India, Pakistan, Water and the Indus Basin: Old Problems, New Complexities

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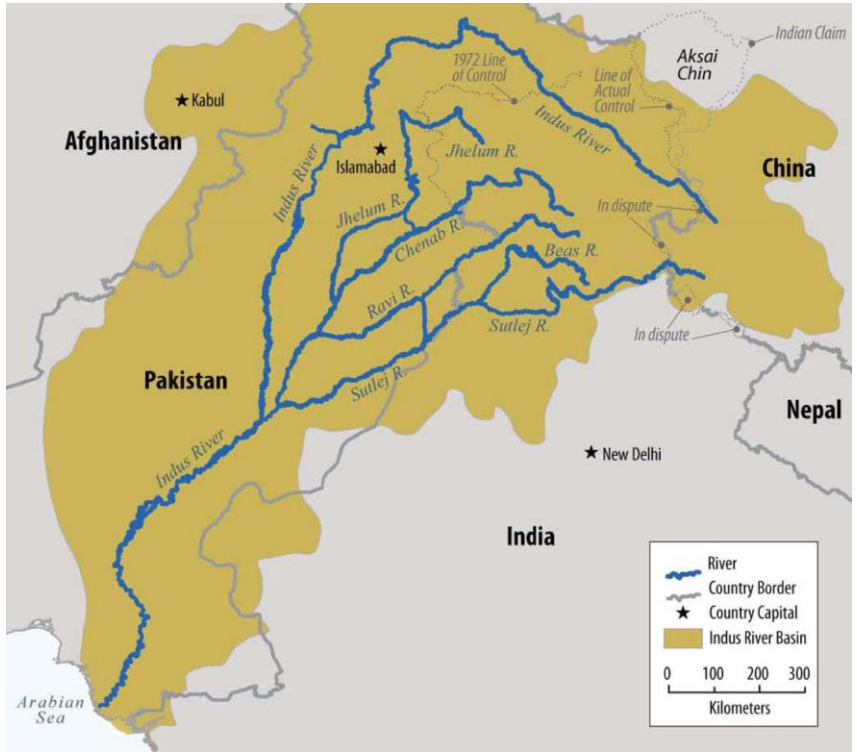
Indus Basin & Treaty



- Basin withdrawal benefits 300 million
- Source of ¼ Indian grain supply
- Employs ~ 40% Pak labor force

- Under IWT (1960):
  - India to “let flow” water of Western Rivers
  - India permitted non-consumptive run-of-the-river hydropower plants subject to restrictions protecting Pakistan’s right

Basin Issues
Wullar Barrage

- Navigation lock/control structure to provide year-round navigation (and 0.3MAF of storage)
- Pakistan claims:
  - A barrage may damage Pakistan's own triple-canal project linking Jhelum and Chenab with the Upper Bari Doab Canal;
  - A barrage would be a security risk enabling the Indian Army to make crossing the river either easy or difficult, at will, by the controlled release of water;
  - After constructing the dam, India would control the flow of water into the Jhelum, creating drought and flood situations at will in Azad Kashmir and Pakistan; and
  - It would ruin Pakistan's agriculture
- Not part of IWT dispute resolution process
- Forms part of “Composite Dialogue”

Basin Issues
Baghliar

- Neutral Expert called upon to decide upon “Difference” concerning design of gated spillways
- Pakistan argued the design allowed India to control flow of the Kishenganga
- Neutral Expert decided that a gated spillway was necessary keeping in view new technical norms and standards and expected sediment yields

Treaty Issues
Kishenganga

- ICA called to settled “dispute” on whether the Treaty permitted drawdown flushing for sediment control
- Pakistan argued design would increase catchment of river and deprive it of its water rights
- Court held:
  - 9m3/s of natural flow of river necessary to maintain its environment
  - It “could not accept” India’s argument and held “India right to generate hydro-electric power on the Western Rivers can meaningfully be exercised without drawdown flushing”
  - Baghliar decision limited only to facts of “difference”
  - Decision on drawdown flushing “extends beyond the specifics of the [Kishenganga dam] to other, future, Run-of-River Plants.”
  - Treaty does not give Parties right to select Neutral Expert; nor does it bar ICA from determining technical questions

Rights-based Assertions vs. Needs-based Solutions

Follows “equitable and reasonable utilization” defined in UN Watercourse Convention, which includes:

(a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

(b) The social and economic needs of the watercourse States concerned;

(c) The population dependent on the watercourse in each watercourse State;

(d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;

(e) Existing and potential uses of the watercourse;

(f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;

(g) The availability of alternatives, of comparable value, to a particular planned or existing use

Threats & Vulnerabilities

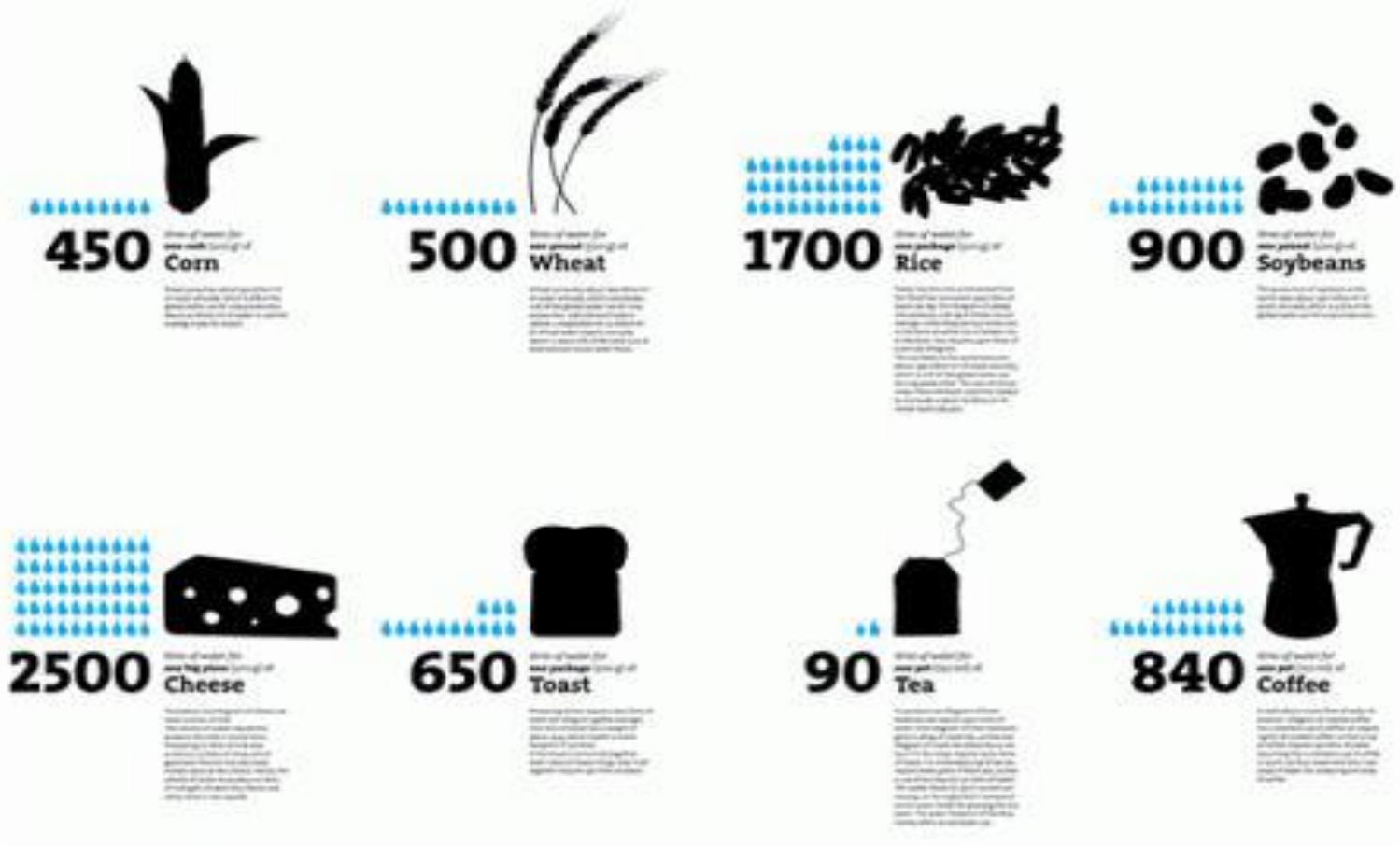
- Climate change
  - Flooding and variation in Monsoon
  - Both countries have different positions at COP
  - A transboundary challenge & opportunity
- Increased use of surface and groundwater
  - IWT a surface water document
  - Changing habits & water dependence
- Identification of 33,832MW and 25,000MW hydropower potential by India and Pakistan, respectively
- Not all riparians included

Country	India	Pakistan	Total
Average long-term available renewable water supplies in the IRB	97 km^3/year	190 km^3/year	287 km^3/year
Estimated renewable surface water supplies in the IRB	73 km^3/year	160-175 km^3/year	239-258 km^3/year
Estimated renewable groundwater supplies in the IRB	27 km^3/year	63 km^3/year	90 km^3/year
Estimated total water withdrawals in the IRB	98 km^3/year	180-184 km^3/year	257-299 km^3/year
Estimated total surface water withdrawals in the IRB	39 km^3/year	128 km^3/year	
Estimated total groundwater withdrawals in the IRB	55 km^3/year	52-62 km^3/year	

Note: Figures for surface and groundwater supplies may not sum evenly to figures for total renewable water resources because a large fraction of groundwater and surface water resources overlap, so that separate supplies cannot be absolutely distinguished.

Source: Derived from FAO, *Irrigation in Southern and Eastern Asia in Figures: AQUASTAT Survey 2011*, Karen Frenken ed. (Rome: FAO, 2012); A.N. Laghari et al., "The Indus basin in the framework of current and future resources management," *Hydrology and Earth Systems Sciences* 16, no.4 (2012); Bharat R. Sharma et al., "Indo-Gangetic River Basins: Summary Situation Analysis," International Water Management Institute, New Delhi Office, July 2008.

An Aside re Virtual Water



Did you know?

Do you want to know?

What’s the future of IWT?

- Article VII (future cooperation)
  - Limitations on revision
    - Diplomatic challenge
    - Indian bilateralism
  - What would you revise and how?
  - Impact of CPEC?
    - Has security architecture around IWT changed?