INDUS RIVER

Indus River originates from high mountain lakes on the Third Pole and runs through China, India, Afghanistan and Pakistan before emptying into the Arabian Sea.

The 2022 Indus floods devastated Pakistan: over 30mn people were displaced and its GDP was impacted by around 10%. Indeed, the Indus is crucial for Pakistan as significant shares of GDP, population and installed capacity are clustered there. The Indus is also important to Afghanistan while India with the most GW on the river is less reliant from a national perspective. Hydropower, followed by coal-fired power dominate power install capacity in this basin.

![Indus River Basin Diagram]

**THE INDUS RIVER BASIN**

- **Length**: 2,880 km
- **Basin Area**: 1.08-1.26 million km²
- **Annual flow**: 146-197 billion m³
- **Flow through**: Afghanistan, China, India, Pakistan
- **Share of ice & snow melt in upper reach**: 62-79% of runoff
- **Average surface water resources**: 155 billion m³
- **Basin Population**: 276 million
- **Basin GDP in 2015**: US$380 billion (constant 2010 price)

**51 GW OF INSTALLED POWER CAPACITY ON THE INDUS**

- **Installed capacity by power type**
  - Hydro: 43%
  - Coal: 32%
  - Gas: 9%
  - Solar: 7%
  - Oil: 4%
  - Nuclear: 3%
  - Biomass: 0.1%

- **Installed capacity by country**
  - India: 46%
  - Pakistan: 32%
  - Afghanistan: 9%
  - China: 7%

- **Surface water resources by country**
  - China: 7%
  - India: 66%
  - Pakistan: 39%
  - Afghanistan: 5%

**CLIMATE CHANGE: PAST & FUTURE TREND**

- **Temperature Change (°C)**
  - 1.14 (1956-2005)
  - 1.81 (2006-2055)

- **Hydrological Changes (mm/year)**
  - Snowfall: -0.22 (1956-2005), -0.50 (2006-2055)
  - Rainfall: 0.41 (1956-2005), 0.32 (2006-2055)
  - Runoff: -0.25 (1956-2005), -0.25 (2006-2055)

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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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?”

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

### Key Country Exposure

<table>
<thead>
<tr>
<th>Country</th>
<th>Surface Water Resources</th>
<th>Population</th>
<th>GDP</th>
<th>Power Installed Capacity</th>
<th>Coal-fired</th>
<th>Hydropower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>24%</td>
<td>40%</td>
<td>30%</td>
<td>80%</td>
<td>0%</td>
<td>84%</td>
</tr>
<tr>
<td>China</td>
<td>0.4%</td>
<td>0.004%</td>
<td>0.002%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>India</td>
<td>4%</td>
<td>7%</td>
<td>8%</td>
<td>11%</td>
<td>7%</td>
<td>30%</td>
</tr>
<tr>
<td>Pakistan</td>
<td>25%</td>
<td>88%</td>
<td>92%</td>
<td>75%</td>
<td>54%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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