

WATER WAR: PAST, PRESENT AND FUTURE IN INDUS ZONE

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The Context

Karl Wittfogel, a German historian who wrote *Oriental Despotism* in 1957, argued that large-scale irrigation systems require centralized management and thereby the central authority gains enormous power. One of the major implications of this hypothesis is that control over water implies control over people. Many historians later on challenged this argument on the ground that vast networks of water projects are not necessarily large projects. But today when the demand for water as one of the major resource consumption is increasing by leaps and bounds, the state as centralized authority has come under mounting pressure to solve the problem of water shortage. And this has led the governments to enhance their authority and control over society. There is an increase in the tendency of the states to seek maximum control over the sources of the supply of water, and thereby increasing the tension between countries that share the claims over water.

Water is absolutely indispensable to human health and survival. We need it for drinking, sanitation, bathing and for food production. According to World Bank, human being needs 100 to 200 liters of water everyday at the least to survive. And if we add the water used for production process into it, the minimum human water requirement is approximately 265,000 gallons per person per year.

About 70 percent of earth's surface is water, but only 3 percent of it is fresh water. Of this two-third of water is secluded in glaciers, ice and in deep underground surface. Thus only 0.01 percent of total water on earth is accessible to human beings and therefore stands as the scarcest resources of the earth in relation to its necessity for human survival.

The global water use is increasing at a much faster rate than the population growth and the pressure of water scarcity is being felt throughout the world. India and Pakistan are no exception to it. At the current pace the population of India will rise to 1.3 billion in 2025, and to 270 million in 2025 that of Pakistan. We have already eaten up the aquifers beneath the surface. The effect of environmental decline and global warming is by now perceptible and could further create imbalance by either incessant rain causing flood or cycles of drought.

In such a situation the governments might have to rely more on artificial mechanisms like creation of more and more big dams and interlinking of rivers so as to divert floodwater to drought affected areas. In nutshell, the governments of the two countries would be forced to take measures to control maximum water supply from the source of origin of rivers.

The control over Indus river basin by India and Pakistan is one of the potential issues of conflict between the two countries. Over the past many years since partition the territorial control over Kashmir has remained the main issue of conflict, but in future water is going to be as crucial as Kashmir.

The Past

The river Indus was the cradle of the great Indus valley civilization of the ancient world. The river valley and its plain had the potential to produce a large surplus because of the fertility of the soil inundated by the annual flood and the easy availability of water for irrigating the field. The surplus production on a regular basis led to the sustenance of non-agrarian specialists like artisans, traders and rulers, who controlled and redistributed the surplus. They all lived in an area, which was away (not far enough) from the agricultural field, gradually leading to urbanization.

Around 1750 B.C., the culture of the Harappa broke up, although decline seems to have set in earlier. Various causes have been suggested. We see that at all the Harappan sites, planning and construction become inferior in the upper levels. At Mohanjo-daro, more than anywhere else, clear indications of a progressive degeneration are available. All this was because of the calamitous alteration in the course of the Indus and the Ravi rivers. This led to the discreation of the surrounding countryside.

The city of Mohanjo-daro became weak under the pressure of population. There was an influx of refugees into the Indus cities. They are said to be followed by the Kulli culture. The Indus cities must have suffered on account of this influx. Thus at Mohanjo-daro, rooms were divided into smaller ones, mansions became tenements. The street plan was no longer maintained. Evidently, the city was overpopulated and law and order was less well kept. All this led to a gradual decline.

Some people suggest that decreasing fertility was the reason which was caused by decreasing fertility increasing salinity of the soil, which in turn was caused by the expansion of the neighboring desert. Others attribute it to a sudden subsidence or uplift of land which caused floods. Excavations reveal that Mohenjodaro itself was flooded more than once. Traces of at least three main phases of deep flooding can be detected here. Chanhu-daro (Sind) was also twice-destroyed by 'massive' inundations. The devastating floods obstructed the normal process of irrigation, leading in turn to the economic decline of some of the Harappan settlements.

Theories of Decline

1. Flood & Earthquake: (RAIKES)

A. Flood (evidence)--silt deposits above ground level
 --Houses built on silt covered debris

B. Earthquake (evidence)--Indus area is earthquake-prone zone

--Earthquake raised the level of flood plains blocking passage of rivers water to sea, causing flood in cities.
 --Earthquake caused shifting of land away from sea-coast affecting commercialities.

Criticism: --Decline of settlements outside Indus not explained by this theory.
 --A river can not be dammed by tectonic effects.

2. Shifting of Indus (destroyed Mahenjo-daro): (LAMBRICK)

(Evidence) --silt is there which is sandy
 --sand silt is not due to floods.

Criticism: This only explains desertion of Mohanjo-daro but not its decline.

3. Increasing Aridity: (AGRAWAL & SOOD)

(Evidence) -- 2nd mill B.C. a period of increased arid conditions.
 --decline of agriculture
 --drying up of Ghagghar

Criticism: --When Ghagghar dried up not worked out yet.

4. Aryan Invasion: (Wheeler)

(Evidence) --Human skeletons lying in the streets
 --Rigveda refers to foltress of *dasas* which god *Purandara* destroyed.
 --The geographical are of Rigveda Aryans include Punjab-Ghagghar region.
 --Vedas mention a place called Hariyupiya on Ravi river where Aryans fought a battle. It has been identified with Harappa.

Criticism: Difference b/w 1800-1500 B.C. (300 years)

5. Ecological Imbalance: (Fairservis)

--population increase, city grew (land, forest decreased)
 --soil exhaustion of area.
 --With forests disappearing there were more floods and droughts.
 --Townsmen moved to Gujarat region and Eastern area.
 --This decline completed by raids and attack by nearby settlements.

The Present

Historically, even after the decline of the Indus civilization, the region witnessed the emergence of the great empires of the Bactrians, the Parthians, the Turks, the Mongols, the Mughals and the British. However, one of the common features throughout was a somewhat solo political authority in the region. The river Indus hardly became a contentious issue even under the circumstances of flanking tribal conflicts. The simple reason was that river water remained a common property, away from any centralised political control.

It was first of all under the British colonial rule that a background was prepared for future tensions in the region for the control of water flowing from the river Indus. They began huge water projects and incorporated many of the tributaries of the Indus into an integrated basin-wide management system. A network of large and small canals connecting one branch of the river to another, were built after 1859.

The partition of one India into two sovereign states- India and Pakistan- resulted in major conflicts for distribution of resources including water. A boundary commission for demarcating the international boundaries, in the states of the Punjab and Bengal under the chairmanship of Sir Cyril Radcliffe was constituted. He awarded most of the canals and the canal irrigated land to Pakistan, but the sources of all the five tributaries of the Indus- Jhelum, Chenab, Ravi, Beas and Sutlej- remained in India. Thus, India continued to be the “upstream riparian” of the Indus and its tributaries.

To fully figure out the complication that the Indus river bears, it is essential to be acquainted with the path of its travel from origin to the outlet in Arabian Sea. It originates in the Kailash range in western Tibet and then flows in a northwesterly direction through China to Ladakh in Kashmir in India. From here the river turns south and passes into Pakistan. Similarly, the five rivers- Jhelum, Chenab, Ravi, Beas and Sutlej- originate in India and later join the Indus in Pakistan.

Despite such a critical distribution of water as resource, the relations between India and Pakistan ever since their creation, have remained tense and fragile, but not over the issue of water rather on the territorial occupation of Kashmir and has even led to wars between the two.

It is important to understand that many political conflicts over resources are hidden and the conflict for water are masked as ethnic and religious conflicts. For Pakistan, Kashmir is more a manifestation of the religious politics and a rallying cry for ultra nationalistic movements. But in reality at the core of the conflict is its concern for the control of water from river Indus. Pakistan is hell-bent on taking control of Kashmir because taking command of Kashmir would mean control over the waters of the Indus and its tributaries.

The Future

Till now India and Pakistan have agreed to Indus Water Treaty of 1960 through some form of joint management system. As a result of the treaty India has got the exclusive control over the waters of the Ravi, the Beas and the Sutlej, whereas Pakistan controls the waters of the Indus, the Jhelum and the Chenab. In addition to this, India also supplies water from the three rivers it controls to Pakistan for a specified period of time.

Over the last few years India has preferred to focus on resolving the Kashmir issue as a political problem. But the moment is not very far away when India would realize and raise the issue of water as the crux of the Kashmir problem. At present India takes control of only one-fifth of the combined Indus flow, while Pakistan takes control of the four-fifth of the total water flow.

With the population of the two countries rising at alarming pace and the crisis of water being felt by both India and Pakistan, water could emerge as a more crucial issue of tension between the two countries. Over the last few years, there have been more frequent instances of water sharing disputes between the two countries and this could become inexorable. The Bagligarh Hydropower project on the Chenab in the Doda district of Jammu and Kashmir, which has recently been completed, is just a tip of iceberg. Kashmir problem could remain unresolved unless water crisis of the two growing countries are settled forever. And this looks to be a distant reality.

There are going to be more and more water related conflicts, specially when the state have gained greater control over water usage and distribution. The genesis of most conflicts in recent times is the increasing demand from commercial and industrial sectors.

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