BRAHMAPUTRA RIVER

Brahmaputra River, also known as Yarlung Tsangpo, originates from the Angsi glacier in northern Himalayas in Tibet. Famous for its abundant water resources, it flows through China, Bhutan, India and finally Bangladesh, where it merges with the Ganges and later the Meghna before emptying into the Bay of Bengal.

The river is crucial for Bhutan as almost all its GDP as well as its entire population and power installed capacity are clustered there. Bangladesh is also significantly exposed to basin risks, whereas India and China (with the most GW in the basin) are less reliant from national perspectives. Installed capacity in this basin is dominated by hydropower.

### Installed capacity by power type

- **Hydro**: 68%
- **Coal**: 10%
- **Gas**: 18%
- **Oil**: 1%
- **Geothermal**: 0.3%
- **Solar**: 1%

### Installed capacity by country

- **India**: 54%
- **China**: 32%
- **Bhutan**: 15%
- **Bangladesh**: 12%

### Surface water resources by country

- **India**: 47%
- **China**: 32%
- **Bangladesh**: 16%
- **Bhutan**: 5%

### Hydrological Changes (mm/year) (RCP 4.5)

- **Snowfall**:
  - 1956-2005: 0.71
  - 2006-2055: 0.56
  - Change: -0.15

- **Rainfall**:
  - 1956-2005: -0.52
  - 2006-2055: -0.81
  - Change: -0.29

- **Runoff**:
  - 1956-2005: 0.15
  - 2006-2055: 0.09
  - Change: -0.06

Source: CWR, CWR’s Report “No Water, No Growth – Does Asia have enough water to develop?”, 2018, Center for Water Resources Research, Chinese Academy of Sciences, Global Power Plant Database.

This factsheet is part of CWR’s Report “No River, No Power – Can Asia’s rivers power growth in a changing climate?” 2023 and should be read in conjunction with this report.

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Note: For consistency and comparability purposes, all power plant installed capacity data used in this factsheet including national power installed capacity are obtained from the Global Power Plant Database managed by the World Resources Institute. This database however, does not reflect the entire national power installed capacity and differs from actual government statistics – discrepancies can range from 2% in Vietnam to 59% in Afghanistan. The analysis in this factsheet while not 100% accurate will suffice in providing insights into the tight water-energy-climate nexus of the HKH 16 countries. For more please see “Global Power Plant Database vs. HKH 16 country statistics” in the CWR’s Report “No River, No Power – Can Asia’s rivers power growth in a changing climate?” 2023.

Source: CWR, CWR’s report “No Water, No Growth – Does Asia have enough water to develop?” 2018, Global Power Plant Database.

Read more on this topic from CWR’s 2018 Report “No Water, No Growth – Does Asia have enough water to develop?”

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