

Stabilization of the Brahmaputra-Jamuna-Padma-Meghna River corridor, Bangladesh (PPT)

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Stabilization of the Brahmaputra-Jamuna-Padma-Meghna river corridor, Bangladesh

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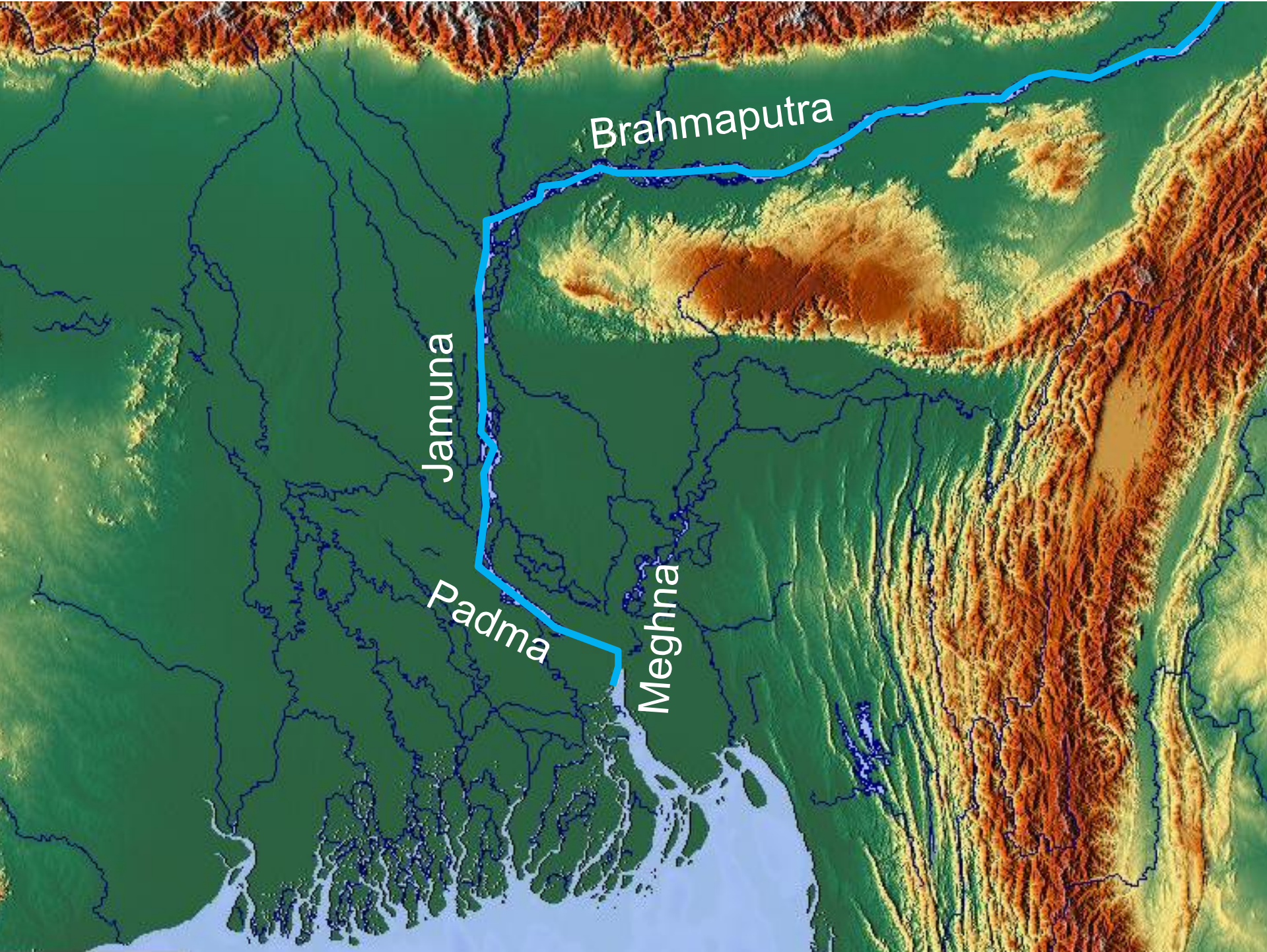
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⁵ *CEGIS, Dhaka, Bangladesh*

⁶ *Bangladesh Water Development Board, Tangail, Bangladesh*



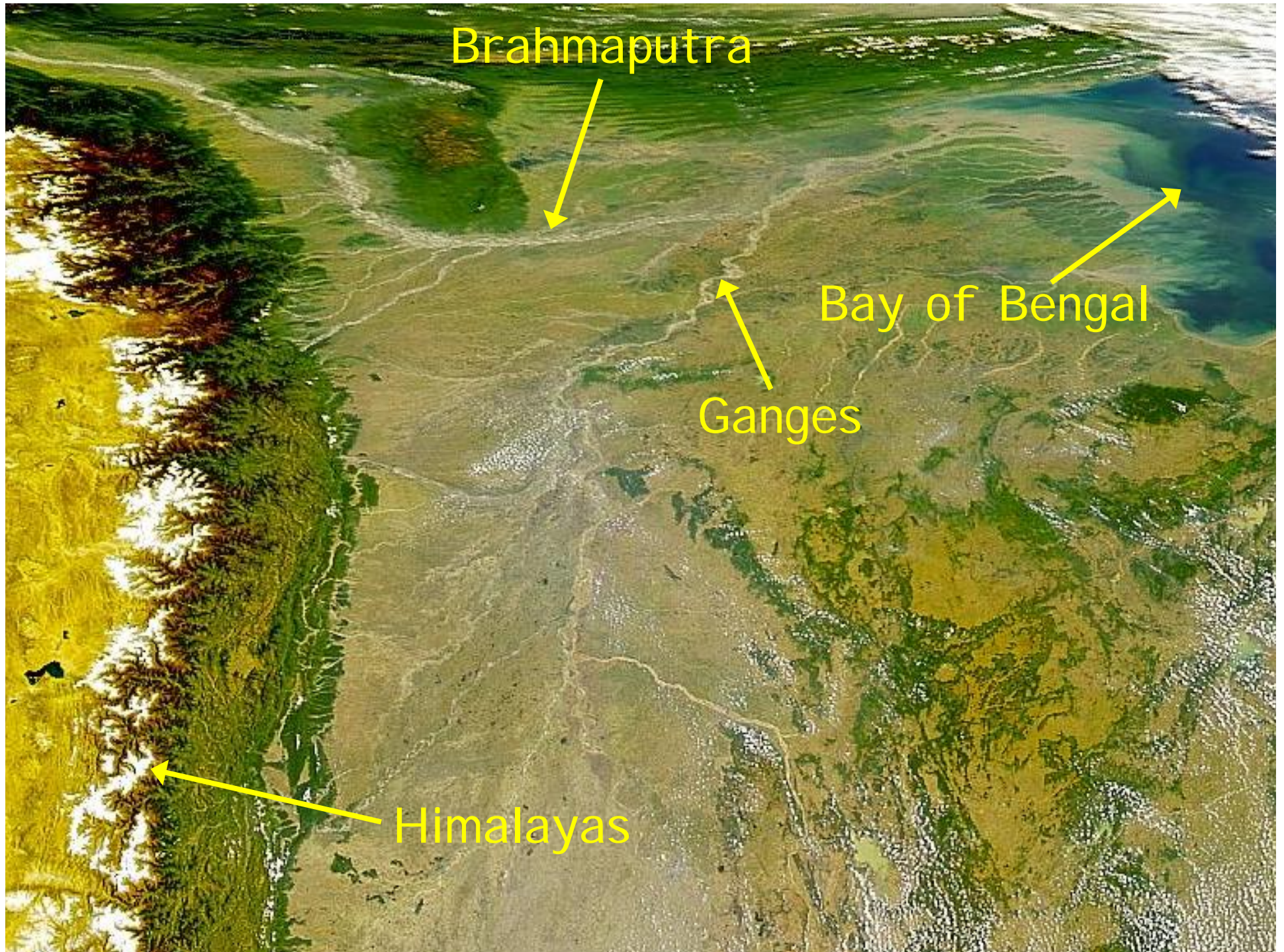


Brahmaputra

Jamuna

Padma

Meghna



Brahmaputra

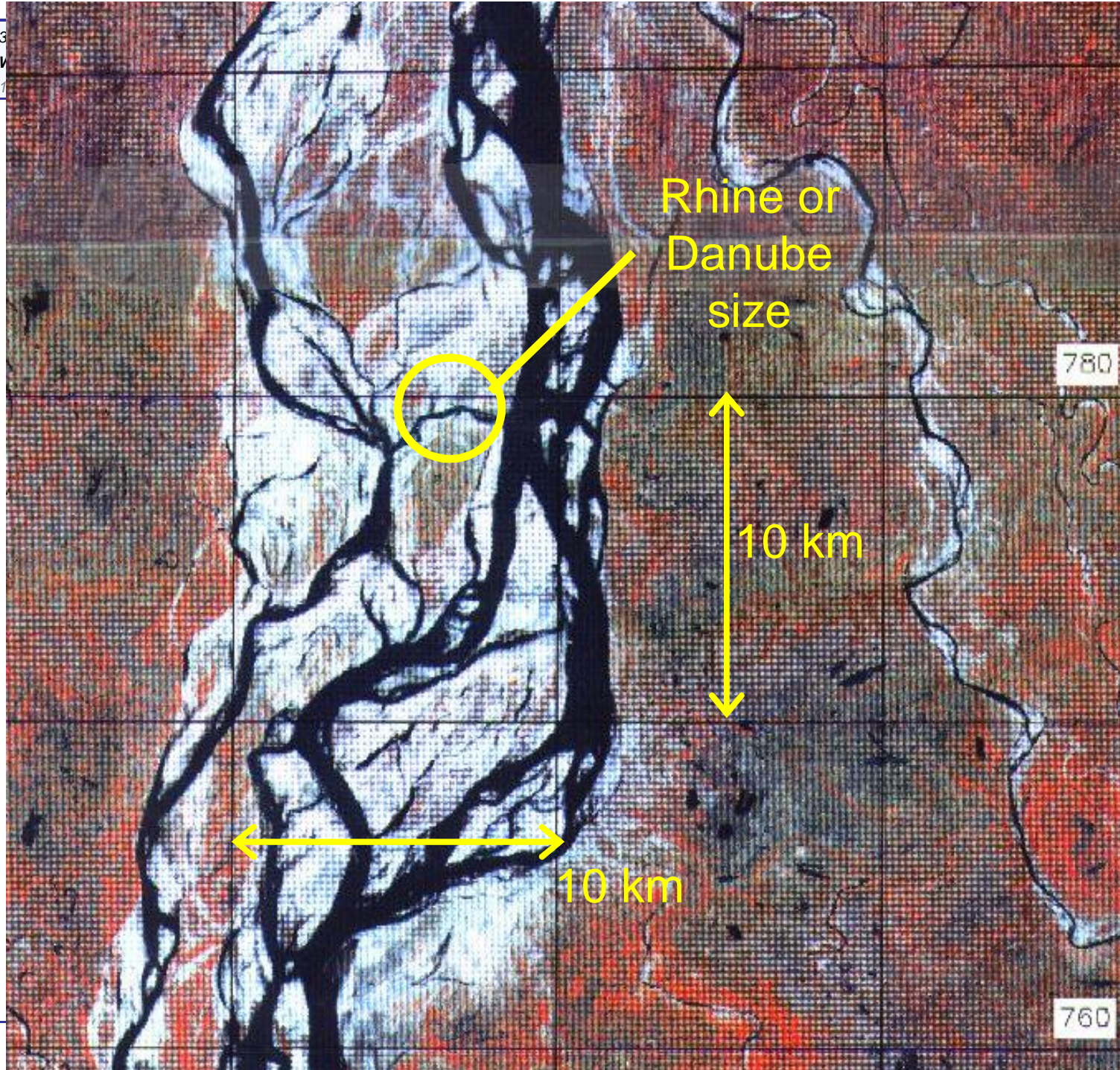
Bay of Bengal

Ganges

Himalayas

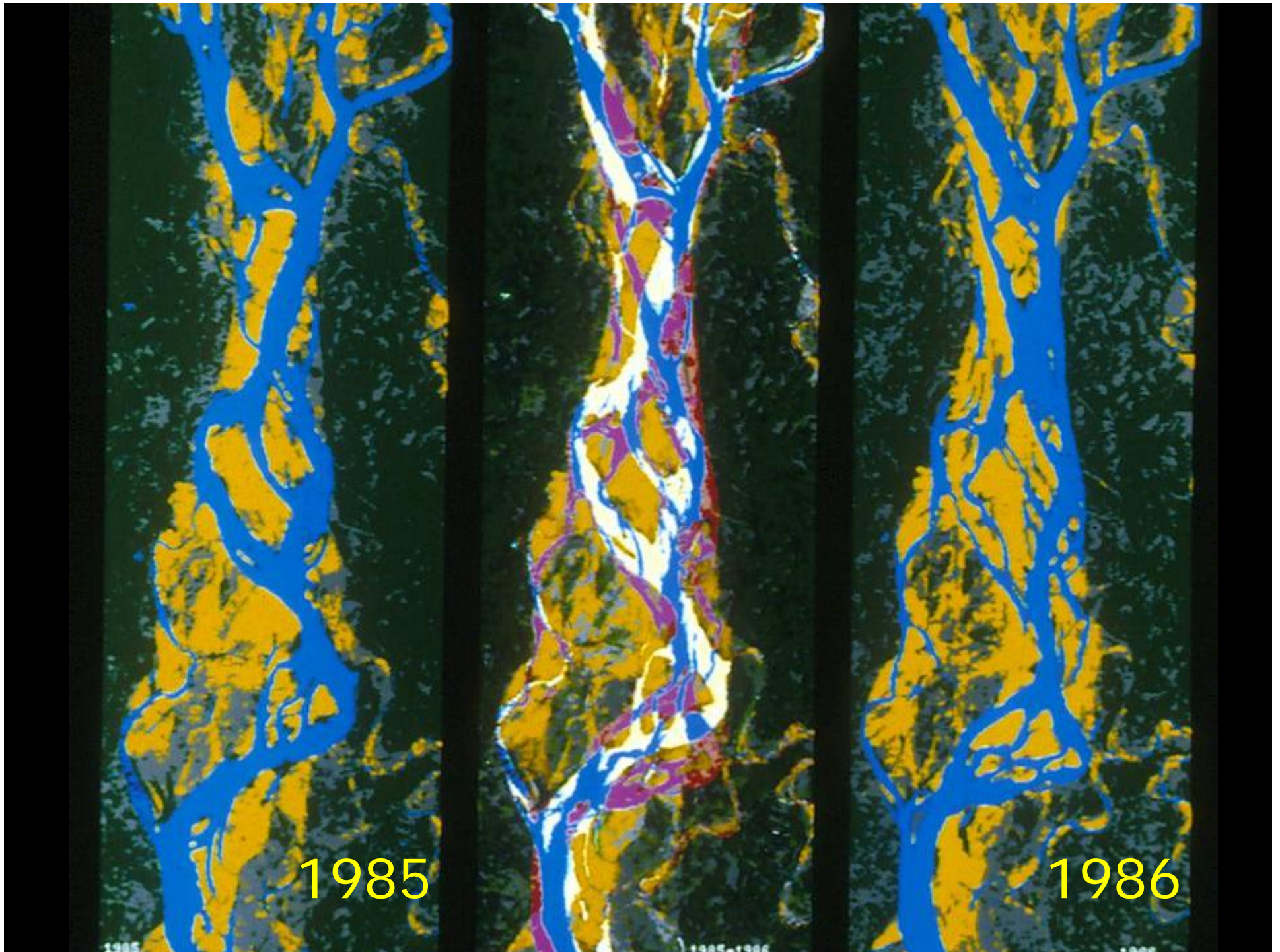
this is not the other
side of the river











1985

1986



Stabilization

- **Prevention of loss of land, infrastructure, religious places, etc.**
- **Prevention of flooding caused by erosion of embankments**
- **Reduction of migration to city slums**
- **Stabilization of distributary off-takes for water supply**
- **Stabilization of river at bridges, ports and ferry landings**
- **Improvement of navigability**
- **Land reclamation**



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World's Large Rivers

18-21 April 2017, New Delhi, India

Works in 1990s – still standing





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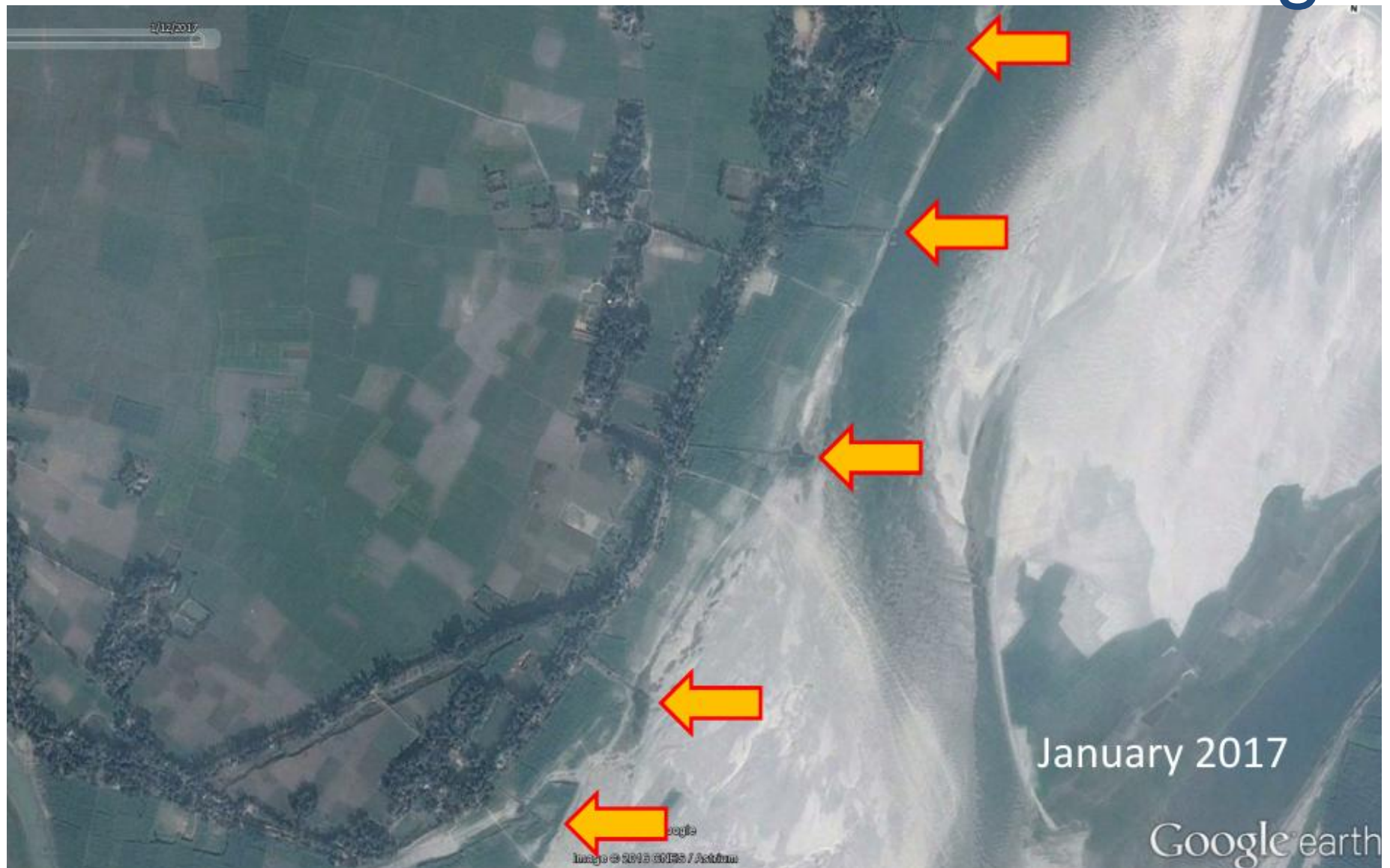


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Evolving insights

- **Longitudinal protection causes less scour than groynes or spurs**
- **Any structure requires monitoring and maintenance: no strong distinction between hard and soft engineering**
- **Adaptive approach, seizing opportunities offered by the river in particular years**
- **Sand-filled geo-textile bags are a feasible alternative to stone and concrete**
- **Current developments in FRERMIP: Flood and Riverbank Erosion Risk Management Investment Program**



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FRERMIP





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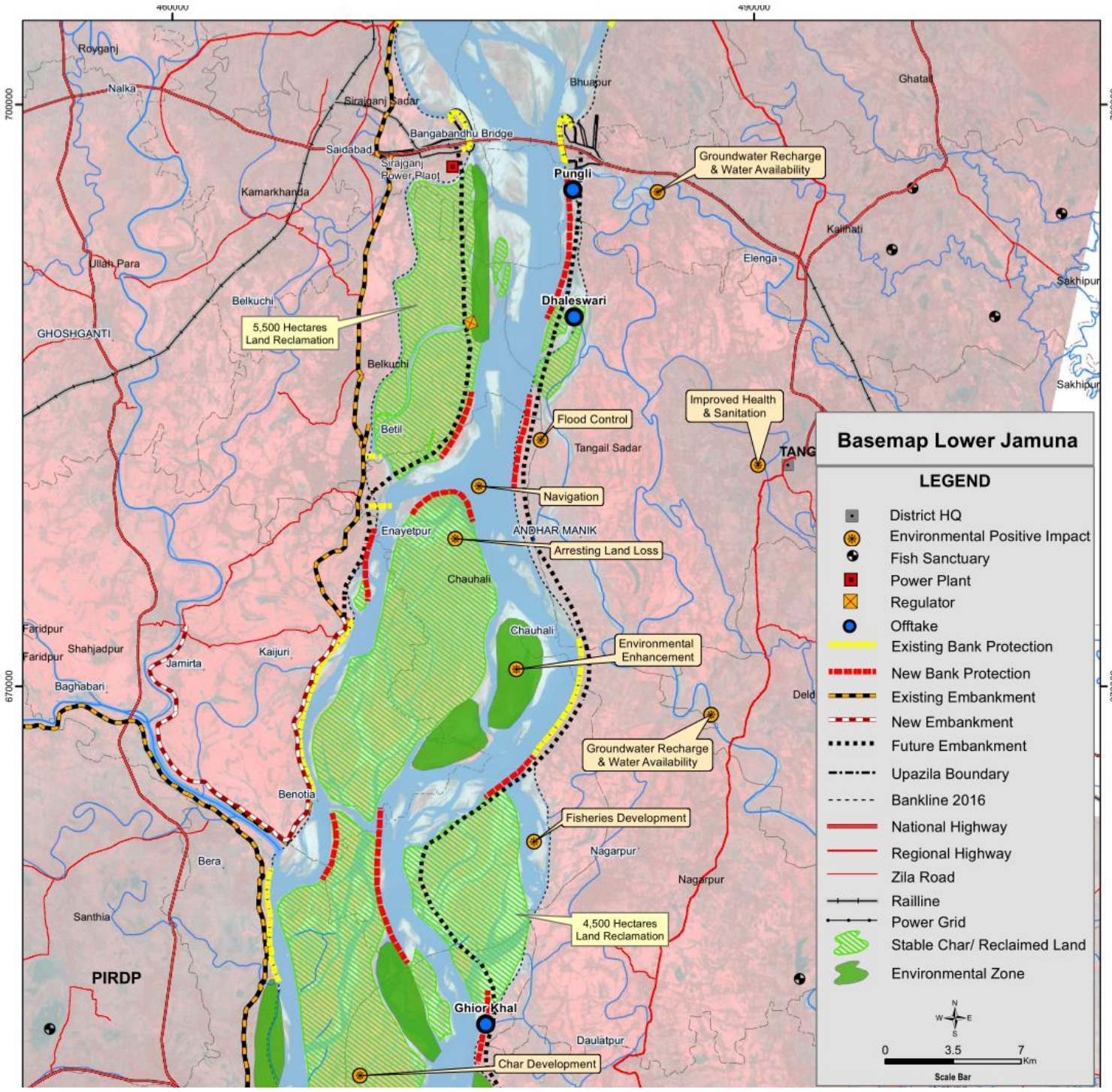




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FREERMIP

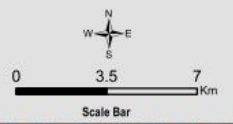




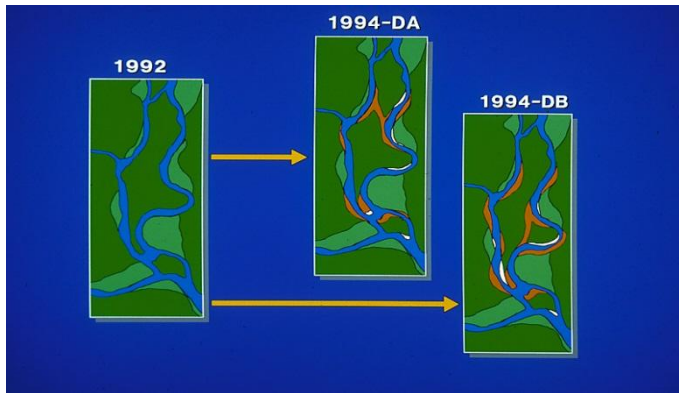
Basemap Lower Jamuna

LEGEND

- District HQ
- ⊙ Environmental Positive Impact
- ⊕ Fish Sanctuary
- Power Plant
- ⊠ Regulator
- Offtake
- Existing Bank Protection
- New Bank Protection
- Existing Embankment
- New Embankment
- Future Embankment
- - - Upazila Boundary
- - - Bankline 2016
- National Highway
- Regional Highway
- Zila Road
- Railline
- Power Grid
- ▨ Stable Char/ Reclaimed Land
- Environmental Zone



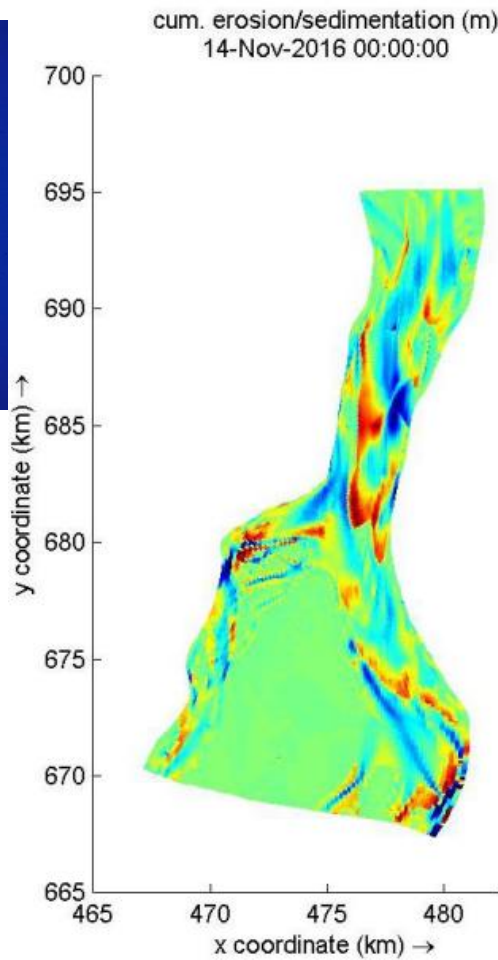
Morphological models



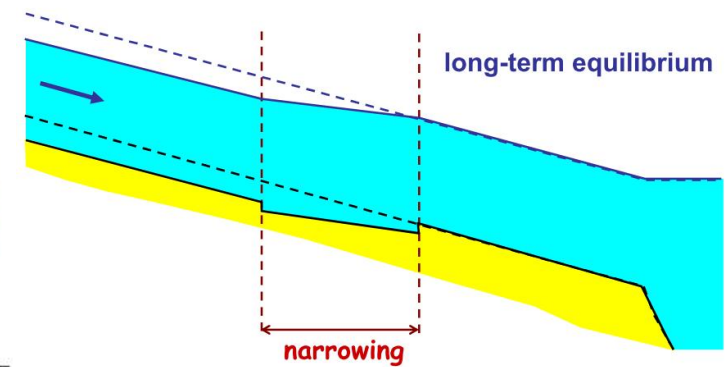
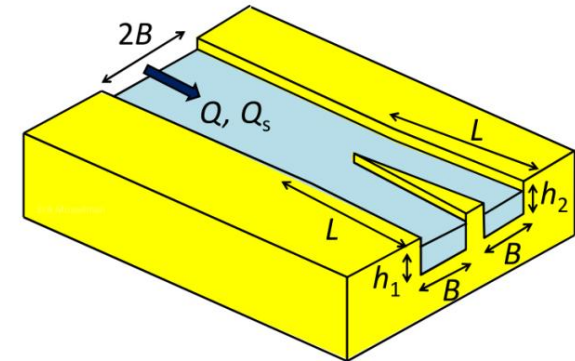
empirical probabilistic



physical



numerical



analytical



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***Let's
see the
movie!***

Mosselman, Haque, Klaassen, Staub, Sarker, Siraj & Islam