

Research in the Sittaung River Estuary, Myanmar

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United Nations
Educational, Scientific and
Cultural Organization

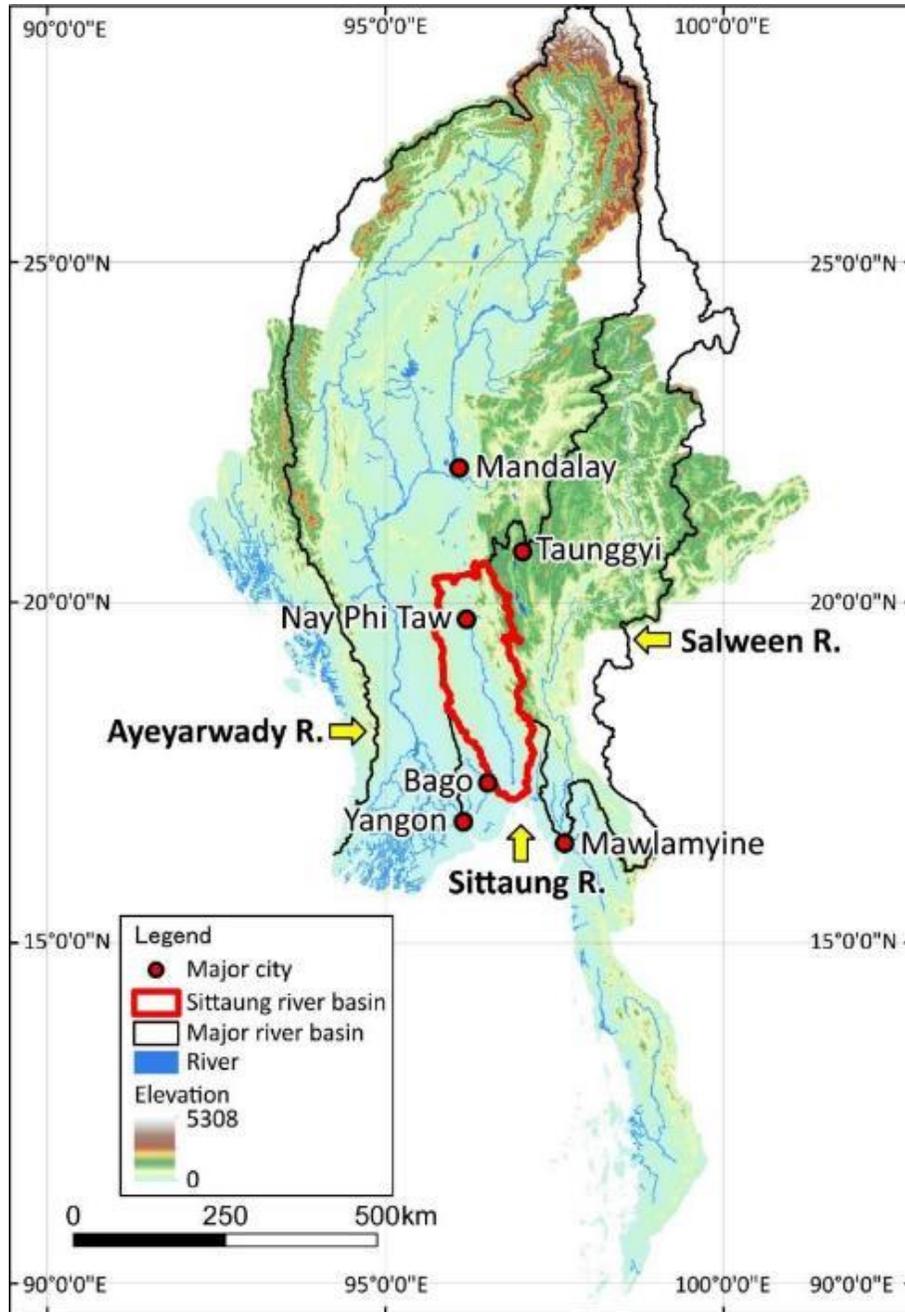


International Centre for
Water Hazard and Risk Management
under the auspices of UNESCO



Public Works Research Institute,
National Research and Development
Agency, Japan

Background



- ✓ **Sittaung River** drains an area of c. 36,000km² and flows into the Gulf of Martaban.
- ✓ The **estuary** spreads towards south from the Sittaung Bridge with a trumpet shape, which is c. 220 km long and 270 km wide.
- ✓ In the estuary, strong tidal currents (tide difference: 4-5 m in Mawlamyine, 6 m in Yangon), with **tidal bores** are caused, resulting in serious **bank erosion** (c. 1km/yr).

Research Team

Sittaung Estuary

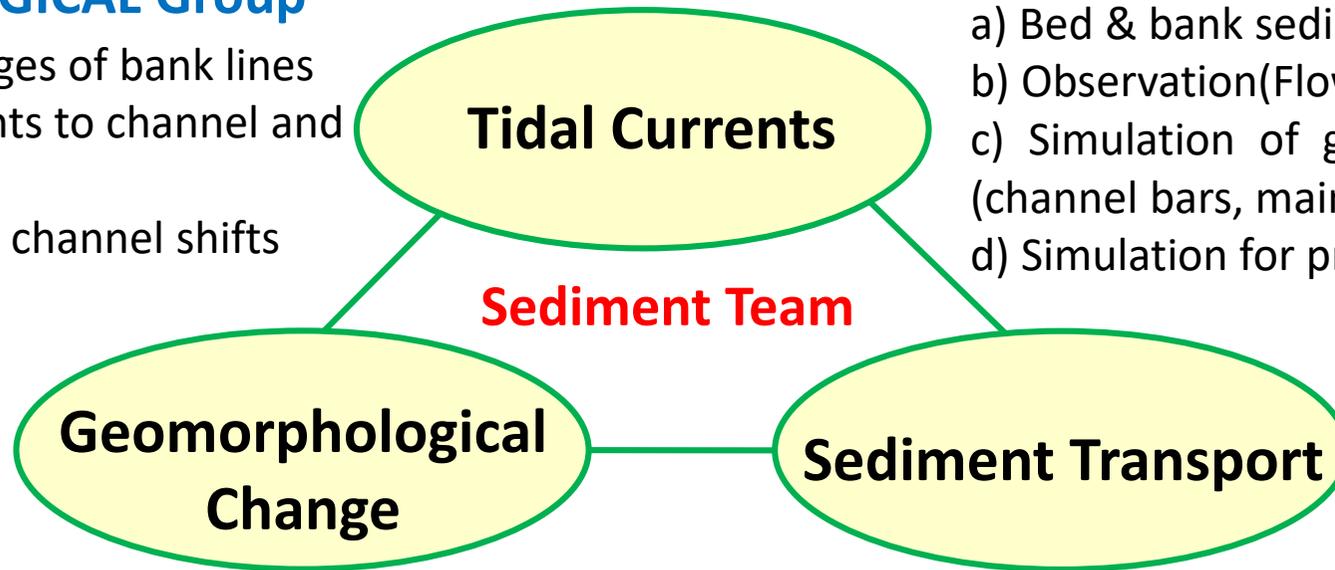
Understanding the behavior of the Sittaung R. and promoting prevention measures for bank erosion is one of the important issues in Myanmar

GEOMORPHOLOGICAL Group

- a) Bank erosion & changes of bank lines
- b) Effects of tidal currents to channel and channel bars
- c) Characteristics of the channel shifts

SEDIMENT HYDRAULICS Group

- a) Bed & bank sediment
- b) Observation(Flow & sediment)
- c) Simulation of geomorphic changes (channel bars, main channel)
- d) Simulation for prevention measures



Feb. 2019: Research meeting at DWIR in Yangon



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Field Survey

Survey in 2019



Survey in 2020

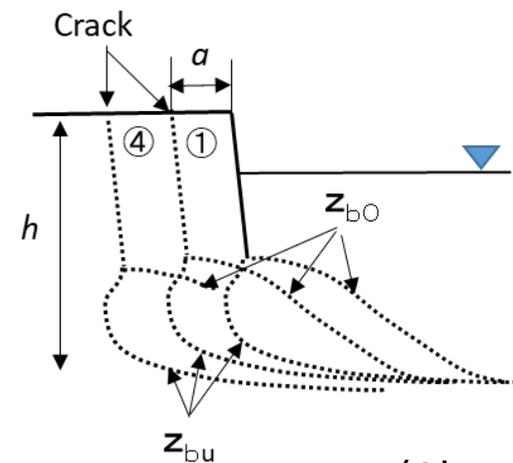
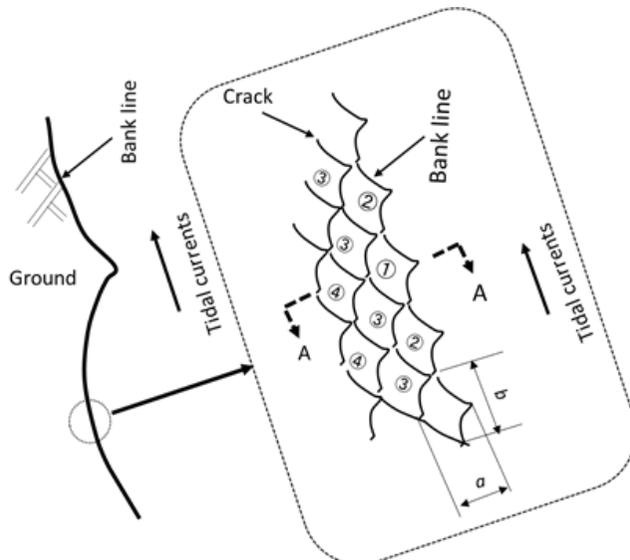


Field Survey

16/Feb/2018



Active bank erosion & sediment deposition (Channel changes) due to river flow and tidal current



(Ahmed et al., 2019)

Numerical Computation

Bed morphology reproduced for 2019 shape as well and compared with satellite image

