

Update and Reporting Activities on Inland Fisheries in Cambodia

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Talk Outline

- Value of fisheries at national and regional
- Pressures/issues on fisheries at local, sub-national, national and regional
- Long-term monitoring data (Core River Monitoring Network “CRMN”)
- How we will cooperate to develop the capacity of observation, evaluation and outreach

Value of fisheries at Regional (Lower Mekong Basin)

- The LMB is the world's largest inland fishery and home to nearly 1,200 fish species, making it the third most biodiverse river system in the world after the Amazon and Congo Rivers.
- 2.3 million tons/year worth an estimated \$11 billion, world's largest freshwater fishery
- Fish and OAAs vital for food security, micro-nutrition, and livelihoods for LMB population
- Large proportion of the catch consumed by households and is not sold
- About half of the fish catch is contributed comes from large migratory whitefish species.

Value of fisheries at National

- Cambodia's capture inland fisheries 500,000 tonnes annually
- At least 498 fish species recorded in the Cambodia's Mekong River
- Tonle Sap Lake hosts 296 fish species ranked third in the world after Lake Malawi (433 species), and Lake Tanganyika (309 species) and produced > 60% of total fish production
- The fisheries sector plays a crucial role in Cambodia's economy. About 3.2 million people work both full time and part time fishers/fisheries-related activities (FiA 2021).
- The value of fishery products approximately US\$ 1.5 billion per year and it contributes 6-8% to total gross domestic product (GDP).
- Fish providing 76% - 81% of total animal protein intake for the population (IFReDI, 2013)
- Total average fish and OAA consumption is 58 Kg/fisher/year with contributing from fish up to 73% and OAA 27% (IFReDI, 2020)
- Fish contribute to energy (12%), protein (36.6%), carbohydrate (1%), fats (27.8%) to total food intake in Cambodian daily diet (IFReDI, 2013)



Pressures/issues on fisheries at regional

1. Hydropower and hydrological fragmentation
2. Unsustainable fisheries
3. Land use change and wetlands degradation
4. Aggregate extraction (sand mining)
5. Limited integrated river basin management
6. Growing climate change impacts
7. Limited knowledge on fisheries (data gaps, modeling vs. hydrology)
8. Limited experience with fisheries conservation measures and restoration
9. Insufficient public investment in capture fisheries
10. Weak regulatory framework at regional levels
11. TBFM in its infancy (very small scale)

Source: MRC



Sources: International Rivers; Mekong River Commission; Stimson Center

W. Foo, 13/04/2020

Pressures/issues on fisheries at national, sub-national and local level

- Hydropower development on mainstream and tributaries
- Climate changes (flood, drought, seawater rise)
- Population growth/increasing demand for fish
- Fish habitats degradation
- Disrupt connectivity
- Overfishing
- Illegal fishing activities (in breeding season, in prohibited area,..)
- Illegal fishing gears (Electro fishing, mosquito net,..)
- Environment change (water flow, deforestation, etc.)
- Sand extraction and mining
- Weak law enforcement



Long-term monitoring data (Core River Monitoring Network “CRMN”)

Core River Monitoring Network “CRMN” is the long-term monitoring activities/network and made of 5 environmental disciplines: 1. Hydrology, 2. Sediment, 3. Water quality, 4. Ecology health and 5.

MRC collaborated with its member countries: Cambodia, Lao PDR, Thailand, and Vietnam to produce these long-term data of CRMN.

Disciplines / Parameters	Organization Responsible for Data Collection	Status of Data Collection
Fisheries	IFReDI/FiA/MAFF	Ongoing
Fish Abundance & Diversity		
Fish Larvae & Drift		
Dai Fisheries on the Tonle Sap River		
Ecological Health	IFReDI/FiA/MAFF	Ongoing
Benthic Macroinvertebrate		
Littoral Macroinvertebrate		
Zooplankton		
Benthic Diatoms		
Hydrology	HRWD, MOWRAM	Ongoing
Water Level		
Rainfall		
Discharge		
Discharge & Sediments	HRWD, MOWRAM	Ongoing
SSC		
Bedload		
SSC Grain Size		
Bed Material Grain Size		
Surveyed River Cross Section		
Bathymetry		
Water Quality	HRWD, MOWRAM	Ongoing
Water Temperature		
pH		
Dissolved Oxygen		
Conductivity		
Turbidity		
Total Nitrogen		
Ammonium (NH ₄)		
Total Nitrate & Nitrite (NO _{2/3})		
Total Phosphorus		
Total Suspended Solids		
Alkalinity		
Chemical Oxygen Demand (COD)		
Mineralization: Calcium (Ca), Magnesium (Mg), Sodium (Na), Potassium (K), Sulphate (SO ₄ ²⁻), Chloride (Cl)		
Chlorophyll		
Light Penetration		
Faecal Coliform		

How we will cooperate to develop the capacity of observation, evaluation and outreach

- Scaling up ABBON and its members
- Facilitation and coordination among all relevant stakeholders on biodiversity and environmental data and networking
- Sustainable mobilize resources to achieve long term plan
- Encouragement and support the training/meeting/workshop opportunity
- Join research implementation and publications

Thank You

