



DEVCO **Environment and Climate Week 2020**

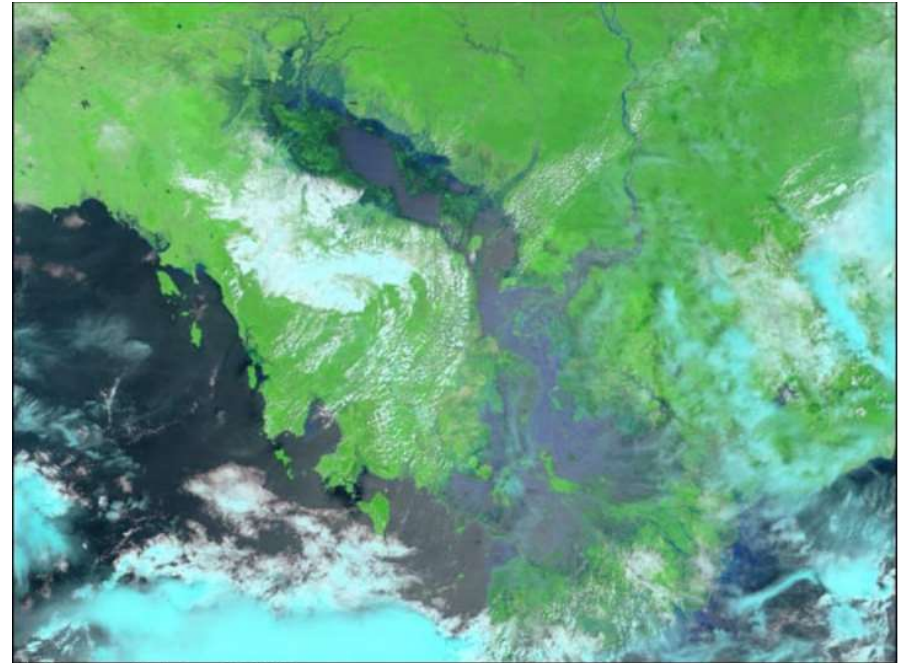
17-21 February 2020
Brussels, Belgium

**Integrated landscape
management in the
Tonle Sap Biosphere
Reserve, Cambodia**

The Tonle Sap flood pulse



Dry Season (January 29, 2003)



Wet Season (October 9, 2002)

<https://earthobservatory.nasa.gov/>

Seasonality

Water level rises from 0.8 to over 9 m asl

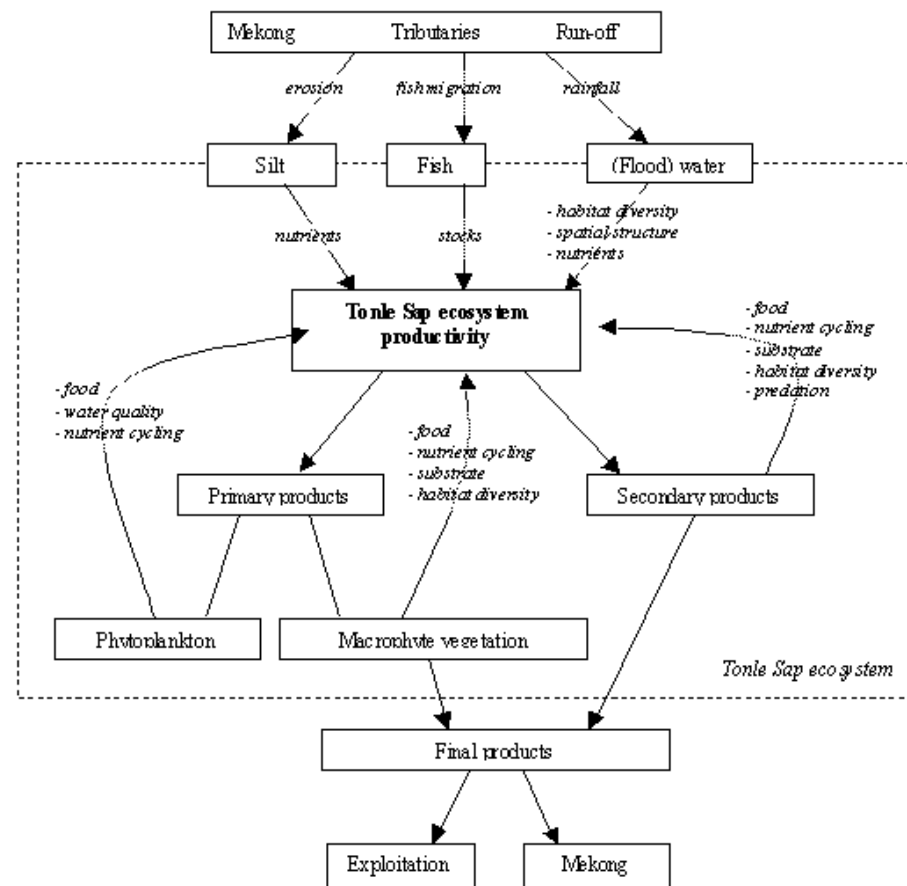
Lake surface area extends from 2,500 to 12,500 km²

- Flooded forest and swamp scrubland
- 150 fish species - 4th productive inland fisheries
- 5 species of turtles, under great threat from trade
- The world largest harvest of watersnakes
- Biggest colony of large waterbirds in SEA, with several endangered species
- Small mammals: primate, otters, Asian mongoose, flying foxes...

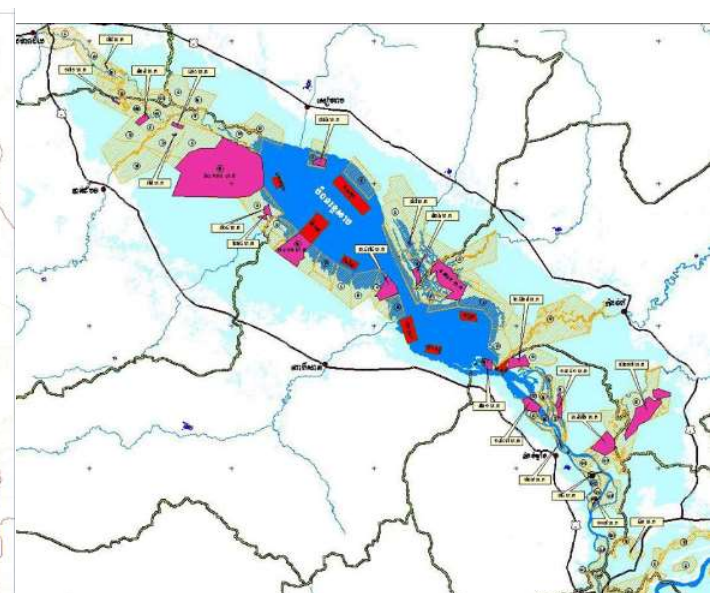
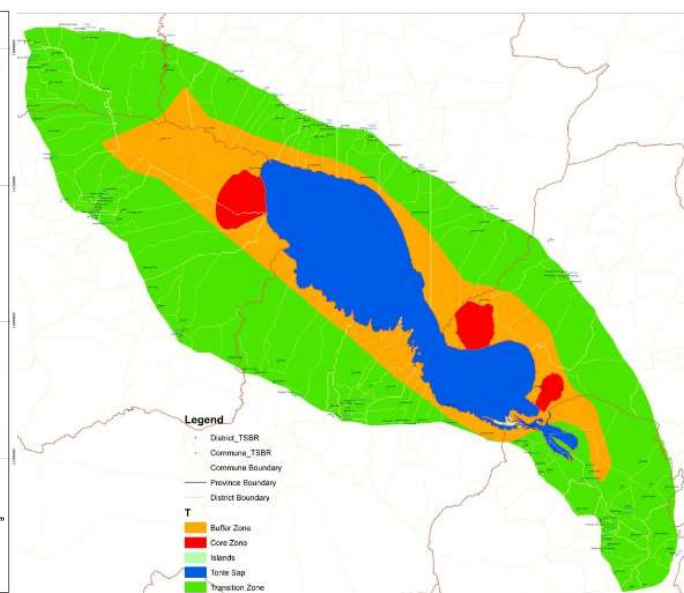
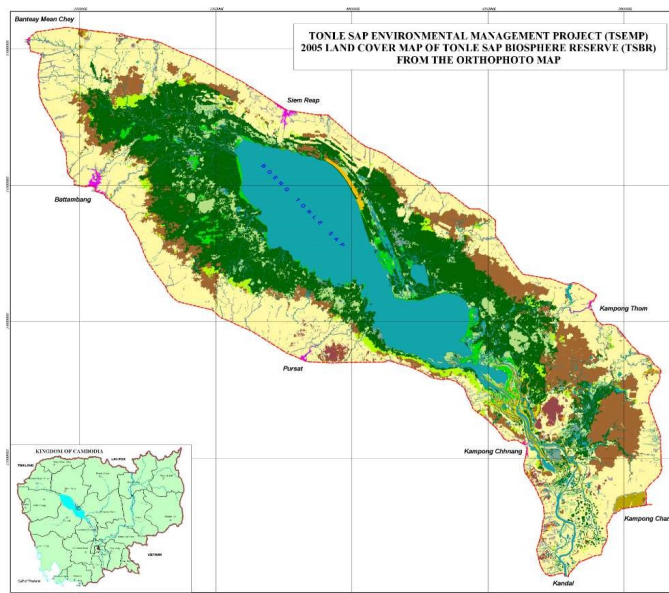


- 1.1 M inhab. living in the TS floodplain (2016)
- Inner part - Floating villages:
 - Fisheries and cage aquaculture
 - Ecotourism
 - Flood recession agriculture
 - Wood and charcoal
 - NFTP
- Outer - Agriculture (rice) and rice-field fisheries
- Growing urbanization





Tonle Sap ecosystem
productivity model



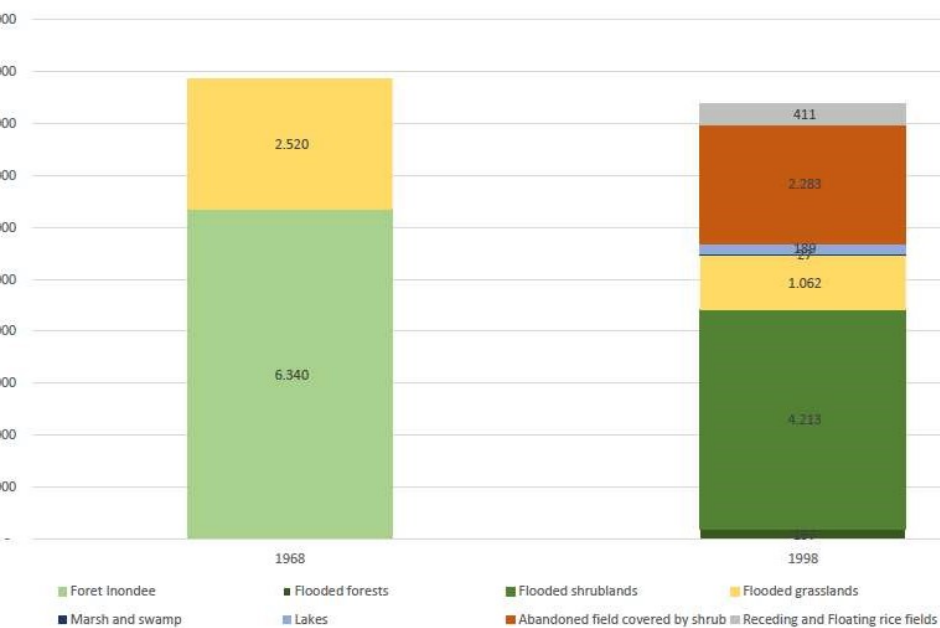
Expansion of the flooded forest

MoE:
Creation of a Biosphere Reserve

FIA

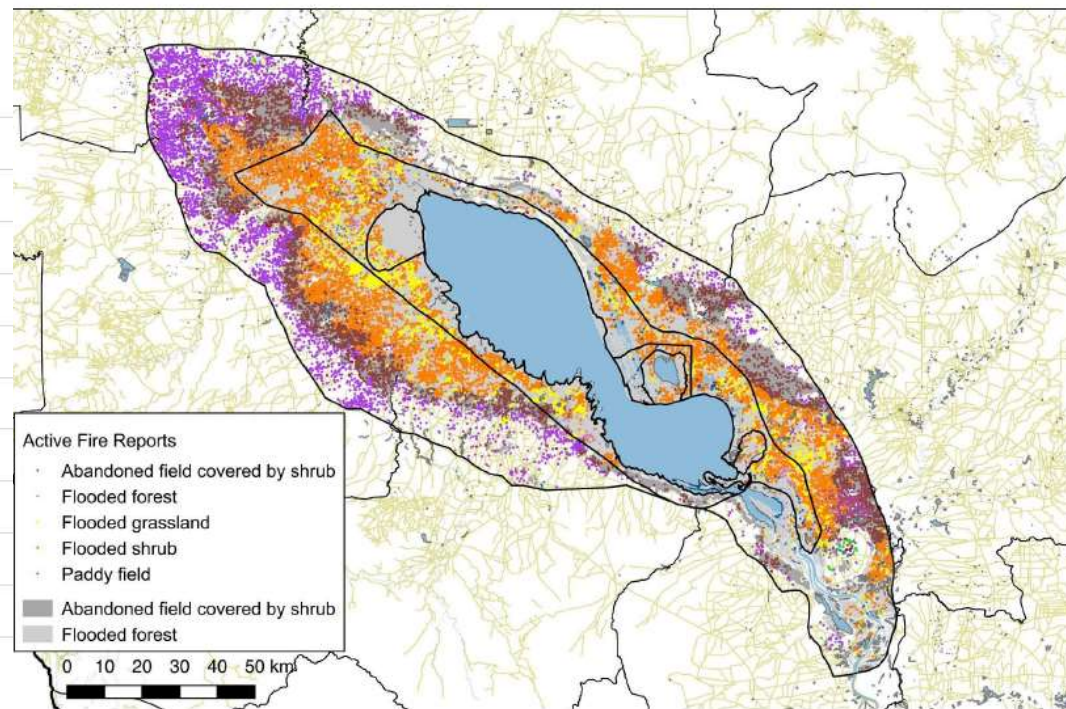
- FCA in the public fisheries domain
- Community-managed FCZ and CFR

Estimates of flooded forest cover for 1968 and 1998.

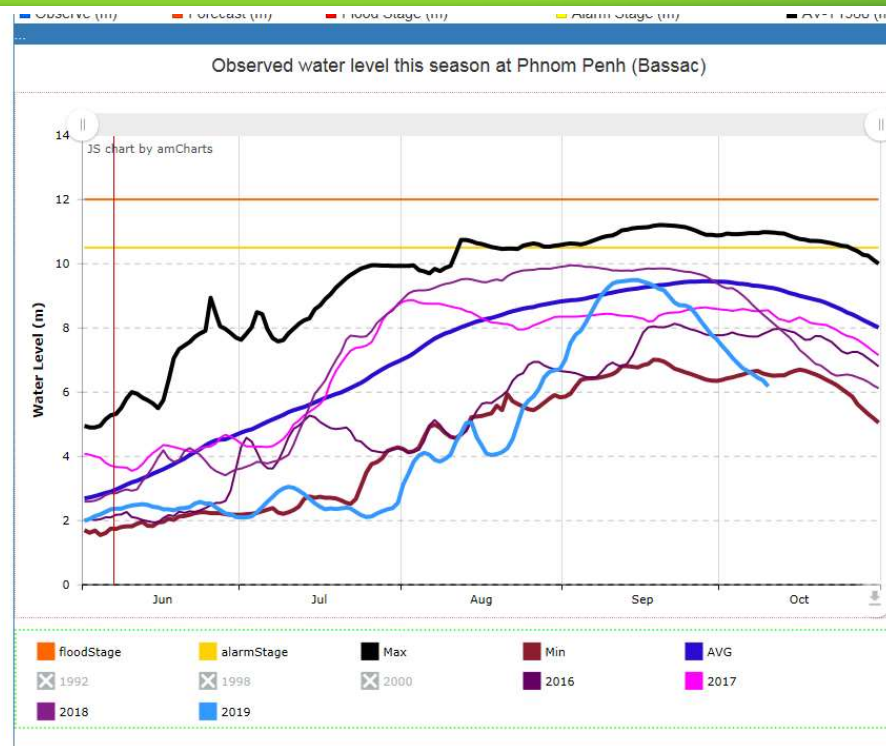


An heavily degraded ecosystem

Location of the 21,038 daily active fire reports by land cover/vegetation type.



Intense fire regime (21,038 fire reports between 2003 and 2016)

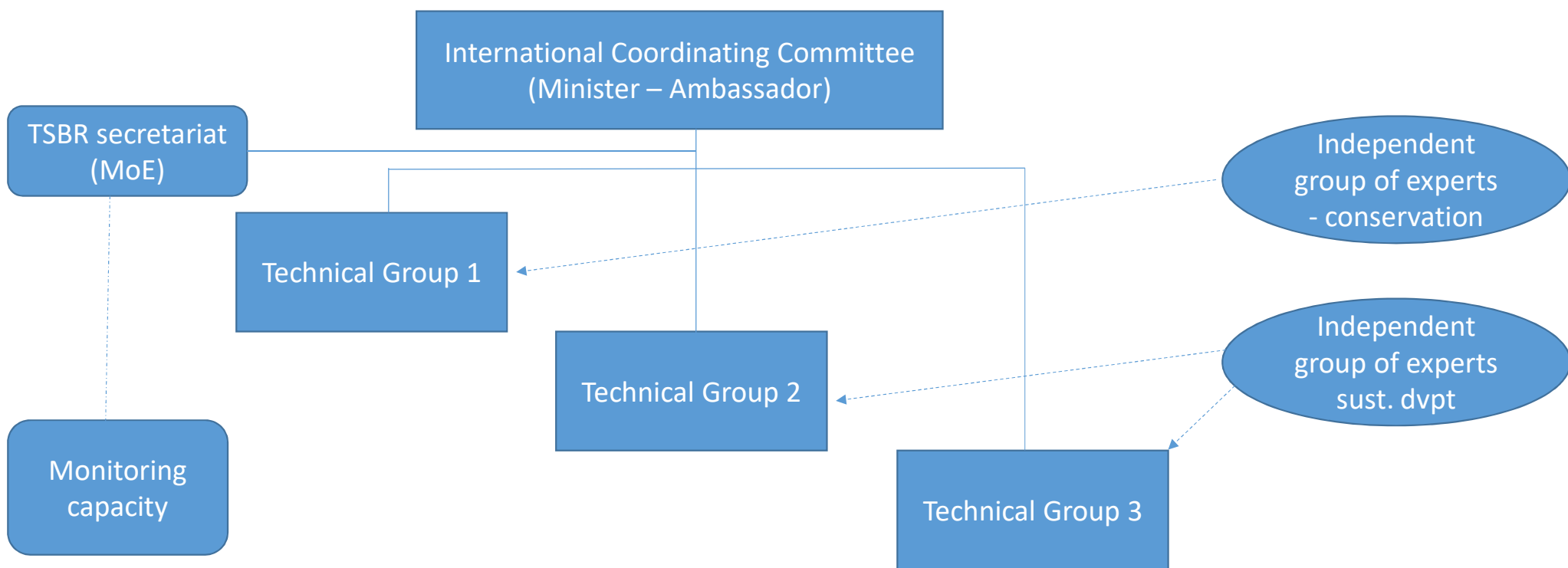


Hydropower dams, deforestation and climate change at basin level

EU response: Combined conservation and development

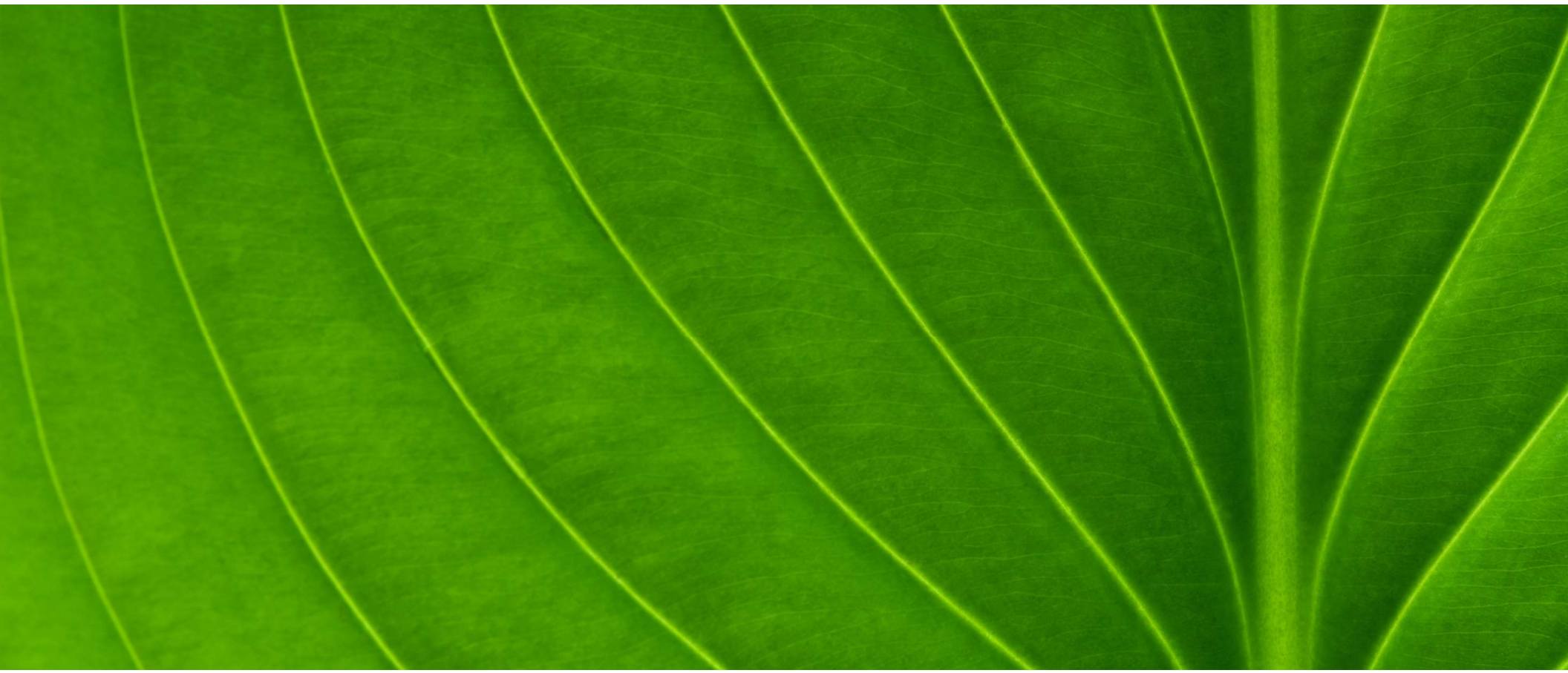
	Wat4Cam (5 M€)	CAPFISH- Aquaculture (25 M€)	CAPFISH-Capture (87 M€)	Integrated landscape (5 M€)
Core areas	Integrated water resources manage- ment for Tonle Sap basin	--	Demarcation Patrol and surveillance	
Buffer		Sustainable cage and pen fish culture	Strengthening of communities' conservation and restoration efforts (small grants) Fire prevention and management plans (provincial level) Patrolling and surveillance Socio-economic development for floating villages (Ecotourism, water& sanitation...) Fisheries VC development	Land use planning and management at community level Vegetation rehabilitation and reforestation activities Environmental awareness Fire prevention
Transition zone		Sustainable rice-fish farming and pond aquaculture	Strengthening of communities' conservation efforts (rice field fisheries) Fisheries value chain development	Sustainable and climate resilient agriculture
Global			Inter-sectoral coordination	TSBR management plan (ecosystem services) Technical assessments and monitoring framework

EU response: strengthened inter-sectoral coordination



EU response: a multi-level approach

Level	Support actor	Action
Central	UNESCO	Inter-sectoral coordination committee (MoE, MAFF, MoWRAM...) TSBR secretariat
	FAO, NGOs	TSBR Management plan Monitoring capacity (FiA, MoE, Universities)
Provincial	FiA, MoE (with FAO)	Fire prevention and management plans Law enforcement (Fisheries, Flooded forest)
Local / Community	FiA (with FAO)	Patrolling and surveillance (Cfis) Vegetation rehabilitation and reforestation activities (Cfis)
	Communes, CBOs, NGOs, private sector	Land use planning and management Vegetation rehabilitation and reforestation activities Environmental awareness Fire prevention Green initiatives: sustainable and climate resilient agriculture, eco-tourism, sanitation and waste management, etc



Thank you!