





- 1. Applying EAFM principles: Case study from the Krabi Province, Thailand**
- 2. Applying EAFM principles: Case study from Kampot, Cambodia**
- 3. EAFM planning: Case study for the Philippines – Visayan Sea**
- 4. Moving towards EAFM: Case study from Hawaii**
- 5. Scaling up EAFM: Case study of the Sulu Sulawesi Seascape Sub-regional Plan**
- 6. Monitor, evaluate and adapt: Case study for the marine fisheries management plan of the Gulf of Thailand**



**These marine case studies were developed as part of a revision of the Essential Ecosystem Approach to Fisheries Management (E-EAFM) training course for the Southeast Asia Fisheries Development Centre (SEAFDEC) in 2019. The revision was funded by the USAID Regional Development Mission for Asia (RDMA) implemented by the National Oceanic and Atmospheric Administration (NOAA) and administered by the National Marine Sanctuary Foundation (NMSF).**





# 1. Applying EAFM principles: Krabi, (Thailand) Case Study



# Intoduction

This case study will discuss how..

- Krabi Province is applying the EAFM
- How this has helped to reduce stakeholder conflict and acquire sustainable financing
- Adopting EAFM is leading towards sustainable fisheries management.



# Coastal Ecology of Krabi

- World famous coastal resources.
  - Karst islands
  - White beaches
  - Mangroves
  - Seagrass
- TOURISM- 5th in tourism income in Thailand - six million arrivals/ year



# The people of Krabi

- >450,000 people live in Krabi province
- Buddhist, Muslim, Chao Ley (Monken)
- Fisheries – one of the most important livelihoods for all groups



# Marine Fisheries of Krabi

- Diverse fisheries
  - Demersal fish
    - Snapper
  - Pelagic fish
    - Mackerels
  - Shellfish
    - Dog Conch
  - Crustaceans
    - Lobsters/ crab





# Krabi Fisheries Management Timeline (1974-2017)

Year	Event
1974	Stationary fishing gear permitted in Krabi and start of bamboo stake net fishery
1980's	Bamboo nets started to be replaced with netting
1990's	Stake net boom
2000	'The Beach' movie that promoted the tourism boom begins
2004	Tsunami wipes out most of the stake net facilities
2009	Number of Stake nets reaches 455. VIP Guest boating accident. Government fund a change in fishing gear. Stakeholder meetings agree to remove all stake nets within 5 years.
2014	New Government takes power- 195 stake nets remain. First demonstrations by stake net fishers and a 1 year extension granted. No new stake nets allowed.
2015	Navy, Department of Fisheries (DoF) prepare to remove remaining stake nets Thai ordinance (No. 58) bans 6 types of fishing gear, including bag nets Controversial plans to renovate and expand Krabi coal plant
2016	Second demonstration by stake nets fishers. Governor arranges public hearing that agrees to remove all remaining stake nets Provincial Fisheries committee established (Governor, DoF, fisher representatives) Similarity between bag nets and stake nets supports their removal and all remaining

# Krabi Fisheries Management Timeline (2017-2019)

Year	Event
2017	<p>66 coastal fisher organizations established</p> <p>Local Fishery management plans (FMPs) drafted</p> <p>Provincial fishery officer attends EAFM training by SEAFDEC,</p> <p>Revision of FMPs – alignment to EAFM principles</p>
2018	<p>Budget for EAFM plan implementation provided.</p> <p>Provincial Governor fund established and a Provincial cluster fund.</p> <p>Electricity Generating Authority of Thailand (EGAT) and Ladkrabang University influence</p> <p>Establishment of crab bank, conservation area, (shellfish), artificial reef, and restocking programme.</p> <p>Livelihood diversification promoted - fish processing group, bee keeping group, eco-tourism group, souvenir group, Thai snacks, agriculture groups</p> <p>SEAFDEC pilot project starts in Nai Nang Village</p>
2019	<p>Additional budget acquired from Prime Minister’s office</p> <p>SEAFDEC EAFM training for stakeholders in Krabi and implementation of EAFM plans and encouraging participation in EAFM activities</p>

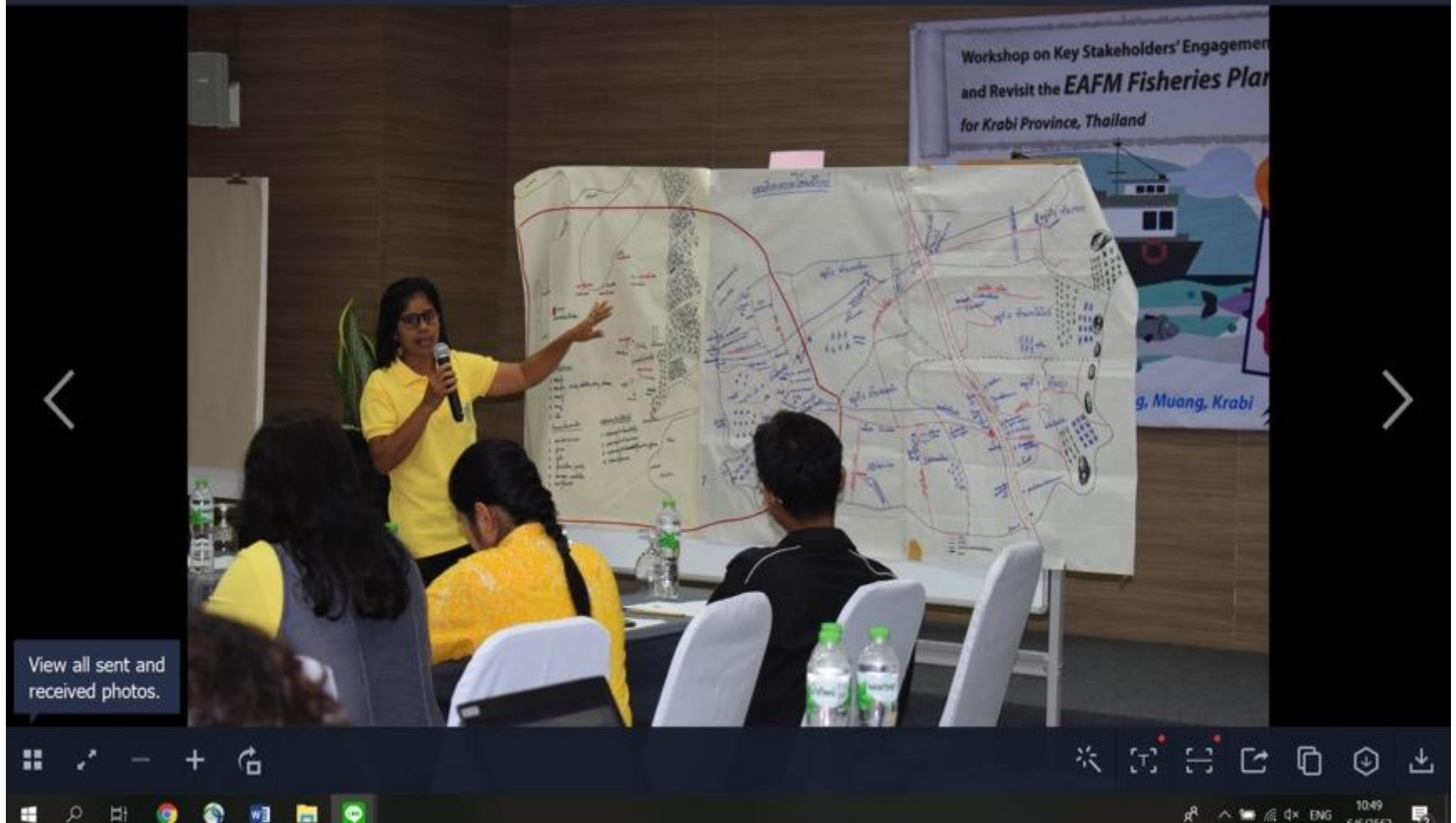
# A contentious issue- Staked nets

- Bamboo staked traps, high potential to trap every size of aquatic animals,
- Although passive- considered a destructive gear
- no clear boundary between bamboo stake trap and mackerel gillnet fishing resulted in conflict
- Navigation hazard and tourist 'eyesore'



# EAFM comes to Krabi

16/18



View all sent and received photos.

# SEAFDEC's pilot project- Nai Nang

- Nai nang village, small sea side village in Muang Krabi district, Krabi province, Thailand.
- Community rely on the ecosystem, most of its people are in activities, such as fishing, rubber tapping and palm gardening,
- Environmental conservative tourist program managed and serviced by local people with their cordial welcome.



# SEAFDEC EAFM Team in Action



# Stakeholder engagement



# Impacts of EAFM in Krabi

- EAFM has contributed to:
  - Increased fisheries resources
  - Reduced stakeholder conflict
  - Livelihood diversification (but most still fishing)
  - Improved relationship between Gov agencies and communities





# Some Lessons learned

- Strict law enforcement can be confrontational.
  - Better to let people adjust their mindsets and attitudes before enforcing the law.
- Officers need to get to know the particular community,
  - to identify and acknowledge the problems and encourage people to participate in a process of finding a solution.

# EAFM Score sheet

<b>Principle</b>	
<b>Good Governance-</b> Increased compliance to fishery laws, conservation area for aquatic species, e.g., blood cockles	
<b>Appropriate scale.</b> 66 integrated community EAFM plans.	
<b>Increased participation-</b> - increased people participation, engagement, and coordination with key stakeholders in decision making process to set up a resource management plan and accepting the agreement on following the law to fight against IUU fishing that came up with the bamboo stake traps removing	

# EAFM Scoresheet (2)

<b>Principle</b>	
<b>Multiple objectives;</b> Tourism, fisheries, energy, agriculture,	
<b>Cooperation and coordination,</b> Provincial authorities playing a key coordination role.	
<b>Adaptive management.</b> SEAFDEC learning centre (pilot) allows for refinement of EAFM.	
<b>Precautionary principle.</b> Declaration of blood cockle conservation area	

# Capacity Building

- DoF and SEAFDEC should remain engaged in building/ supporting the capacity for EAFM implementation in Krabi.



## 2. Applying EAFM principles: Kampot Cambodia case study

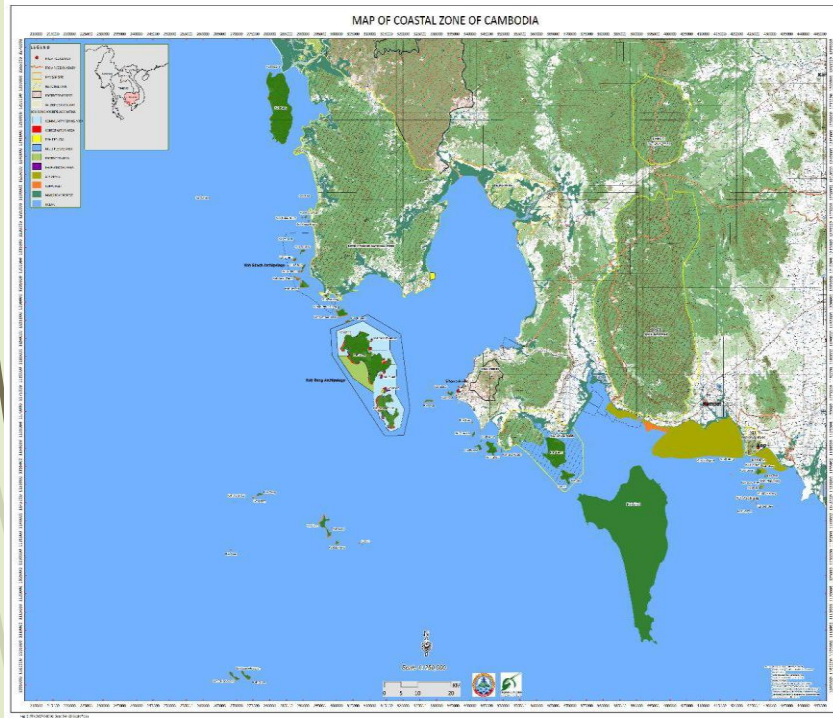


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Prepared by EAFM team of FiA

25 June 2019

# Geography



- ▶ Trapang Ropov fishing ground was formed by two community fisheries (Cfi) located in the trans-boundary between Preah Sihanouk and Kampot provinces.
- ▶ It is the main fishing ground for local communities who are living in Trapang Ropov and Prey Nup 2 fisheries communities.
- ▶ The site has various fisheries resources, fish, blue swimming crab, seagrass bed conservation, blood cockle *refugia* and mangrove area. It has habitat for endangered species like dugong, sea turtle, and sea horse.
- ▶ It is a major tourist destination, but also many development from private sector are occurring (resorts, port, oil industry...)
- ▶ In 2017 the population of this fishing ground is 2,991 families with 835 house hold involved with fishing (fishers) and 300 fishing boats (long tail boats).

## Ecology and Fishing activity of Trapang Ropov fishing ground



- ▶ The management area of this site is 5,952 ha ( mangrove 698 ha, seagrass bed 700ha, blood cockle 102 ha, and blood cockle conservation 15 ha).
- ▶ The target species are mud crab (*Scylla serrate*), Mackerel (*Rastrelliger* spp.), Anchovy (*Stolephorus* spp); *Amblygaster* spp. , blood cockle (*Anadara granosa*) and Blue swimming crab (*Portunus pelagicus*).
- ▶ Fishing gears used in this area include crab trap, mullet gill net, gill net, and push net.

# Trapang Ropov Fishery Management Timeline

Year	Event
1980-2001	All fisheries management under Department of Fishery (DoF), at the National level.
2002	Community Fisheries formed by sub-degree and proclamation. It gave the right to Community Fisheries (CFi) to manage and protect fishery resources under supervision from the Fisheries Administration (FiA) and Fisheries Administration Cantonment, (FiAC) and Provincial fishery officers. The CFi sets area of management, responsibilities of various agencies, and regulation of access to fisheries.
2004-2005	A project that focused on governance resources and co-management, which was supported by South China Sea, demarcated seagrass boundary and installed some concrete boxes to prevent trawling in shallow water (seagrass bed)
2006	Declaration of the Fisheries Law
2018-2019	Pilot site for EAFM- The site has EAFM management plan in late 2018 under support from SEAFDEC.



## Why this is a good case study



- EAFM Pilot sites in Cambodia
- Examined 2 provinces (Preah Sihanouk and Kampot provinces)
- Joint transboundary management fisheries resource between two provincial fisheries officer (one regulation to manage area shared by two jurisdictions) - **[scale]**
- Co- management [**cooperation and coordination**] and joint patrols with CFI and FiAC
- Realistic planning process



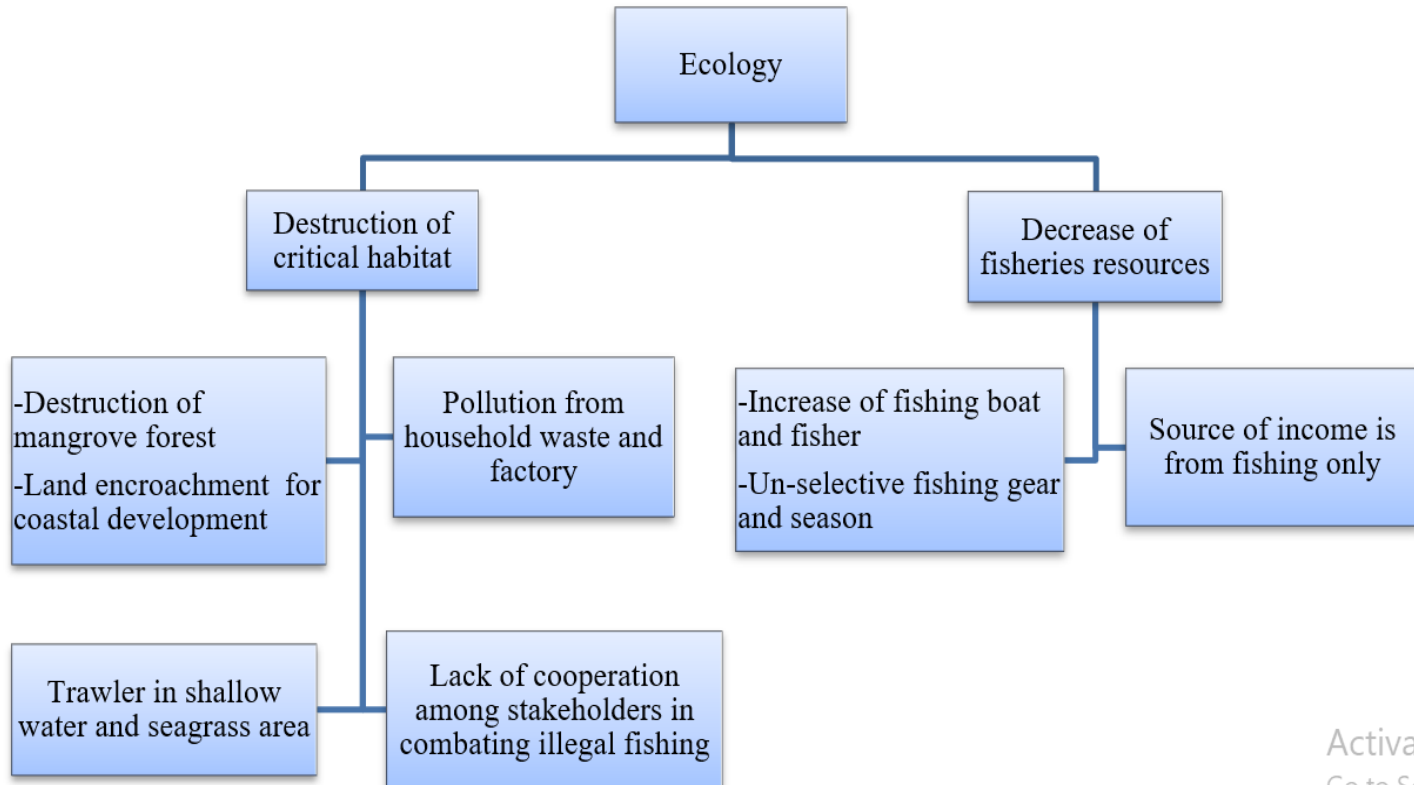
## Problem/ issue

- ▶ IUU fishing still occur in CFi area (form neighboring country and out side CFi).
- ▶ Limited cooperation among stakeholders
- ▶ Limited knowledge of local people on participation in fisheries management
- ▶ Few alternative livelihood opportunities (high dependency on fishing)
- ▶ Budget constraint

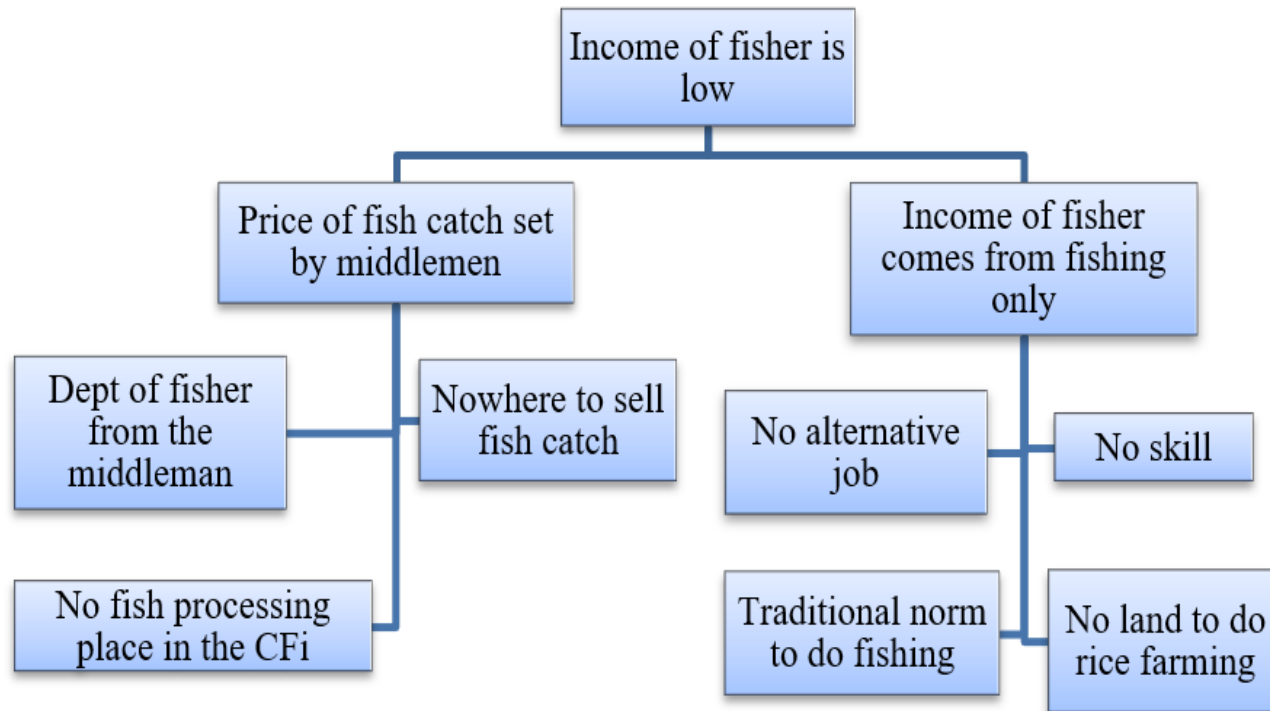
## Opportunities

- ▶ People like fish sauce that produced by CFi
- ▶ Combating IUU fishing is the priority of Royal Government of Cambodia (MAFF-FiA)
- ▶ People like eating sea food that caught by CFi (healthy food)
- ▶ Eco tourist is more popular in marine area

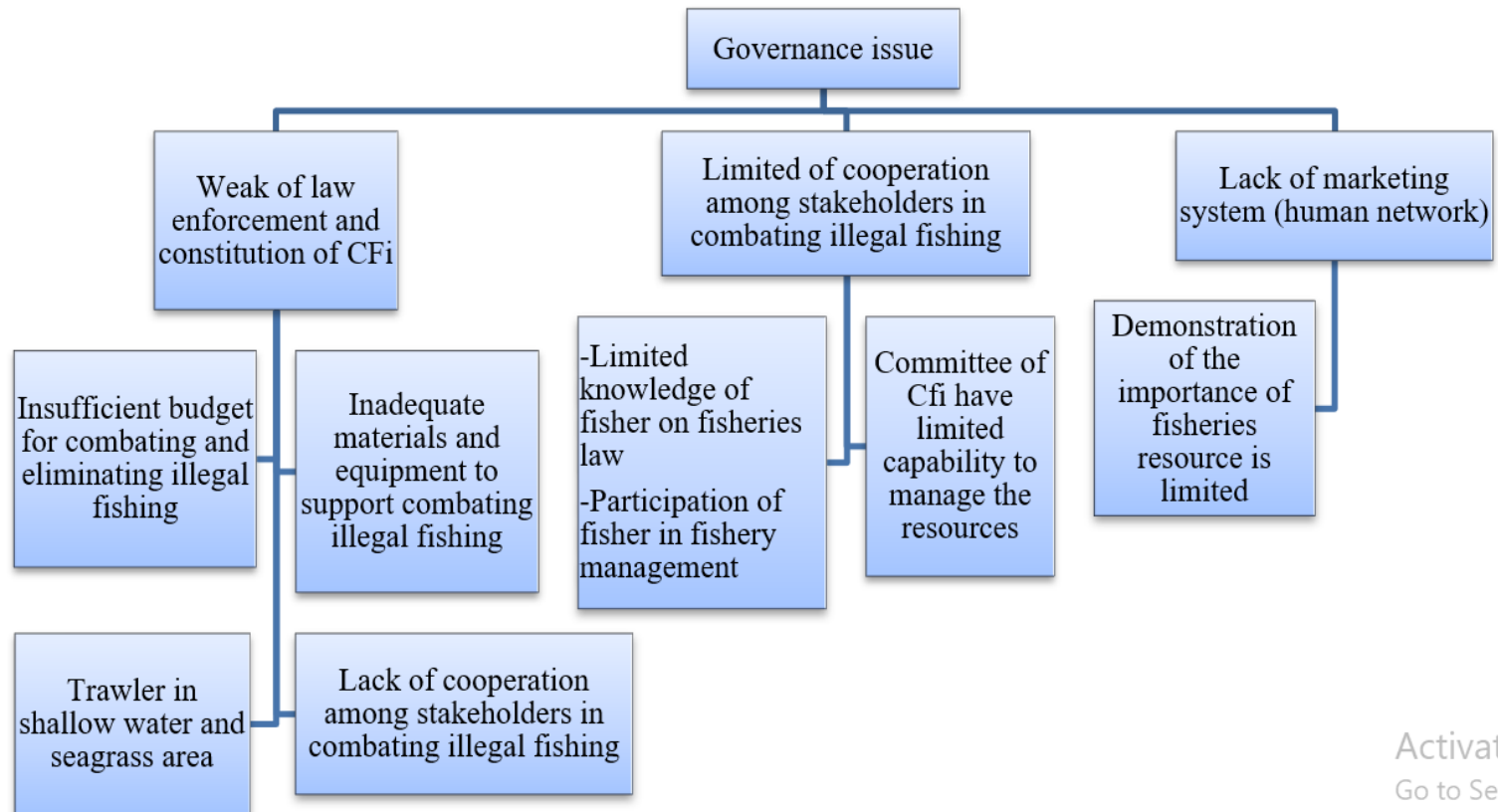
# Problem Analysis (Ecological factor)



# Problem Analysis (Human factor)



# Problem Analysis (Governance factor)





# Management Plan

## Vision

Sustainable Fisheries Resources Management and Enhancement of Livelihood of fishers in Trapang Ropov and Prey Noup 2 Community Fisheries, Tuek Chhou district, Kampot province, and Prey Noup district, Preah Sihanouk province.

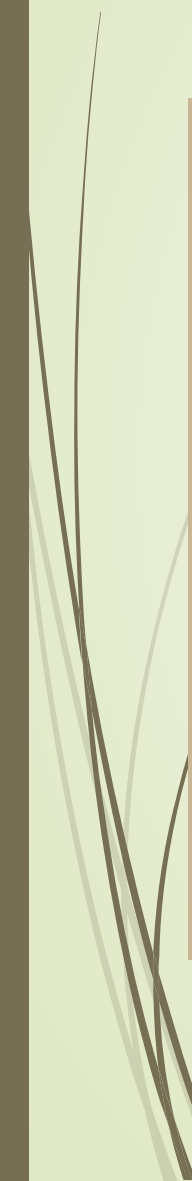
## Goals

- ▶ **Ecology:** Enhancement of fisheries resources and its habitat in Trapang Ropov and Prey Noup 2 Community Fisheries
- ▶ **Human:** Improvement of livelihood generation of fisher in Trapang Ropov and Prey Noup 2 Community Fisheries through introduction of alternative livelihood and skill of fisher apart from fishing activity.
- ▶ **Governance:** - Effective law enforcement (fisheries law and instruments, and constitution of community fisheries)
  - Strong cooperation among key stakeholders to engage in management and conservation of fisheries resources, and market of local fish and fisheries product



# Management Plan

## Objectives

- Rehabilitate critical habitat of fisheries resources and improve fish stocks in Trapang Ropov fishing area
  - Increase income of local fisher from fishing and fisheries related activities
  - Strengthen law enforcement and cooperation among stakeholders in combating illegal fishing practice within the Trapang Ropov fishing area
  - Enhance human networking to sell local fish and fisheries product
- 

# Management Plan

<b>Activities to be implemented under objective 1</b>			
1.1 Replant mangrove forest	Area of mangrove forest replantation	15 ha of mangrove forest replantation for 5 years (3 ha/year, 1,000 seeds/ha)	10 ha for <u>Trapang Ropov</u> and 5 ha for <u>Prey Nup 2</u>
1.2 Restore the seagrass bed	Area of seagrass bed restoration/maintenance	-100 ha of seagrass bed in <u>Prey Nup 2</u> maintained - 200 ha of seagrass bed restored in <u>Trapang Ropov</u> - 6 signboards and demarcated poles	
1.3 Put artificial reef to conservation area	Number of artificial reefs (concrete box, concrete pole)	- 300 poles installed in <u>Prey Nup 2</u> - 100 poles installed in <u>Trapang Ropov</u> - 100 concrete boxes in <u>Trapang Ropov</u>	



# Management Plan

## Activities to be implemented under objective 2

2.1 Provide alternative livelihood to fisher (fish source, and dry fish processing)	<ul style="list-style-type: none"><li>- Number of fish source group</li><li>- Number of dry fish group (កម្ម កម្ម)</li></ul>	<ul style="list-style-type: none"><li>- At least one group of fish sources formed and well operated</li><li>- At least one group of dry fish formed and well operated</li></ul>	
2.2 Create branding for fish source and dry fish	<ul style="list-style-type: none"><li>- Number of Brand for fish source</li><li>- Number of Brand for dry fish</li></ul>	<ul style="list-style-type: none"><li>- One brand for fish source</li><li>- One brand for dry fish</li></ul>	

# Management Plan

<b>Activities to be implemented under objective 3</b>			
3.1 Facilitate with commune council aiming at assist patrol team of CFi	- Strong cooperation between CFi and commune council	- At least one commune council involve in patrol team of CFi	-
3.2 Conduct regular meeting to strengthen cooperation of relevant stakeholders	- Number of stakeholder meeting conducted	- Meeting among stakeholders to strengthen cooperation of relevant stakeholders conducted at least once per month	-
3.3 Joint patrol with relevant stakeholders	- Number of day to joint patrol among key stakeholders	- Joint patrol for 8 days per month	-
3.4 Demonstrate fisheries law and instruments	- Number of fisheries law and legislations	Fisheries law and legislations demonstrated at least one time per month	-
3.5 Conduct awareness raising on importance of fisheries resources in daily living	- Number of awareness raising on importance of fisheries resources in daily living	Awareness raising on importance of fisheries resources in daily living conducted once per month	-

## Activities have been implemented

One activity has been promoted by SEAFDEC is fish sauce production for community livelihood



## Activities implemented



- ▶ Joint patrol and transboundary management with two FiACs (protection of resource)



# Activities implemented

➤ Mangrove replantation



## Activities implemented

- ✓ Eco- tourism
- ✓ Awareness raising activities



# Activities implemented

- ✓ Crab bank
- ✓ Mari-culture (seabass)



# Impact of EAFM in Trapang Ropov



➔ EAFM has contributed to:

- Increased fisheries resources ( Mangrove replanting, crab bank..)
- Reduced stakeholder conflict (IUU fishing )
- Livelihood improved (Cage culture, Fish sauce production and fish processing)
- Improved relationship between Government agencies and communities





# Lesson Learned

- ▶ The EAFM plan identified many activities (including capacity-building and livelihood support), but there is not enough budget to implement (other than the limited support from SEAFDEC and small budget from FiAC)
- ▶ In preparing the EAFM plan (and budget), we must be realistic - only identify activities that are likely to be funded, or have a strong strategy to find the resources to implement the identified activities - otherwise the plan is not going to be implementable
- ▶ Responsibility for implementing the plan lies with CFi, with support of FiAC; other agencies like Fisheries Conservation Department, facilitate technical support. Need to let other agencies (provincial government, Dept of tourism, Dept of environment, private sector etc) know about the plan so that they can also support it.
- ▶ EAFM should to improve in pilot site based on the 3 key principles EAFM - increase to participation, cooperation and coordination and adaptive management.



## Challenges

- ▶ IUU fishing still occur in CFi area (form neighboring country and out side CFi).
- ▶ Limited cooperation among stakeholders
- ▶ Limited knowledge of local people on participation in fisheries management
- ▶ Few alternative livelihood opportunities (high dependency on fishing)
- ▶ Budget constraint

## Opportunities

- ▶ People like fish sauce that produced by CFi
- ▶ Combating IUU fishing is the priority of RGC (MAFF-FiA)
- ▶ People like eating sea food that caught by CFi (healthy food)
- ▶ Eco tourist is more popular in marine area



## Further Actions

- Add more value to fish sauce production through nice packaging and eco-label
- Build shelter for selling Cfi products particularly fish sauce
- Strengthen participation of relevant agencies to engage in fisheries resources management
- Provide more training and activity to support livelihood community fishery (CFi)
- Continue to build awareness of relevant stakeholders for the improvement of current activities

**THANKS YOU FOR YOUR ATTENTION!**





**CORAL TRIANGLE INITIATIVE**  
ON CORAL REEFS, FISHERIES AND FOOD SECURITY



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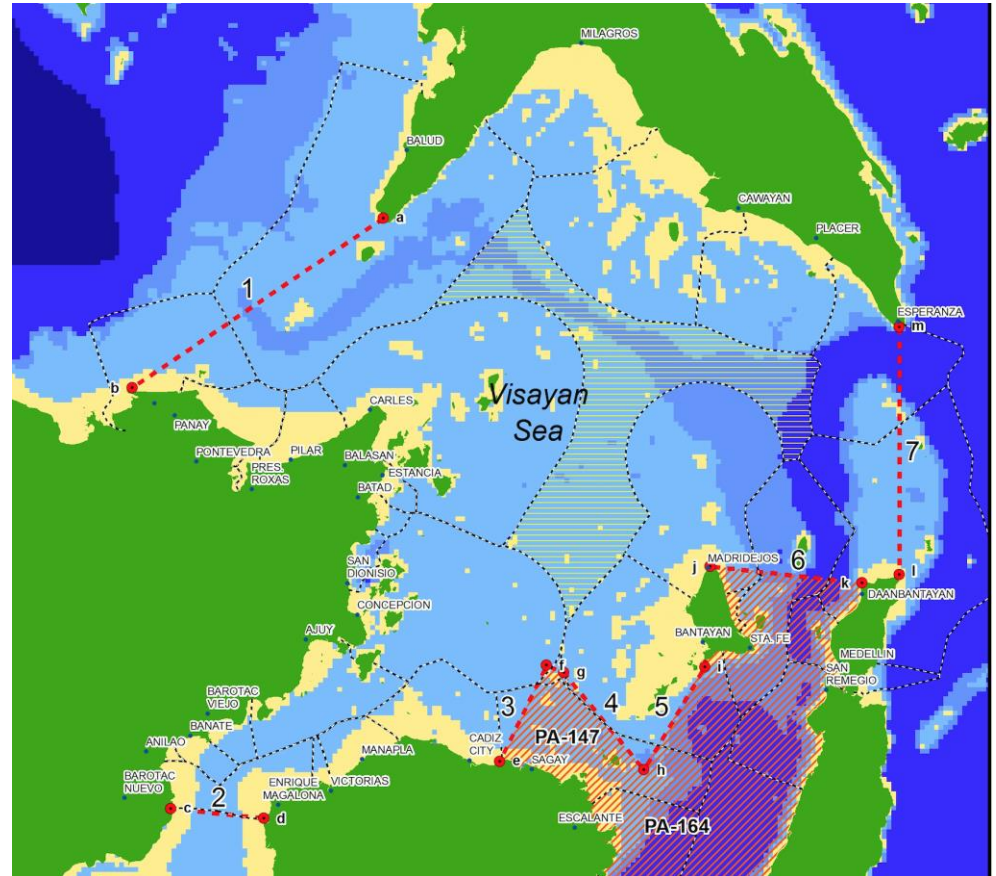
**ASIA**

# 3. EAFM Planning: Visayan Sea (PH) case study



# Visayan Sea

- Located in central Philippines covering roughly 14,000 km<sup>2</sup>
- One of the country's richest fishing grounds (~12% national production)
- Comprises 3 administrative regions, with 5 provinces and 33 municipalities/ cities
- Reported to have the highest diversity of shore fishes in the world (much of it is being lost)
- Considered overfished, with 70% fish biomass decrease compared to 1950s
- Major fisheries: sardines, other small pelagics, squids, blue swimming crab



# Management history

- Visayan Sea closed season for sardines, herrings and makerel since 1939
- 2010 Provincial governors declare commitment to Visayan Sea Action Plan
- 2015 Governors declare commitment to sustainable fishing
- 2017 Governors sign Covenant of Commitment and Cooperation – creating Council and TWG
- **2017 – Start-up workshop; Planning workshop**, consultations/validation, use of ‘theory of change’ – refined/validated draft ready for Council adoption
- **2018 Governors adopt the Visayan Sea Management *Framework***
- 2019 preparation of provincial-level implementation plans (specifying actions at the inter-LGU alliance levels)
- Next steps – formal adoption of provincial and alliance management actions; preparation of M&E plan; revision of the closed season regulation to incorporate reference points and harvest control rules



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# EAFM Planning Process







This publication was supported by the United States Agency for International Development.

## Management Framework for the Conservation, Protection and Restoration of the Visayan Sea



**Bureau of Fisheries and Aquatic Resources**  
 PCA Building, Diliman, Quezon City, Philippines  
 +63 (02) 929-8074, 929-9597  
 Email: info@bfar.da.gov.ph

# Vision and Goals

Visayan Sea, a highly biodiverse and resilient ecosystem, managed sustainably based on science by progressive communities and a proactive government.

## Goals

1. Restored fishery resources and rehabilitated habitats of the Visayan Sea;
2. Sustainable livelihood, both fishery and non-fishery related, through enhanced capacities, and equitable access to available resources;
3. Established efficient and effective governance structure with improved fishery law compliance and enforcement that addresses socio-economic security and ecological integrity.

# Restored fisheries objectives

Implement fisheries management measures to achieve and maintain the threshold indicators within 2022

Improve health of coral reefs, seagrasses, and mangroves, prioritizing critical habitats and spawning areas, within 2022



# Sustainable livelihood objectives

Heighten stakeholders' awareness of the Visayan Sea and their participation in its management by 2020

Build capacity and develop economic opportunities to at least 10% registered fisherfolks, or about 15,000 out of 153,000, by 2022.



# Effective governance

## objectives

Adopt the Visayan Sea Management Framework by the five (5) Provinces and BFAR by December 2018

Create a Visayan Sea TWG and Scientific Advisory Group and adopt a Manual of Operations by 2019

Update CRM plans of the 33 Visayan Sea cities and municipalities to be consistent with the Visayan Sea Management Framework, with support of the Provincial LGUs, BFAR and other NGAs and NGOs by December 2019



# Effective governance

## objectives

Build capacity of key stakeholders (NGAs, LGUs: Technical Staff, BD, FARMCs, LCEs, Sanggunians, MPA Managers) in implementing the Management Framework by 2020

Update and enforce local policies in conformity with RA 8550, as amended by RA 10654 and the agreed harvest control rules, by December 2022



# **Insights on EAFM:**

## **from concept, training to implementation**

- The challenge of scale - there is no existing political or agency jurisdiction that covers the whole Visayan Sea;
- Because of the large scale, meaningful participation is difficult to achieve;
- Champions were instrumental in creating an awareness and focus of Visayan Sea as a management unit/area;
- Partnerships - CSOs, development partners, private sector, academe supported the vision/goals for Visayan Sea with supporting/complementary activities;
- Shift to science-based management by integrating the inputs of science advisory group in management decision-making.



Draft EAFM Plan for the Visayan Sea Fishery Management Area (FMA), planning workshop output last November 21-24, 2017

**Thank you.**





# 4. Moving towards EAFM: A case study in Hawaii



# Geography



The case study focuses on the Western Pacific Regional Fishery Management Council, whose jurisdiction includes the EEZ around the following coastal states:

1. Commonwealth of the Northern Mariana Islands (CNMI)
2. Territory of Guam
3. Territory of American Samoa
4. State of Hawaii
5. Seven unincorporated possessions of the USA, including the islands of Howland, Baker, Jarvis and Wake, Johnston Atoll, Palmyra Atoll and Kingman Reef (known collectively as the Pacific Remote Island Areas)

# **USA Timeline 1950s-2013**

**1950s-1970s: Overfishing → Collapsing fisheries**

**1976: New Conservation & Management Act**

**Magnuson-Stevens Fishery Conservation and Management Act**

**1980s: Regional Councils and single fisheries Fishery Management Plans (FMPs)**

**1996: Sustainable Fisheries Act → Essential Fish Habitat**

**2004: Coral Reef Ecosystem FMP**

**2010: Fishery Ecosystem Plans (FEPs)**

**2012: End of 'overfishing' for all USA fishery stocks  
- Rebuilding of stocks**

# 1980s: Formation of 8 Regional Fishery Management Councils



## Council Members

- **Federal Agencies** (NOAA Fisheries, U.S. Fish & Wildlife Service, US Coast Guard, State Department)
- **State Fishery Agencies** (local gov.)
- **Fishermen\*** (commercial, recreational)
- **Other concerned users/stakeholders\*** (seafood owners, conservationists, researchers, educators)

*\*Nominated by respective State's Governors*

# 1996: The US Sustainable Fisheries Act



## **An important legislative shift towards EAFM**

- **reduce bycatch**
- **protect essential fish habitats**
- **to consider the effects of management decisions on communities.**



## 2. Appropriate scale

### Coral Reef **Ecosystem** FMP (2004) Shift from target to multi-species, multi-scale fisheries

- Multi-species fisheries (2,000+ species)
- Multi-gear fisheries (25+ methods)
- Occurs across national, state and territorial waters



## 4. Multiple objectives

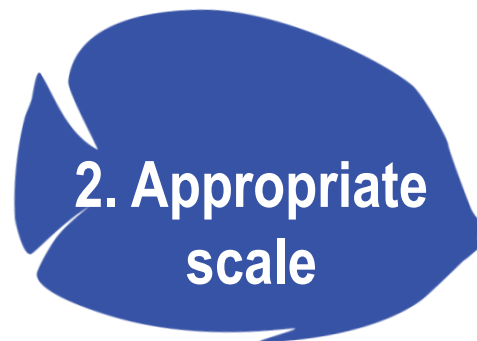
- **Ecological well-being objectives:**
  - restore reef fisheries, resources, habitats
  - maximum, sustainable long-term catch
- **Human well-being objectives:**
  - generate revenue and livelihoods
  - improve public awareness of reef ecosystems and their vulnerability
- **Governance objectives:**
  - promote improved surveillance and enforcement
  - collaborate with other agencies to share data and resources



- Precautionary, ecologically, culturally sensitive sustainable use
- Apply adaptive management
- Establish research, monitoring, data collection and permits to improve management decisions

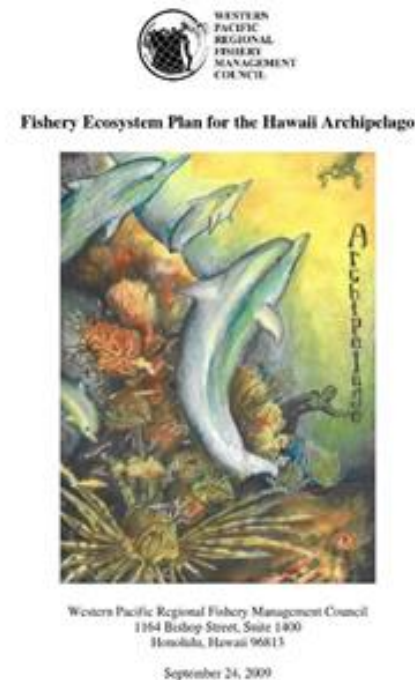


# 2010: Fishery Ecosystem Plans (FEPs)



## Transition to 5 area-based FEPs

- Mariana Archipelago
- Pacific Remote Islands
- American Samoa Archipelago
- Hawaiian Archipelago
- Pacific Pelagics



Cover Artwork Courtesy of Jeffrey Egan, John F. Kennedy High School, Tanning, Guam

***2012: End of “overfishing” in all USA stocks***



# Lessons learnt

- EAFM is a step by step process; apply lessons learned along the way
  - increasing stakeholder engagement
  - broadening scale of management
  - increasing data and information needs (not just stock assessment)
  - built on existing fisheries management



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Coral Triangle Support Partnership



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## 5. Scaling up EAFM: Case study of the Sulu Sulawesi Seascape Sub-regional EAFM plan

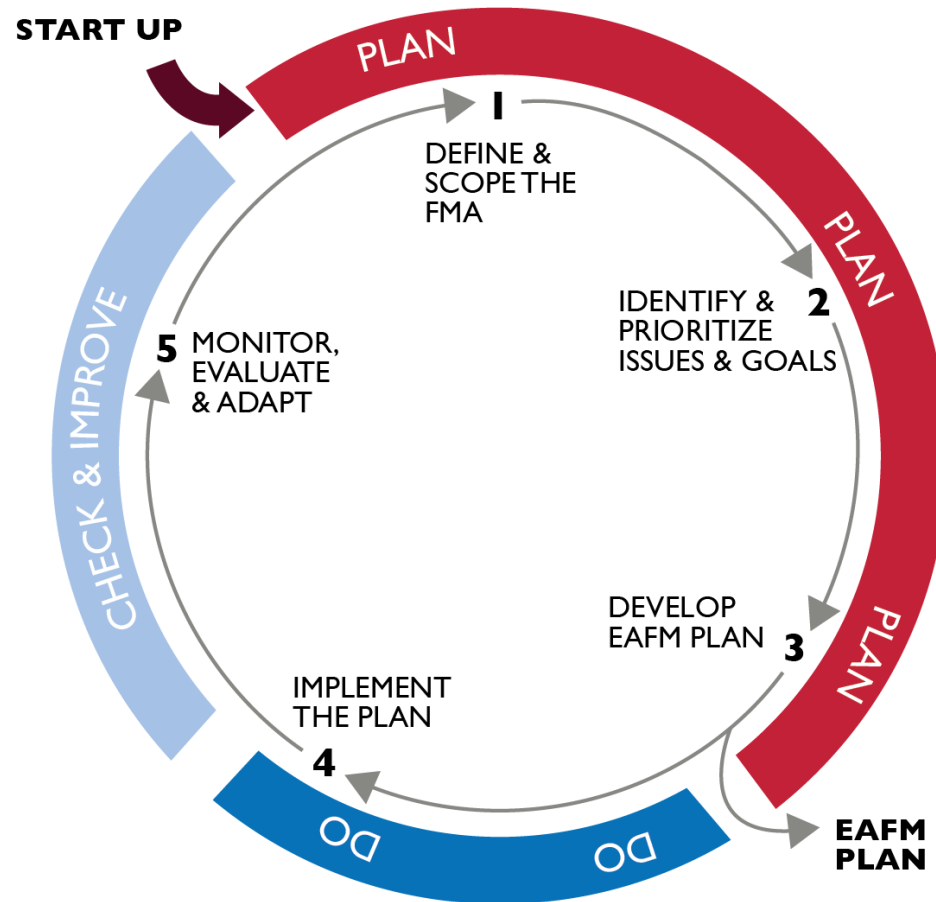
The USAID Oceans and Fisheries Partnership

# The Ecosystem Approach to Fisheries Management

- An EAFM Plan establishes a defined vision, scaled set of goals, objectives, and activities.
- Goals are developed based on the three pillars of the EAFM:



# The Ecosystem Approach to Fisheries Management (EAFM)



# Scaling EAFM Plans for Sub-Regional Management

A nested approach to fisheries management planning – linking upward and downward.

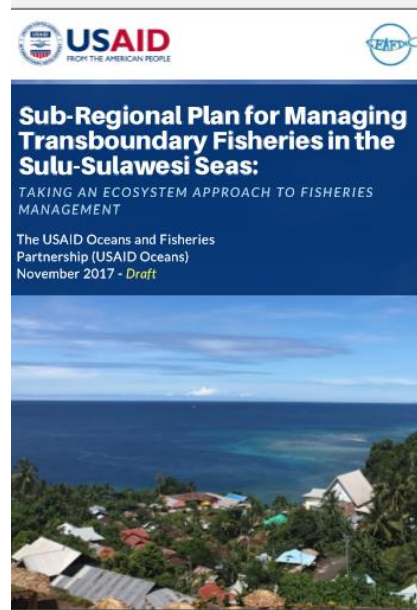


# History of the Sulu-Sulawesi Seascape (SSS) Sub-Regional EAFM Plan

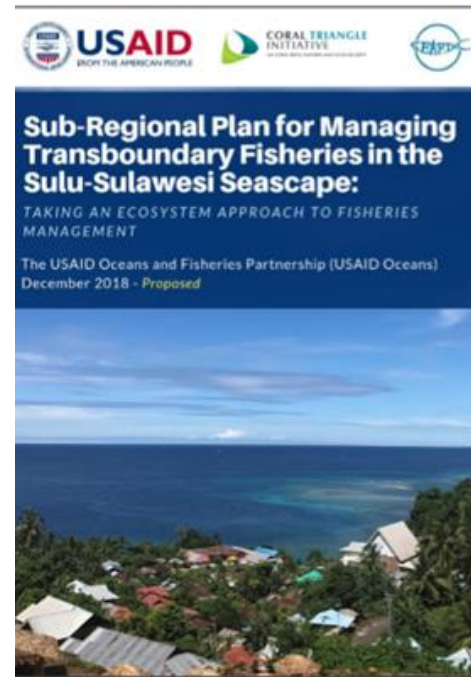
Over 2015-2018, the USAID Oceans and Fisheries Partnership, its partners, and key stakeholders convened to develop the sub-regional plan.



2015



2017



2018

# The Sulu-Sulawesi Seascape

- Key area for regional fisheries production, food security, economic development
- Priority area for biodiversity conservation
- Shared boundaries, ecosystem dynamics and resources, environmental issues





# Scaling EAFM at the Sub-regional Level

The SSS Sub-Regional EAFM Plan was designed to support existing, related management efforts also focused at the same sub-regional scale:

- Ecoregion Conservation Plan (ECP) for the Sulu-Sulawesi Marine Ecoregion (2003)
- Comprehensive Action Plan for SSME (2011)
- SSME Regional Strategic Action Program (2013)

# Linking the Sub-Regional Plan

## International:

- FAO Code of Conduct of Responsible Fisheries (CCRF)

## Regional:

- CTI-CFF Regional Plan of Action (*specifically EAFM Goal*)

## National/Local:

- National Fisheries Policies
- Sub-national/local area plans (*for fisheries, conservation, etc.*)



# EAFM Plan Outline

(source: “Essential EAFM” materials)

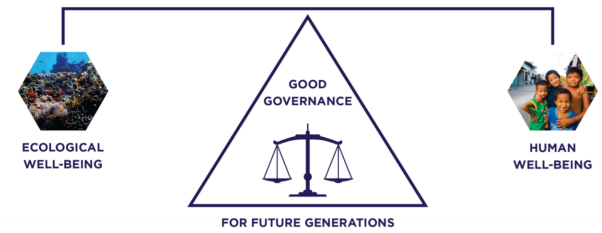
1. Vision
2. Background
3. Fisheries Management Unit
4. Major threats and issues
5. Goals (n=3)
6. Objectives, indicators, and benchmarks (n=18)
7. Management actions
8. **Governance and Coordination (proposed new section)**
9. Compliance
10. Data and info needs – source of data, etc.
11. Financing
12. Communications
13. Monitoring and evaluation (review of plan)
14. Next Steps

# Vision Statement for the SSS EAFM Plan

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

- Initial focus on transboundary small pelagic species.
- Expanded focus later on transboundary large pelagics/neritic tunas and demersal (soft-bottom, hard/coral reef) fisheries.
- Includes socio-economic, livelihoods, and cultural “benefits”

# EAFM Pillars and Goals



## Ecological Well-being

*“Improved long-term health of living marine resources and their habitats through responsible regional fisheries management for optimal benefits to our communities.”*

## Human Well-being

*“Resilient, self-reliant, and empowered communities who benefit from inclusive, just, responsible, and economically- and socially-equitable fisheries management.”*

## Good Governance

*“Improved governance and transboundary fishery policy capacity through a coordinated regional framework that is effectively implemented through a participatory, responsive, transparent, and adaptive process.”*

# EAFM Objectives (18):

## Ecological Well-being

- EO-1: Maintain optimal/sustainable exploitation rates
- EO-2: Maintain suitable water quality
- EO-3: Restore habitat & conserve marine biodiversity
- EO-4: Control by-catch
- EO-5: Minimize negative fishery impacts
- EO-6: Increase science & information

## Human Well-being

- SO-1: Enhance income
- SO-2: Improve community resilience
- SO-3: Improve human well-being (legal, just & equitable)
- SO-4: Equity and social benefit for all
- SO-5: Enhance & stabilize consumption (food security)

## Good Governance

- GO-1: Reduce IUU fishing
- GO-2: Strengthen capacity (sustainable fisheries)
- GO-3: Climate adaptation & mitigation
- GO-4: Strengthen regional MCS
- GO-5: Improve judicial & enforcement capacity
- GO-6: Enhance stakeholder participation
- GO-7: Strengthen regional coordination

# Management Actions:

- Maintenance of national **sovereignty** with **guidance** through the sub-regional plan
- **3 types** of management actions:
  - Current **national** (i.e., country ‘contributions’)
  - Current **multinational** (e.g., CTI-CFF, RPOA); and
  - **Proposed** (new) management actions (e.g., GEF7).

# (Proposed) Governance Recommendations

Implementation proposed for the three national governments and fisheries authorities.

- Coordination and cooperation of various government levels and multiple sectors is required.
- Governance mechanism:
  - CTI Sulu-Sulawesi Seascape Sub-committee on Fisheries;
  - Similar structure as the Tri-National SSME Committee
- National sovereignty (national waters) and sovereign rights (waters up to EEZ) were considered



# Collaborative Design and Development

Collaborative, multi-national, multi-stakeholder process  
four-year (2015-2018) development process



# Socialization

Socialization with CTI Regional Secretariat and National Coordinating Committees, other partners to review and secure buy-in.



**NCCC Philippines**



**NCCC Malaysia**



**NCCC Indonesia**



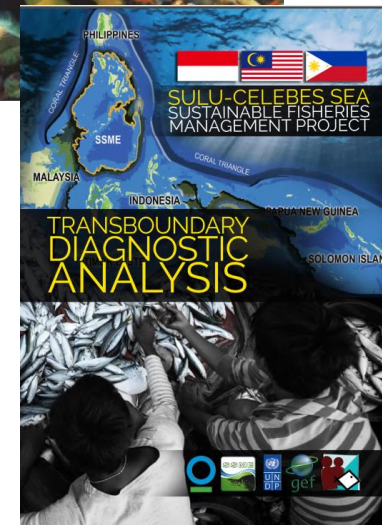
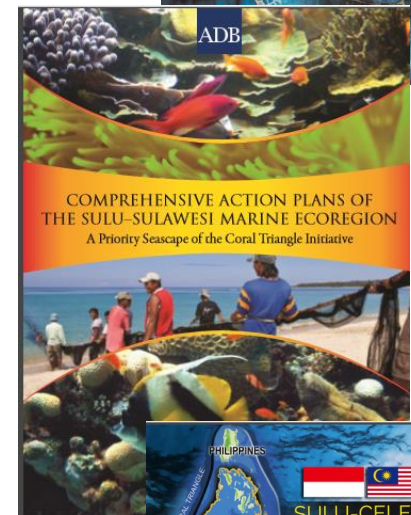
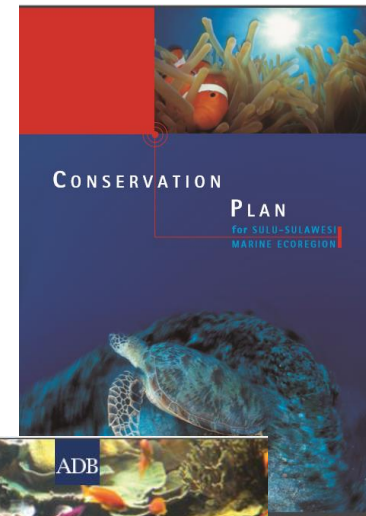
**CTI Regional Secretariat**



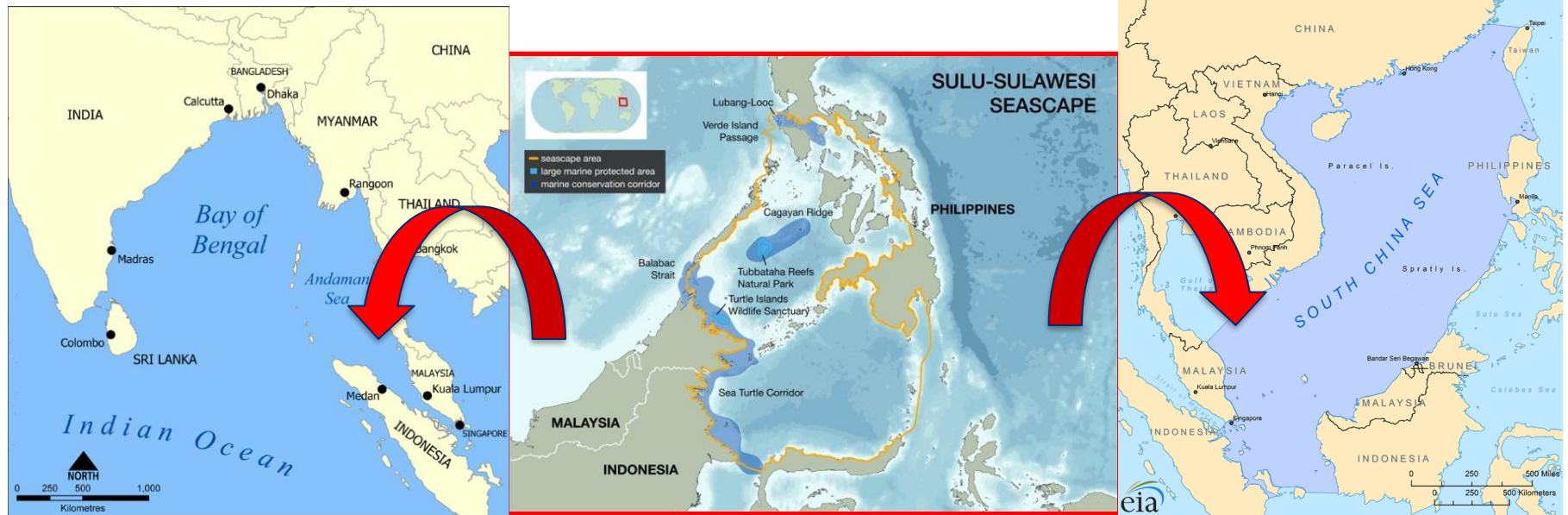
**Indonesia partners**

# Insights on the Planning Process

- Regional institutions, programs and working groups played critical support role
- Built upon past and existing related fisheries management efforts e.g., SSME, ECP, SAP, others
- Some challenges still remain on the scaling of EAFM beyond national jurisdictions (e.g., sovereignty and sovereign rights)



# Potential Replication in other Sub-Regions



**Andaman Sea**

**Sulu Sulawesi Sea**

**South China Sea**



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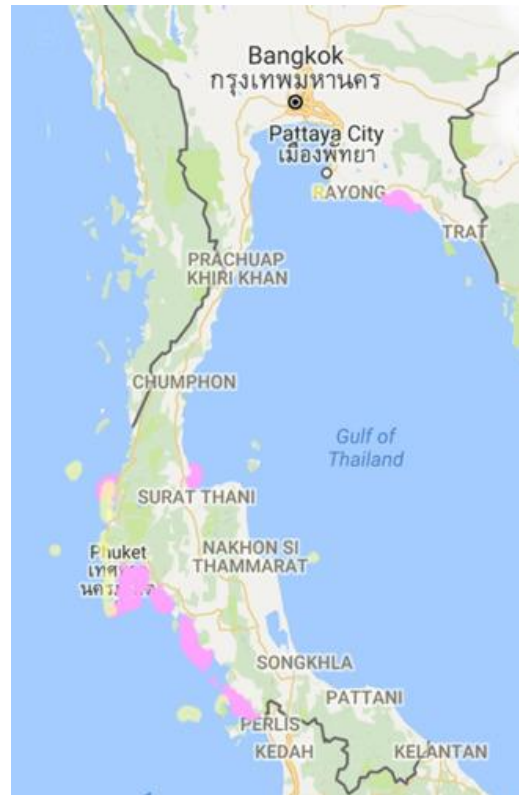


## 6. Monitor, evaluate and adapt: A case study of marine fisheries in the Gulf of Thailand

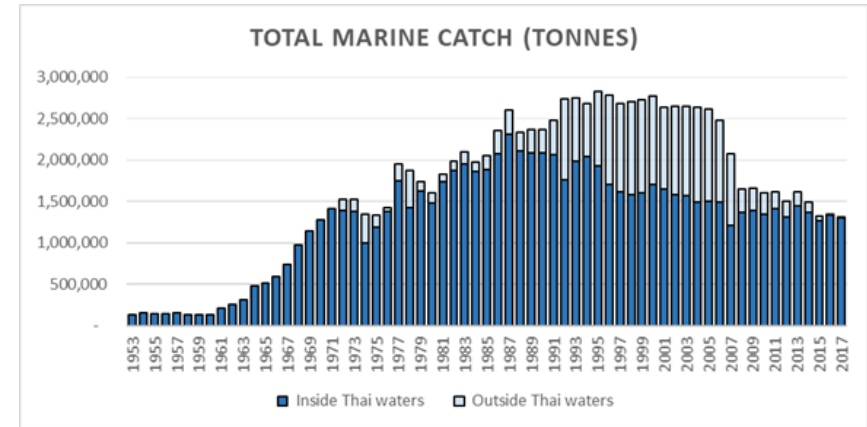


# Geography

- Marine capture fisheries taken by both artisanal and commercial vessels in Thai waters (including the territorial waters out to 12nm and the Thailand exclusive economic zone (EEZ)) of the Gulf of Thailand (GOT).



# Fisheries management timeline



- 1947: Fisheries Act (1947) provided the basics for managing Thailand's fisheries, 1947 through to 2015
- 1960s: Trawling introduced into the GOT
- 1970s: Rapid expansion of fishing effort (both boats and technology) in the GOT
- 1980s: Declining fisheries resources in GOT forced Thai vessels further offshore and into neighbouring waters
- Late 1990s: Declaration of neighbour's EEZs resulting in joint ventures
- 2008 -2015: Indonesia, Malaysia, Myanmar and Papua New Guinea blocked access to Thai vessels
- 2015: New Royal Ordinance on Fisheries B.E. 2558 (2015) and its amendment in B.E 2560 (2017) lead to a number of reforms, including a transition to a limited access fishery and reduction in fishing effort
- 2015: Thailand Marine Fisheries Management Plan (FMP) (2015-2019) developed based on EAFM principles
- 2019: First evaluation of the performance of the FMP (2015-2019)
- 2019: FMP (2020-2025) revised based on the evaluation



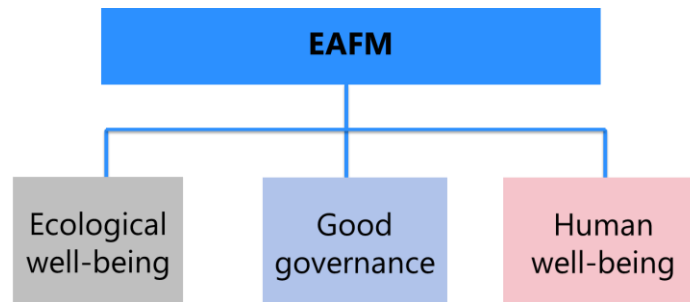
# Why this case is valuable

- It demonstrates:
  - An independent evaluation of a fisheries management plan (EAFM plan) as required as part of the EAFM Management Cycle
  - The importance of indicators and benchmarks
  - An ability to adapt a FMP based on the evaluation of performance of management (Step 5 of the EAFM Management Cycle)



# Reason why EAFM at the site

- Previous fisheries management under an open-access regime that just considered fisheries resources issues was not effective
- The national FMP recognized threats/issues and their root causes that covered the three components of EAFM (ecological, human and governance) and developed a plan to address these issues
- The performance evaluation is an essential step in EAFM planning and implementation



# Problems/issues

- Issues covered the ecological, human and governance dimensions
- The priority issues were:
  - Overfishing, especially by the commercial fleets
  - Illegal, unreported and unregulated (IUU) fishing
  - Degraded critical habitat
  - Conflicts between artisanal and commercial fishers
  - Catching a large quantities of juvenile fish of larger commercial
  - Inadequate fisheries data and information
  - Inadequate fisheries management capacity
- Objectives, indicators and benchmarks were developed for the underlying core problems for these issues
- The performance evaluation was based on comparing the indicator status with the benchmark (Step 5 of the Management Cycle)



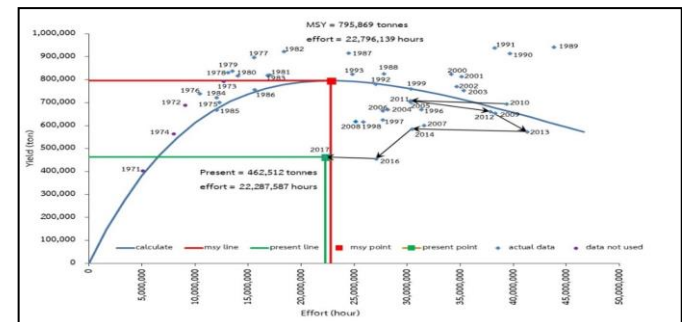
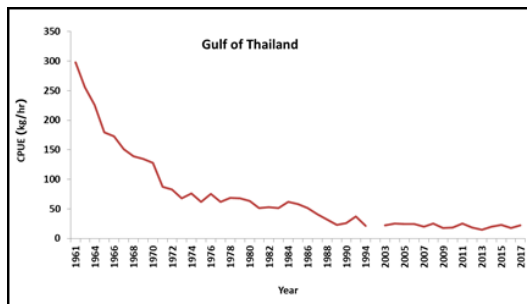
# Results

- Results of the 2019 fisheries management performance evaluation

Target reached	Good progress	No progress
<b>Goal and objective</b>		Assessment
<b>Goal: Reform Thailand's marine fisheries to a limited access regime where the fishing effort is commensurate with the MSY</b>		
Objective: Reduce fishing capacity and fishing effort		
Objective: Rebuild fish resources through artificial reefs and restocking programs		
Objective: Reduce the catch of juveniles of the larger commercial species		
<b>Goal: Prevent, deter and eliminate IUU fishing</b>		
Objective: Minimize IUU fishing through effective MCS		
<b>Goal: Increase benefits for and reduce conflicts among major stake holders</b>		
Objective: Resolve conflicts between small-scale and large-scale fishers		
<b>Goal: Improve the marine environment</b>		
Objective: Restore and maintain critical habitats		
<b>Goal: Strengthen capacity to sustainably manage fisheries</b>		
Objective: Improve fisheries data and information		
Objective: Strengthen fisheries management capacity		

# Results

- Many of the management measures specified in the FMP had already been implemented
- Excellent progress was made against the urgent issues of (i) overfishing and overcapacity, and (ii) IUU fishing
- For the other less urgent issues, good progress has been made against all objectives.
- The evaluation was used to guide an update and revision of the FMP



# Lessons learnt

- An independent evaluation against the indicators was important for informing the revision of the new FMP (2020-2025)
- The evaluation was made more difficult because:
  - Not all the indicators specified in the FMP were monitored
  - Monitoring of some indicators was the responsibility of other agencies and there was inadequate coordination and cooperation
  - Scientific analyses of the results required a broad base of technical skills

	Demersal fish	Anchovies	Pelagic fish
<b>2015</b>			
Gulf of Thailand	Overfishing*	Fished at MSY	Overfishing
<b>2017</b>			
Gulf of Thailand	Overfishing controlled Overfished**	Fished below MSY	Overfishing controlled Overfished

# Recommendations for solutions or next steps

- EAFM planning needs to ensure that the agreed indicators are being monitored
- Independent assessors need to be identified and trained

