THANLWIN ESTUARY:

THREATS CHALLENGING SOCIO-ECONOMY OF LOCAL COMMUNITY

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13 March 2017
MICC 2, Nay Pyi Taw

Agenda

- Background
- Socio-economy
- Potential threats
- Adaption by local community
- Conclusion

Background

Thanlwin River

- Length: 2820 km (1749 ml); River Basin: 324,000 km 2
- Source: T'ang Ku La (Tangula), Eastern Tibet, China
- Mouth: Gulf of Mottama (Martaban), Katpali (Andaman Sea)
- Transboundary River: China, Myanmar, Thailand
- Thanlwin River is known by different names in various areas such as "Nu Jiang" or "Nu" in Tibet and China, "Thanlwin" in Myanmar and "Salween" or "Nam Kong" in Thailand.
- - the only major river in this region that still runs freely

Map of the Rivers in Myanmar

Map of the Thanlwin Watershed

China

Thanlwin River

Myanmar

Thailand

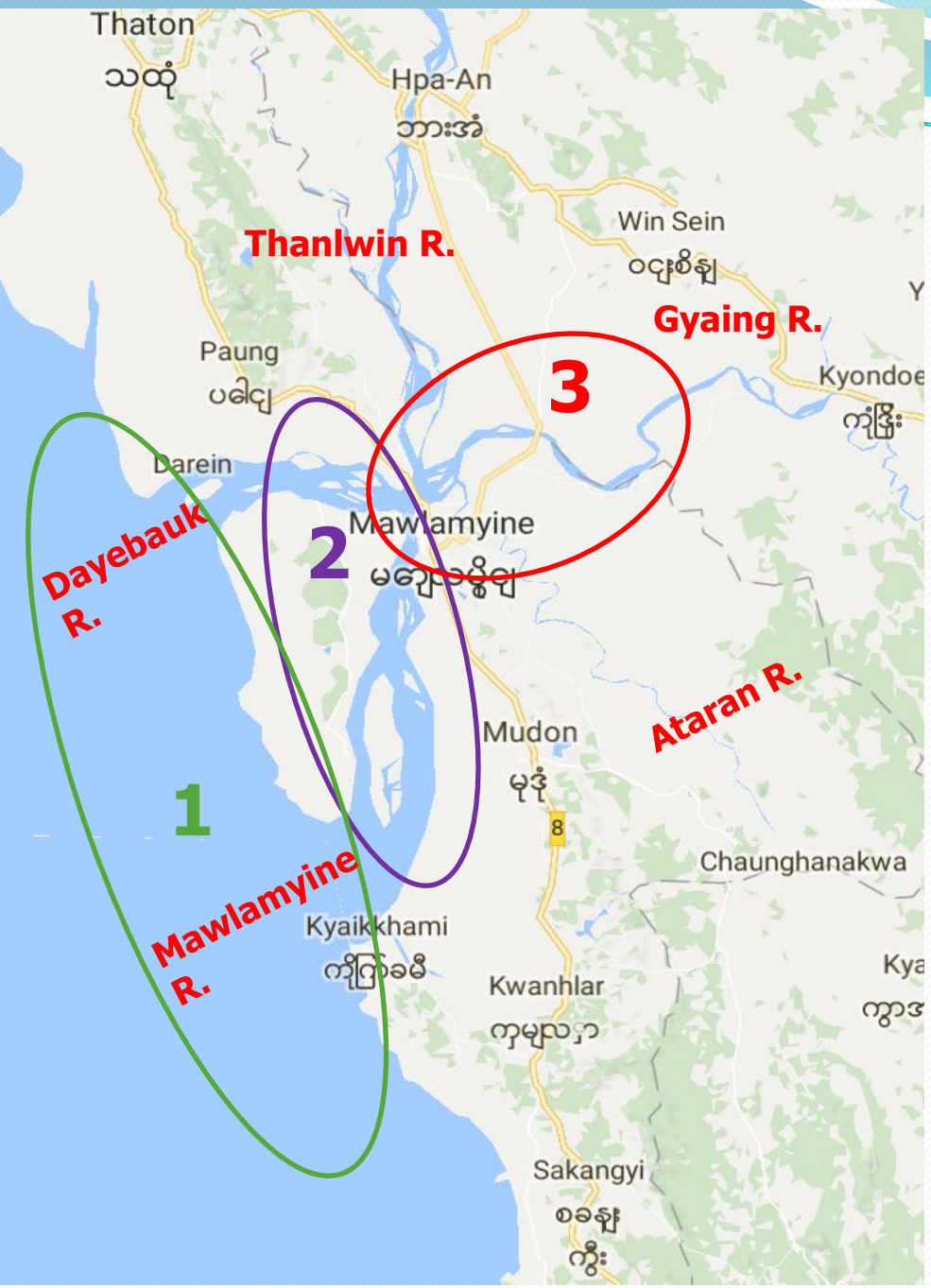
Thanlwin River Basin in Asia

Thanlwin River Basin

- **Basin Areas** (km^2)
  - China - 169,600
  - Myanmar - 134,400
  - Thailand - 16,000
- **% of Basin Areas**
  - China - 53%
  - Myanmar - 42%
  - Thailand - 5%
- **% of Basin Areas in Country Areas**
  - China - 1.8%
  - Myanmar - 19.9%
  - Thailand - 3.1%
- **Inhabitant**
  - 3 Millions in China
  - 7 millions in Myanmar
- **Living** - Farming, Logging, Fisheries
- **Plants** - 7000 species
- **Fishes** - 140 species, (47 are endemic)
- **Turtles** - 10 -15 species (highest species composition in the world)

Thanlwin River Estuary

Sea water penetration



1- Mouth region: high salinity (15‰-30‰)

2- Middle estuarine region: Moderate salinity (5‰-15‰)

3- inner estuarine region: low salinity (0‰-5‰)

Tidal influence (dry season):

25 km up along Salween R

75 km up along Attaran R

60 km up along Gyaing R

Sea water penetration & Salinity Level

Unit characteristics of Estuary

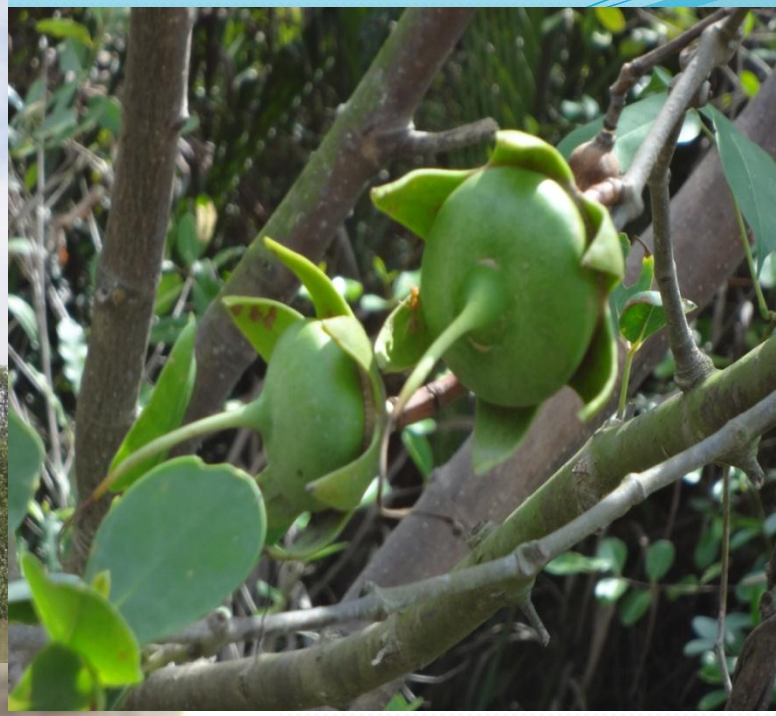
- Four dis-tributries of Thanlwin River forming Thanlwin Estuary : Gyaing, Attaran, Darebauk, Mawlamyine rivers
- Environment: High sedimentation, high nutrients (fertile), high turbulence, influencing the daily rhythm of fresh and salt water, dynamic
- Establish: Mud flat, Mangroves, riverine vegetation, new Islands
- Resources: - Fresh, brackish, marine fishes and prawns
- other creatures
- Fishes: 70 species

Estuarine Resources

- Fishes and prawns (Fresh, marine, brackish)
- Fauna and fauna
- Mangroves
- Mudflat
- Fresh water (drinking &domestic used)
- Lands

Habitats

- Fertile
- Feeding ground (high nutrients)
- Breeding ground
- Nursery ground
- Spawning ground

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Potential treats challenging the local community

- Large erosion and sedimentation
  - Land loss
  - Conflict
  - Block the water way
  - Changing the ecosystem
  - Habitat loss
  - Expend and narrow
- Declining the fishery resources
  - Migrate to other place
  - Soci-economy change

Predicted reasons

- Upland erosion
- Construction of bridge
- Sand collecting
- High sedimentation
- Overexploitation
- Illegal fishing in spawning season
- Illegal fishing by using poison and large gear

Villages	River bank	Economy
Ahlat village	Dayebauk River	Mudflat fishing, crab fishing, clam collecting, dry fish making, fisheries with small boat and large engine boat, farming
Khin tan village	Dayebauk River	Mudflat fishing, crab fishing, clam collecting, dry fish making, fisheries with small boat, farming
Kalwee village	Dayebauk River	crab fishing, dry fish making, fisheries with small boat and large engine boat, farming
Kau –mu-pun village	Mawlamyine River	crab fishing, dry fish making, fisheries with small boat and large engine boat, farming
Ka-nyaw village	Mawlamyine River	dry fish making, fisheries with small boat and large engine boat, farming
Ka-tone-paw village	Mawlamyine River	fisheries with small boat, farming
Kayar village	Gyine River	fisheries with small boat, farming, Making palm sugar
Kau-bien village	Gyine River	fisheries with small boat, farming
Kau-sein village	Attran River	fisheries with small boat, farming
Kau-ton village	Attran River	fisheries with small boat, farming


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Expected Impacts

Greatly disrupt the riverine ecosystem: destroy the livelihoods of those peoples living along the river

- Polluted waters: difficult for drinking water
- New Islands: block and change the water way
- Dams: Large areas of land will be flooded or drought. Salt water will penetrate inner region and destroy the farm lands, harm the agriculture, change the ecology of downstream estuaries, Habitat change, socio-economy change, Changes in water quality, salinity, seasonal flows, decline in fish catches due to interrupted migrations, decrease biodiversity
- Climate change: flooded by sea level rise
- Large construction: High sedimentation, change the biodiversity behavior
- Sand collection: River bank Erosions

Conclusion

- Estuary is an ecosystem with unit characteristics (dynamic but balanced)
- Thanlwin River is one of the region's last largely free-flowing River.
- Millions depend on the Thanlwin River and estuary to sustain their fisheries & farmlands.
- Keep the Thanlwin River and estuary healthy and flow beautifully for the millions upstream & downstream that it sustains, if possible.


THANK YOU ALL