Climate and Demography

The Indus river watershed is significant transboundary watershed. It is shared by India and Pakistan though it originates in China. Indus is the third largest river in the region and originates in the Himalayas and flows into the Arabian Sea to the south-west.

The deep blue line going through the above figure is the Indus River. The river has been the lifeline of one of the most ancient civilization in history known as the Indus Valley Civilization dating back to 3300 B.C.

There are a number of tributaries of the river four of them are particularly important namely - Kabul, Jhelum, Chenab and Ravi.

It is the most important river of Pakistan which is the downstream riparian state. The population density in the watershed is 145 people/km². The alluvial plains of the Indus basin cover an area of 207,200 km², approximately 25% of the land area of Pakistan. It supplies water to world’s largest contiguous irrigation system that has been developed over the past 140 years. Today, it supplies water to about 26 million acres of land.
Water Resources

The total length of the river is 3,180 kilometres (1,976 miles). The river has a total drainage area exceeding 1,165,000 square kilometres (450,000 square miles). The river's estimated annual flow stands at around 207 cubic kilometres.

Figure above shows the overall watershed of the river basin and also points to important cities. The climate in the Indus plain is arid to semi-arid with significant variability both throughout the year and from upstream to downstream. Mean annual rainfall is low ranging from 9cm in the lower plain to 51cm upstream. The region depends on the Indus for major irrigation needs.

History of Arguments

The entire basin historically was part of pre-independence India but in 1947, when India gained independence the country was partitioned into two sovereign states - India and Pakistan. This sowed the seeds of conflict since the political boundaries divided the river into upstream and
downstream riparian states. The two countries were at odds on how to distribute and manage the essentially cohesive and unitary irrigation network. At the time of independence, the water from Indus was the primary source of livelihood for the people in Pakistan. It felt threatened to have the sources in Indian control.

What followed was about 13 years of arguments and bilateral and later tri-party deliberations on what was essentially an engineering problem. In 1960, with the mediation of the World Bank the Indus Water Treaty was signed by the two states. The issue had two pillars. First, how should the control over the tributaries of the Indus be divided that were a source of huge potential economic development. The agreement stated that the control of the three largest eastern Indus tributaries would be passed to Pakistan while India would hold sway over the three large western tributaries. Second issue was how to finance construction of canals and storage facilities needed to transfer water from eastern Indian rivers to Pakistan. No party was ready to bear the costs of such a massive project. The Bank responded with a plan for external financing supplied mainly by the United States and the United Kingdom.

This treaty has had its share of controversies. Most recent arose when India planned to construct a dam on one of the tributaries under Indian control. It was a 450 MW hydroelectric project and disputes arose over the pondage, size and water capacity of the dam. Pakistan wanted India to reduce the size of the project stating that it jeopardizes the water availability to its downstream irrigation networks. India threatened to walk out of the Indus Water Treaty. Again, the dispute was unresolved by bilateral talks and World Bank technical experts were invited to decide.

Such disputes have been sprayed in history books and there seems to be no resolution especially now these issues have become intertwined with political issues such as Kashmir and insurgency.

**Required Reading**


**Suggested Reading**
