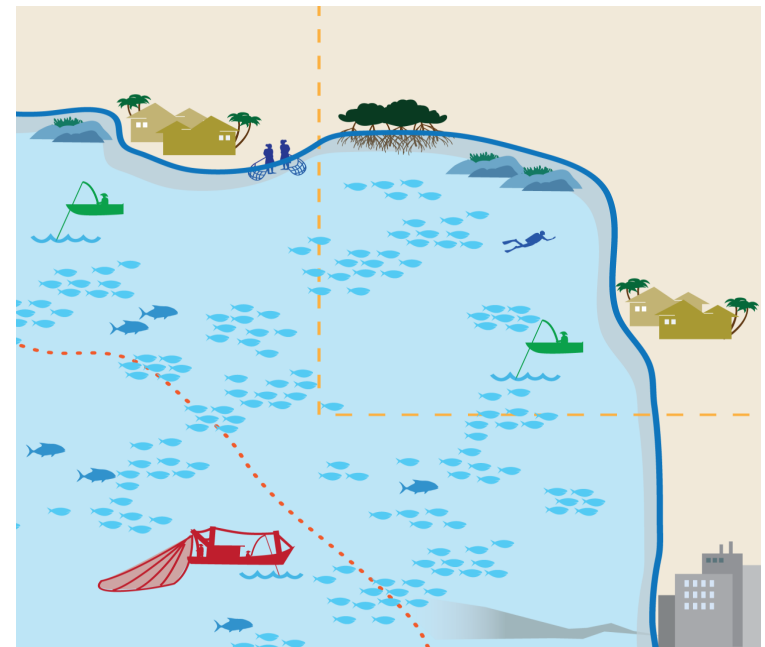
Define and scope the Fisheries Management Unit (FMU)



1.1 Define the FMU

1.2 Agree on the FMU vision

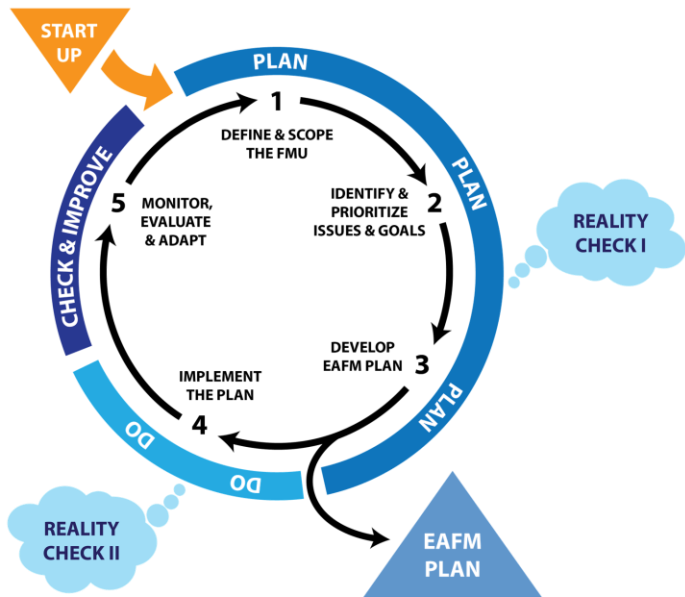
1.3 Scope the FMU



Provides background information and a vision

Step 2

Identify & prioritize issues & set goals



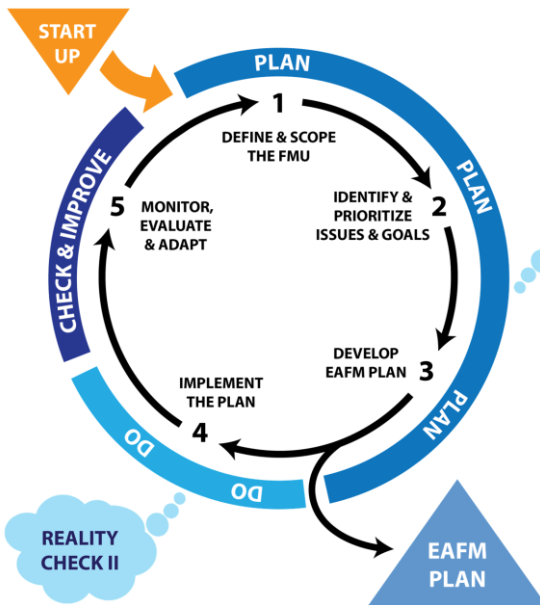
- 2.1 Identify threats & issues
- 2.2 Prioritize issues
- 2.3 Define goals for EAFM plan

Reality check I

Are the goals achievable?

Reality check I

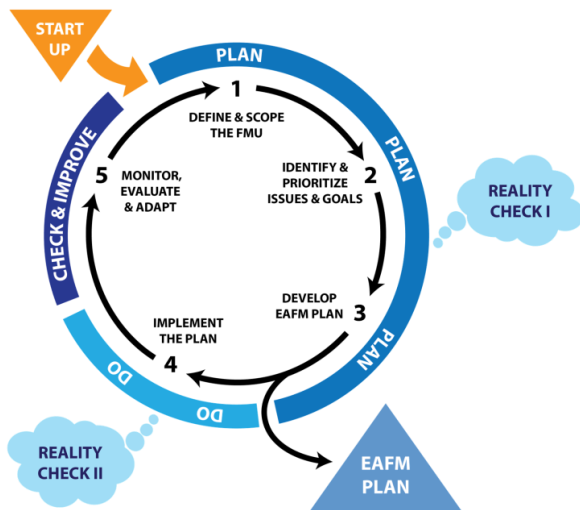
- Constraints & opportunities
- Facilitation skills
- Conflict management



Step 3

Developing the EAFM plan

Develops the management framework

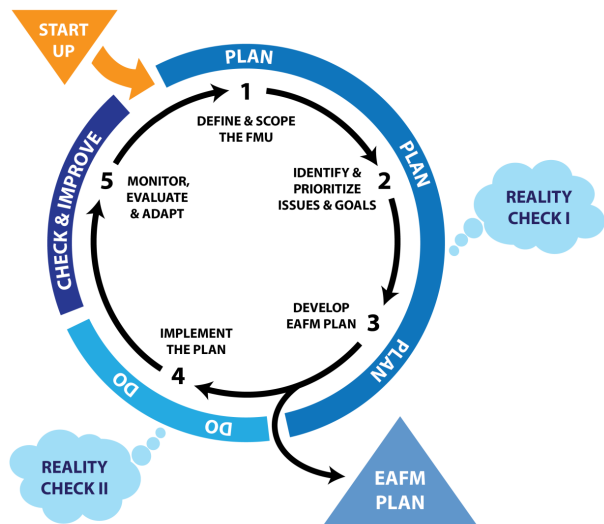


- 3.1 Develop management objectives
- 3.2 Develop indicators & benchmarks
- 3.3 Develop management actions & compliance
- 3.4 Identify sustainable financing
- 3.5 Finalize the EAFM plan

Step 4 Implement

Implements the plan through formalizing and communicating

4.1 Formalize, communicate, engage and implement

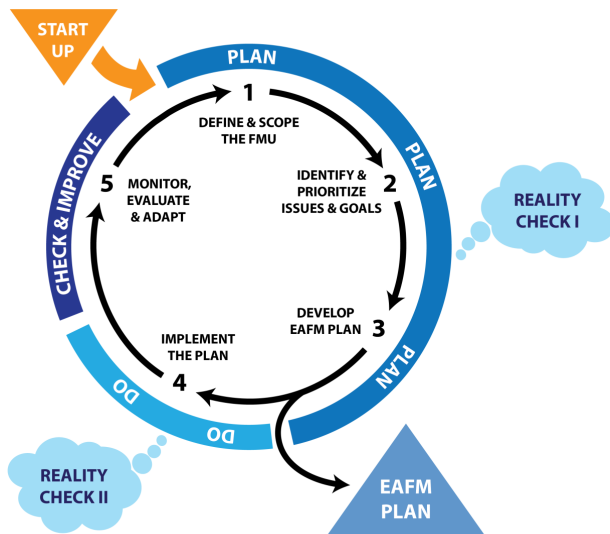


Reality check II

Checks whether the governance and supporting structures are in place

Reality check II

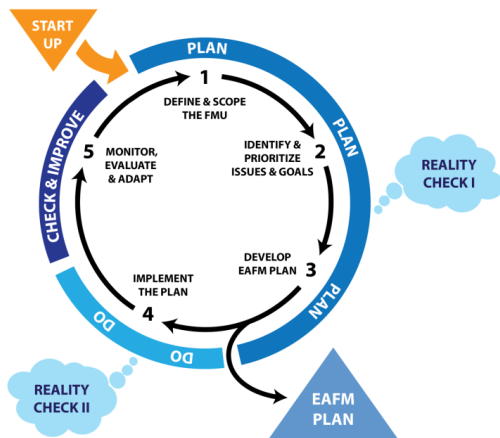
- Governance
- Co-management
- Supportive environment



Step 5

Monitor, evaluate, adapt

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



- 5.1 Monitor & evaluate (M&E) performance of management
- 5.2 Review and adapt the plan based on M&E

Summary

Planning – Steps 1-3

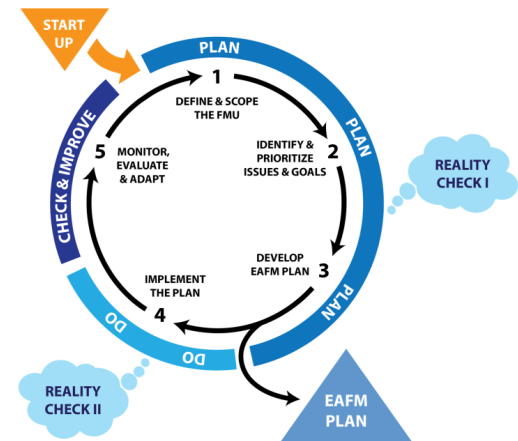
1. Define & scope
2. Issues & goals
3. Objectives, indicators, management actions, compliance, and financing

Doing - Step 4

4. Implement

Checking & improving - Step 5

5. Monitor, evaluate and adapt





Key messages

- The EAFM process cycle has 5 steps
- Before the first step in the cycle, get organized in the Start up
- The EAFM plan comes 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



Activity 10

The EAFM steps

Move to the large circle and follow instructions



Form working groups

1. Form **working groups** (may be based on shared fishery / shared geographical area)
2. 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
3. On Day 5, each group will present their draft EAFM plan and receive feedback

8. EAFM Startup: Preparing for EAFM & engaging stakeholders



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Session objectives

After this session you will be able to:

- Define startup tasks needed to initiate the EAFM process and co-management
- Describe how to identify and prioritize stakeholders
- Engage stakeholders through co-management

Startup

To start the EAFM process in a new location, you will need to:

- Prepare for EAFM by undertaking six key tasks
- Engage stakeholders and develop co-management arrangements



Prepare for EAFM: 6 tasks





1. Form an EAFM core team

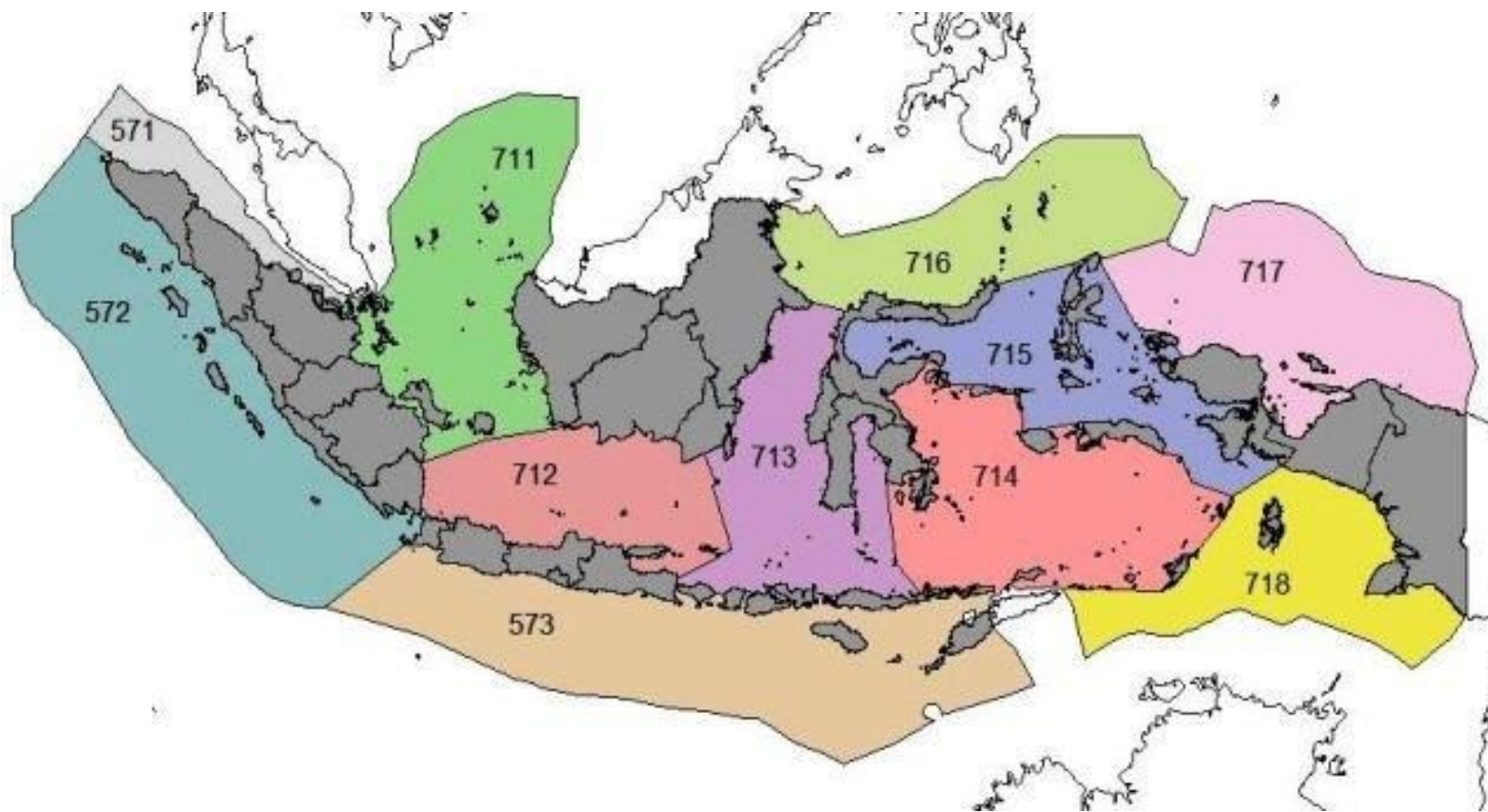
Establish a core team to guide the EAFM start up:

- include key agencies
- identify a Team Leader to lead the process
- lead agency is often the Fisheries Agency



2. Identify the general EAFM area

Agree on what area the EAFM will focus on



3. Check legal obstacles

Make sure there is no legal obstacles to continue EAFM

- lack of appropriate existing legislature should not be used as a reason to delay the start of EAFM





4. Develop a workplan for the EAFM team

- The team needs a start up work plan to guide the start up:

What to do?	Who is responsible?	By when?

- If any start-up activity requires budget, don't forget to include it



5. Identify and prioritize stakeholders

- Identify ALL stakeholders to begin with
- Prioritize stakeholders (see next slides)

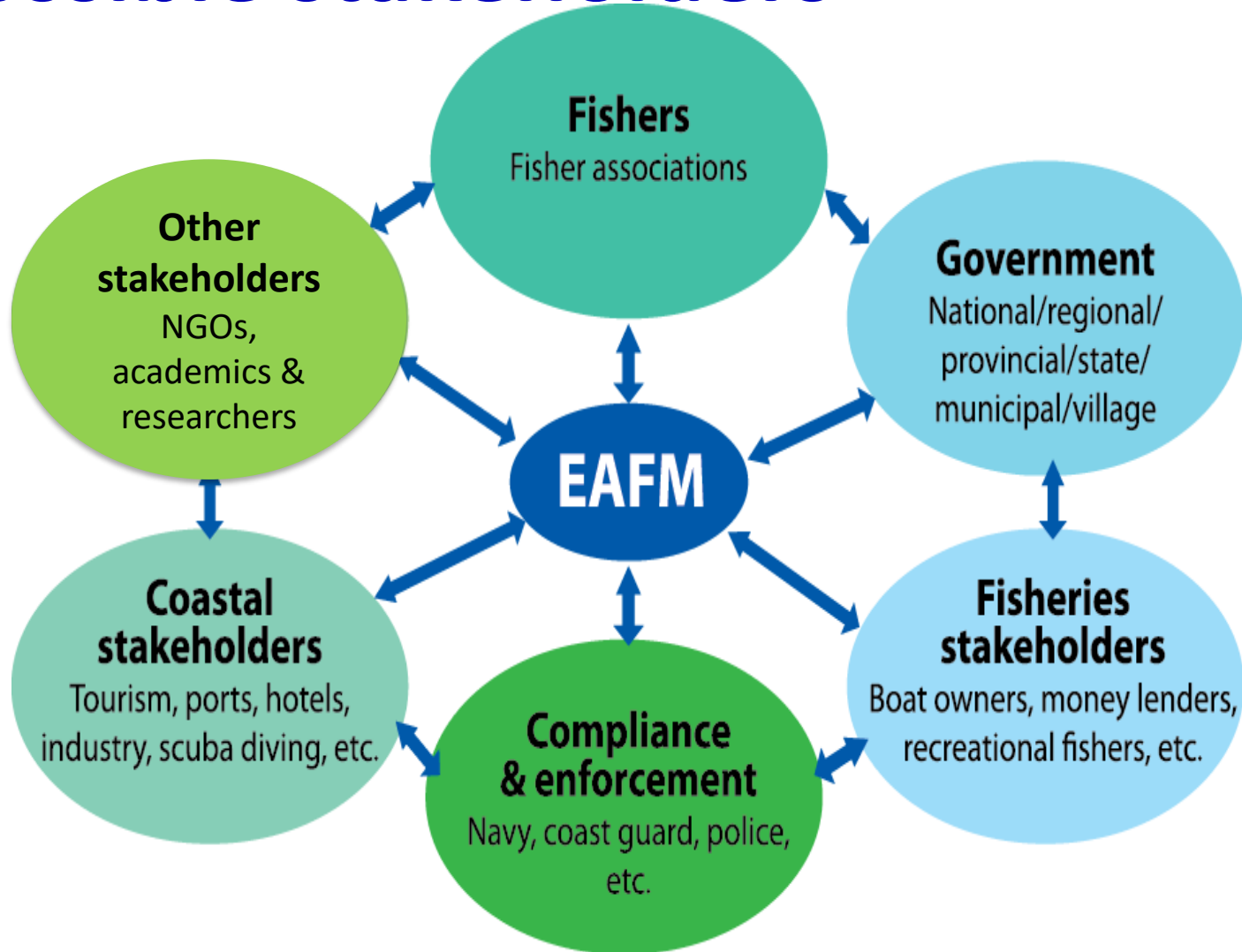
Note: this is an initial identification of potential stakeholders and will be revised as the process proceeds



Stakeholders

A stakeholder is any individual, group or organization who has an interest in or who can affect or is affected, positively or negatively, by the EAFM process

Possible stakeholders

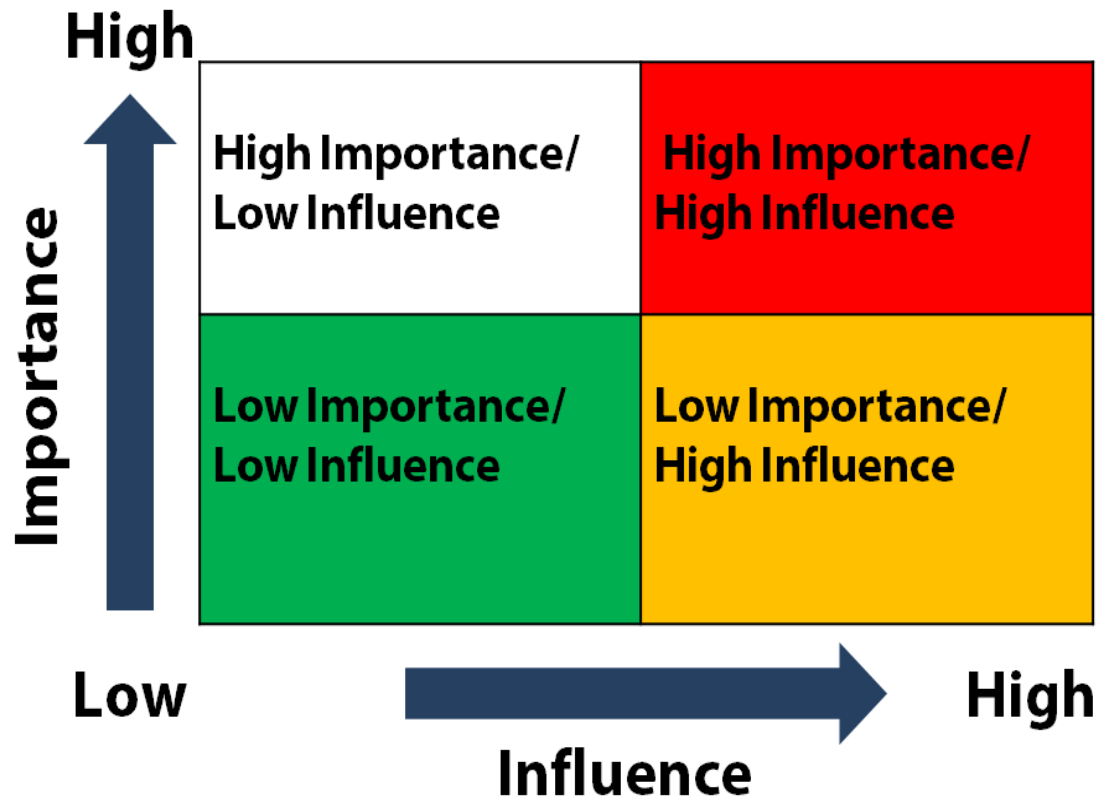


Stakeholder Analysis

Importance: how important a stakeholder is for EAFM process

Influence: how much influence a stakeholder has over EAFM process

2x2 matrix



Prioritizing stakeholders

High Importance/Low Influence	High Importance/High Influence
Need to be represented	Key stakeholders for EAFM Need to be included in the key stakeholder group
Not interested	Need to get them to 'buy in' into EAFM process
Low Importance/Low Influence	Low Importance/High Influence



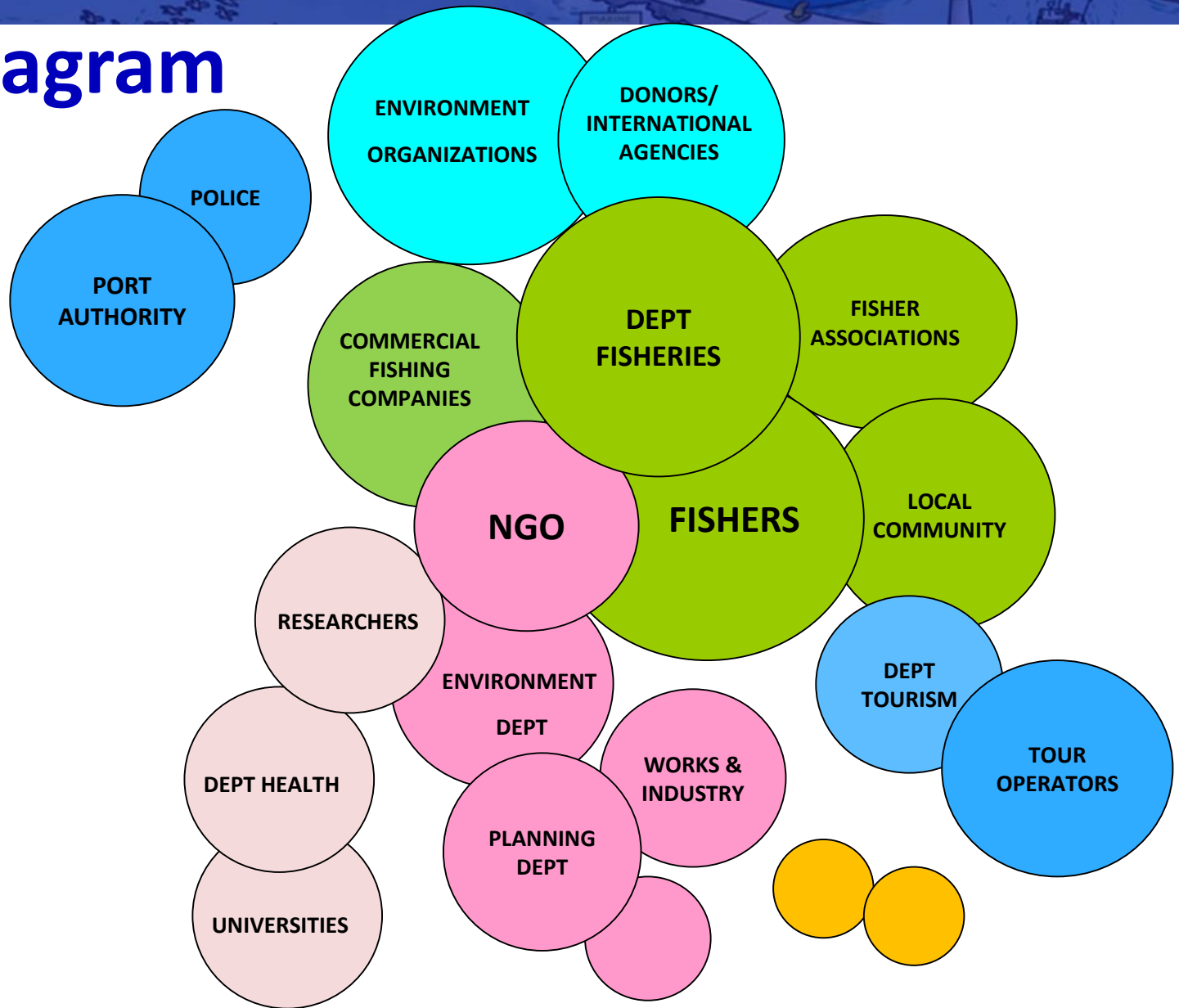
Activity 11

Stakeholder analysis

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. Place 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* each has over/in the EAFM process

Venn Diagram





Venn Diagram

Useful for describing **relationships** as part of institutional analysis

- Dimension 1 = Size of circle (importance)
- Dimension 2 = Proximity of circle (frequency of interrelationship and linkages)
 - Separate circles = no interrelationships or linkages
 - Touching circles = information passes between institutions
 - Small overlap = some cooperation in decision-making
 - Large overlap = considerable cooperation in decision-making
- Dimension 3 = group of related stakeholders by different colors



Activity 12

Identifying stakeholder relationships

Using the **Venn diagram** technique:

1. Write the name of each stakeholder on a circle (important stakeholders on large circles and less important on smaller circles)
2. By moving the circles and using colors, identify the interrelationships and linkages between the fishers and other stakeholders
3. What could strengthen linkages and coordination?



Establish a key stakeholder group

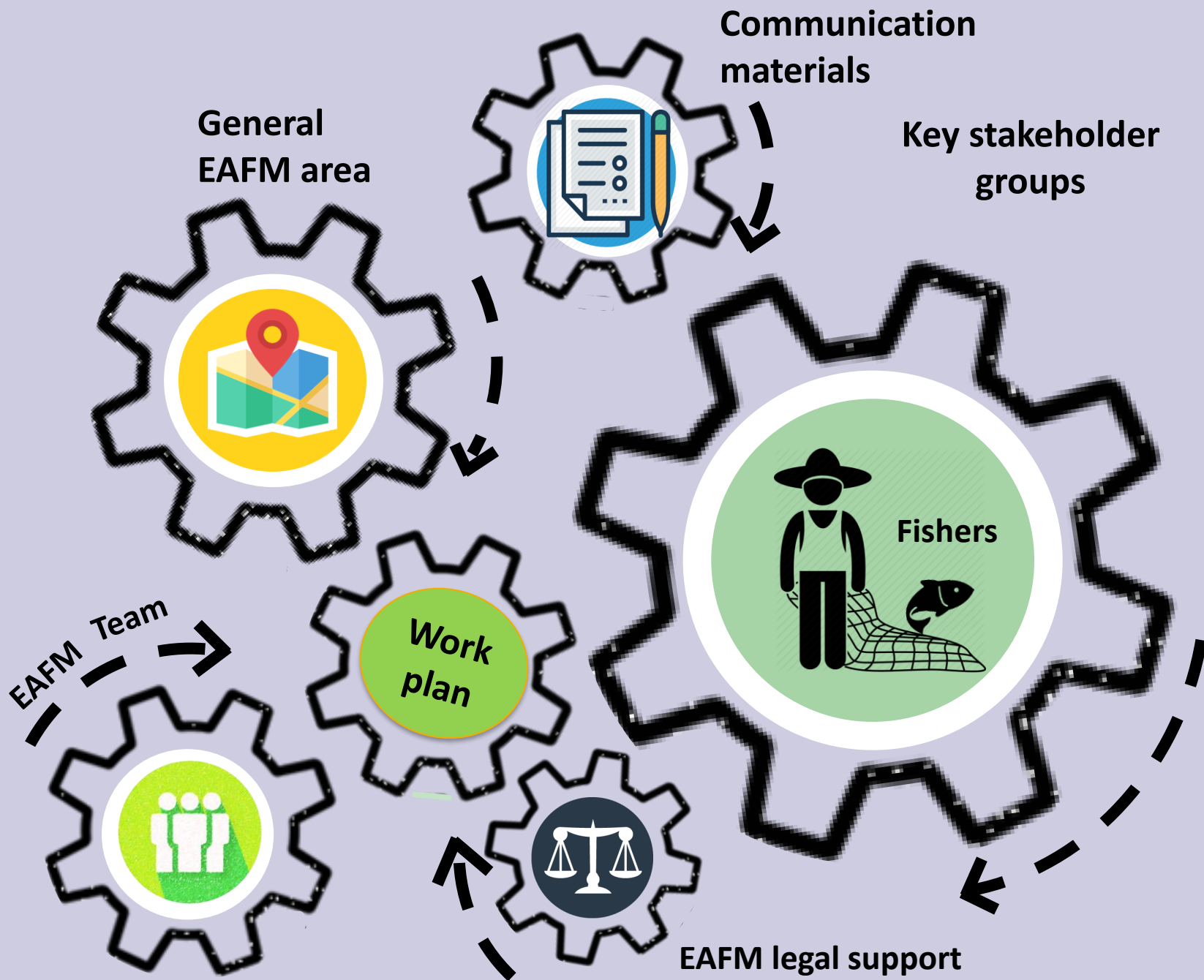
- Representatives from the key stakeholders (as identified in the stakeholder analysis) should form a group.
- They are responsible for:
 - Developing dialogue and stimulating EAFM discussion
 - Facilitating community organization
 - Helping stakeholders understand EAFM
 - Identifying problems, issues and opportunities
 - Assisting throughout EAFM process



6. Communicate to get support from related agencies

- The start of an EAFM process needs a campaign to raise awareness
- Develop communication materials for the agencies
 - Pamphlets
 - Media clips
 - TV interviews
 - Radio broadcasts
- Need to actively engage and encourage participation in the EAFM activities

Start Up Overview!





Engaging stakeholders & co-management

- Both during and after the startup, it is important to engage stakeholders in the whole EAFM process (Planning, doing, checking and adapting)
- Needs a **participatory approach**
- EAFM team will need **participatory** people skills (*for example: facilitation, conflict management*)



Participation

The active
participation
of people is at
the heart of
EAFM

So what do we mean by participation?

Key principles of participation

Let go of your own ideas and viewpoints

Promote a process of learning, changing and action

Listen and build rapport and trust

Work with stakeholders



Don't dominate

Respect of local customs, languages and experience

Believe in people and their abilities

Allow all people to be heard

Be flexible

Aim of participatory approaches



Agree on issues and solutions

Identify trade offs



Empowerment
Awareness raising
Ownership



Group trust



Preparing stakeholders to 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
 - policy briefs



Preparing stakeholders to engage (cont'd.)

Community mobilization

- Stakeholders get organized to arrive at consensus on interests and concerns
- Methods can include:
 - environmental education,
 - building alliances and networks
 - human capacity development



Facilitating stakeholder input

Meetings	Input from larger group coming together
Workshops	Input from a smaller group working towards resolving an issue
Focus group discussions	Input from a small facilitated group discussing a specific topic
Interviews	Views of selected people with specialized knowledge in certain topics
Surveys	Views of a large number of people representing the population



Activity 13

Characteristics of a facilitator

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

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

No words or writing allowed!



Co-management in fisheries

Partnership arrangements in which stakeholders share the responsibility and authority for the fisheries management



Degrees of partnership

More



Ownership

Partnership/collaboration

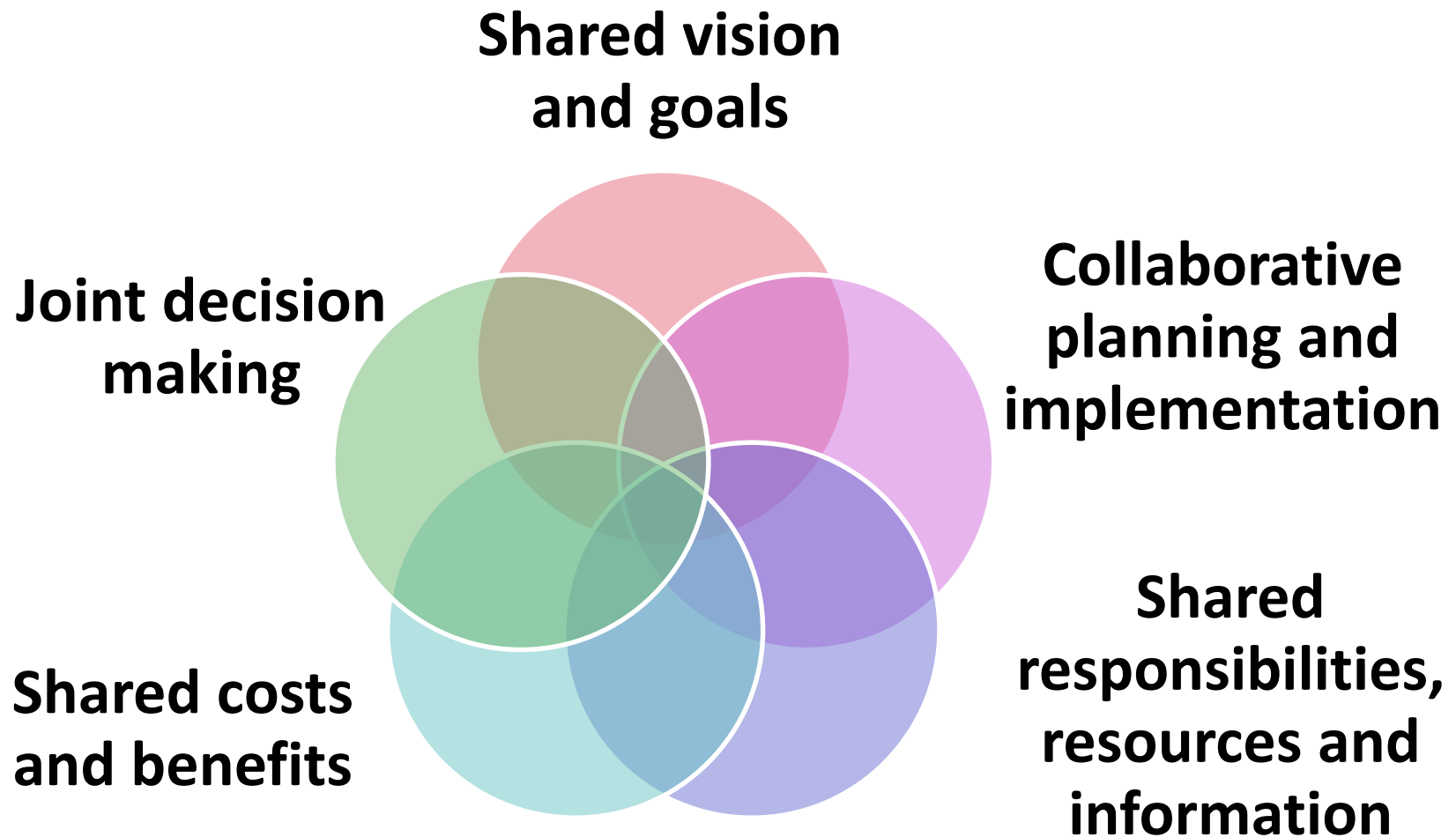
Cooperation

Consultation/advisory

Less

Sharing information

Key elements of co-management





Key messages

- Before starting on the EAFM management process there are some initial tasks to be done by the EAFM team
 - Get organized
 - Identify, prioritize and engage stakeholders
- Stakeholder engagement is initiated in the beginning and continues through the whole EAFM process
- EAFM involves developing co-management arrangements to involve stakeholders in the whole process



Activity 14

Active listening in threes

☺ *Paraphrasing*

☺ *Clarifying*

☺ *Eye contact*

☺ *Body language*

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 3rd person observes (can take notes) then feeds back. Rotate so you all get a chance to speak and observe



9. Step 1: Define and scope the FMU



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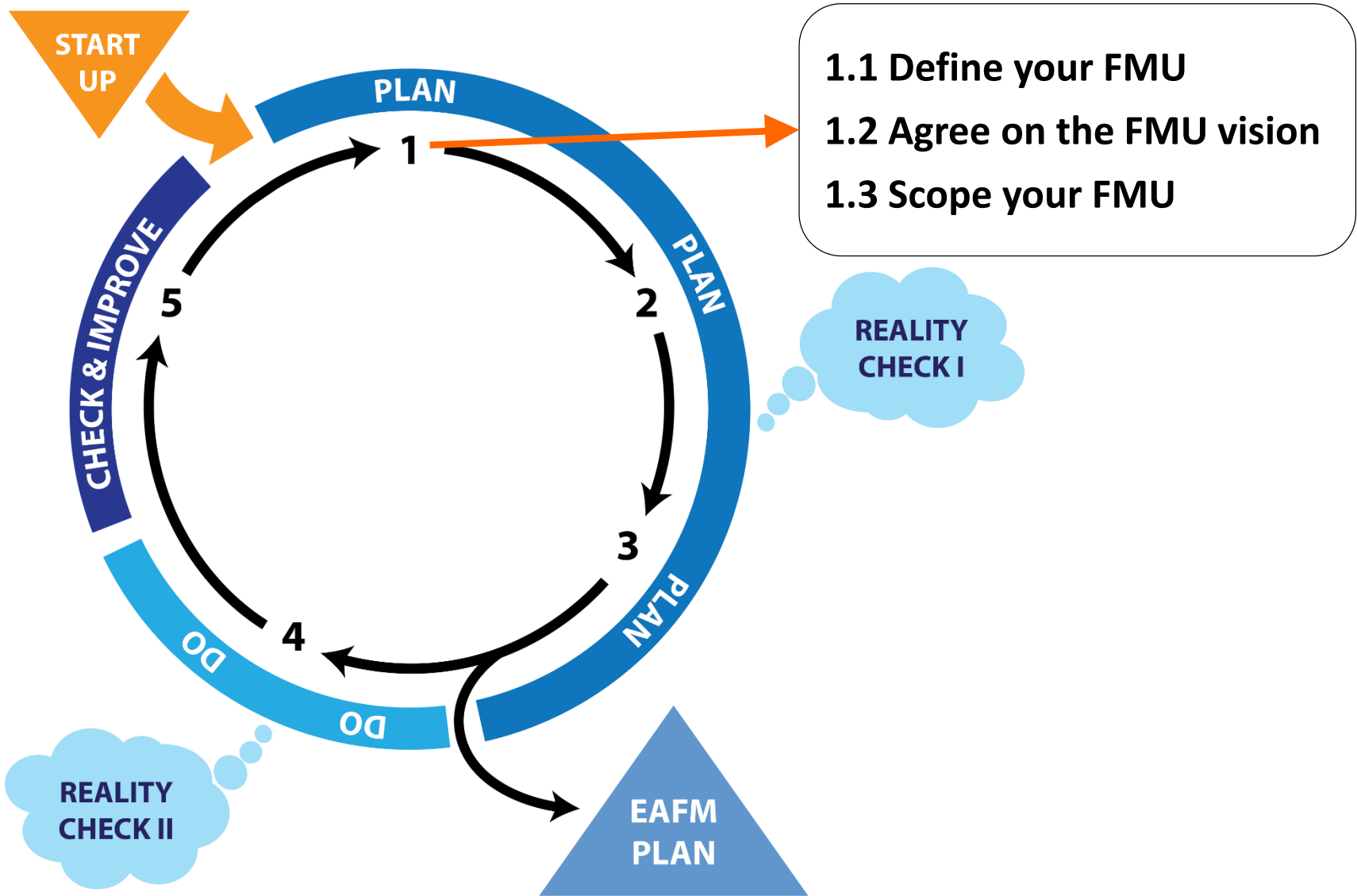
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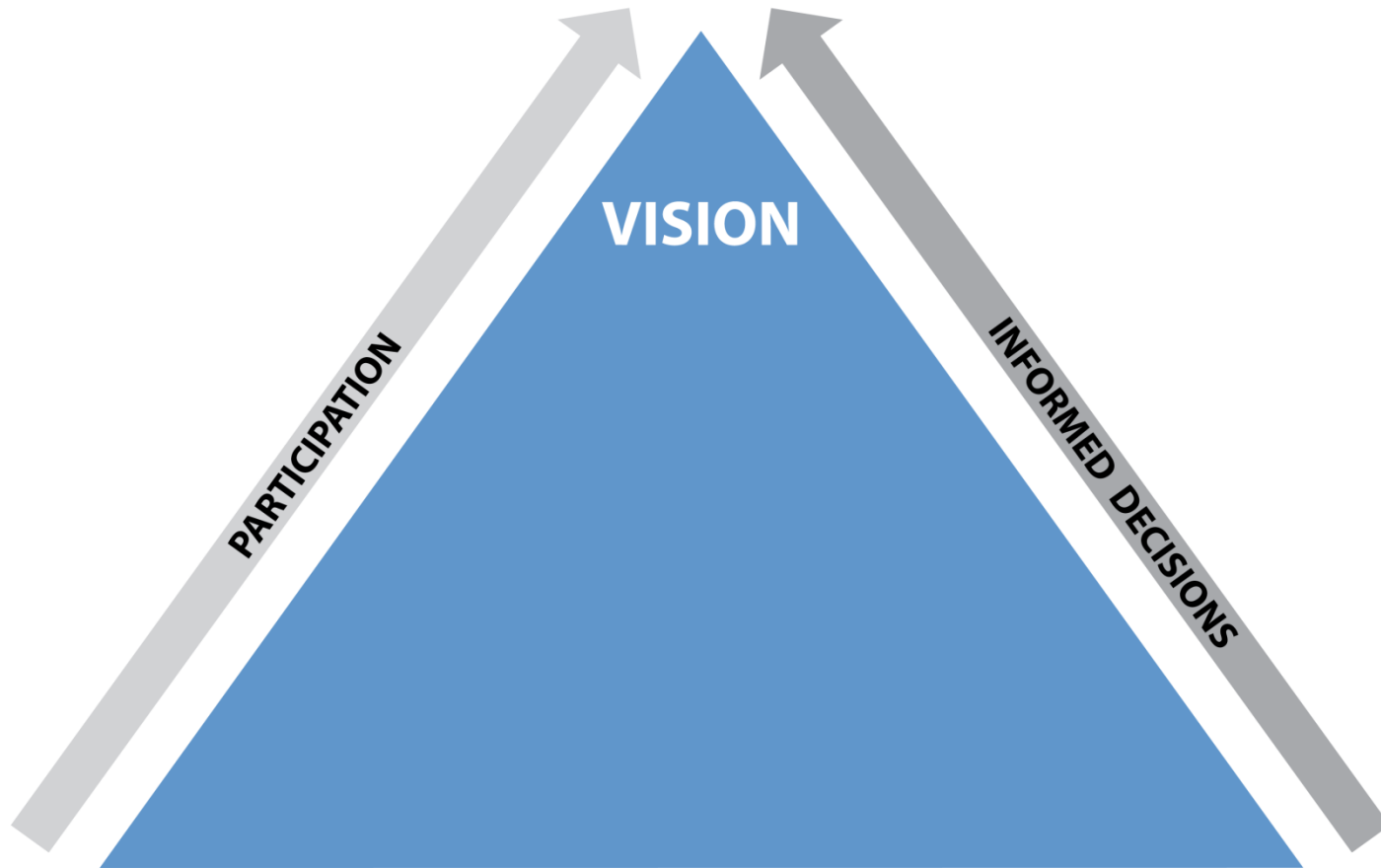
Session objectives

After this session you will be able to:

- Understand what FMU defining and scoping means
- Understand visioning and be able to agree on a vision



Building the EAFM plan





Remember

- The start up tasks prepared us for the 5 EAFM steps:
 - Engage stakeholders
 - Facilitate co-management

Note that these were initiated in the start up but continue throughout the whole process



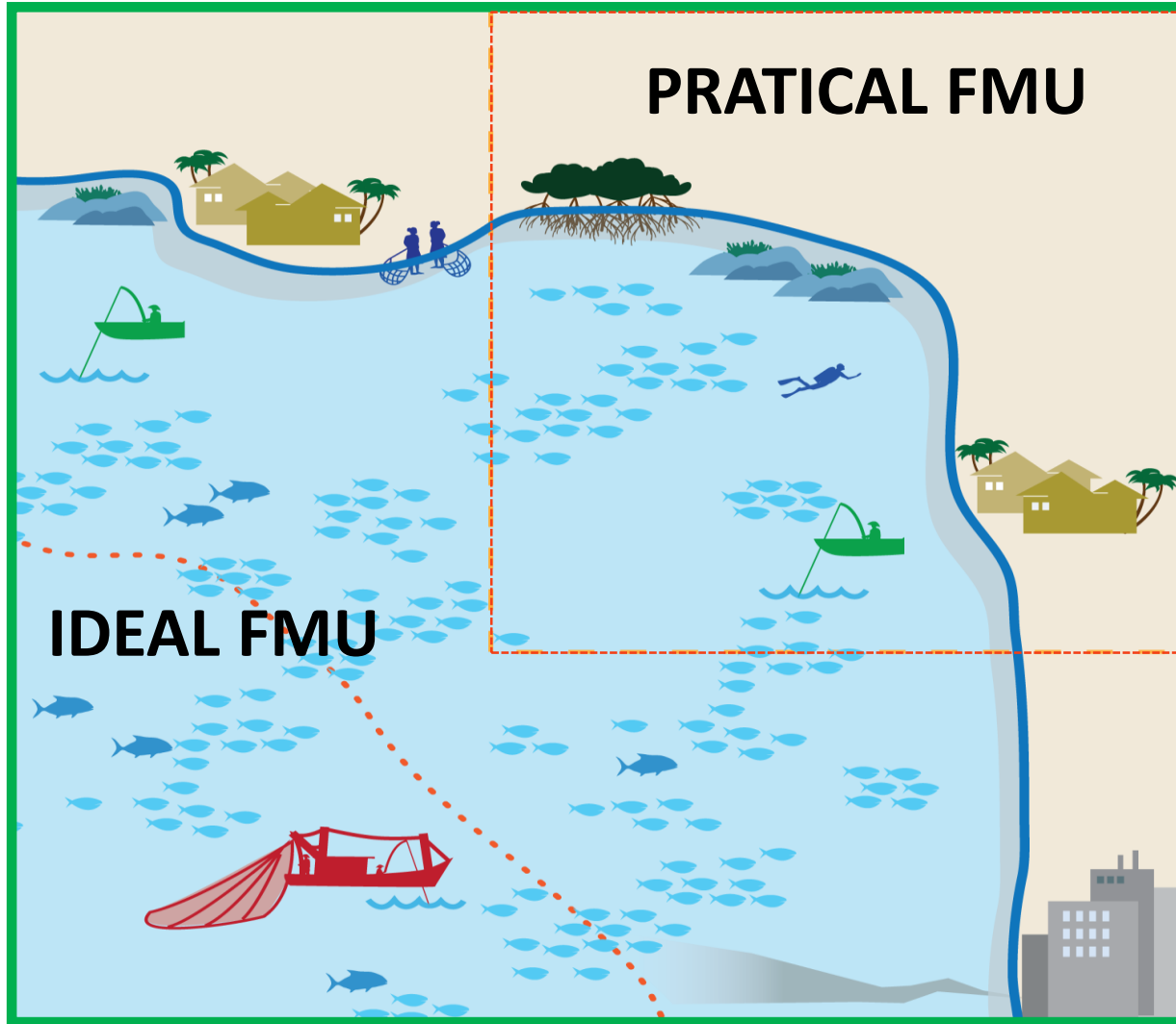
1.1 Define your FMU

Define your fisheries 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 vs. reality





Practical FMU:

Dealing with what is not included

- Acknowledge lack of complete coverage of the FMU and consider this in the planning
- Engage “outsiders” in planning process, especially:
 - stock(s) shared by two districts/ provinces/ countries
 - both small-scale and large-scale fishers harvest the same stock(s)
- Look for more appropriate scales later on in the process (*e.g.* joint management over several districts).



Activity 15

Map your FMU

Create a map of your FMU area, including:

- Ecological boundaries
- Social boundaries (*e.g.* communities, fishing ports, etc.)
- Habitat areas
- Political jurisdictional boundaries (including national/province/district jurisdictions)

Add a logo for your FMU

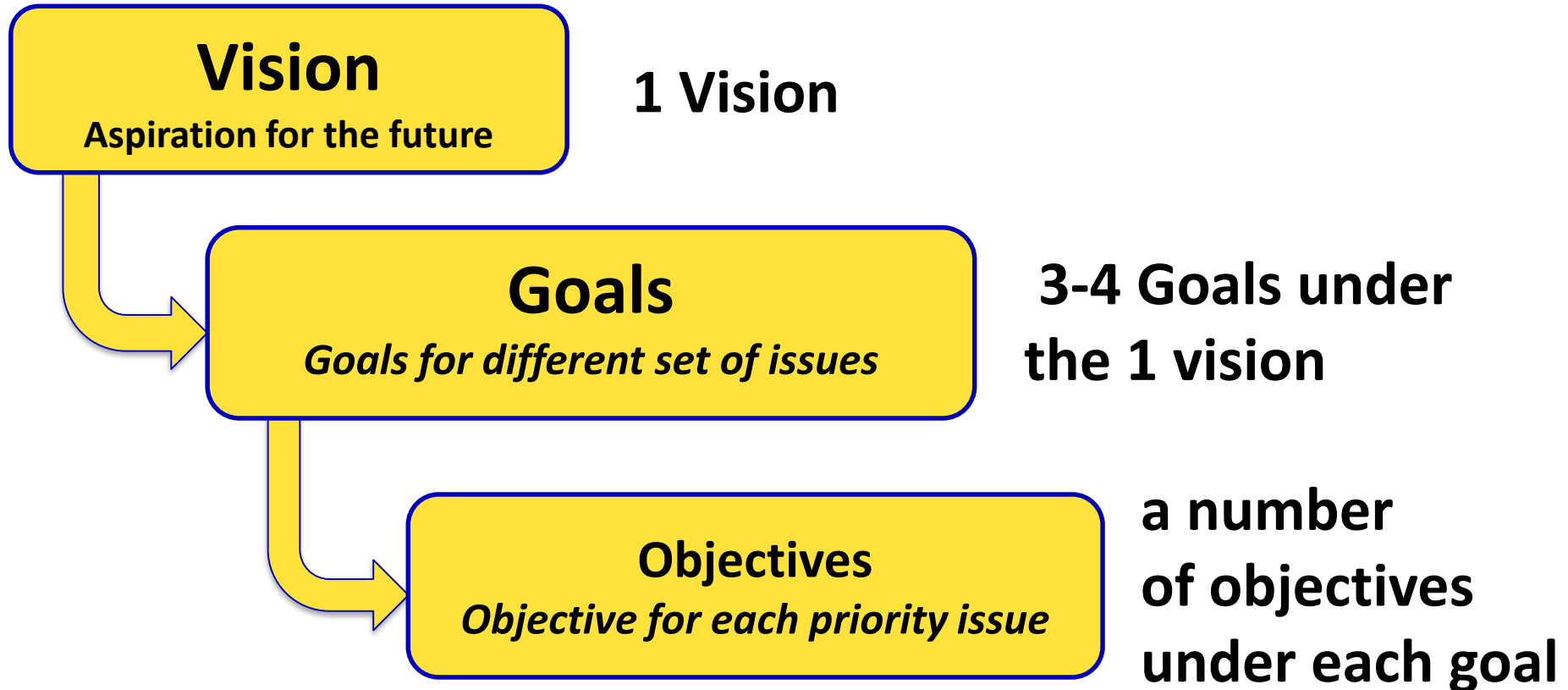


1.2: Agree the FMU vision

Vision, goals and objectives

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

The hierarchy (levels)



Example vision: Possible components

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



A legacy for you, your children, and future generations



Activity 16

Agree on the FMU vision

1. What should FMU look like in 20-30 years in the future.
2. Write down single words or phrases that represent the ideal. Then work together on the table to work those words into a statement.

Should include all 3 components of EAFM



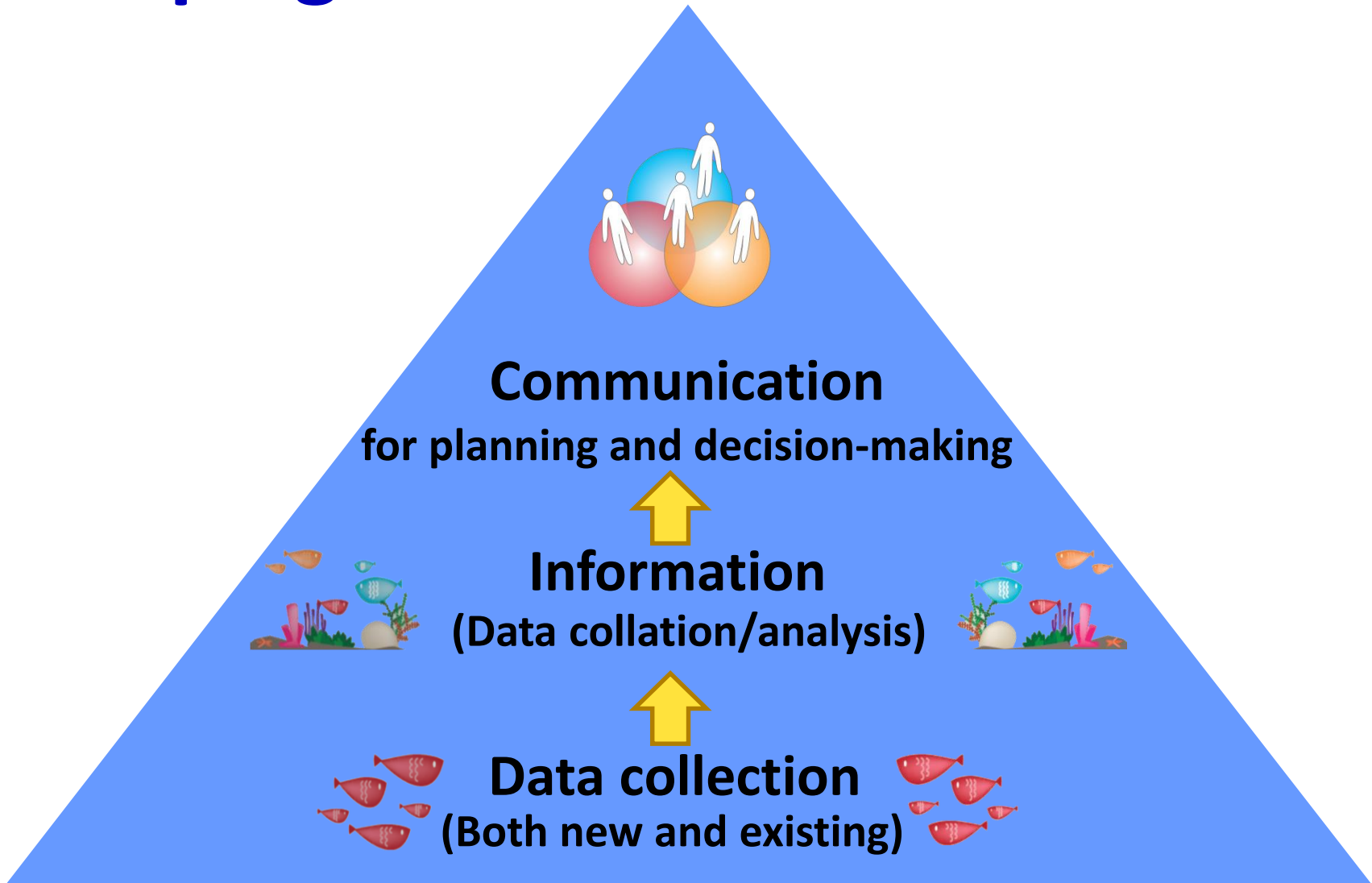
1.3 Scope the FMU

collate background information

Now, the FMU needs to be scoped for relevant and usable 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



Types of data

Qualitative data

Analyze “how and why”

Data that can be observed, described, and recorded, but not measured in numeric terms.

Sources:

- Answers to open-ended questions in survey
- Quotations from interviews or focus groups
- Observations of activities or behaviors
- Document excerpts, quotations, or passages

Ex: Types of household income

Quantitative data

“How much, how many, how often, what percentage”

Data that can be counted or expressed numerically, and thus manipulated and analyzed statistically, usually collected from samples

Sources:

- Existing statistics
- Biophysical research
- Answers to closed-ended questions in biological and socioeconomic surveys

Ex: Household income per month



Information needed for the three components

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



Ecological

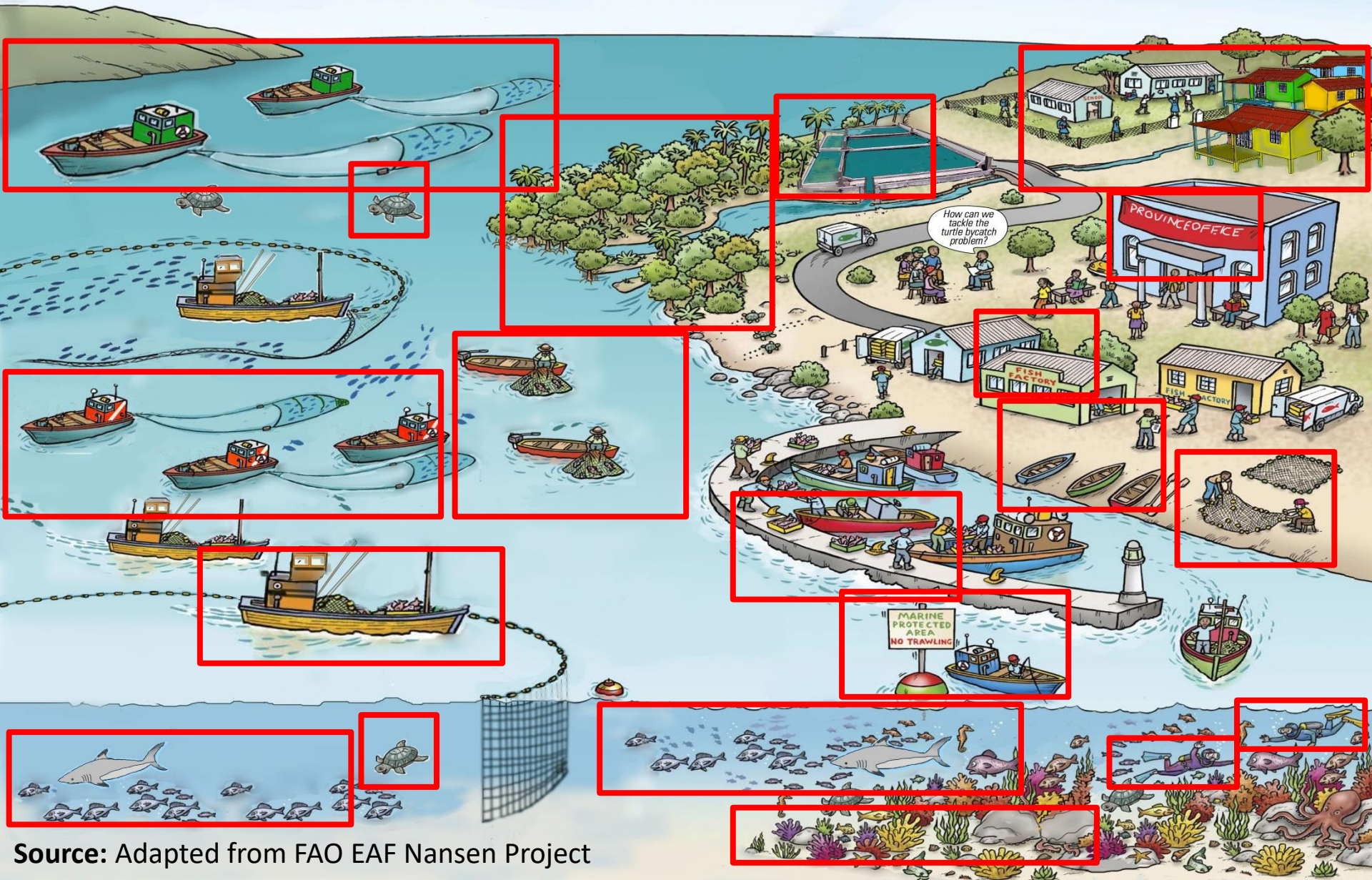


Governance



Human

Information needs



Source: Adapted from FAO EAF Nansen Project



Existing and new information

Large amount of data and information already collected:

- **Fishery data** – catch, effort, stock assessment, economics
- **Ecosystems** – biological/ecological, habitat, environment
- **Resource use activities** – who and how people use the resource and how they benefit (socio-economic)
- **Governance** – what the current governance arrangements are

May have to collect some new data....



After scoping...

- Share and check the findings with stakeholders
- Stakeholders can provide valuable information that you have missed

Remember this is not final . Periodically it should be reviewed and new information should be added

Sharing with stakeholders

Share information on the FMU and stakeholders based on the start up work



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



***Now Step 1 is completed.
We can start writing an EAFM plan***

Title = EAFM Management Plan for FMU X

1. Vision (Step 1)

2. Background (Step 1)

Possible subheadings for 2:

- 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



Key messages

In Step 1:

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



Activity 17

Types of information for scoping

1. What types of information would you collect for scoping?

Tip: Look at the different headings of the EAFM plan background section

2. What sources of information would you use?
3. Does the information exist?
4. *If no data are available*, what methods might you use to collect it?
5. Who will collect it?
6. Record your outputs on a flipchart



10. Steps 2.1 – 2.3

Identify and prioritize issues and set goals



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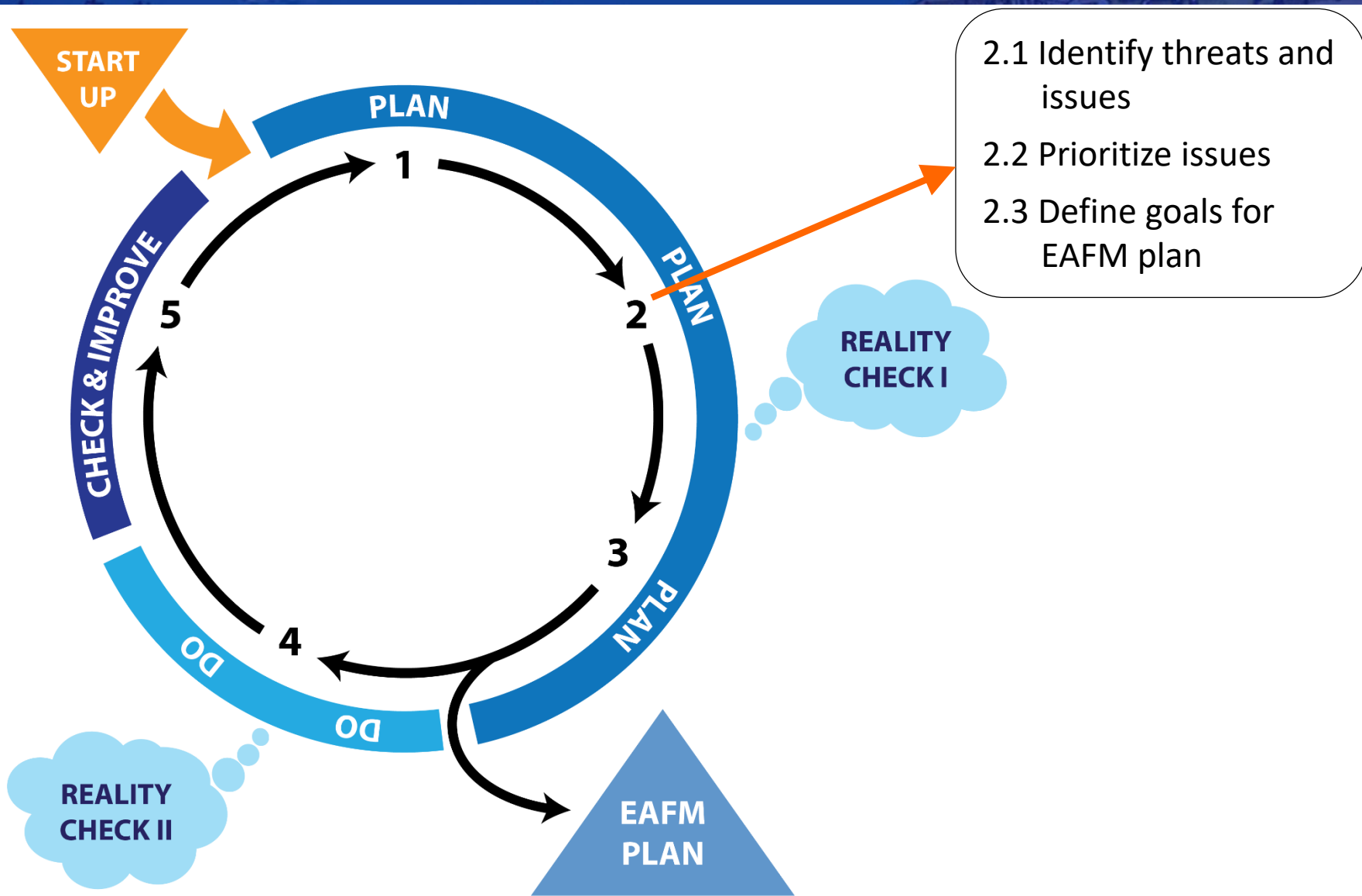
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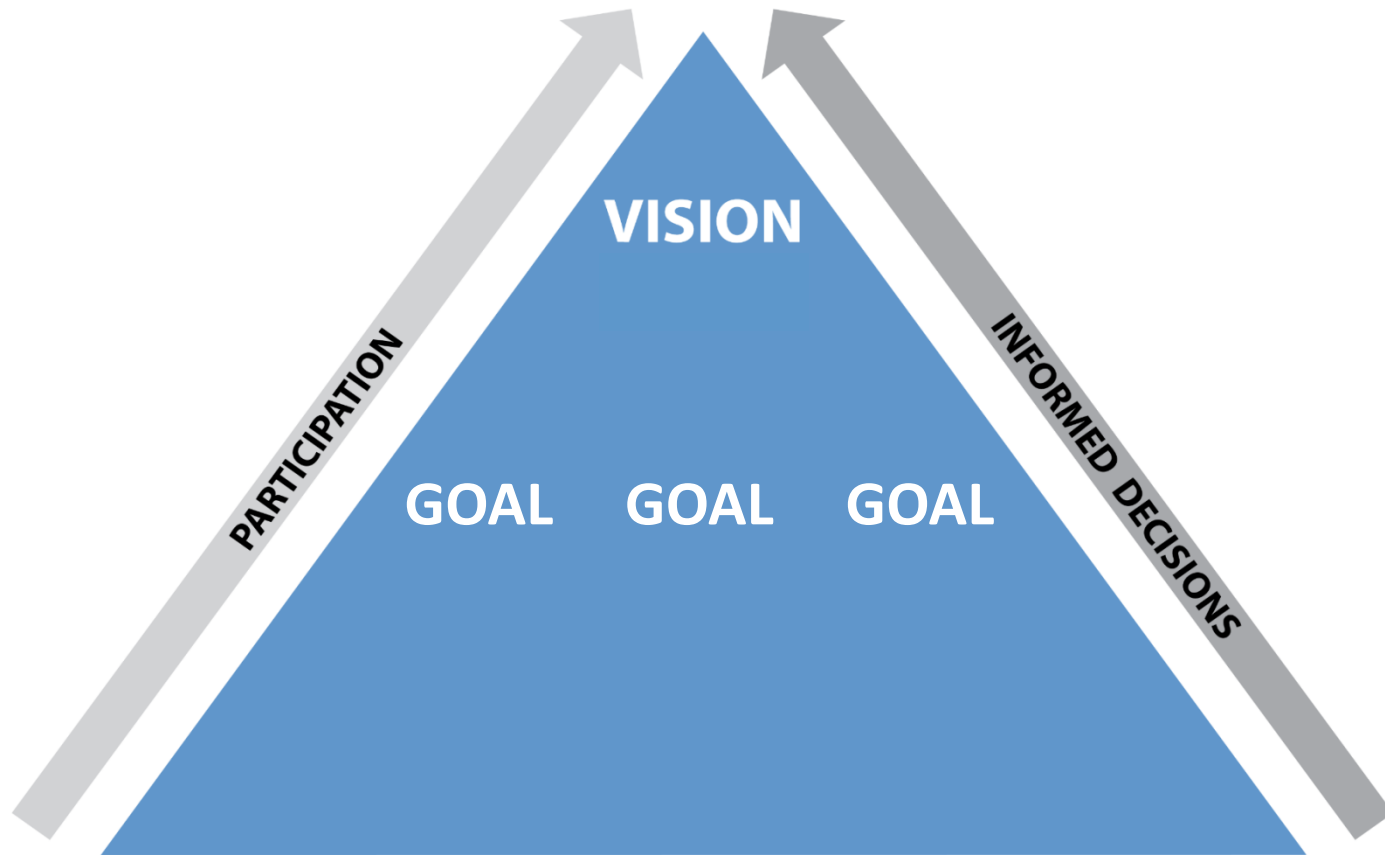
Session objectives

After this session you will be able to:

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



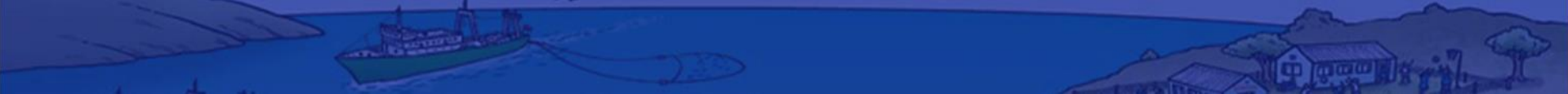
Building the EAFM plan





2.1 Identify threats and issues for the FMU

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



Activity 18

Identify FMU threats and issues

1. Consider the threats and issues that were developed earlier
2. Identify the specific threats and issues for your FMU
3. Write one on each card
 - Be sure to include all 3 EAFM components (Ecological, Human, and Governance)
 - Use a different color card for each component



2.2 Prioritizing issues

- Stakeholders will generate a long list of threats and issues
- Need to prioritize, as they cannot be managed all at once
- To prioritize them, use a tool to sort them

For example:

- Simple ranking
- Risk assessment



Risk assessment

- How likely is it going wrong? (likelihood)
- What would be the consequences of it going wrong? (impact)

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

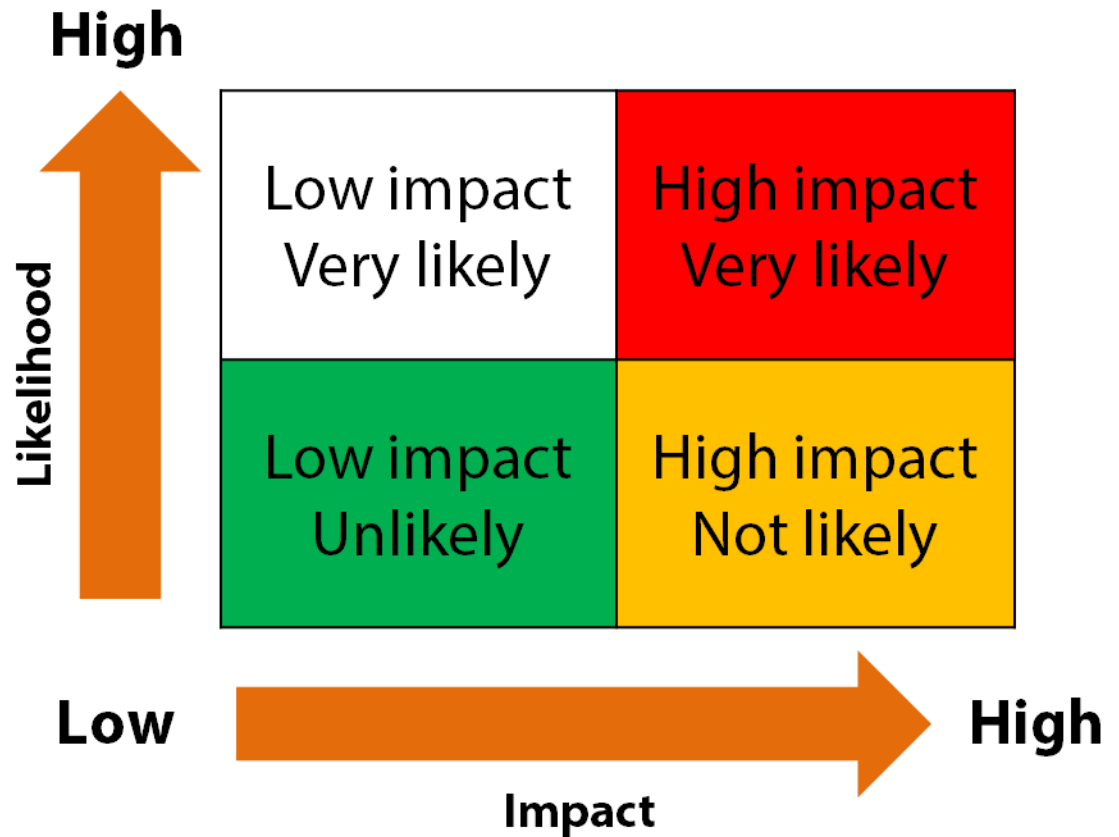
Prioritization based on risk

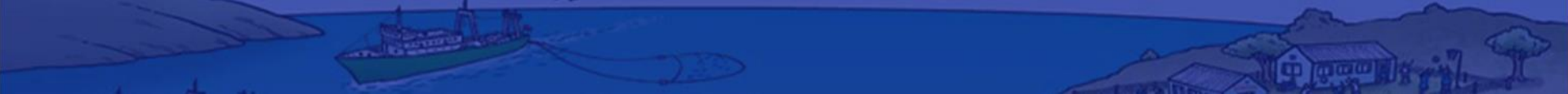
Impact

-how much change would occur

Likelihood

-probability of it occurring





Activity 19

Prioritize FMU threats and issues

1. Take the issues and plot them on a 2x2 matrix and then identify the ones that are high risk.

Impact vs. likelihood (High/high – Low/low)

2. Take the High/high risks and group them up under the 3 EAFM components

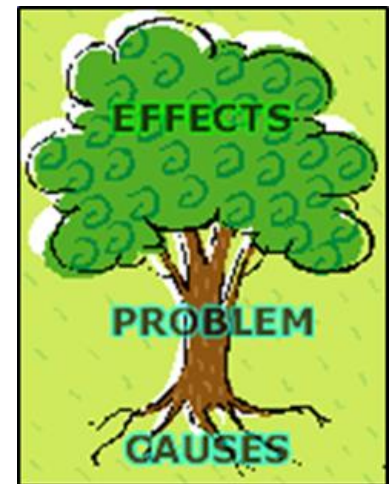


Causes and effects

- There is a wide variety of threats and issues
 - some are broad (*e.g.* climate change, pollution)
 - some are specific (*e.g.* bombing reefs)
- The broad issues are too broad to be managed under an EAFM plan
- One tool that helps separate out causes and effects and what can be addressed by management is called a Problem Tree

Terms used in a problem tree

- **Driver:** large-scale events that effect many issues
 - e.g. climate change or growth in population and wealth
- **Effect:** the effect the issue is having
 - e.g. loss of income
- **Core problem:** the actual problem
- **Causes:** the cause of the problem.
 - Can be further broken down into main causes and underlying causes



Ecological example

Driver

Population and wealth growth
(demand for seafood)

Effect

Loss of fisheries resources and fish abundance

Core problem

Lost of habitat and
natural resources

Decreasing fisheries resources

Main cause

Destroy natural habitat
e.g. seagrass,
mangrove

Use of
illegal
fishing
gears

Use of
destructive
fishing
gears

Unlimited
No. of
fishing boat
& gear

Causes

Human example

Driver

Poverty

Effect

Low quality of living

Core problem

Low income

Main cause

Low prices of fish products

High income dependency on fishing

Causes

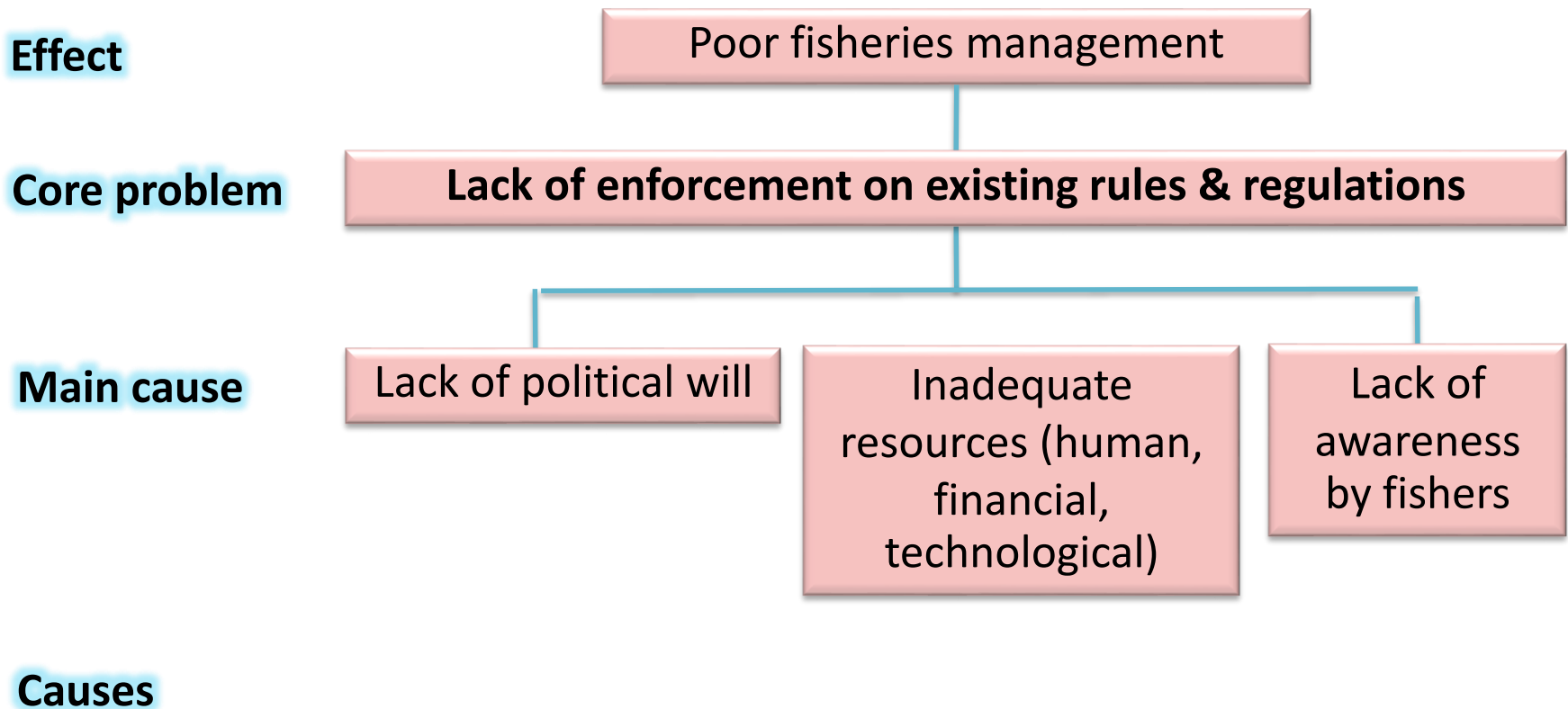
Sales through middleman

Low quality of products (size, freshness, etc.)

No alternative livelihoods

Lack of alternative credit or loan

Governance example



Using the problem tree

Effects



Goals

Core problems



Objectives

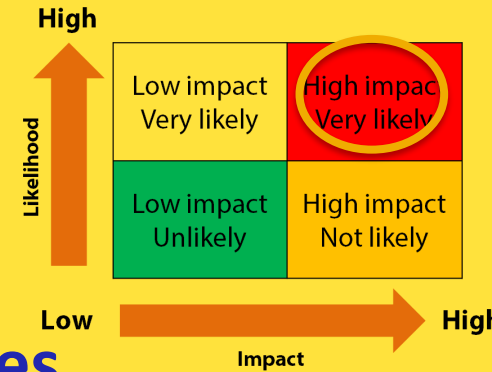
Causes



**Management
actions**

Activity 20

Causes and effects



Using the high priority threats and issues

1. 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) and may need to become more specific.

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



2.3 Goals

A goal is what you want the FMU to look like in the future for a given theme

- Guided by examining the **effects** in the problem tree
 - For example:

Theme	Example of a goal
Fishery and ecological	Restored and sustainably managed fisheries and other living marine resources
Habitat	Restored and conserved vulnerable and critical marine habitats
Livelihoods	All communities that depend on the fisheries resources are restored to and maintained above the poverty level



Activity 21

Setting goals

1. Consider the effects as identified in the problem tree
2. Set goals for each EAFM component



Key messages

In Step 2:

- Issues are prioritized so that only the most important are addressed initially in the EAFM plan
- Need to identify drivers, effects, core problems and causes to assist setting goals, objectives and effective management actions
- Based on the effects for the prioritized issues, goals can be agreed for EAFM components or themes



EAFM Plan outline

Now Step 2 is completed.

We can use the results in the EAFM plan

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)**
- 3-4 based on components*



11. Reality check I



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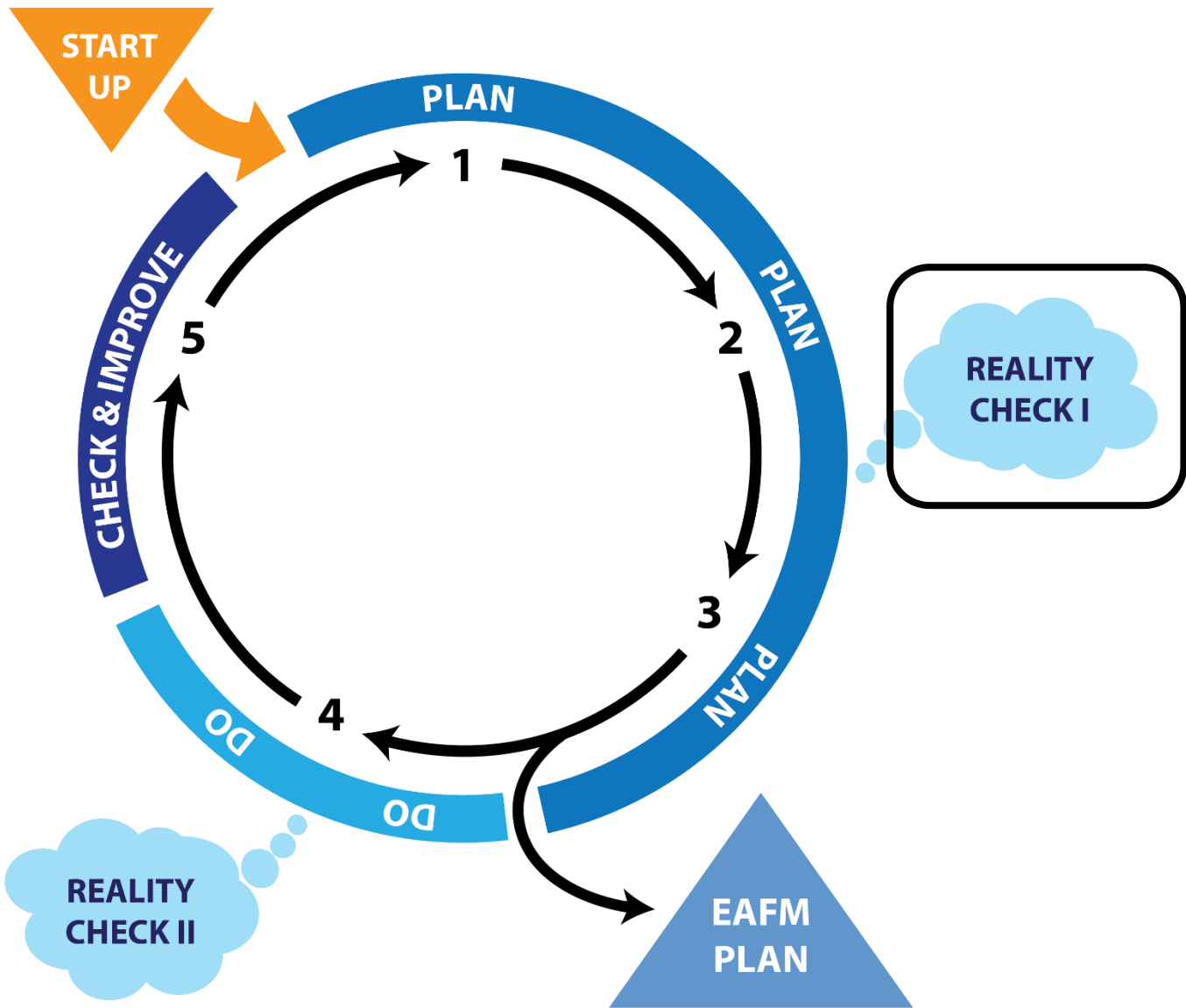
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Session objectives

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)
- Understand how to manage conflict





Constraints and opportunities to meet the goals

- For each goal you identified in step 2.3 there will be constraints and opportunities to achieve 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



Activity 22

Constraints and opportunities

Identify the constraints and opportunities to achieve your FMU goals

Output:

- constraints on red cards
- opportunities on green cards



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:
 - Stimulate discussion and facilitate solution finding
 - Ensure everybody participates



Facilitator is expected to...

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



Activity 23

Hold an FGD

Hold an FGD on one topic from next slide.

1. Form groups each with 1 facilitator, 1 observer, and respondents
2. Pick one topic in 30 seconds. Each individual prepare silently for 3 minutes
3. Facilitator to initiate the FGD for the given time
Observer to silently monitor the process
4. Observer, facilitator, trainer and respondents to provide feedback on the FGD process



FGD topic options

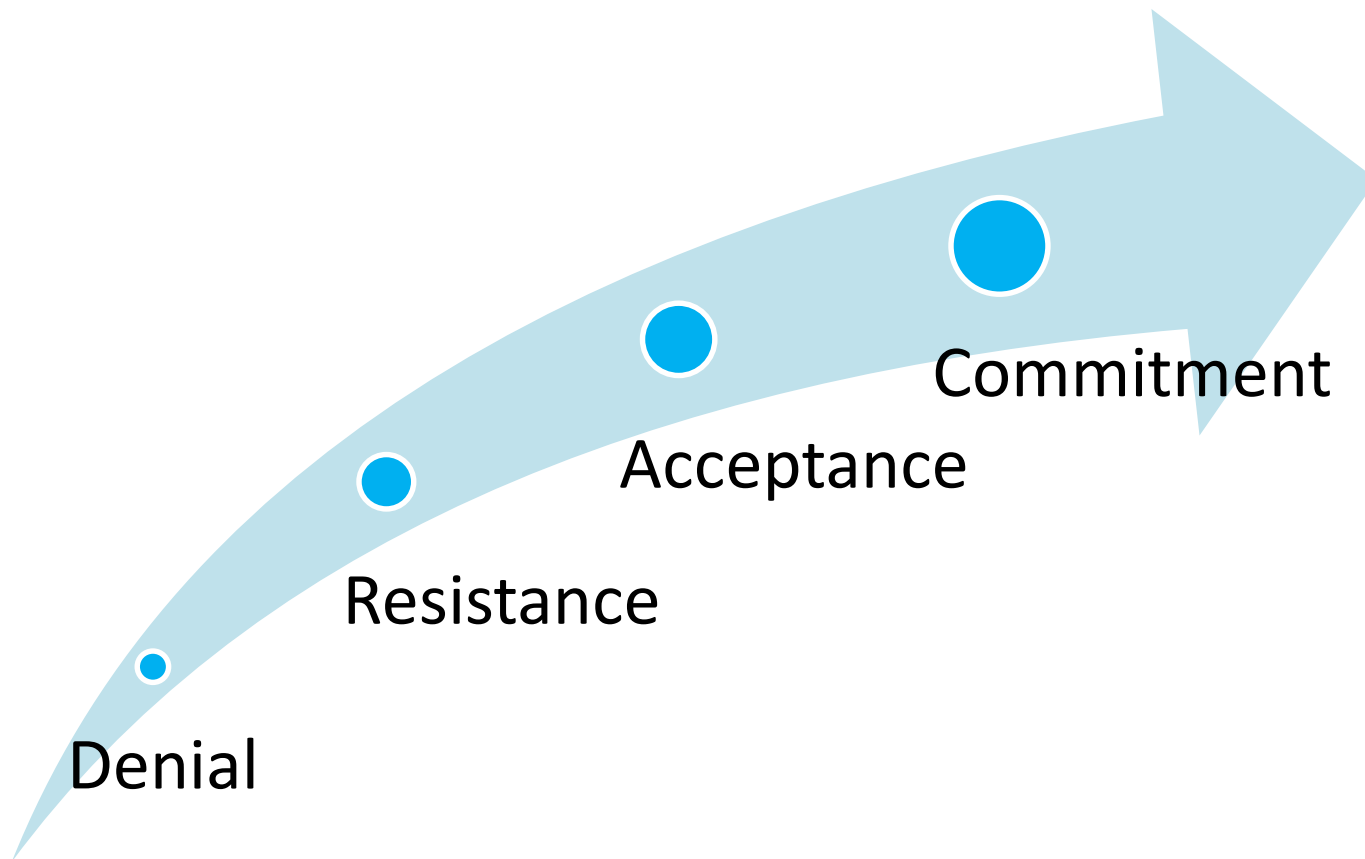
1. EAFM plan exists but there is little political will; government lacks interest; it has not delivered on promises. Suggestions?
2. The government, police and navy should enforce compliance – do they?
3. Rules and regulations have been set as a result of the EAFM Plan but one group of stakeholders is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



Conflict in EAFM

- Many of the constraints and opportunities may involve conflict
 - in views and opinions
 - even physical fights
- Where is conflict likely to occur in the EAFM process?
- Is conflict always bad?
- People tend to resist change but conflict needs to be seen as part of change

Conflict as change process





Activity 24

Map conflicts

Revisit your FMU maps and plot areas where conflicts are likely to occur and who the players are.

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

Mediating

Questioning

Listening



Negotiation strategy

- Understand the conflict
 - who, what, why, etc.
- Act as the facilitator
- Move towards a win-win outcome
 - Prepare & analyse
 - Discuss the options
 - Propose and seek solutions
 - Bargain

Powerful questioning

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

- Questions to start a discussion
- Questions to challenge assumptions
- Questions to move forward (to address an issue)
- Questions to stimulate thinking or convey a vision





Negotiation

<http://www.youtube.com/watch?v=1FeM6kp9Q80>

Watch the video and discuss



Key messages

In Reality Check I:

- The constraints and opportunities to achieve the EAFM goals are assessed
- Facilitated focus group discussions and conflict resolution can help resolve many constraints



Activity 25

Win-win solutions role play

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



12. Steps 3.1 & 3.2

Develop objectives, indicators and benchmarks



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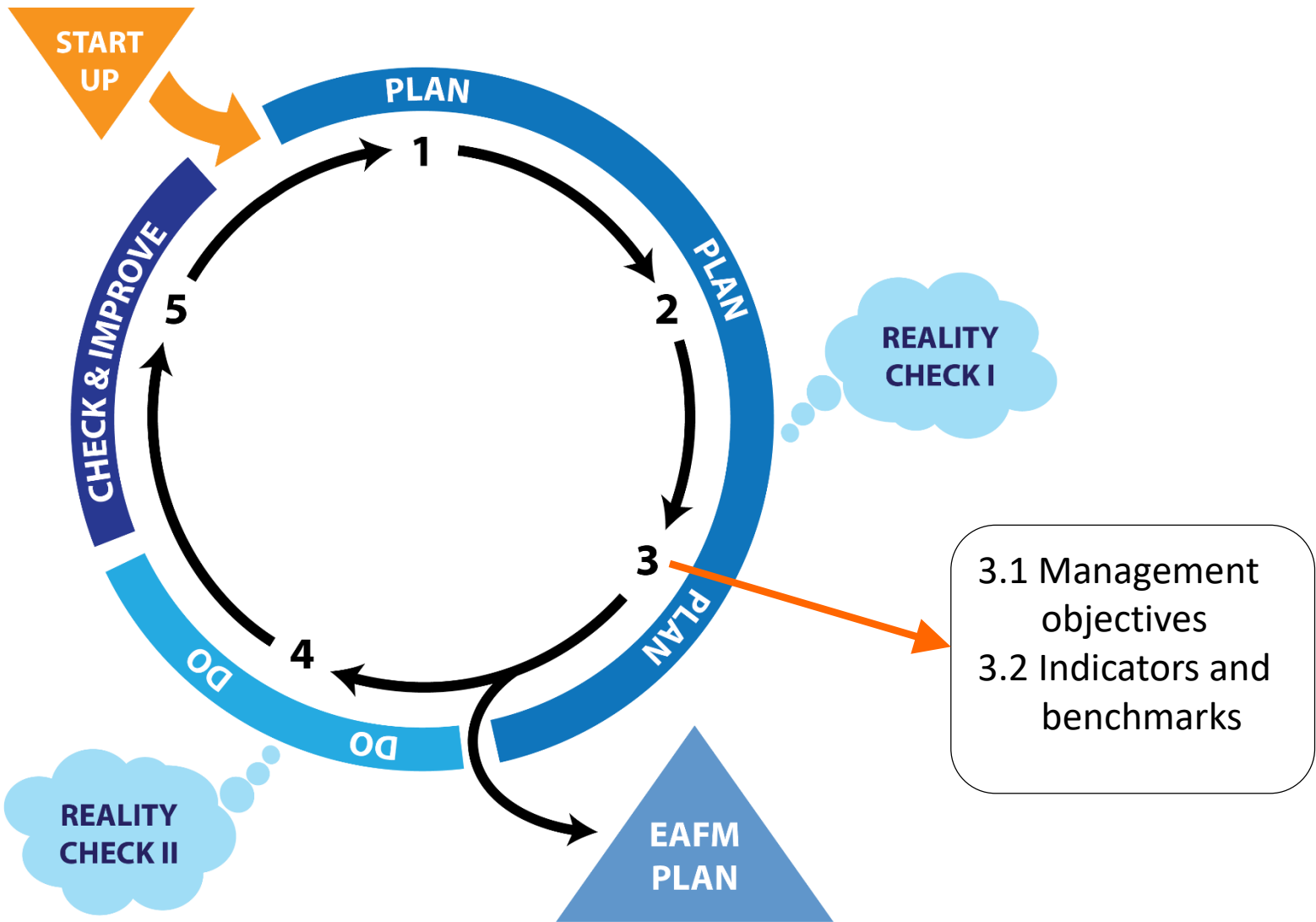
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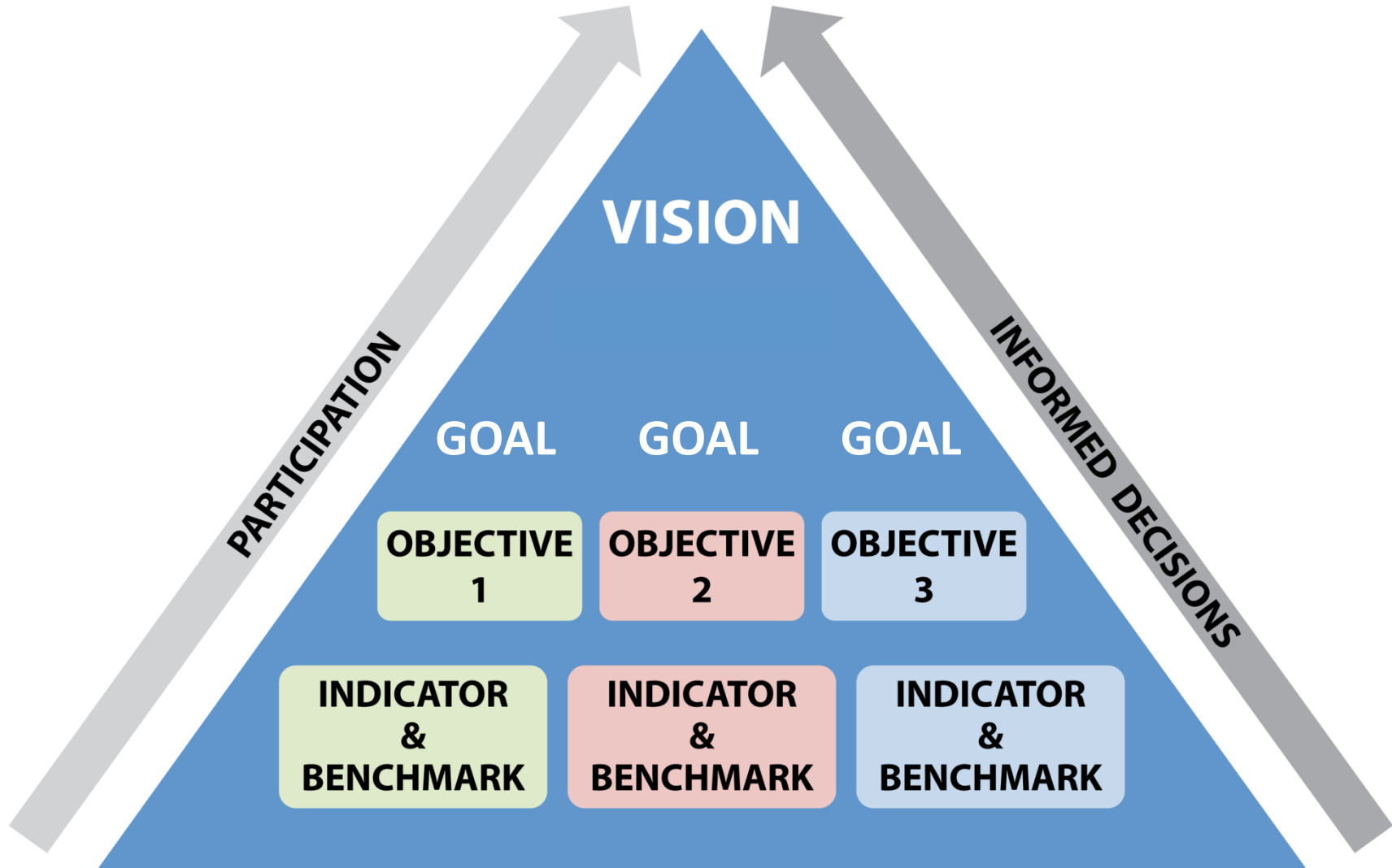
Session objectives

After this session you will be able to:

- Develop management objectives
- Develop indicators and benchmarks to measure progress towards meeting the objectives



Building the EAFM plan





3.1 Developing objectives

**Priority threat/issue
(core problem)**

**Management
objective**

Ask:

For this issue: what do you
want to achieve?



Objectives

Management objective

What you want to achieve through management actions?

 good objective = To reduce the % of juvenile fish caught

 bad objective = Improve the health of the ecosystem



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 mangroves)

An indicator must be linked to the objective



Indicators need to be “SMART”

- **S**pecific
 - Is it specific?
- **M**easurable
 - Is it measurable?
- **A**chievable/**A**ttainable
 - Can it be met by management actions?
- **R**elevant
 - Is it well linked to your management goals/mandates?
 - Is it of importance for the impacted communities and stakeholders?
- **T**ime bound
 - Does it have a completion date? By when?

Fishery resources example

Goal

Sustainable fishery

Objective

Reduce the % of juvenile fish caught in the fishery

Indicator

% of juvenile fish caught by the boat or at landing sites



Ecological example

Goal

Protected vulnerable and endangered species

Objective

Minimize the number of turtles caught in the fishery

Indicator

Number of turtles caught (based on sample)



Human well-being example

Goal

Maximum socio-economic benefits for the fishery

Objective

Increase/maintain employment in the harvest and post-harvest sectors

Indicator

Number employed in the harvest/post-harvest sectors



Governance example

Goal

Improved compliance and enforcement

Objective

Strengthen cooperation amongst different compliance and enforcement agencies

Indicator

Coordination group formed, multi-agency compliance plans formulated & groups meeting regularly with agreed minutes



Objectives need to complement

- Do the **fisheries/ecological well-being objectives** support or hinder the objectives for human well-being and governance?
- Do the **human well-being objectives** support or hinder the objectives for fisheries/ecological well-being and governance?
- Do the **governance objectives** support or hinder the objectives for fisheries/ecological well-being and human well-being?

If **no**, revise the objectives !!!



What is a benchmark?

- A standard or point of reference against which things may be compared.
- Benchmarks can be a **target, limit, or baseline**
 - **Target** = where you want to be
 - **Limit** = where you do not want to be
 - **Baseline** = where you have come from

(e.g. Target: Increase the area of mangroves by 20% by 2020)

Limit: Not to decrease area below 50%

Baseline: Area of mangrove in 1980



When the indicator is compared to benchmark
it tells you how well you are meeting the objective

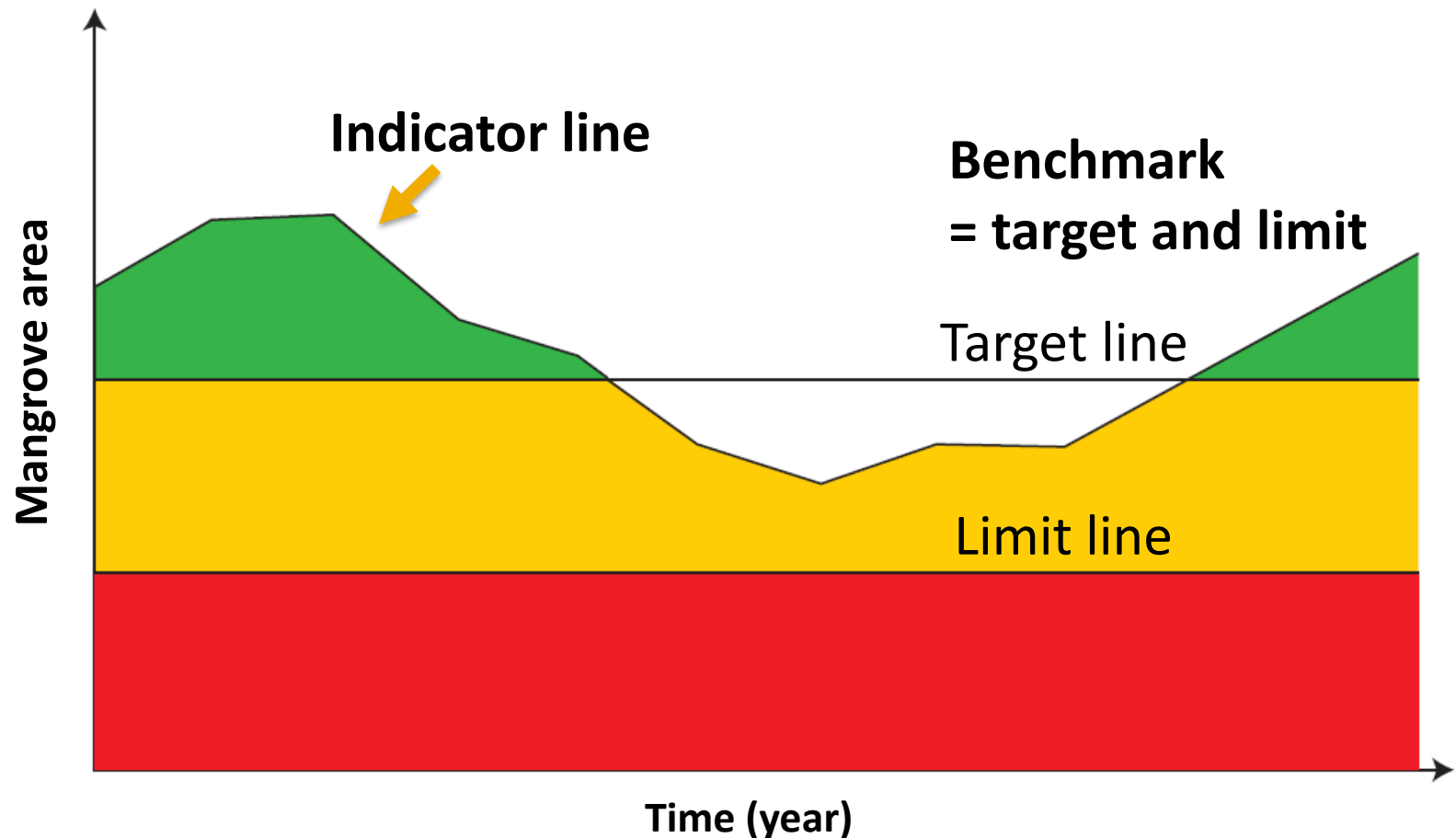


Simple example

- Objective:
 - Reduce the fever of a sick patient
- Indicator:
 - The patient's body temperature
- Benchmark (in this example, a target):
 - 37 degree Celsius in 2 days

Indicators and benchmarks

Mangrove area example





Activity 26

Develop objectives, indicators and benchmarks


1. Choose **at least 4 issues** that were categorized as high/high: **2 ecological (1 fish & 1 environmental), 1 human, 1 governance)**
1. Develop a management objective for each issue that relate to the key problems
2. Select indicator(s) and benchmark(s) for each management objective

Outputs: Issue, Objective, Indicator and Benchmark:



VISION





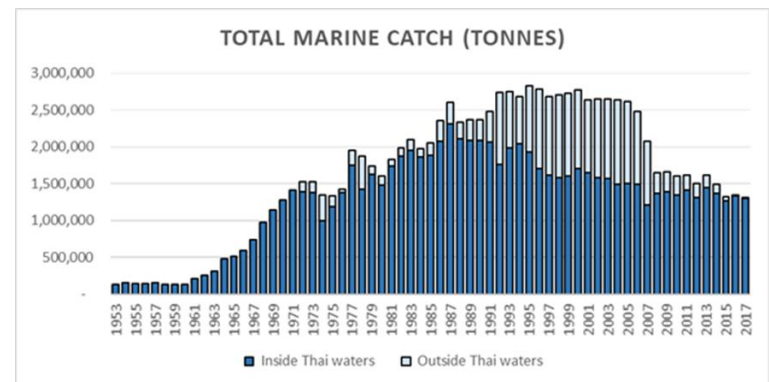
Data & information for the indicators and benchmarks

- Data and information are needed for the indicators and benchmarks
- 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 for indicators and benchmarks

Key data and information questions

- **WHAT** needs to be measured?
- **WHO** will measure it?
- **WHERE** will the data come from?
- **WHEN** and how often do you measure it?
- **HOW** do you measure it?





Who will measure it?

Stakeholders could be involved in any of the following activities:

- Identifying the monitoring objectives
- Developing indicators
- Deciding on data collecting methods and timing
- Collecting data
- Validating and interpreting findings
- Making suggestions on solutions and adaptive management

This is known as **participatory M&E (PM&E)**



Participatory M&E (PM&E)

A process through which stakeholders at various levels engage in monitoring or evaluating a particular project, program or policy. PM&E focuses on the active engagement of primary stakeholders.

(WORLD BANK 2010).



Who is involved in PM&E

- National agencies
- Local governmental unit staff
- Fishers (both large-scale and small-scale)
- NGOs
- Local educational institution staff
- Representatives from communities or user groups
- Researchers



Advantages of PM&E

- Includes stakeholders' input and ideas to develop the M&E system
- Increases relevancy and appropriateness of M&E
- Shares responsibility, trust, ownership and results
- Builds capacity and empowers stakeholders to use information for decisions
- Leads to adaptive management that better responds to stakeholders' needs



Disadvantages of PM&E

- Requires facilitation
- Needs long-term commitment
- Can be time consuming and difficult
- Unclear budget sources
- Requires skill training and scientific quality control
- Requires understanding and acceptance of different types of indicators
- Could bring out conflicts, especially when local expectations are not met



EAFM Plan outline

*Now 1st part of Step 3 is completed.
We can use the results in the EAFM plan*

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)**



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
- Indicators and benchmarks are developed to assess whether objective are being achieved
- Participatory M&E facilitates locally appropriate indicators



13. Steps 3.3–3.5 Management actions, compliance, finance & finalize EAFM plan



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Coral Triangle Support Partnership



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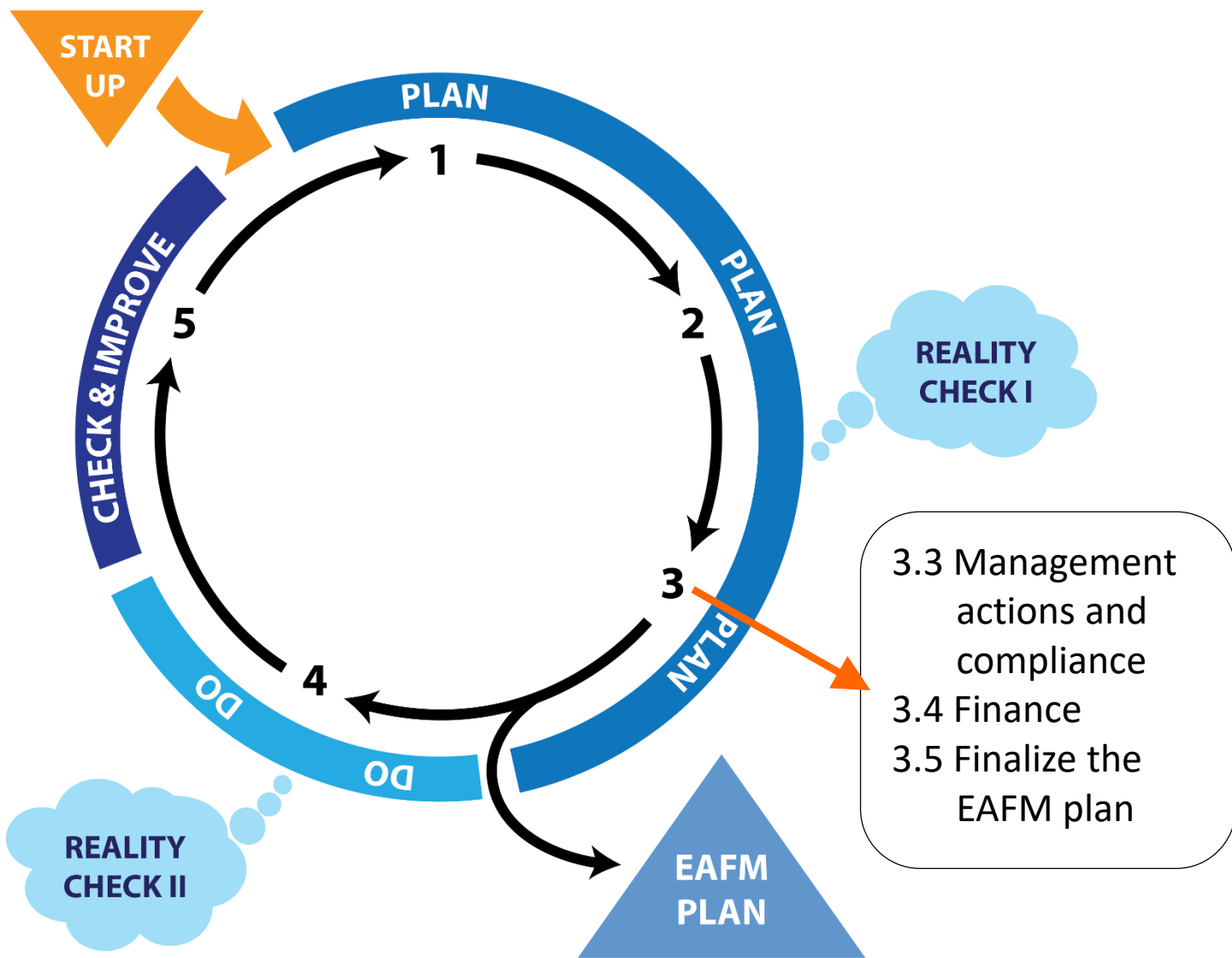
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Session objectives

After this session you will be able to:

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



Building the EAFM plan

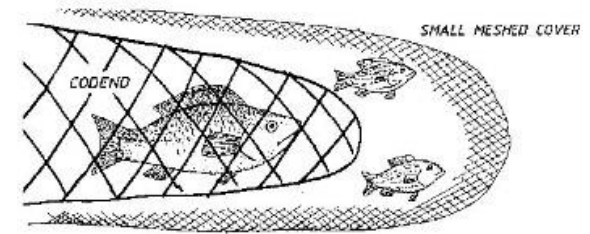


3.3 Management actions

An action that will help meet the objective.

Management actions could include:

- Technical measures
 - Catch and effort controls (e.g. gear, limited entry)
 - Spatial and temporal controls (e.g. MPAs, seasonal closures)
 - Limits on net mesh size
- Ecosystem manipulation
 - Habitat restorations (e.g. plant mangroves)
- Community-focused activities
 - Income diversification (e.g. alternative livelihoods skills)



See the “Manager’s toolkit” in your toolkit handout for more details

Management actions (cont'd.)

Management actions could also include:


- Human capacity development
 - Fishery management skills
- Strengthening institutions
 - Increase coordination (e.g. Inter-agency task forces)
- Working with others to achieve objectives outside your mandate
 - ICM, MSP, Environment Agency, etc.





Grouping management actions

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



Compliance & enforcement

- Management actions need to be complied with to be effective
- For fisheries compliance and enforcement, we use the term monitoring, control and surveillance (MCS)
 - Monitoring - data/information gathering need for setting controls and for compliance
 - Control - rules/controls applied to the fishery
 - Surveillance – patrolling and enforcement

MCS needs:

- Cooperation and coordination across several agencies and stakeholder “buy-in”
- Training & financial resources
- Education and awareness raising
- Surveillance and effective penalties



Top-down

Government MCS:
Fishery patrols
enforcement



Limited capacity

Transparency issues?

Bottom-up

Local MCS:

Co-management fish wardens and “eyes on the water” improve safety!



Encourage stakeholders' acceptance of the rules



Top-down vs. bottom-up

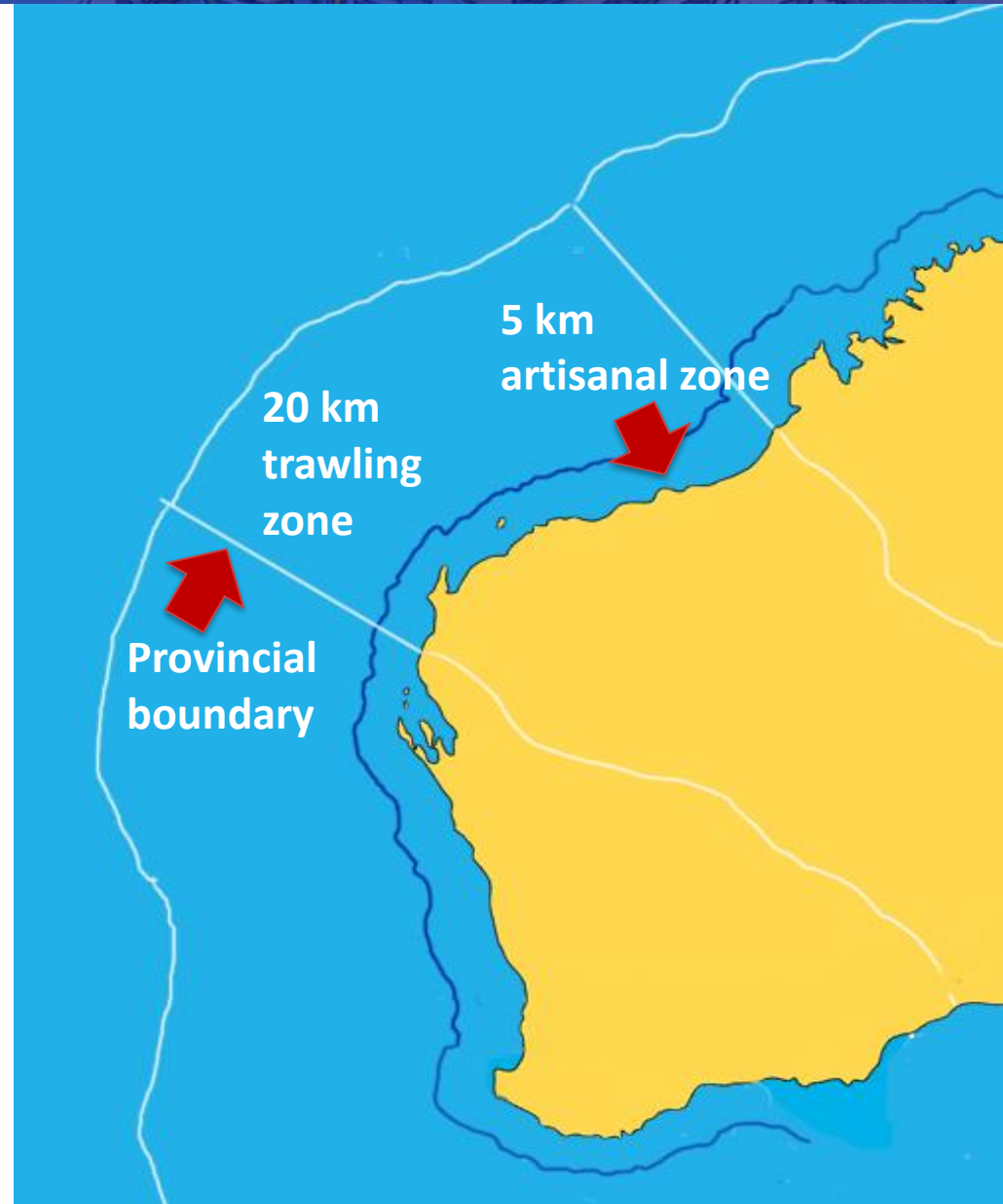
- Often a combination of both is needed
- Developing the EAFM Plan with full stakeholder participation increases “buy-in”
- Stakeholder “buy-in” reduces the need for enforcement , *i.e.* it generates self-compliance
- Need to develop appropriate incentives

Port monitoring – catches/landings and gear



Example of MCS: monitoring fishing zones

- VMS to track larger vessel compliance
- GPS for small boats



Another example: wheelhouse markings





3.4 Financing

- Plan needs to have a section on how it will be financed i.e. the 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



Sources of funding

- Preferably Government
(part of the normal budget cycle)
- Other sources:
 - Government special grant
 - Donors (may cover start up costs but not ongoing)
 - Grants from NGOs , RGOs
 - Fishing fee (*e.g.* licenses)
 - Linked to access rights
 - Fines for non-compliance
 - Stakeholders (share the costs)
 - Private sectors



Step 3 is now almost completed.

We can insert the results into the EAFM Plan

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 information needs (Step 3)**
9. **Financing (Step 3)**

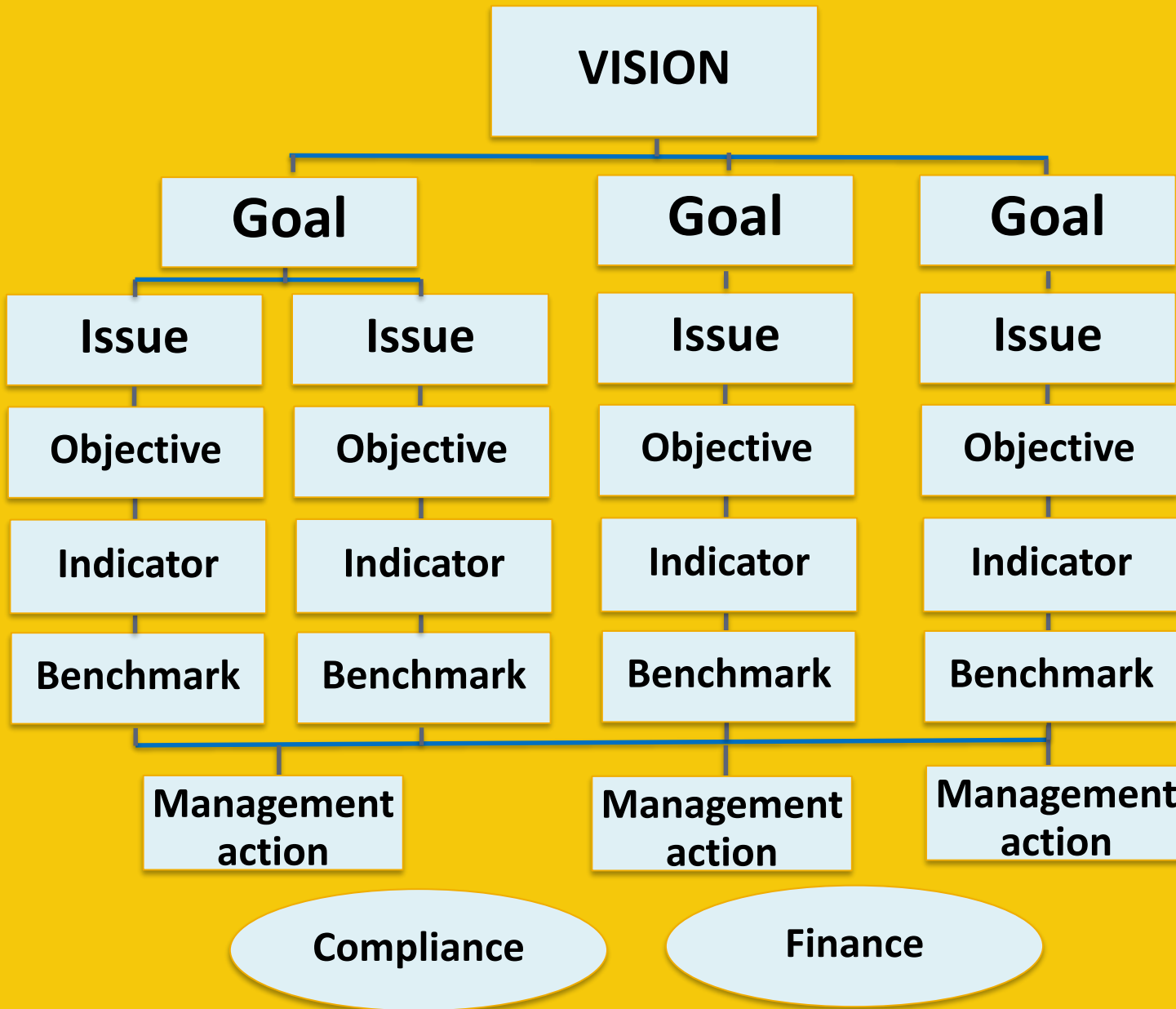


Activity 27

Identify management actions

1. Produce a set of management actions for the objectives you identified earlier
2. For each action, consider appropriate compliance and enforcement actions, taking practicalities and costs into account
3. Discuss financing mechanisms needed to implement the management actions

See output on the next slide





3.5 Finalizing the EAFM plan

- You have now completed headings 1 – 9 of the EAFM Plan
- The last headings on communication and reviewing can also be added now or later
 - How the plan is to be communicated?
(*e.g.* link to a communication plan (Step 4))
 - Frequency of reviews
(*e.g.* link to M&E (Step 5))



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 4.1
Formalize, communicate,
engage & implement

How can we tackle the turtle bycatch problem?

PROVINCEOFFICE

PLAQUE PROTEGEE AREA NO TRAWLING



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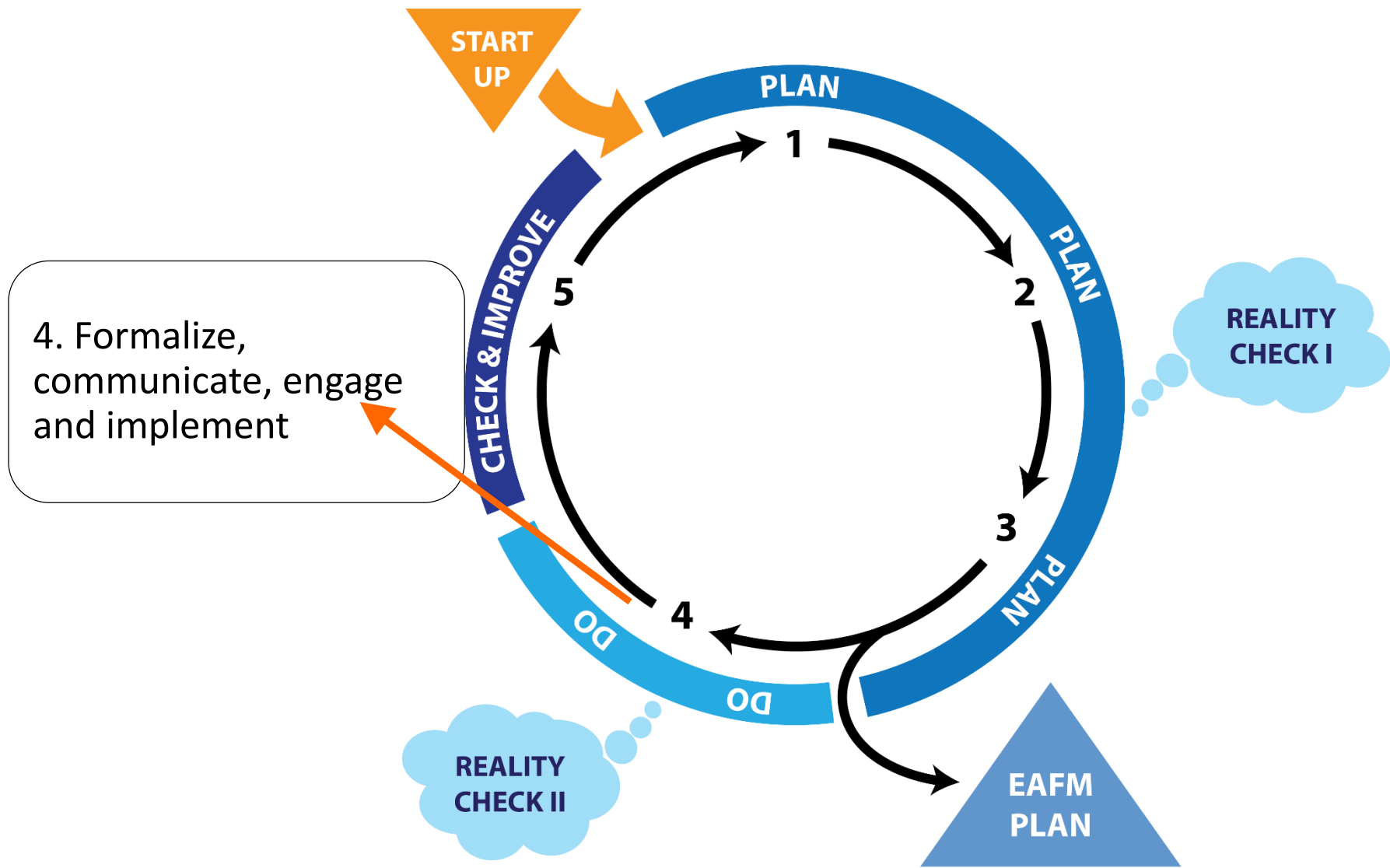
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Session objectives

After this session you will be able to:

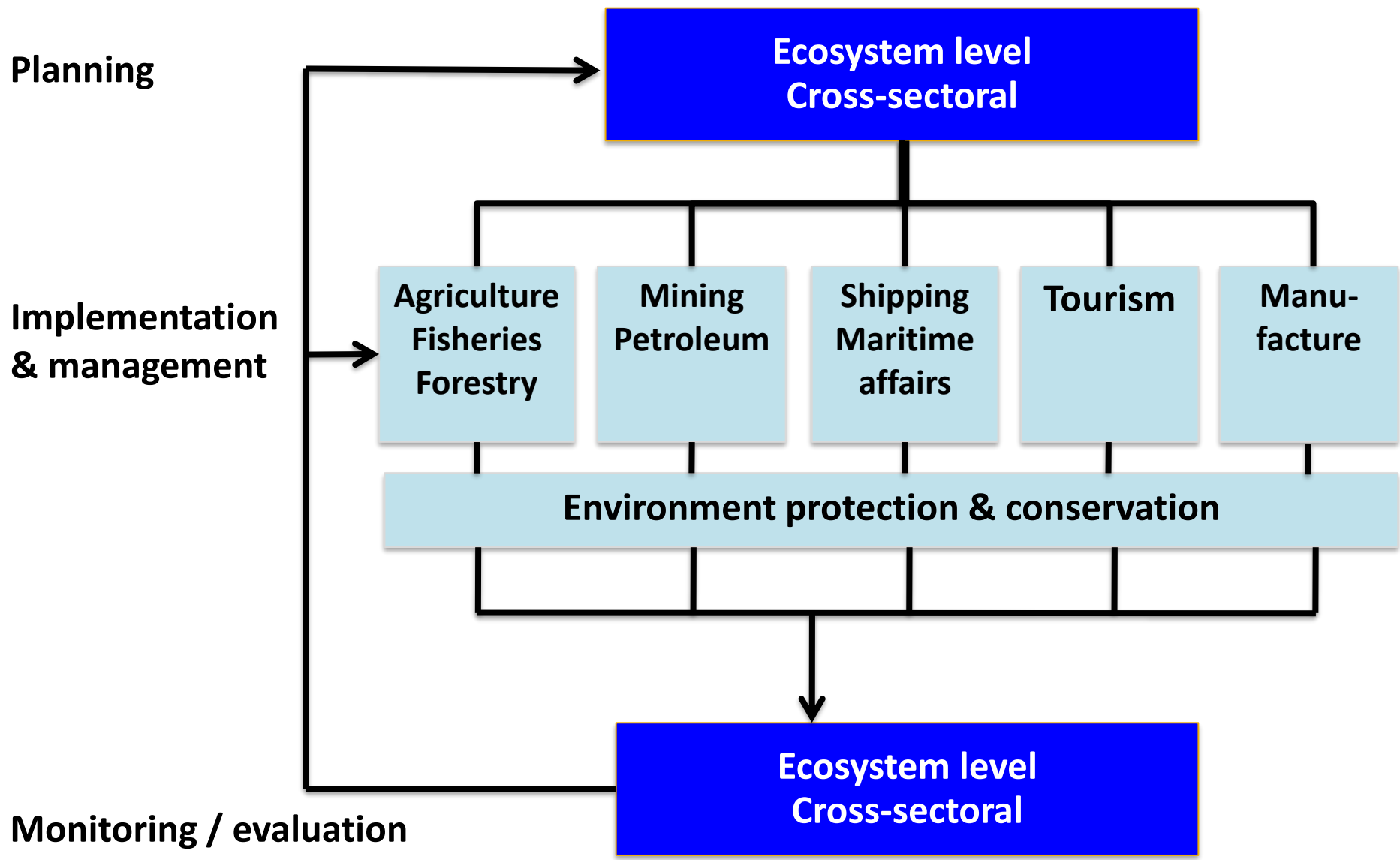
- Summarize what is meant by formal adoption of the EAFM plan
- Develop a communication strategy
- Develop an implementation work plan





Implementing the EAFM Plan

- Usually governments' work is organized into sectors (*e.g.* mining, transport, agriculture, fisheries)
- Implementation will require working with other sector
- Each agency should have a clearly defined role and responsibility
- Implementation at grass roots level (*e.g.* fishing communities) will be less sectoral, but will still require coordination and cooperation across agencies





A work plan helps implement the EAFM Plan



EAFM plan



Implementation
work plan



Implementation work plan

- Most effective if mainstreamed into annual budget cycles and plans, but this may take time
 - 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



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 depend on the country's
 - Decree
 - Ordinance
 - Proclamation
 - Local government acts
- Important to link the plan to existing legislation
 - *e.g.* Fishery Act





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



Communicating the EAFM Plan

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?



Communication Strategy

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



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. Reality check II



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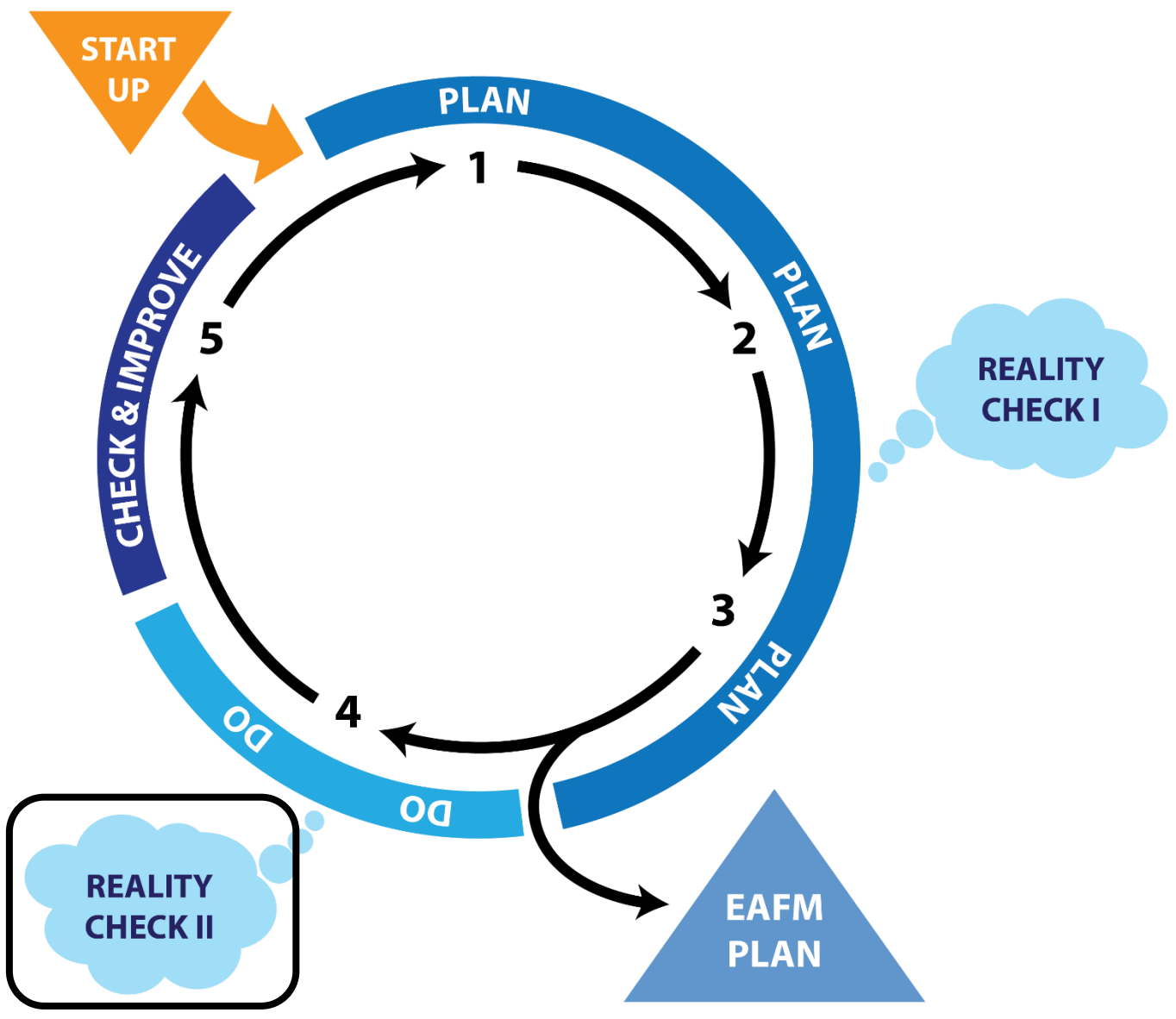
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Session objectives

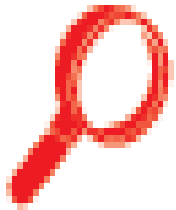
After this session you will be able to:

- 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





Reality Check II



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

Key principles of EAFM



1. Good governance



2. Appropriate scale



3. Increased participation



4. Multiple objectives



5. Cooperation & coordination

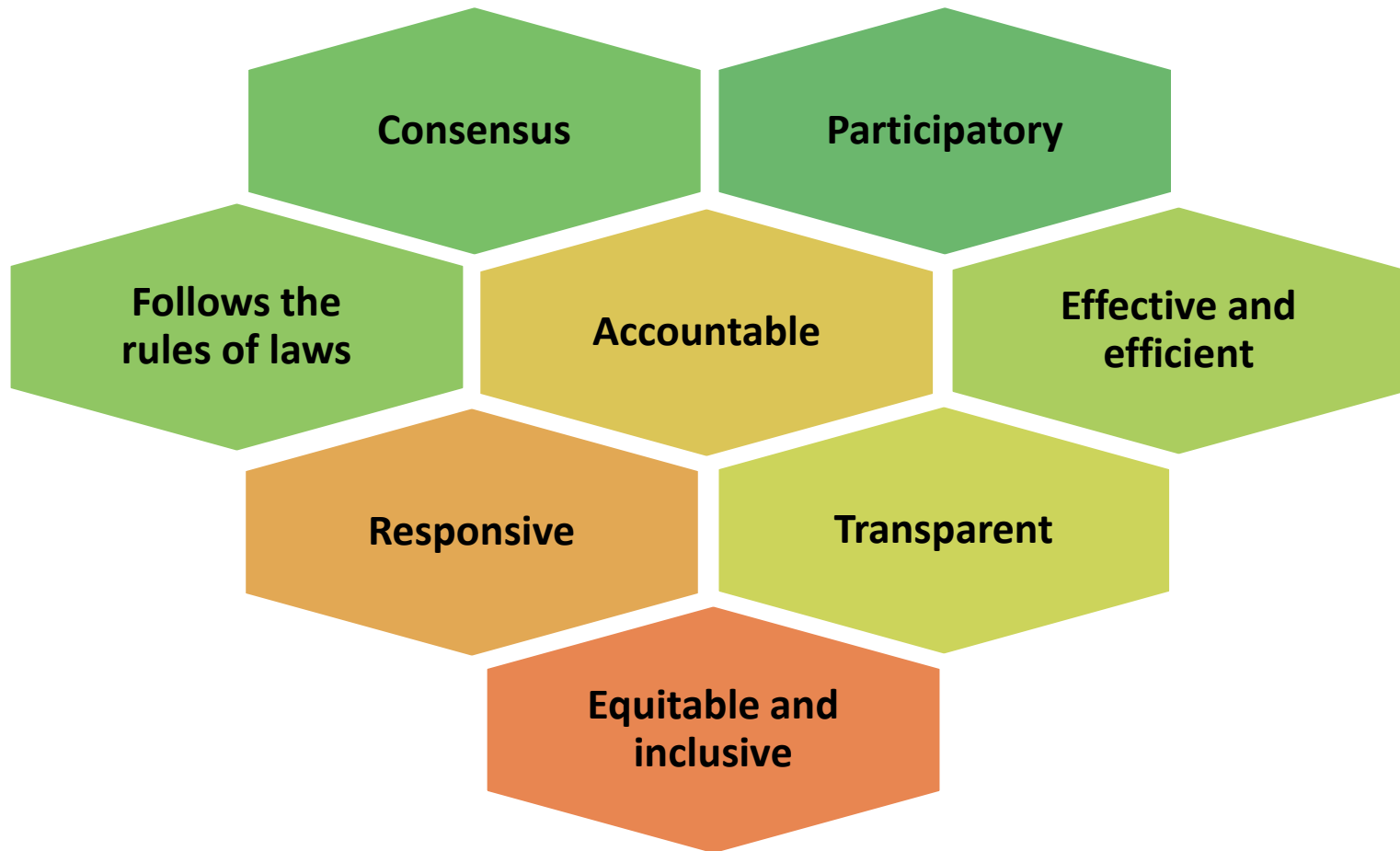


6. Adaptive management



7. Precautionary approach

Good Governance



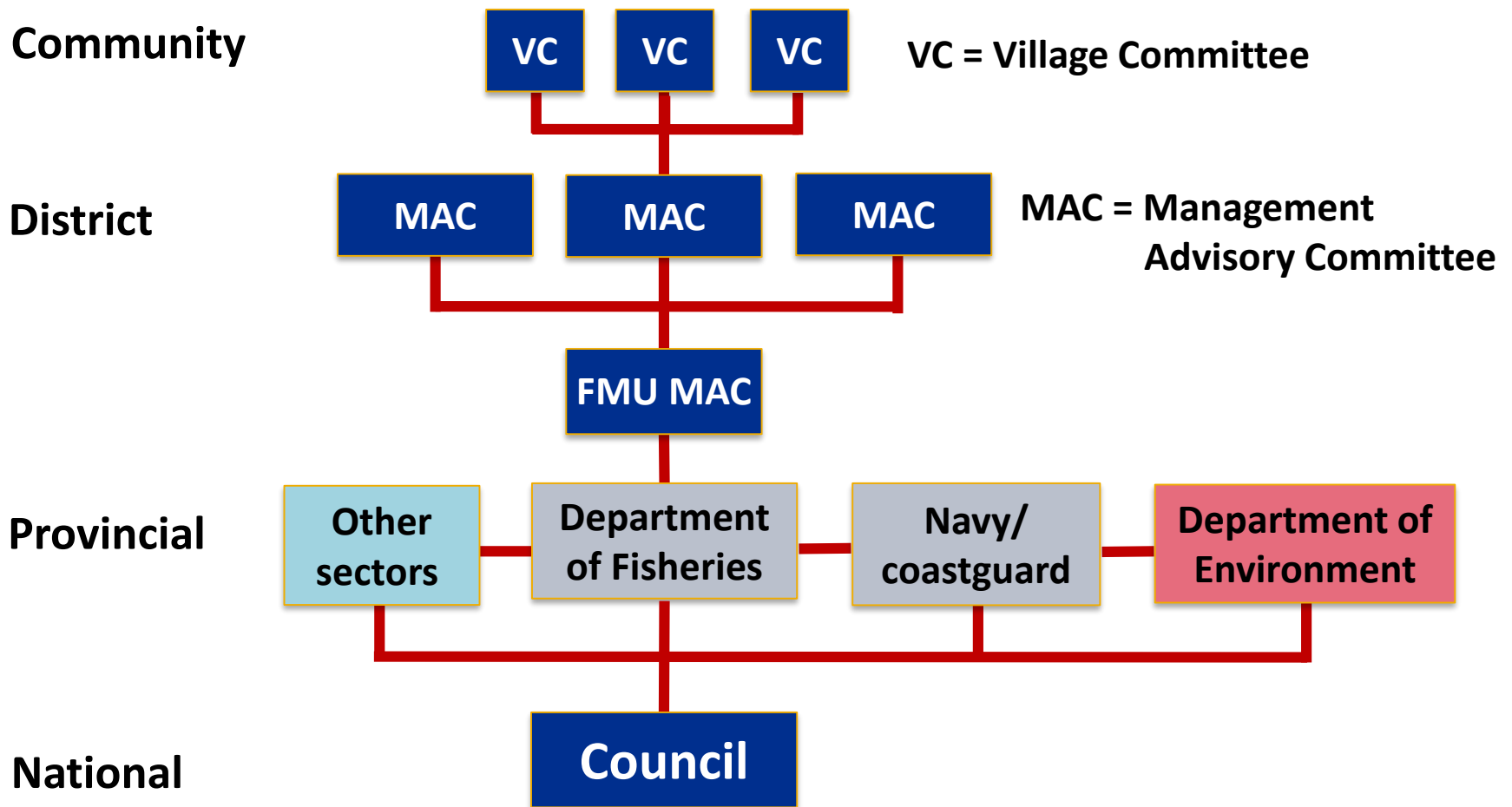
Source: <http://www.unescap.org/pdd/prs/ProjectActivities/Ongoing/gg/governance.asp>



Governance check list

1. Is the legal framework not blocking EAFM?
2. Are rules and regulations in place and agreed to by stakeholders?
3. Do we have effective compliance and enforcement?
4. Are effective governance arrangements in place for coordination and cooperation?

Governance arrangements





Other success factors

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

- Are we working at the right scale?
- Is co-management working through empowered stakeholders?
- Are we learning through adaptive management?



Activity 28

Reviewing the principles

1. There are 7 principles (on white paper)
2. There are questions (on color paper)
3. Match the questions to the principles



Also need a supporting environment

- Adequate resources (personnel, equipment, training) for EAFM?
- Adequate financing?
- Adequate data and information to support management?
- Effective communication strategy?
- Effective monitoring and evaluation (M&E)?



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?



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, and has an annual budget been allocated?
2. Have other sources and models for funding (e.g. “user pays”) been adequately investigated?



Activity 29

Turning constraints to opportunities

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 outside of the circle discuss what is needed to turn them into opportunities



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
- Check whether the practical arrangements are in place (*i.e.* the supporting environment)



16. Steps 5.1 & 5.2
Monitor, evaluate & adapt

How can we tackle the turtle bycatch problem?

MARINE PROTECTED AREA
NO TRAWLING



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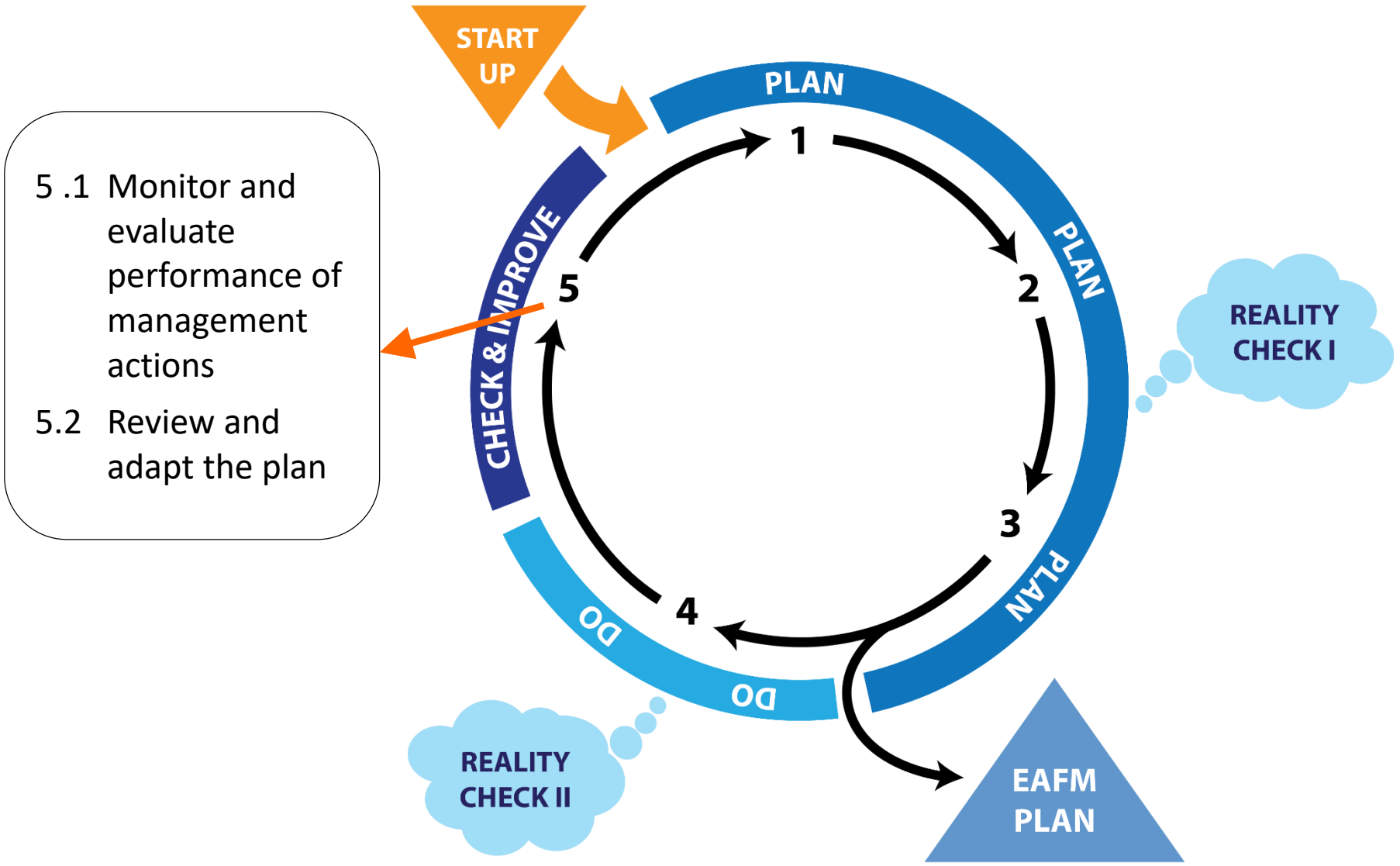
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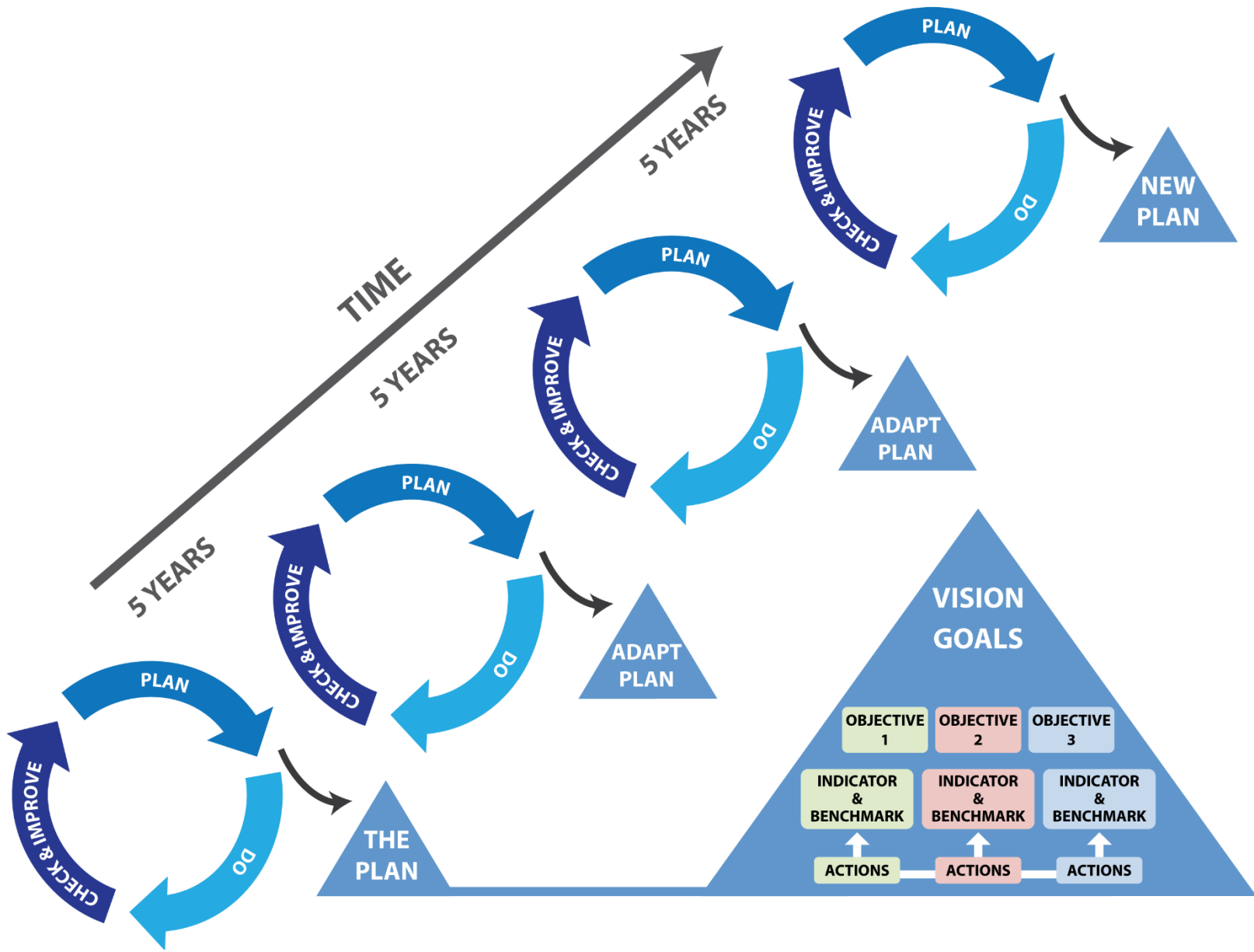


Session objectives

After this session you will be able to:

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







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: DO NOT GET CONFUSED WITH “MONITORING” IN MCS
(which means monitoring for compliance and enforcement, not the broader monitoring needed here)



The sub-steps

5.1 M&E

- Monitor: Collect data (focus on indicators)
- Evaluate: Collate results of monitoring and evaluate management performance against benchmarks, and report

5.2 Review and adapt the EAFM plan

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

A blue-toned illustration of a coastal scene. In the foreground, a small boat with two people is on the water. In the background, a larger boat is visible, and a sign on a post reads "PROTECTED AREA No Boats". The scene is set against a dark blue background with white waves.

Monitor

- Collect data for each indicator
 - Avoid unfocussed data collection but do not ignore relevant information (*e.g.* fishermen observations, environmental change)
- Make monitoring participatory where appropriate
- 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



Evaluate performance

Assess each indicator against its benchmark to measure the effectiveness of each management action.

Example:

Objective: Increase area of mangrove habitat

Indicator: Hectare of mangroves

Benchmark (baseline): 10,000 ha in the year 2010

Benchmark (target): increase 50% by 2020 (15,000 ha)

Indicator in 2018: 50% of baseline (5,000 ha)

Evaluation: Is management working ?
Is there a need to adapt?



Evaluate performance (cont'd.)

- Evaluate all indicators
- Collate, analyze and describe the overall performance of management actions

Assess other sources of information that verify (confirm or disprove) the indicator evaluation
e.g. cross-check with stakeholder observations

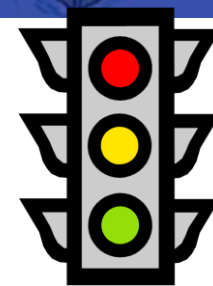


Communicating and reporting

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

Traffic light system

An example of a simple reporting system



Goal and objective	Assessment
Goal: Reform Thailand's marine fisheries to a limited access regime where the fishing effort is commensurate with the MSY	
Objective: Reduce fishing capacity and fishing effort	Green
Objective: Rebuild fish resources through artificial reefs and restocking programs	Green
Objective: Reduce the catch of juveniles of the larger commercial species	Yellow
Goal: Prevent, deter and eliminate IUU fishing	
Objective: Minimize IUU fishing through effective MCS	Green
Goal: Increase benefits for and reduce conflicts among major stake holders	
Objective: Resolve conflicts between small-scale and large-scale fishers	Yellow
Goal: Improve the marine environment	
Objective: Restore and maintain critical habitats	Yellow
Goal: Strengthen capacity to sustainably manage fisheries	
Objective: Improve fisheries data and information	Yellow
Objective: Strengthen fisheries management capacity	Yellow

Green: Performance is at or above benchmark

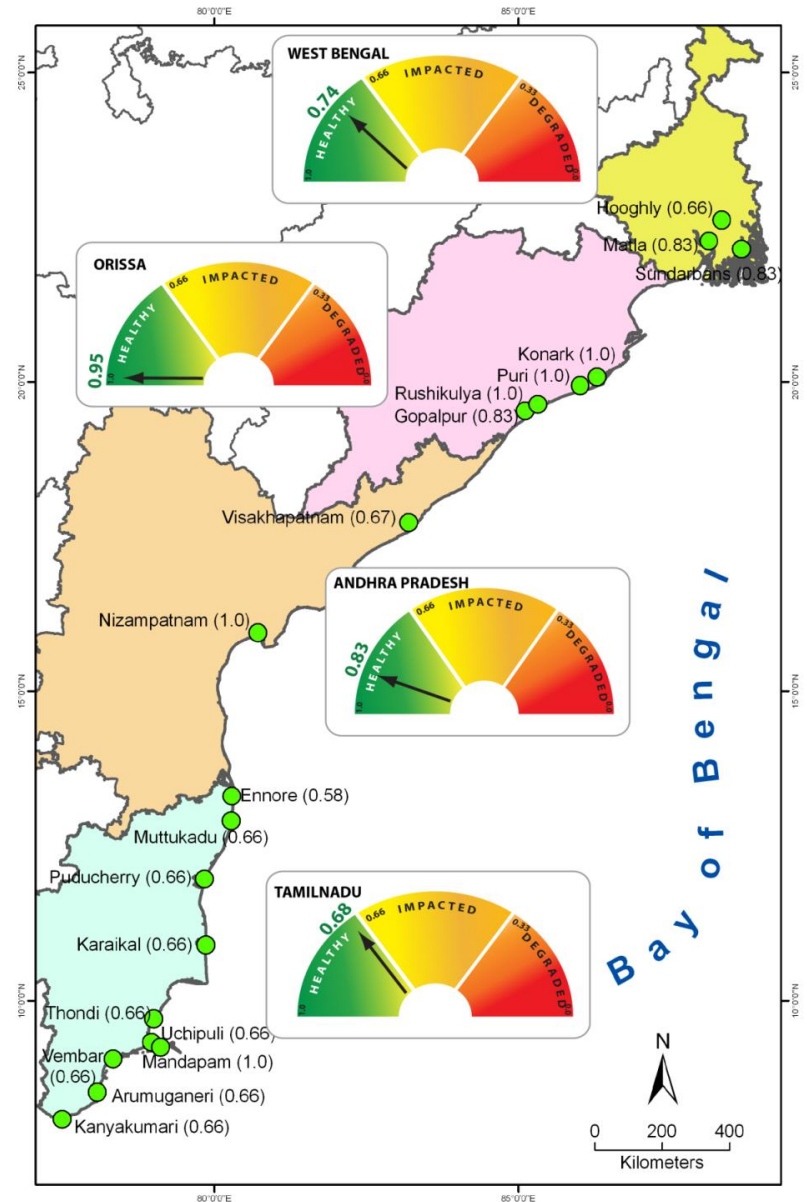
Orange: Performance is close to benchmark

Red: Performance is well below benchmark

Instrument panel

Another example of a simple reporting system

Bay of Bengal
Ecosystem health





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)



Short-term reviews

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



Long-term reviews

- Carry out a comprehensive review every 3-5 years.
- May be necessary to:
 - Reconsider goals, objectives, indicators, etc.
 - May need to rethink the whole plan and management system
 - Be carried out by independent auditor

If the plan is working, celebrate!!



Monitoring

1 YEAR



Short-term reviews

- Evaluate and adapt

- Management actions
- Compliance arrangements
- Governance arrangements

3-5 YEARS



Long-term reviews

- Evaluate and adapt

- Reconsider goals, issues and linked objectives, actions and indicators

An illustration at the top of the slide shows a coastal scene with several boats on the water. One boat has a sign that says "PROTECTED AREA". There are also some buoys and a pier in the background.

Key messages

In Step 5:

- Monitor, evaluate and adapt completes the EAFM cycle ready to enter the next cycle
- Yearly review: are you meeting or progressing towards the objectives?
(If not, adapt the management actions and compliance arrangements, where necessary)
- 5-yearly review: are you meeting objectives and goals?
(If not, it may be necessary to also revisit issues and goals and start again)



Home work: preparing presentations

- For tomorrow, present your 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



EAFM QUIZ!

