

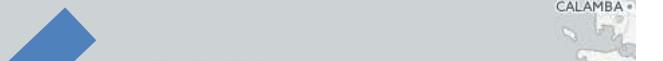
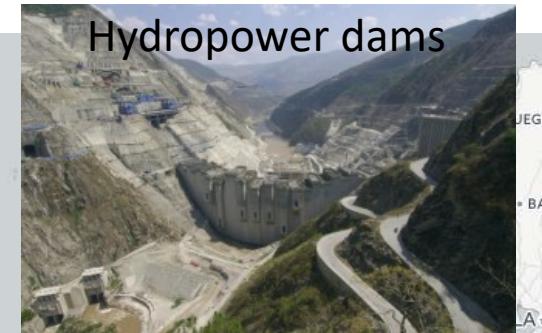
Threats and future of freshwater fish biodiversity in East and Southeast Asia

AP-BON Freshwater team

Our field works 2008-2018



Issues of freshwater fish biodiversity and the habitats in SE Asia



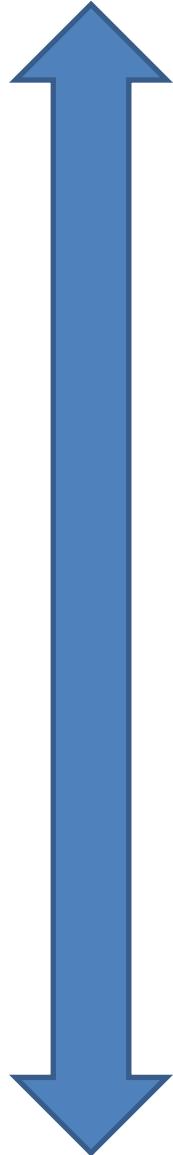
Alien



Land-use change
(Plantation)



Spatial scale



Global warming

Hydropower dams

Land-use change

Pollution

Alien

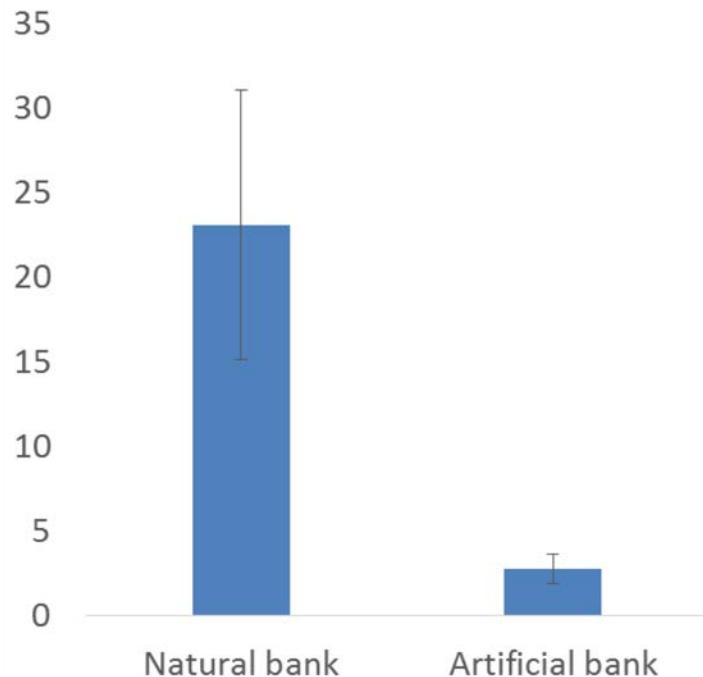
Habitat loss

Habitat loss

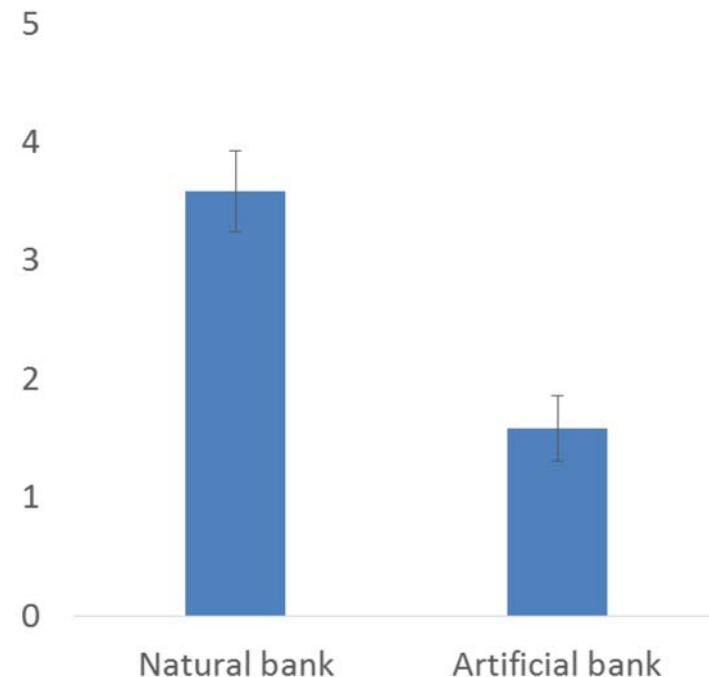
China,
Tioxi River



Individual density



Species richness

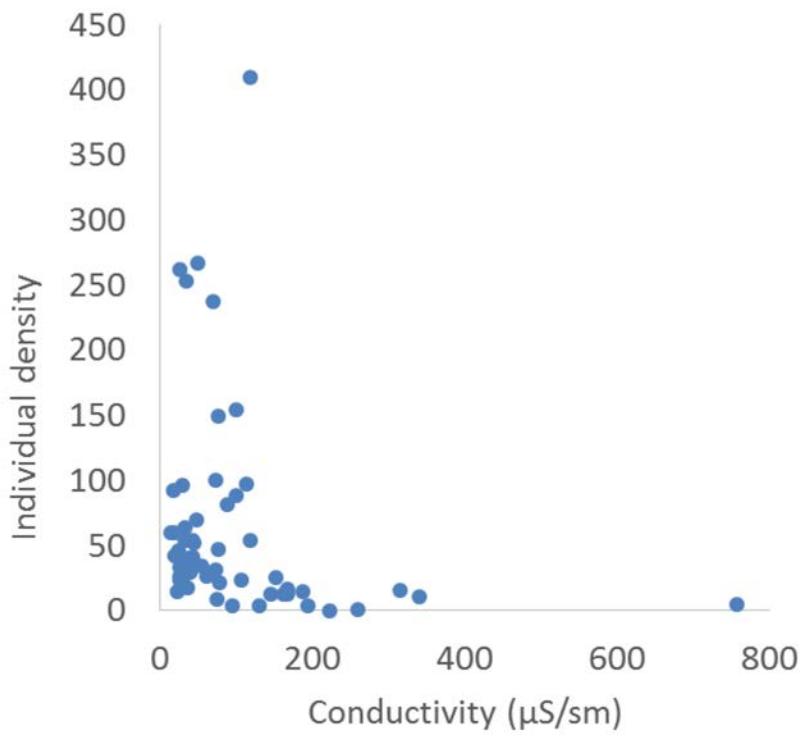


Pollution

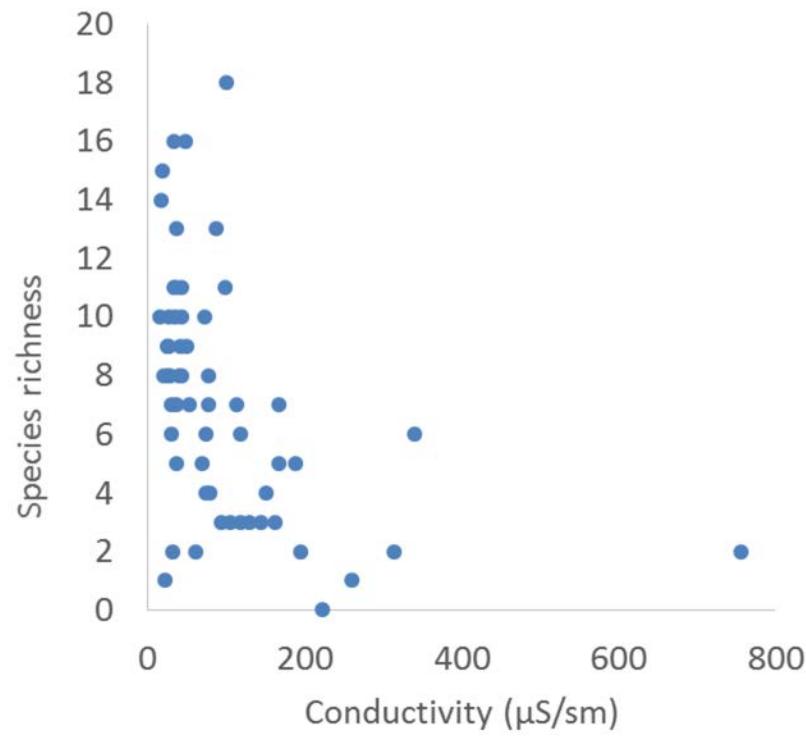
Peninsular
Malaysia



Individual density



Species richness



Pollution

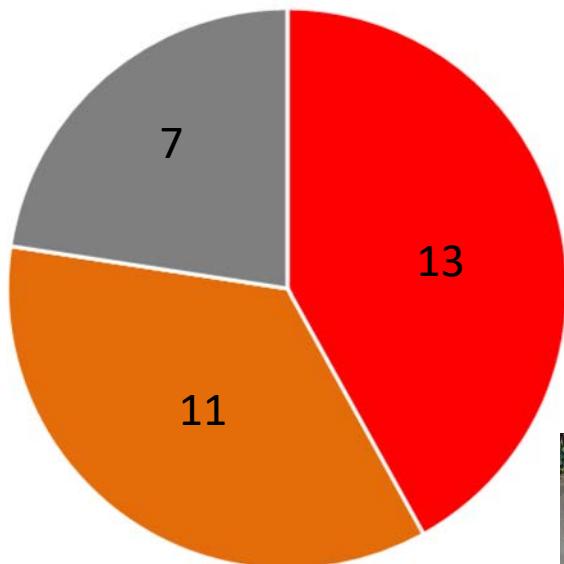
Pollution

Alien

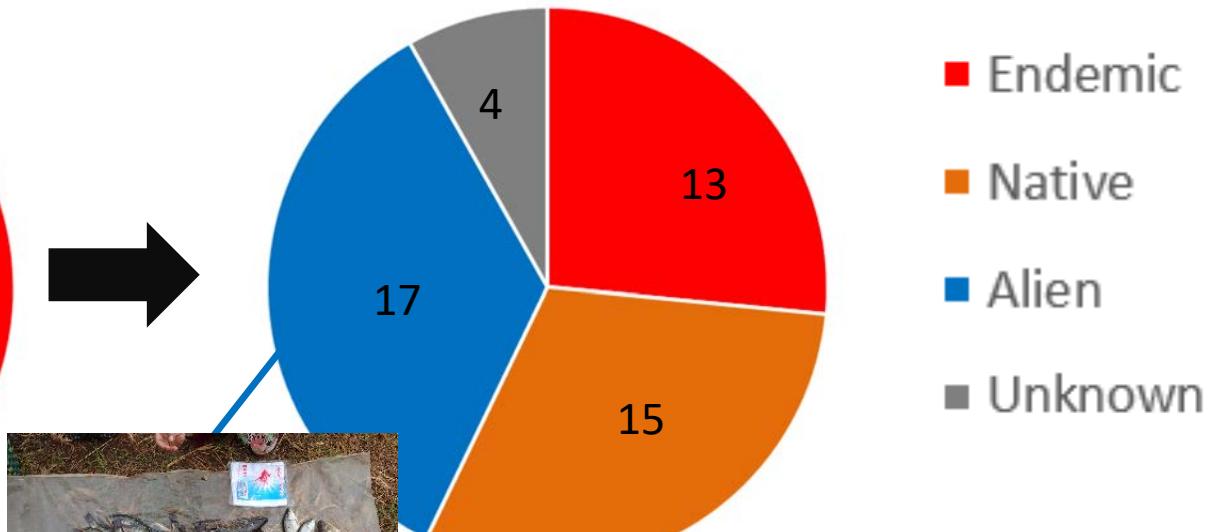
Myanmar,
Inle Lake



Annandale 1918

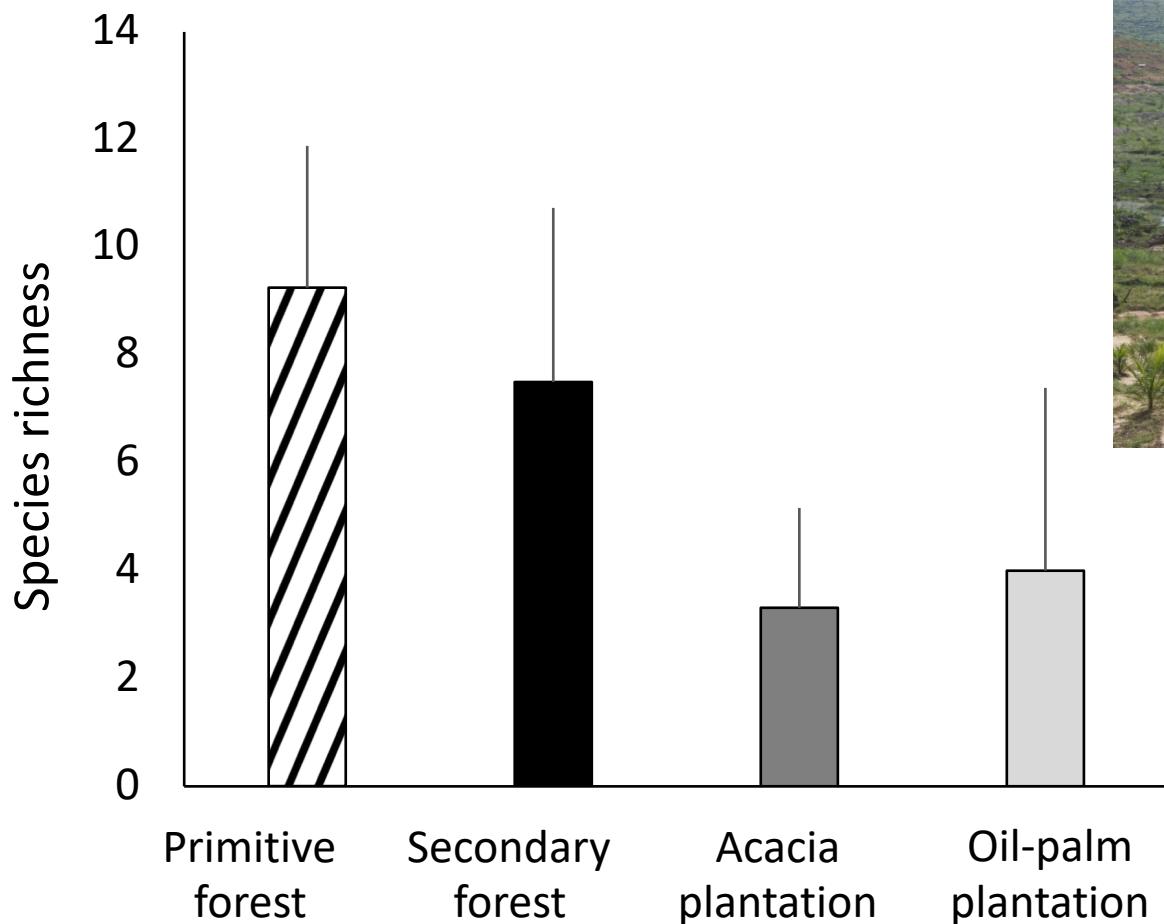


Kano et al. 2016



Land-use change

Sarawak,
Malaysia

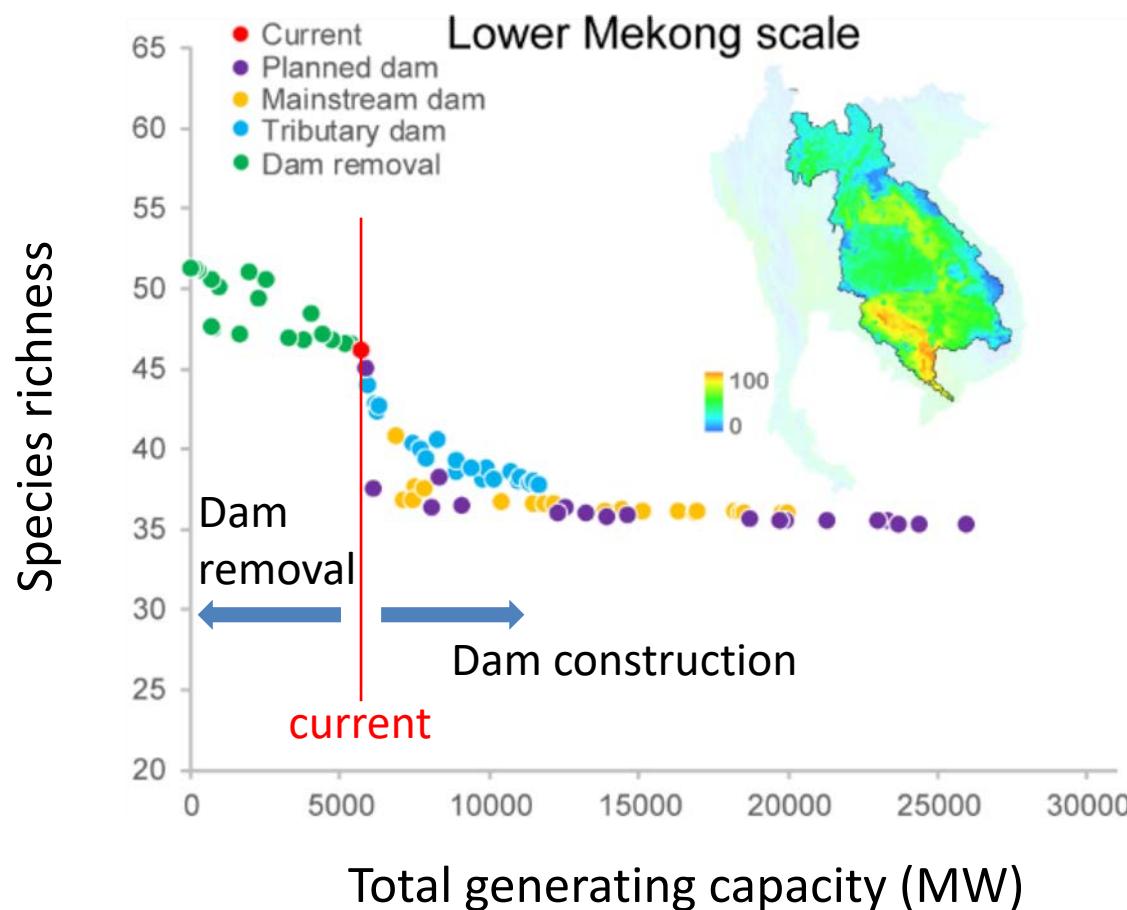


Hydropower dams

Mekong River



Simulation by actual data of 1500 locality

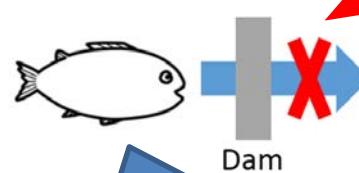
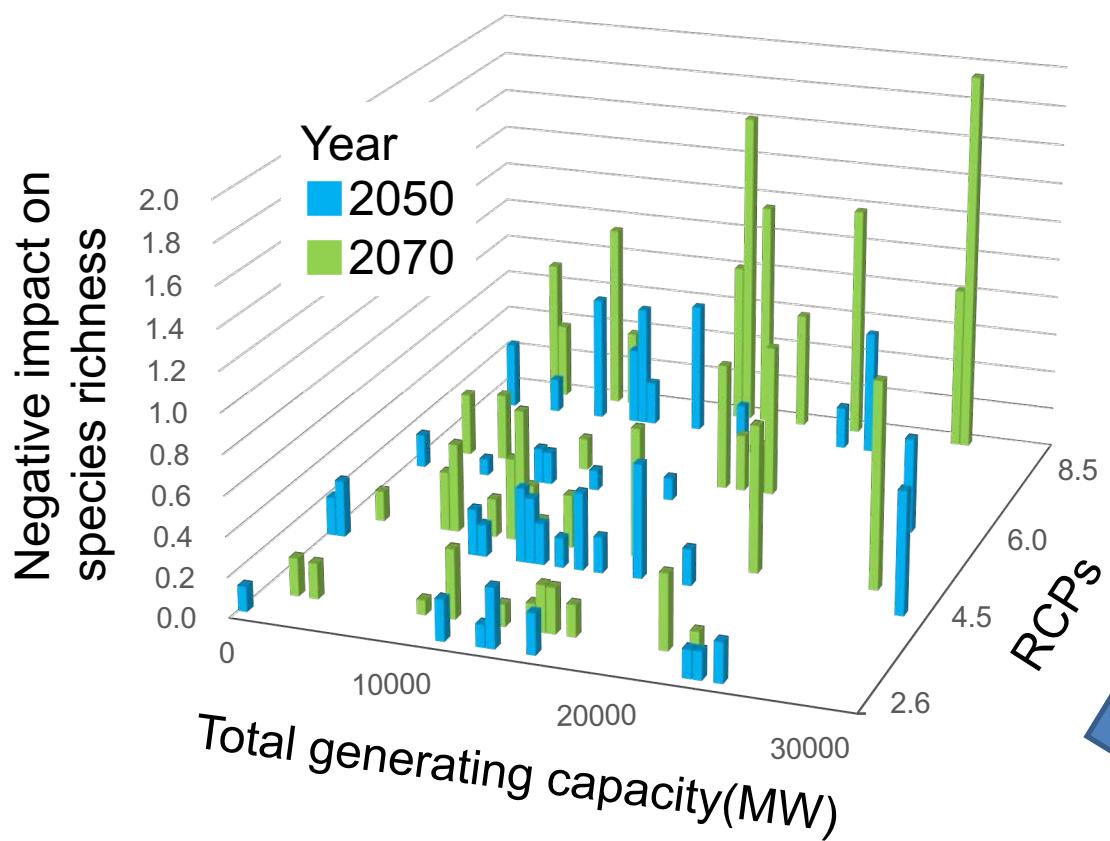


Global warming

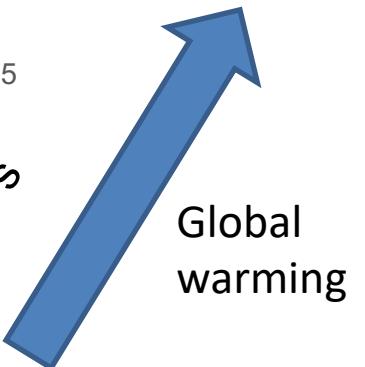
Mekong River



Synergistic impact with hydropower dams



Too hot!
I want to go upstream,
but cannot go!



Synergistic impact

Disscussion tommorow

Next long-term monitoring of
freshwater fish biodiversity in SE Asia

Possible monitoring sites

Alien

Pollution

Inle Lake

Hydropower dams

Mekong
(Ubon Ratchathani)

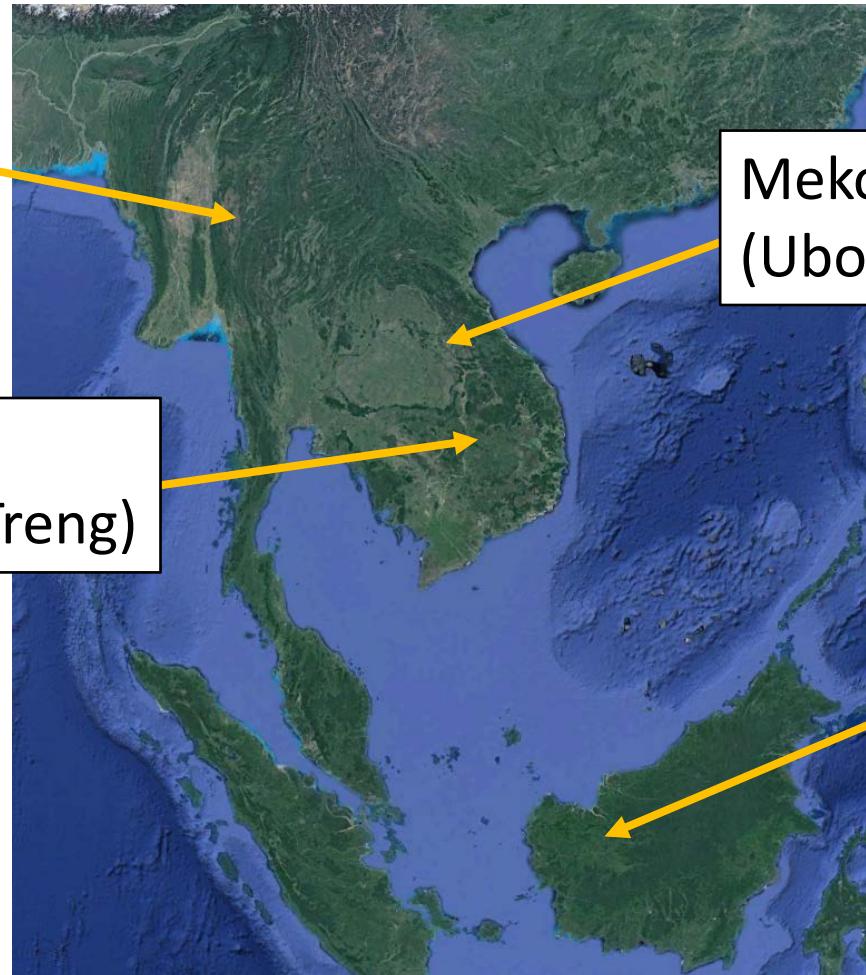
Mekong
(Steung Treng)

Hydropower dams

Baleh River

Hydropower dams

Plantation



Methodology

How can we standardize the sampling effort?

- Fishing gear
- Sampling area
- Sampling time
- Number of people

Simpler better?

e.g. No new species for 30 minutes or 2 hours by 3 persons
(any fishing gear)

Methodology

Is market survey effective? and how?

