

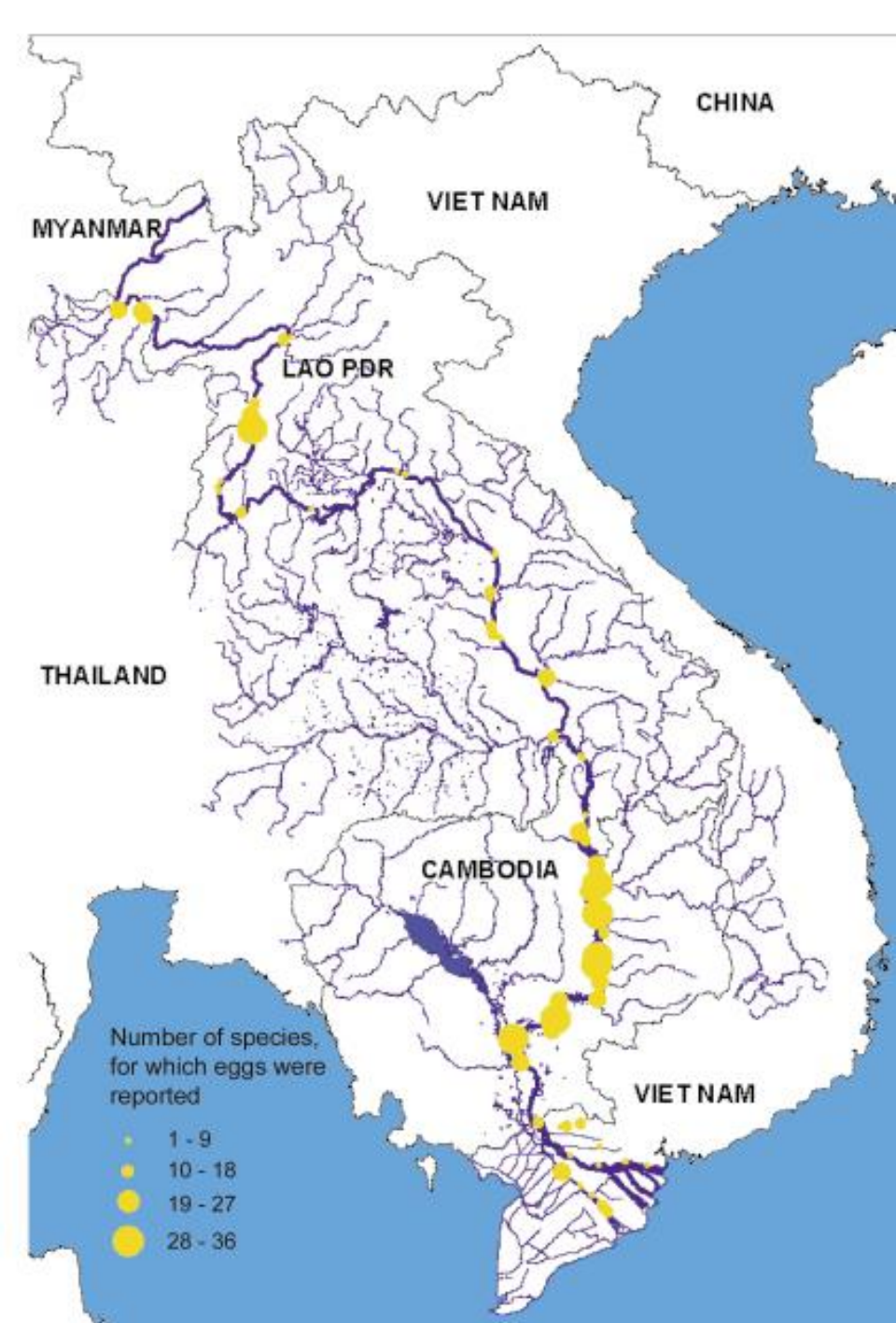
Ecological degradation as a non-traditional security issue

The case of the Mekong

Nguyen Huu Thien

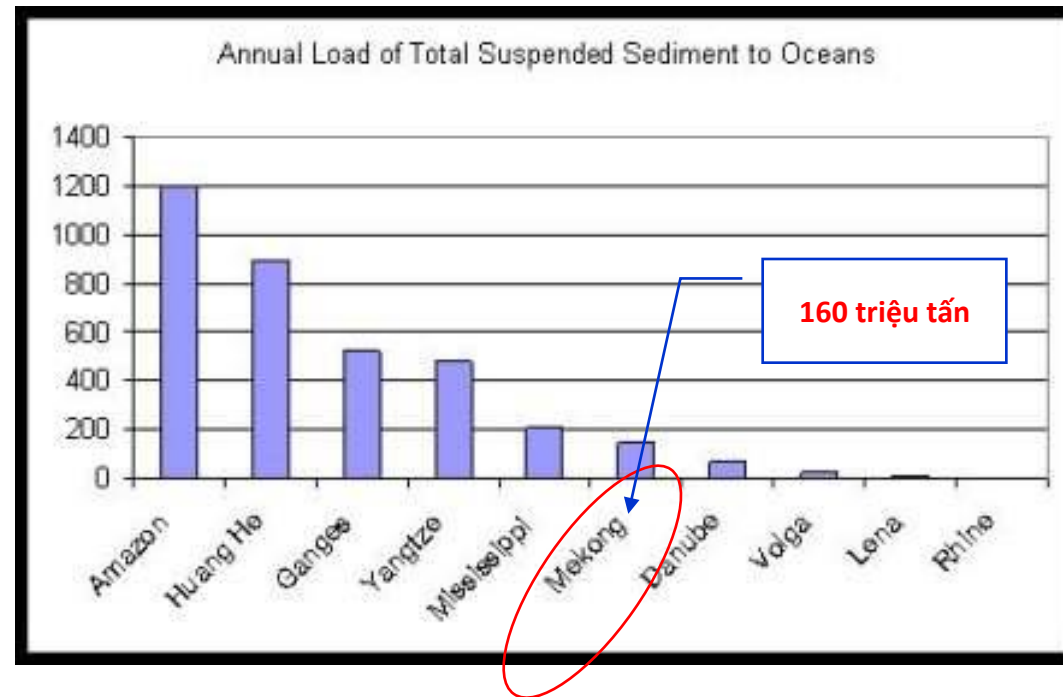
Delta ecologist 0913619159





The annual sediment load of the Mekong River is 160-165 mil tons

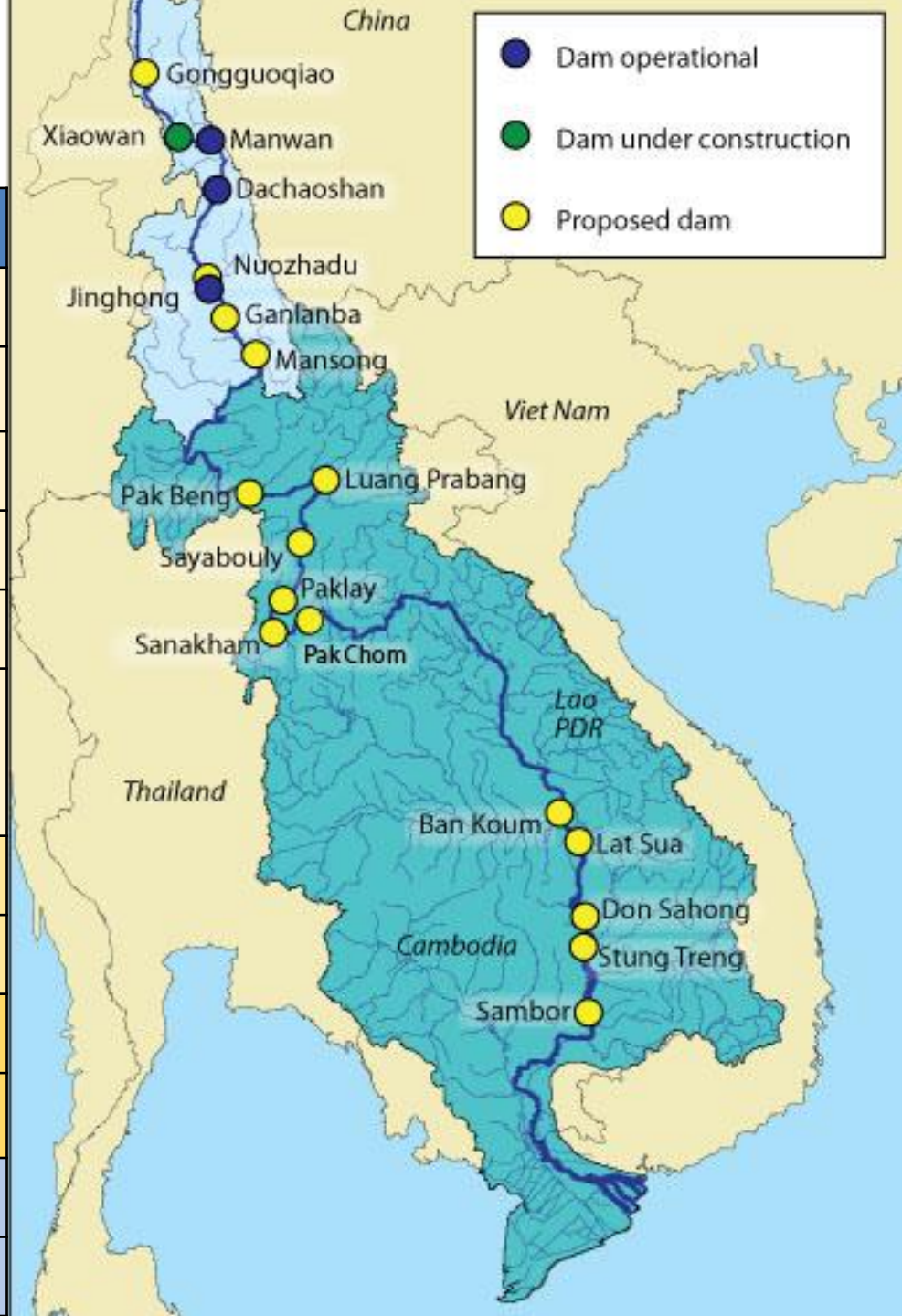
Mekong is ranked 6th in the world for its annual sediment load



Source: Water Quality for Major Watersheds. The GEO Data Portal, UNEP

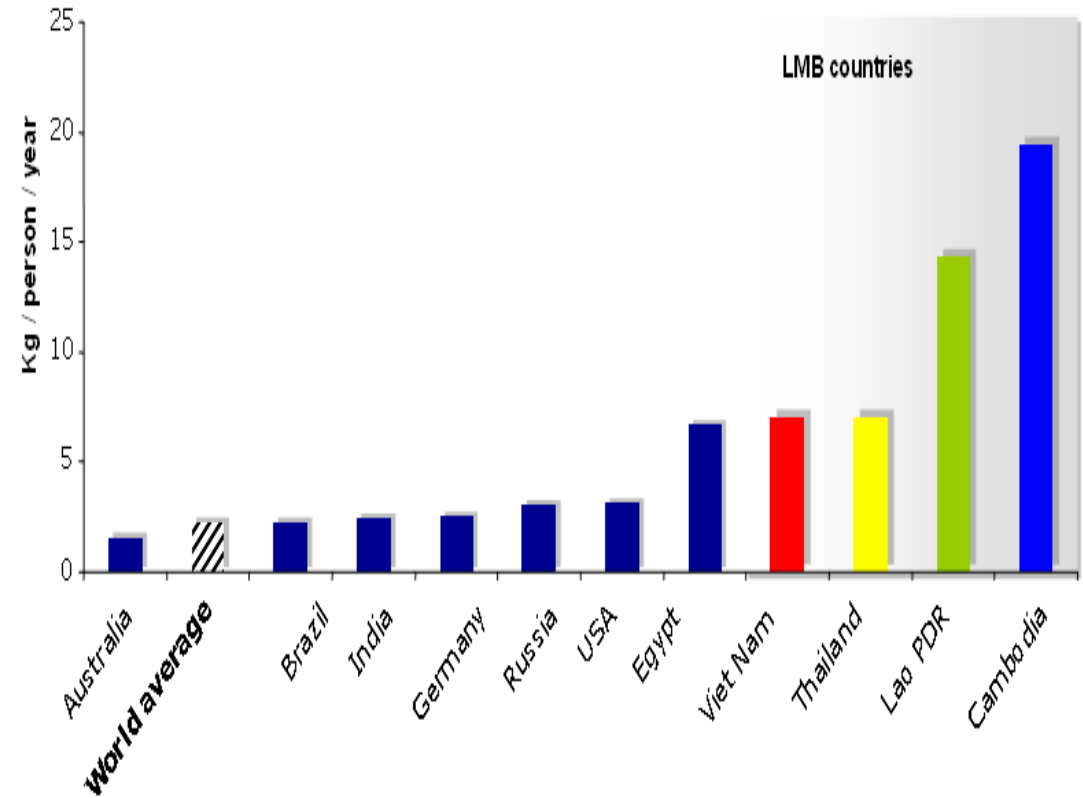
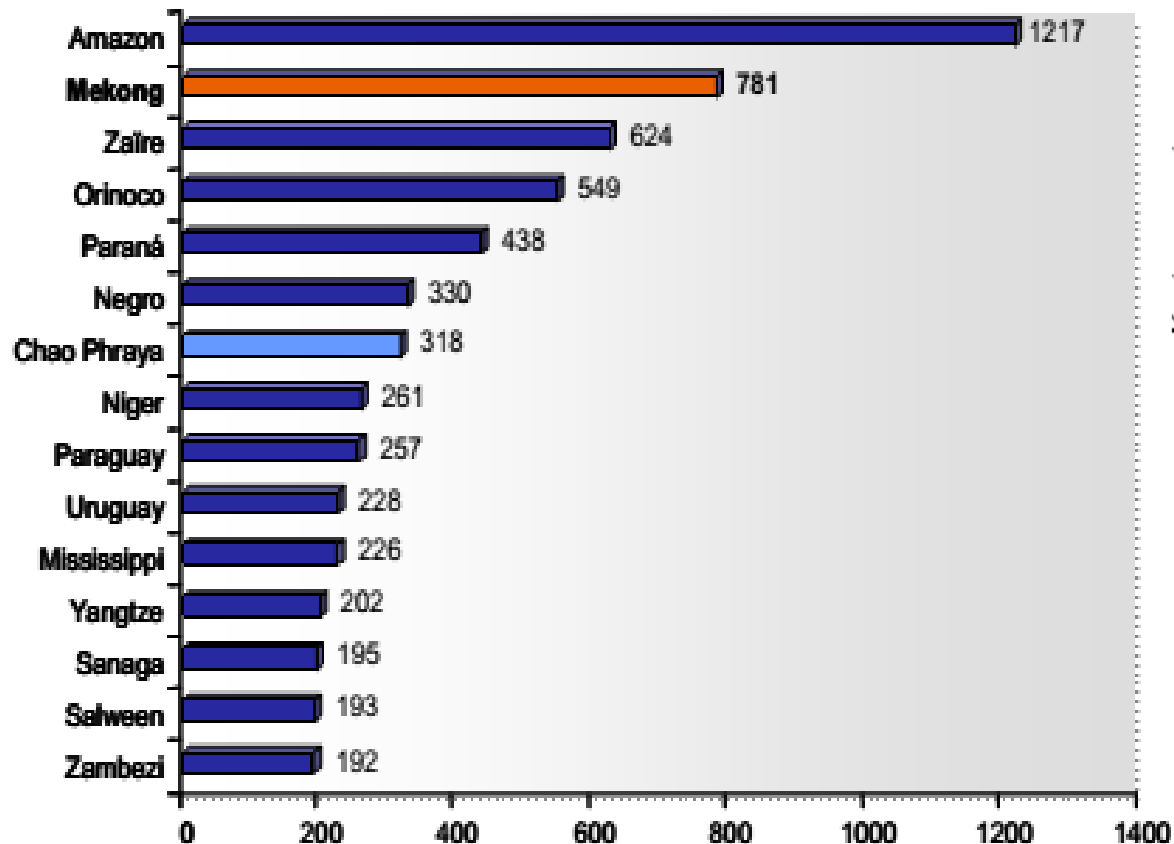
Proposed LMB mainstream hydropower projects

No	MAINSTREAM PROJECT	DEVELOPER
1	Pak Beng	China: Datang International Power Generation
2	Luang Prabang	Vietnam: PETROVIETNAM Power Corporation
3	Xayaburi	Thailand: SEAN & Ch. Karnchang Public
4	Pak Lay	China: CEIEC & Sino-Hydro
5	Xanakham	China: Datang International Power Generation
6	Pak Chom	Thailand/Laos: Joint feasibility study by Panya consultants on behalf of Ministries of Energy in Thailand and Ministry of Mines and Energy in Lao PDR
7	Lat Sua	Thailand: Italian Thai Asia Corp. Holdings
8	Ban Koum	Thailand: Charoen Energy & Waters Asia
9	Don Sahong	Malaysia: Mega First
10	Thakho	France: Compagnie Nationale du Rhone and EDL
11	Stung Treng	Vietnam
12	Sambor	China: Southern Power Grid



Impact on fisheries

Figure 1: Fish species richness for different rivers of the world.



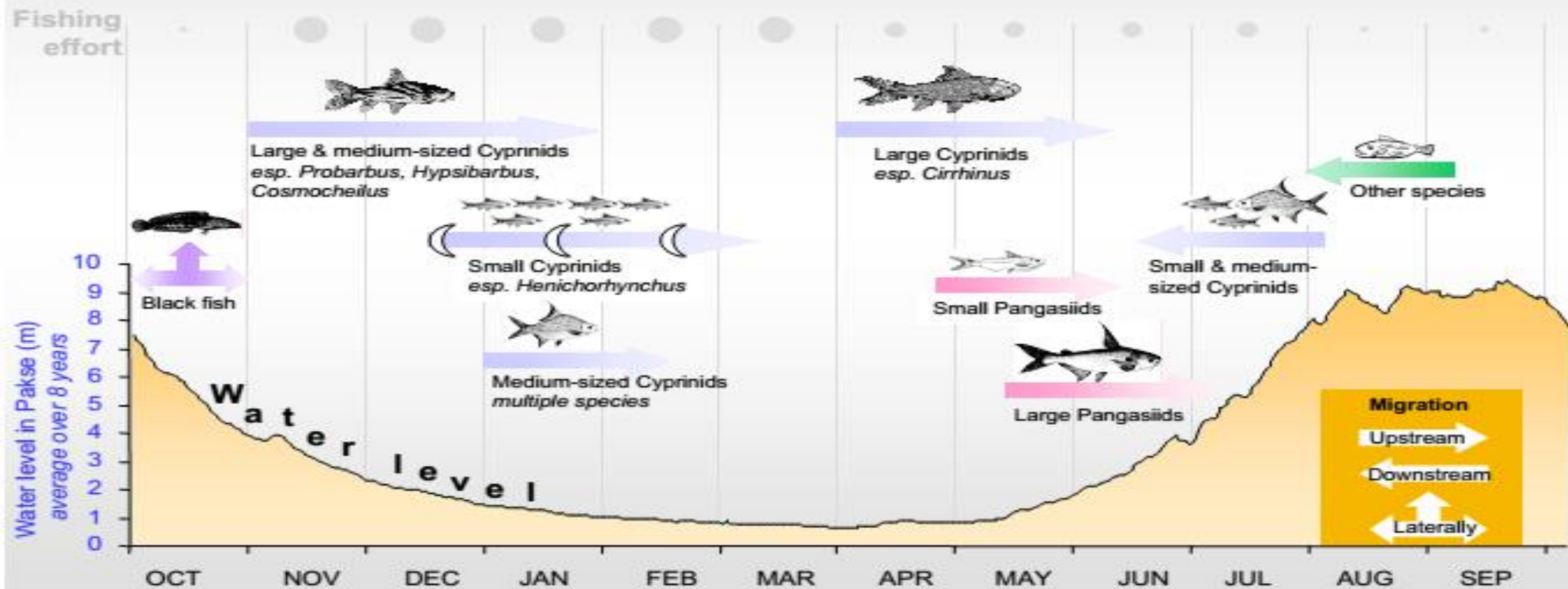


- **Black fish:** move locally between the floodplains and the river.
- **White fish:** migrate upstream annually.
- **Grey fish:** the in-between group, migrating locally between the floodplains and the local tributaries.

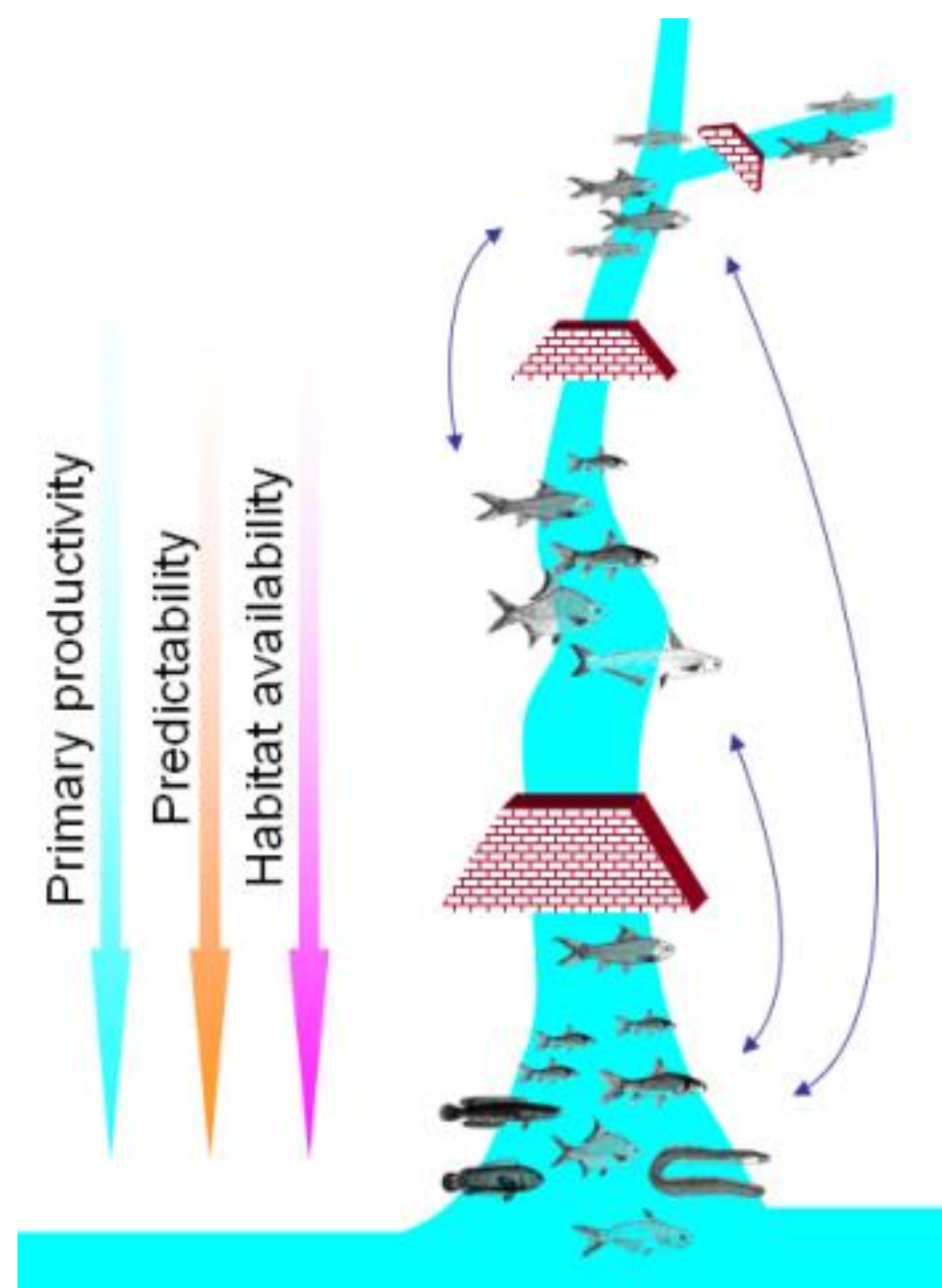


- Source: Fishery impact assessment paper (SEA)

Mekong fish migrations



Example from Khone Falls (Southern Laos)



Cascading impacts on the food web, human health, and livelihoods.



Fertilizers cannot replace sediments



The Delta Building Process is halted and reversed.
Currently more than 50% of the coastline is being severely eroded.



Migration out of the Mekong Delta in Vietnam



Conclusion

- There are direct and indirect links between environmental degradation and poverty, migration, tension and conflict, and even terrorism.
- Environmental degradation should be seriously considered a Non-traditional Security Threat.
- Environment degradation as an NTS should be in the discourse of national, regional, and world's security discussions.