



EAfm Capacity Plus Module 1: Inland fisheries

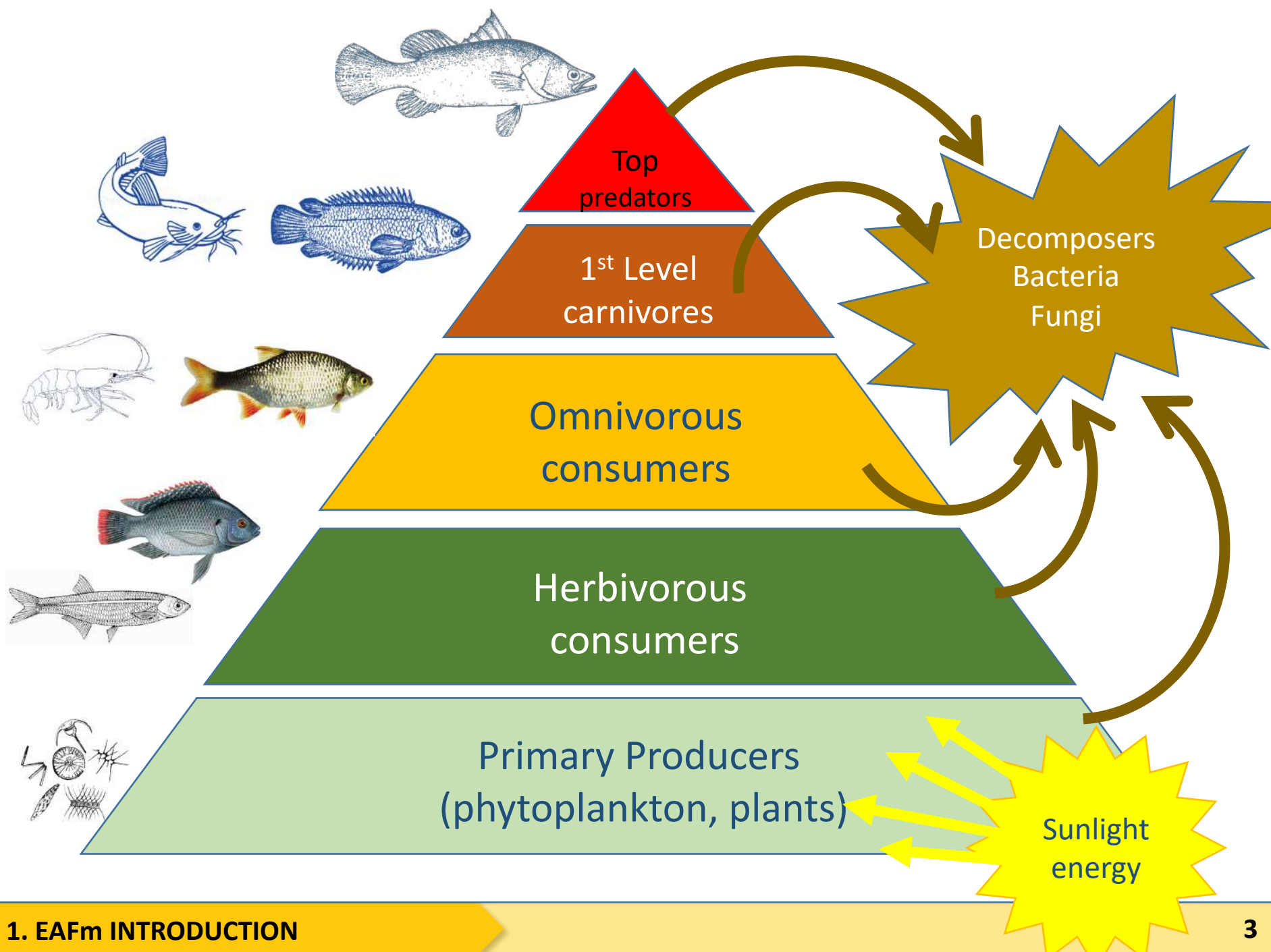
EAfm Capacity Plus training
Yangon, Myanmar- August 2019





Module objectives

- Understand the differences between coastal and inland Ecosystem Approach to Fisheries management (EAFm);
- Learn skills and knowledge to more sustainably manage inland capture fisheries
- Recognize how Myanmar is already adopting some EAF principles and is moving towards EAFm
- Understand some challenges that Myanmar is facing in moving towards EAFm.



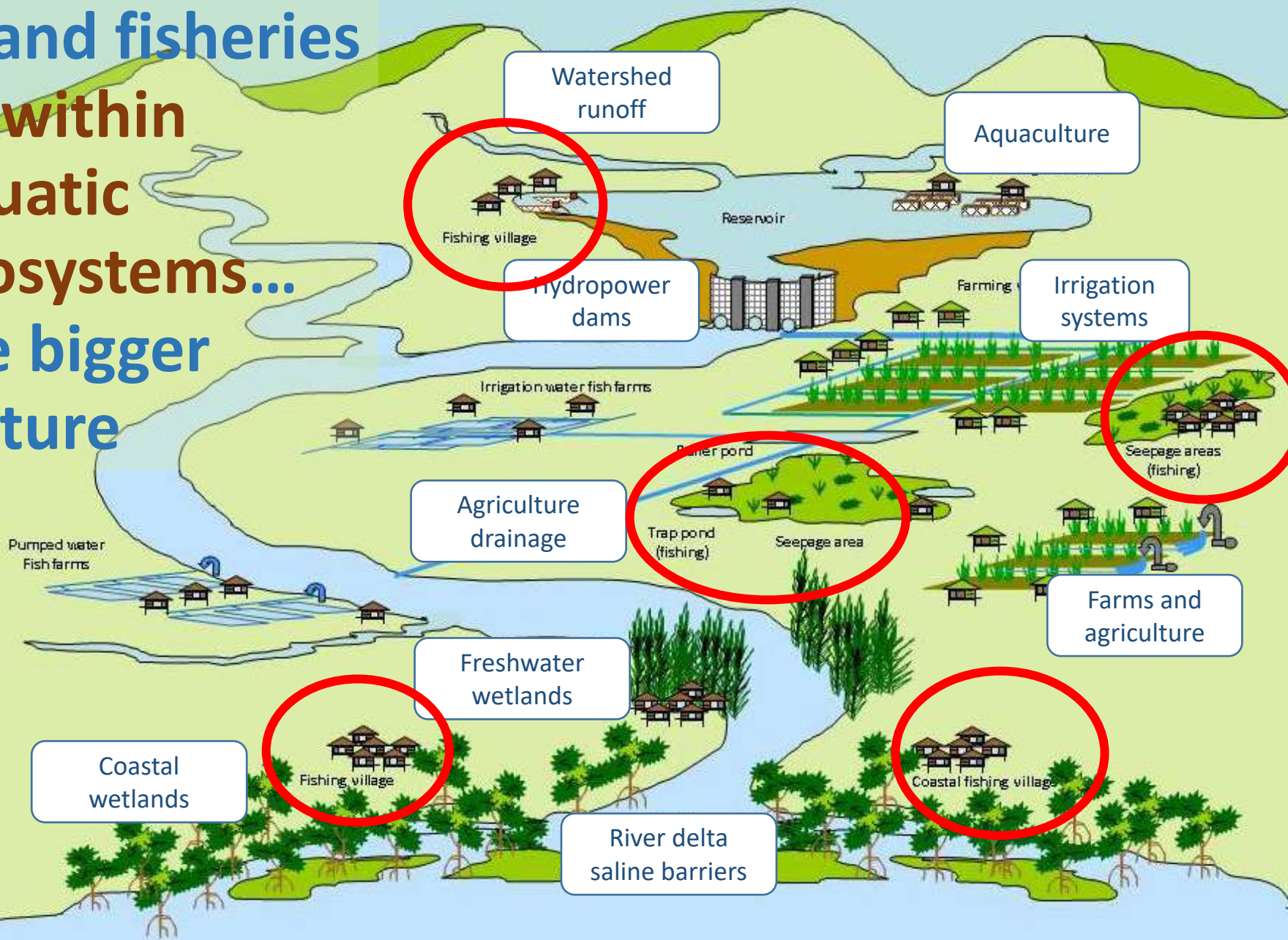


What is an ecosystem?

“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)

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



Many natural and man-made issues impact on inland fisheries

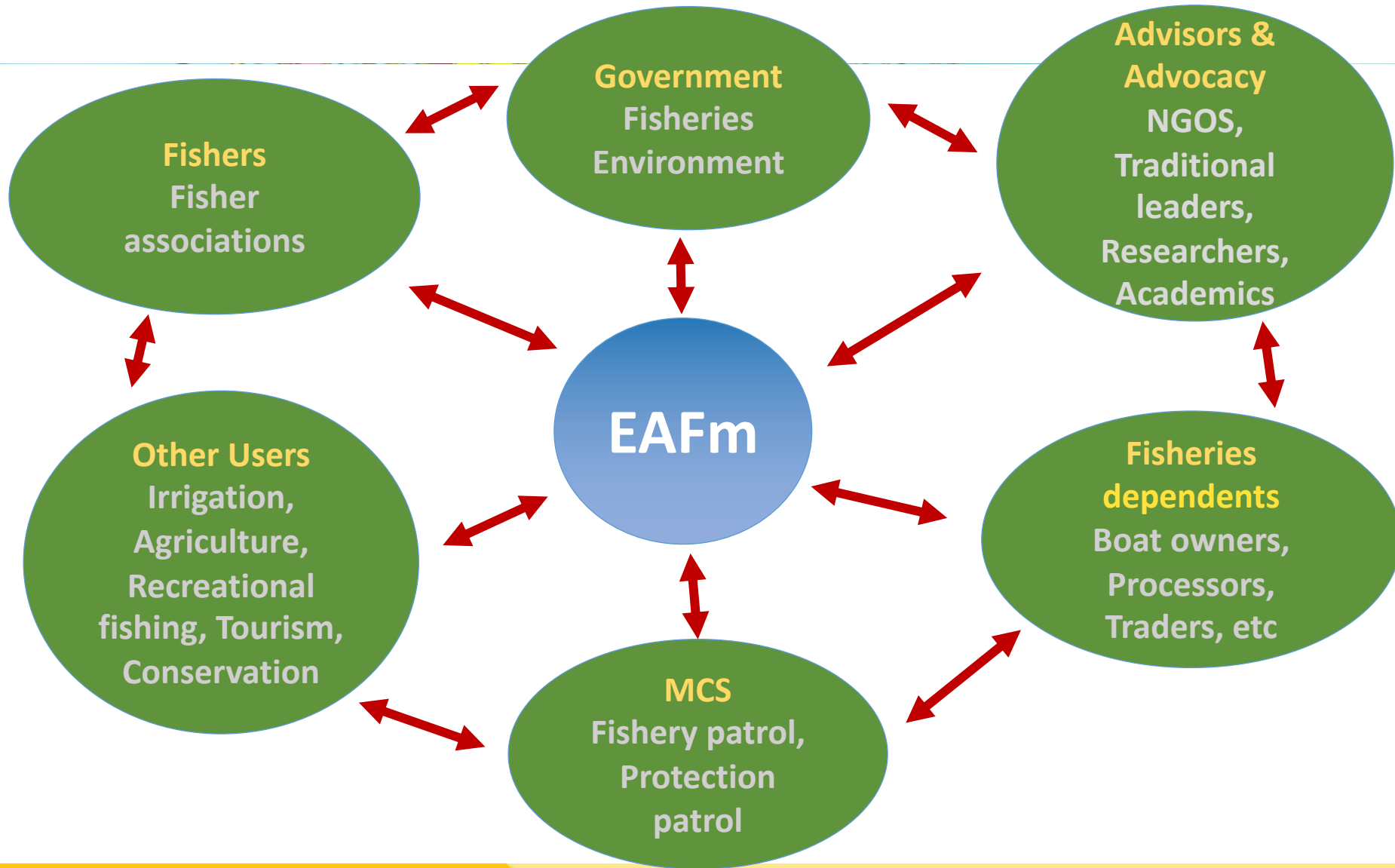


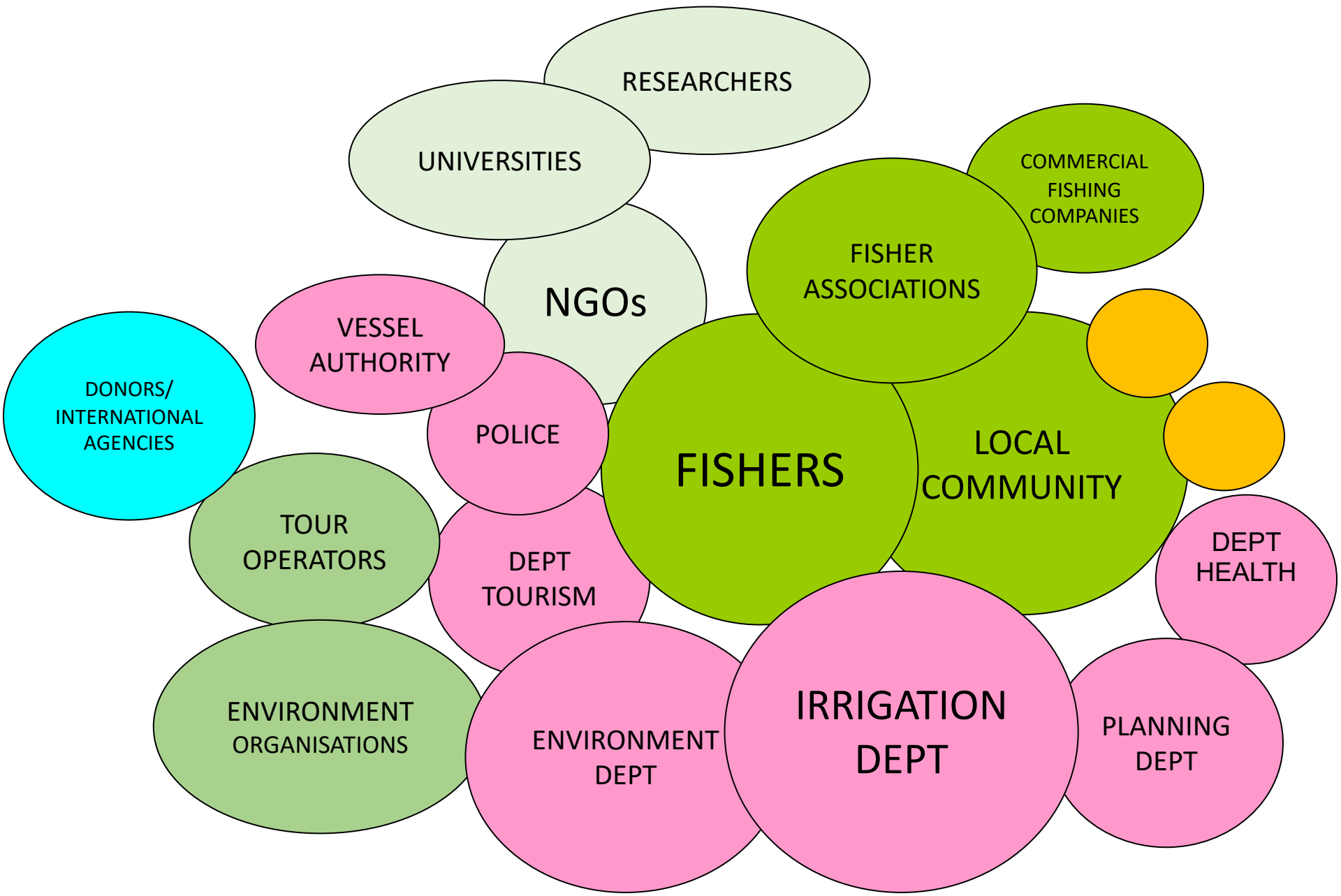


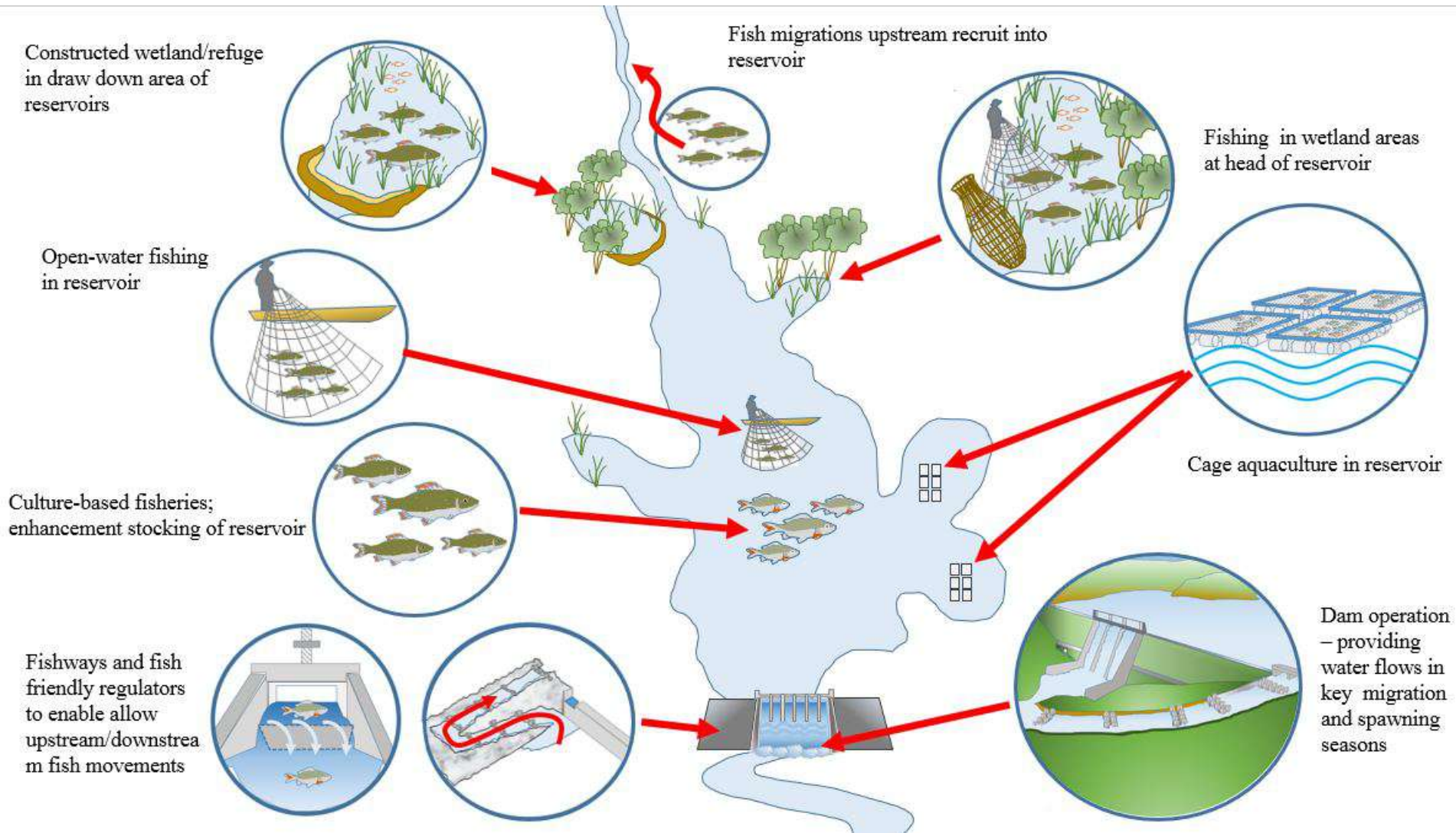
Ecosystem services & benefits

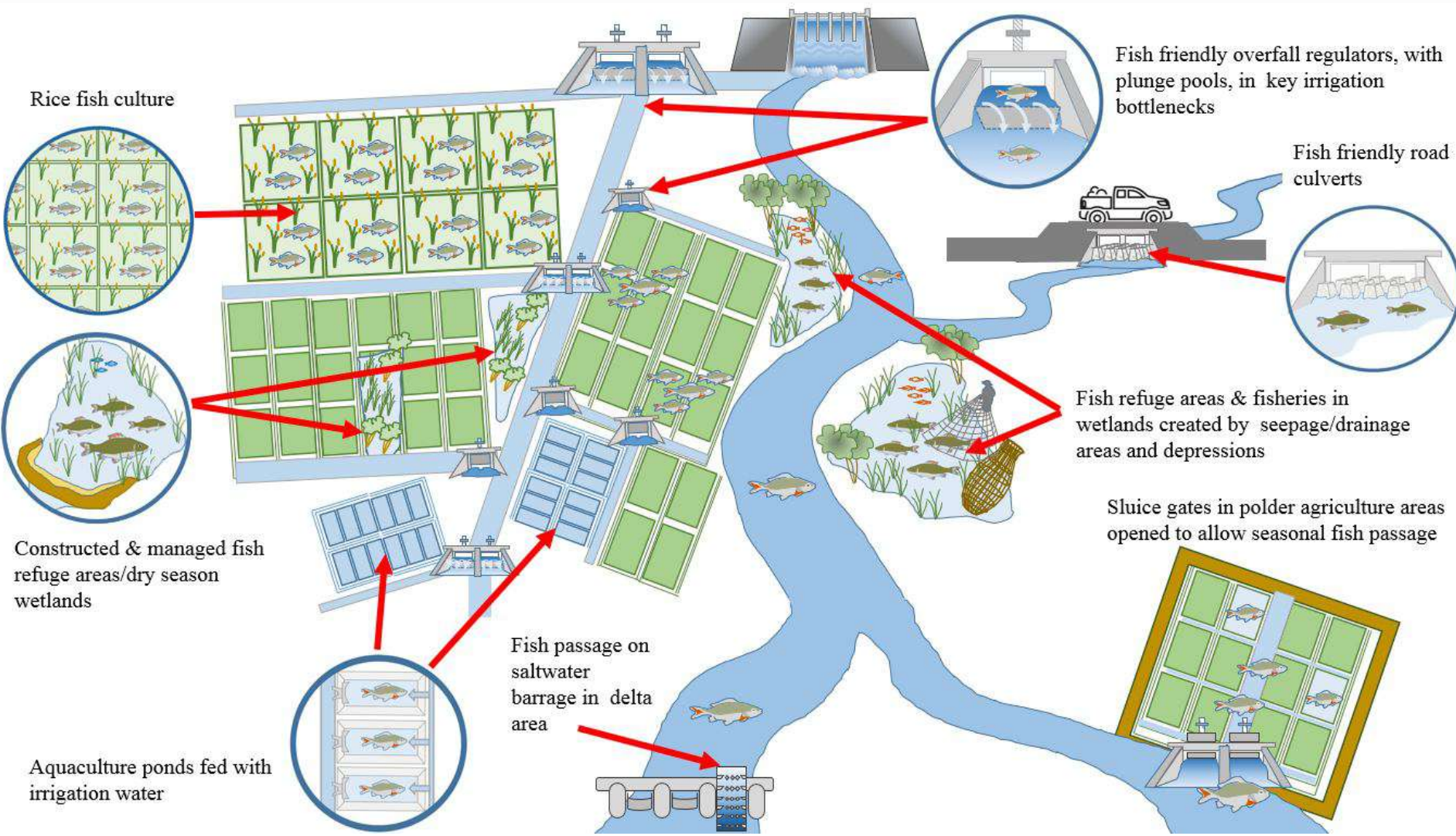
- **Supporting** – e.g. food webs of plants and animals
- **Provisioning** – e.g. supply of fish for animal and human food
- **Regulating** – e.g. coastal protection and resilience against variability and change, as well as natural disasters
- **Cultural** – e.g. recreation, cultural and traditional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

Possible stakeholders











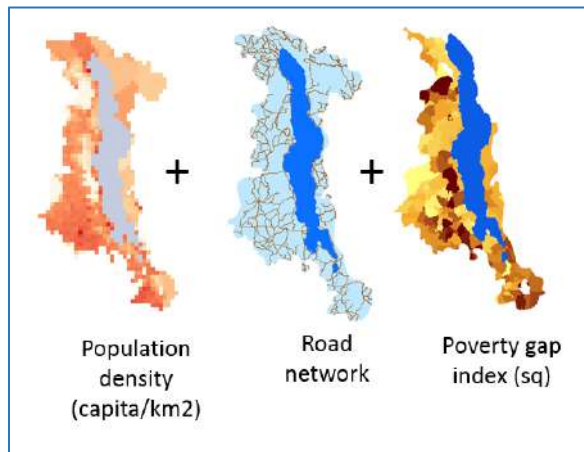
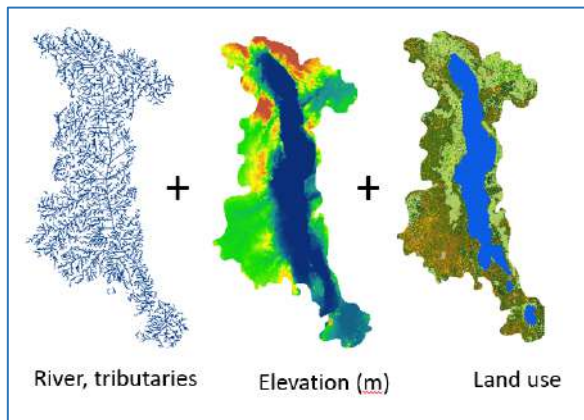
Example: Cambodian Fish Refuges



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

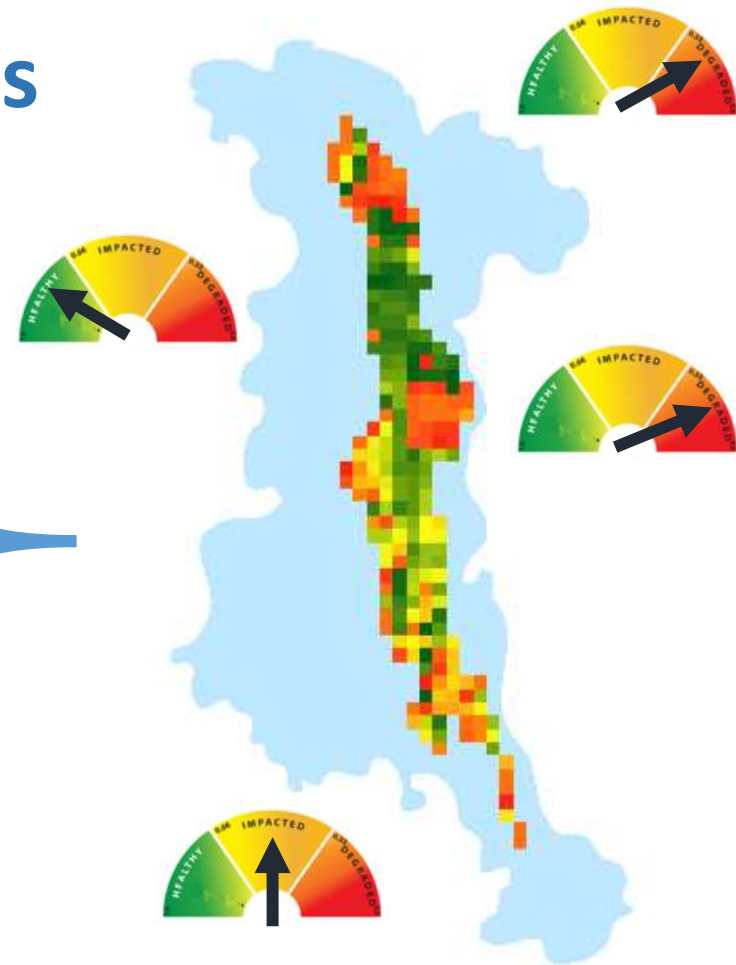


Mapping of threats/impacts

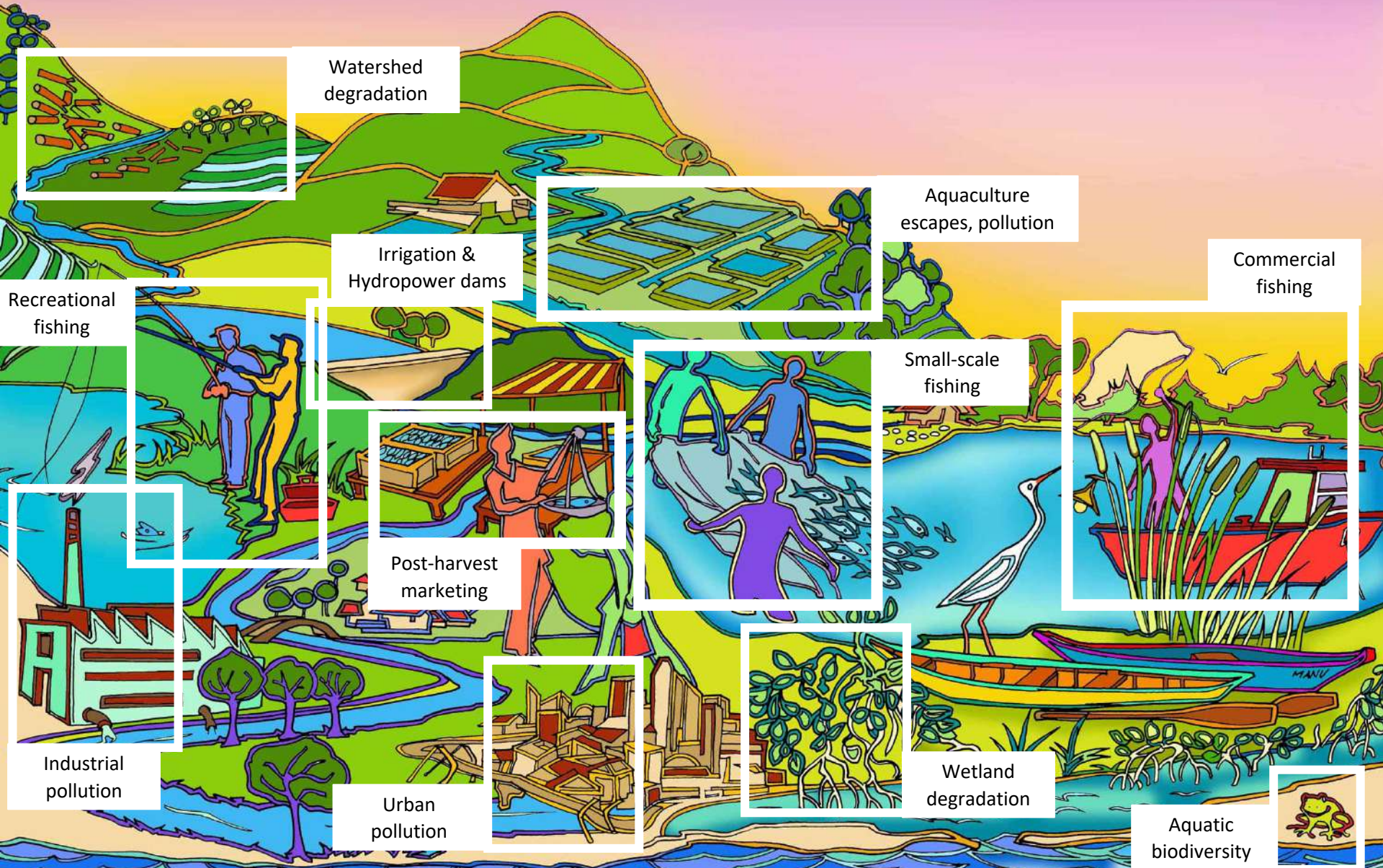


Nutrient runoff

Fishing pressure



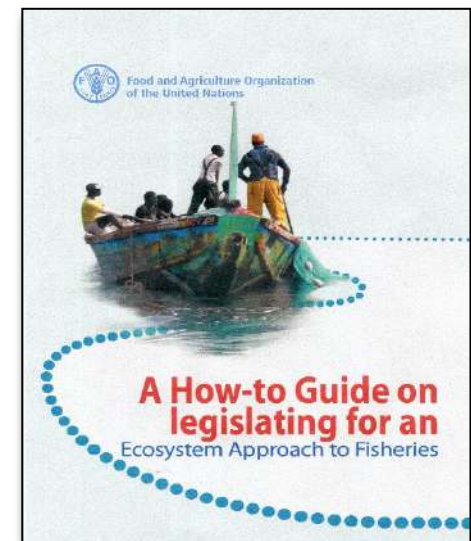
Information





Determine the legal basis for EAFm

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





For this course.....

Inland fisheries case study-
Ayeyarwaddy, Myanmar

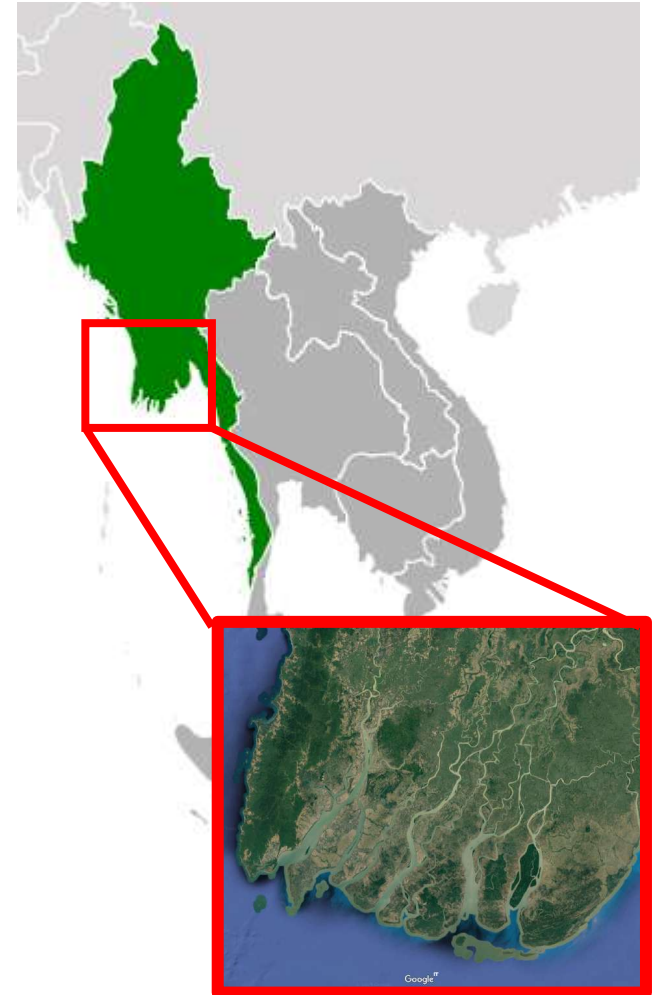


Ayeyarwaddy delta, Myanmar Case study



Ayeyarwaddy Region - Myanmar

- The session will discuss how
- Myanmar's freshwater fisheries laws and policies have been influenced by the EAFm
- The 7 EAFm principles are being adopted into freshwater fisheries management





Ecology: the delta ecosystem

Ayeyarwaddy Delta

- Extensive river / canal network
- Fish Biodiversity– high
- >388 fish species in the Basin
- 193 (50%) endemic to the Basin,
- 100 (26%) of the endemics are only found in Myanmar.

Ecology influenced by seasonal salt water intrusion and retreat.





Ecology: Pressures on the system

- Intensification of rice farming practices, through inorganic fertilisers, herbicides and pesticides
 - Use of dry season water bodies for irrigation or recession planting
 - Lost floodplain connectivity through roads and embankments, (including aquaculture pond embankments)
 - Natural resource degradation and decline in fisheries production
- These pressures have triggered demands from small-scale fishers for sustainable resources co-management



Fisheries

- Large and migratory species of commercial significance,
 - Catfishes (*Wallago attu* and *Pangasius* species),
 - Hilsa, *Tenualosa ilisha* – anadromous- one of the Ayeyarwaddy's most economically important fish species.
 - *Catla catla*, *Cirrhinus cirrhosus*, *Labeo calbasu*, *Lates calcarifer*, *Pangasius pangasius*, *Rita sp.*, *Silonia silondia*. *Chana striata*, and *Clarias sp*
 - Declining catches have triggered demands from small-scale fishers for sustainable resources co-management.



Livelihood and economic contribution

- Delta fisheries exploited by large and small-scale fishers and farmers.
 - Many fishers are full-time and landless
 - Poverty rife in fishing communities
- Important generator of food, employment and wealth
 - Domestic, regional & export markets
- Processing of fish source of income for rural households
 - Women play important roles
- Increasing calls from fishers for
 - more equitable sharing of access to natural resources
 - sustainable resources co-management



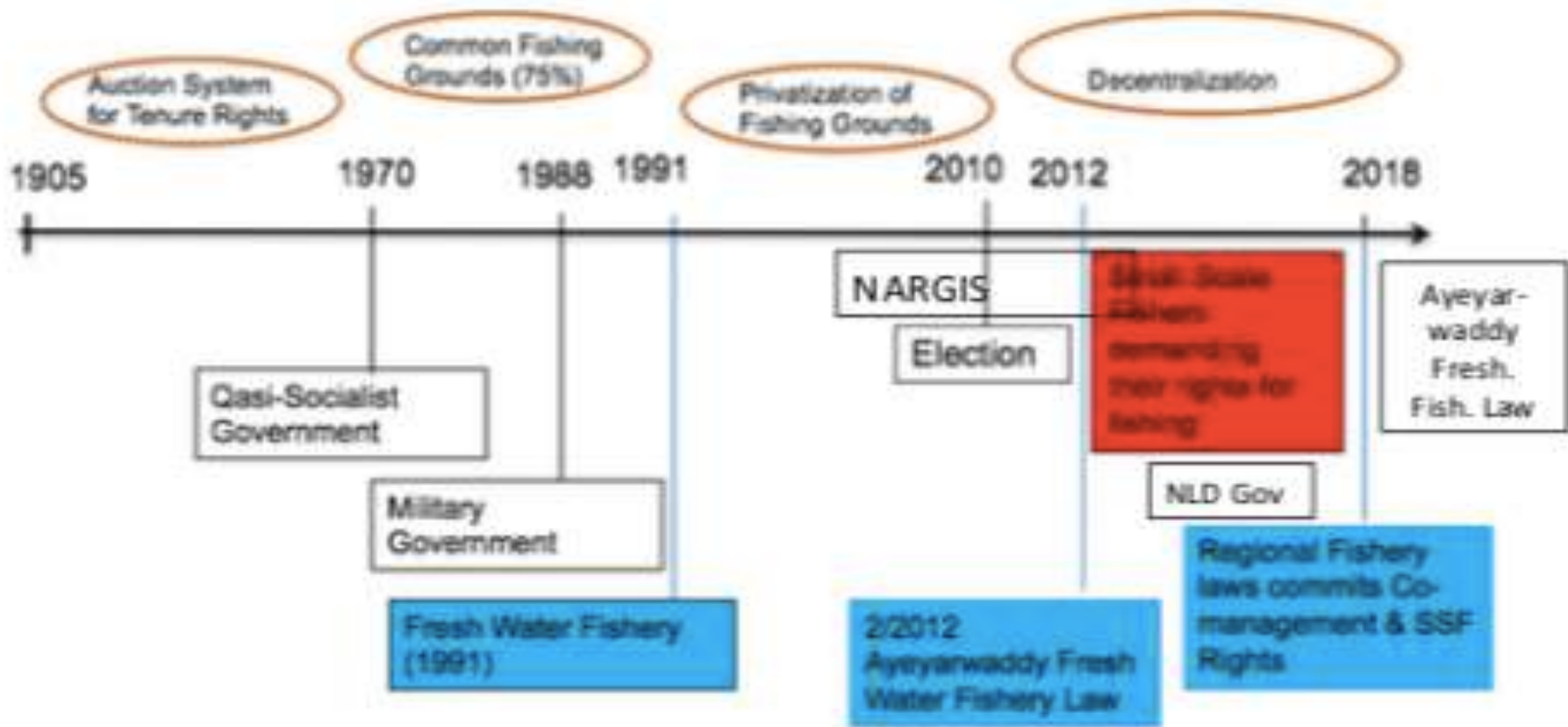


Governance: fishery reforms

- Historically, fisheries governance focused on revenue generation
- Gradual reduction in small-scale fisher access to traditional fishing grounds
 - Since 2012, freshwater fishery governance has steadily improved
 - New laws and pro-poor policies introduced in several states and regions
 - Following successful pilots, fisheries co-management being rolled-out
 - Small-scale fisher access to fishing grounds is improving
- The integration of EAFm into this transitional process could
 - strengthen community fisheries co-management capacity
 - provide way for fisheries officers to engage effectively with community fisher organizations



Timeline



Ayeyarwaddy is Moving towards EAFm

EAFm principle	How it is being implemented
Good Governance:	Changes in policies and laws attempt to redress gross stakeholder inequalities, and chronic resource degradation
Appropriate Scale	Myanmar's <u>decentralization</u> of inland fisheries governance <u>allows fine tuning of legislation and policies</u> to local conditions and contexts.
Increased participation	At the <u>heart of the governance reforms</u> has been the <u>organization of community and stakeholder groups</u> with an interest in improving fisheries governance, and facilitating their active involvement in policy and law developments.
Multiple objectives	The approach aimed to meet the following objectives <ul style="list-style-type: none">• <u>Pro-poor</u> fisheries governance mainstreamed by Government• <u>Improved livelihoods</u> and incomes for small-scale fishers• <u>Stronger community organisations</u> and community leaders• <u>Sustainable</u> natural resources management• <u>Increased transparency</u>, reduced corruption in revenue from fisheries

Moving towards EAFm – 7 principles (2)

EAFm principle	How it is being implemented
Cooperation and coordination	<p><u>Creation of community associations and networks</u> allowed for consistency in approach and the coordination of lobbying efforts.</p> <p>This was <u>essential</u> given the isolation of the many remote and disparate fishing communities in the Delta.</p>
Adaptive Management	<p>Process to <u>develop a legal framework</u> providing more equitable and sustainable benefits a <u>process of trial and error</u> lasting >10 years.</p> <p><u>Lessons from other countries</u>, (e.g. Cambodia, Thailand) crucial in showing alternative governance systems in operation, and facilitated the flexible approach adopted by law and policy makers.</p>
Precautionary principle	<p>Reforms proposed and subsequently agreed, <u>did not attempt to displace the existing leasehold and tender systems</u>.</p> <p>Sought to <u>increase stakeholder benefits</u> in lower value fisheries.</p> <p>Preceded by <u>extensive piloting by CSOs</u> to demonstrate how community co-management approaches could benefit poorer fishing households and improve local natural resources management.</p>



Strengthening the capacity to deliver

- NGOs and CSOs leading the capacity building of community fisheries organizations
- Conservation in resource management plans generally weak.
- The integration of EAFm could improve the extension capability and impact of the DoF,
 - Provide tools for fisheries officers to engage effectively with community fisher organizations
 - Strengthen community co-management capacity leading to more sustainable fisheries and their equitable use



Lessons from case study

- EAFM is a step by step process; apply lessons learned along the way
 - increasing stakeholder engagement
 - broadening scale and scope of management
 - built on existing fisheries management
 - strengthen governance
- Many fisheries in the world are doing EAFM in part;
- Each country is a different stage of the journey



Key messages



Discussion