

THE UPPER BRAHMAPUTRA RIVER BASIN

The Brahmaputra River Basin originates from the Chema Yundung glacier on the Tibetan plateau and is the biggest trans-Himalayan river basin (A= 651.334 km²; L= 2.896 km), encompassing parts of the territory, ecosystems, people, economies and politics of China, Bhutan, Nepal, India and Bangladesh. The Upper Brahmaputra River Basin (UBRB) is defined upstream of the town Guwahati in NE-India and drains about 500.000km² shared mainly by China (293.000 km²), Bhutan (45.000 km²) and NE-India (195.000 km²), where the slope of the river forms a flood plain in front of the Himalaya with a braided channel pattern.

BRAHMATWINN PROJECT

The overall objective of BRAHMATWINN is to enhance and improve capacity to carry out a harmonized integrated water resources management (IWRM) approach as addressed by the European Water Initiative in headwater river systems of alpine mountain massifs in respect to impacts from likely climate change, and to transfer professional IWRM expertise, approaches and tools based on case studies carried out in twinning European and Asian river basins (WWW.BRAHMATWINN.UNI-JENA.DE).

It will be realized by holistic case studies carried out in two twinning macro-scale basins:

1. the Upper Danube River Basin (UDRB) in Europe, and
2. Upper Brahmaputra River Basin (UBRB) in South Asia.

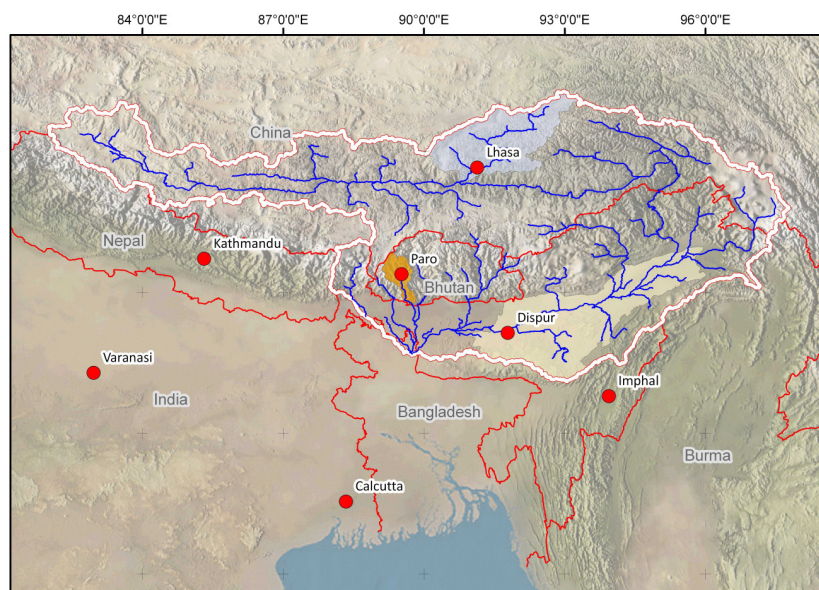
INTEGRATED WATER RESOURCES MANAGEMENT

IWRM in the UBRB has to consider the sensitive geopolitical situation with ongoing territorial disputes. Consequently water management is mainly based on national regulations and co-operation between all countries involved is still in the initial phase, demanding further support. At present water resources management in the UBRB comprises the following water-soil related issues:

- Flood protection management by means of predictive runoff modelling based on corresponding rainfall and snow melt estimates, hydrostructures, and a sophisticated management of natural retention reservoirs in the NE-Indian flood plains.
- Extreme events from glacier lake outburst floods (GLOFS) that require a specific monitoring and management strategy.
- Improved and sustainable water supply and sanitation, treatment of waste water and mining discharges as focal points for improving rural and urban livelihood environments by combining water quantity and water quality management.
- Maintenance and improvement of the navigable river stretches in China and NE-India (Assam).
- Identification and mitigation of 'hot spots' of erosion and sediment input caused by land degradation following unsustainable land use changes.
- Identification of environmental flow requirements to sustain wetlands on the Tibetan plateau and the NE-Indian flood plains.
- Landscape related issues such as mud-flows and avalanches, together with a monitoring programme for snow and glacier melt dynamics.

Legend

- City
- River
- National Boundary
- ▭ UBRB Watershed
- ▭ Assam
- ▭ Wang Chu Basin
- ▭ Lhasa River Basin



0 50 100 200 300 400 500 600 700
Kilometers



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ABOUT TWIN2GO

Twin2Go reviews, consolidates, and synthesises research on adaptive and integrated water resources management in basins around the world. The aim is to draw insights relevant to policy and research on issues around adaptive water governance in the context of climate change, and to make them transferable to other basins. Twin2Go further promotes sharing of research results with practitioners and high level decision makers through effective dialogue.

(WWW.TWIN2GO.UOS.DE)