

WATER AND POWER CONFIGURATIONS IN INDUS SOCIETY

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***Abstract:** Bourgeoning population and receding Himalayan glaciers have increased the demand for water on one hand, while on the other, decreased the supply of water in Pakistan. This makes water a highly contested resource, and thus brings it into the realm of politics. In order to understand the politics of water, it is necessary to understand that water is a constituent element of political and economic power, whereas this power then influences the power configuration in the society in general. Because of their control of water and land, the landed elite have been able to entrench themselves in the power structure of the society; and then, using this power, appropriate most of the water resources of the country. Within the federal structure of the state of Pakistan, the Punjab and its landed elite have been the beneficiaries of this power configuration which owes its existence to the control of land and water.*

Keywords: Indus society, Indus Civilization, water politics, hydropolitics, Indus Basin, agrarian society, colonialism, federation

Introduction

Water has emerged as a major issue in the realm of national and international politics, particularly in semi-arid and arid regions, in last two decades of the 20th century, and continues to be so.¹

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¹ The United Nations' *Mar del Plata* Conference was the most significant event held to address the issue of water in 1977. See Adrain McDonald and David Kay, *Water Resources: Issues and Strategies* (Essex: Longman Scientific and Technical, 1988). The debate in last two decades is dominated by the alarmists, and the scenario produced presents a picture of imminent global wars on water on almost every continent of the world, most importantly, in Africa and Asia. For water conflict literature, see Anthony Turton, "Hydropolitics: The

Growing global population and worsening climate scenario have put a lot of stress on the available natural resources; and water is no exception. The consequent scarcity brings the issue into the sphere of politics, as it makes water a contested resource in most of the water stressed areas. However, response from the epistemic community in the discipline of political science has been lackadaisical, and the issue of water politics has been relegated to the place of ‘low politics’.² This leaves us in a situation in which the theoretical linkages between politics and water are not properly defined. So, as an emergent discipline, hydroplitics remains an academic area with fuzzier boundaries. The academic anarchy in the discipline, as has been suggested by Anthony Turton, is also because of the fact that water, having multiple uses as well as users, calls for an interdisciplinary approach, which has not been encouraged at academic institutions as yet.³

This being the state of the discipline in general, little efforts have been made to understand politics around the issue of water in Pakistan.⁴ Pakistan, already being one of the most water stressed countries of the world, is heading towards a situation of acute water

Concept and its Limitations,” in *Hydropolitics in the Developing World: A South African Perspective*, eds. Anthony Turton and Roland Henwood (Pretoria: African Water Issues Research Unit, 2002), 13–17.

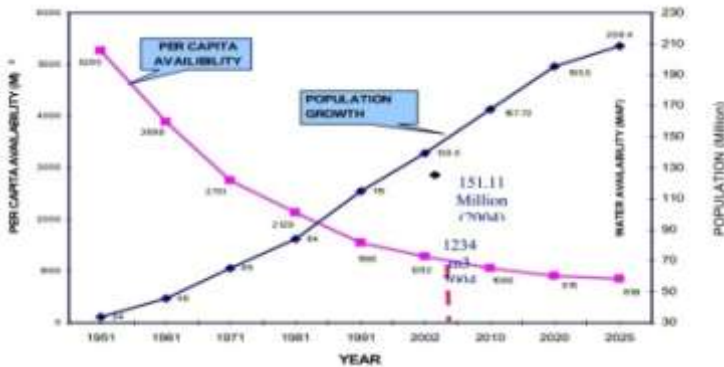
² With reference to Arab-Israeli conflict over water, it is generally said that water is matter of low politics as against high politics of identity and survival. For one, Lowie argues that conflict and cooperation in the matters of high politics results in conflict and cooperation in low politics of water. For details, see Miriam R. Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin* (New York: Cambridge University Press, 1993).

³ For details, see Turton and Henwood, *Hydropolitics*.

⁴ The few studies that deal with the issue are conducted by water engineers and development NGOs. Jeroen Warner, “Is water politics? Towards International Water Relations,” in *Politics of Water: A Survey*, eds. Jeroen Warner and Kai Wegerich (London: Routledge, 2011), 3.

scarcity.⁵ Water availability in Pakistan has decreased from 5300 cm per capita in 1951 to a little over 1000 cm per capita (minimum benchmark) in the 2011.⁶ The impending scarcity, coupled with the issue of trust deficit among the federating units, creates an alarming situation for the state and society of Pakistan.

Figure 1: Water Availability Vs Population Growth



Source: Water and Power Development Authority, *Kalabagh Dam Project*, <http://www.wapda.gov.pk/pdf/KBDAM.pdf>.

This paper attempts at understanding the politics of water in Pakistan. The paper is divided into two parts. The first part explains the significance of water in the making of the Indus society throughout history. The second part provides an analysis of the socio-political structures in which decisions regarding water are made. The basic argument of the paper is that through a long historical process, the landed elite have been able to secure resource capture vis-à-vis water, and on the basis of it, are deeply embedded in the power structures of the state. In this socio-political scenario, some are more equal than others, and hence they appropriate much of the available water.

⁵ For details about significance of water for Pakistan’s economy, see John Briscoe and Usman Qamar, *Pakistan’s Water Economy Running Dry* (London: Oxford University for World Bank, 2005).

⁶ 1000 cm per capita per day is thought to be the minimum amount of water required to live a healthy life. There is almost consensus on this figure among the academics linked with the issue of water. See, for example, McDonald and Kay, *Water Resources*.

I

There is a clear link between agriculture and emergence of civilizations in the subcontinent. Academics are of the view that city life, which is equated with civilization, could not have been possible in the absence of surplus produced by agriculture.⁷ Irfan Habib, commenting on the emergence of Indus Civilization, opines:

The emergence of town, which archeologist initially recognize by the large area their remains cover, necessarily implies the presence of a considerable number of people who do not grow food for themselves but work at crafts or perform services while subsisting on food mainly produced by villagers. Such a situation could only be brought about when peasants grew more food than they needed for their own bare subsistence, or, in other words, produced a surplus.⁸

The existence of such surplus is verified by the presence of large granaries in the ruins of ancient cities of Harappa and Mohenjo-Daro. Agriculture for its turn depended on water in a semi arid and arid climate, “where rainfall farming was problematic because of the inherent variability in precipitation, and therefore, the difficulty it generated for the economic and social stability.”⁹ Thus, in order to secure economic and social stability of the cities, it was necessary to have secure supply of water, and the Indus society had

⁷ There exists a consensus among the historians concerning the surplus produced by agriculture as a necessary precondition for the emergence of city life in the Indus Plains. See, for example, Aparajita Chakraborty, “Social Formation of the Indus Society,” *Economic and Political Weekly* 18, no. 50 (1983): 2132–38. Also see Irfan Habib, *The Indus Civilization* (New Delhi: Tulika Publishers, 2006)

⁸ Habib, *Indus Civilization*, 1.

⁹ Jeremy Allouche, “The Multi-level Governance of Water and State Building Process: A Longue Duree Perspective,” in *Politics of Water: A Survey*, eds. Jeroen Warner and Kai Wegerich (London and New York: Routledge, 2011).

managed to dam the rivers or creeks and dig canals. Such large public works required more than mere community efforts for their existence and management.

This situation paved the way for ruling elite to step in and play an effective role in securing continuous supply of water, which was necessary for the social and economic stability of the whole society. Wittfogel argues that this need to create and maintain hydraulic infrastructure for large scale farming resulted in the emergence of “Oriental Despotism”.¹⁰ “The state, therefore, had an opportunity to establish its legitimacy and control through political and economic subjugation of the hydraulic regime, and this was tolerated on account of population’s desire for stability and guarantee provided by the building and management of irrigation facilities.”¹¹ Chakraborty also argues that the necessity of managing large irrigating facilities along with communally owned land system strengthened the central authority, which in case of the Indus society was a priest class, at the cost of general public.¹² The whole cultural super-structure based on this agricultural mode of production perpetuated exploitation of the common people.

When Aryans defeated the local inhabitants of the Indus, they destroyed their irrigation facilities and subjugated them.¹³ However, they seem to have been fascinated by the rivers of their

¹⁰ Basing his argument on Marx’ theory of Asiatic mode of production, Wittfogel argues that despotic rule emerged and thrived in agrarian societies of India, China, and Egypt mainly due to its indispensability for the management of large irrigation facilities. For details, see Karl Wittfogel, *Oriental Despotism: A Comparative Study of Total Power* (Michigan: Yale University Press, 1955).

¹¹ Allouche, “Governance of Water,” 46.

¹² Chakraborty, “Social Formation,” 1133.

¹³ We find reference in Vedas that explains how Indra freed the waters that were captured in dams. The Aryans’ fancy for the land is also evident in the sanctity they attached to the rivers in the Vedic literature. For Details, see Edward Thomas, “The Rivers of the Vedas, and How the Aryans Entered India,” *Royal Asiatic Society* 15, no. 4 (1883): 357–86.

new homeland. Vedic Aryans, originally pastoralists, adopted sedentary mode of life and developed skills and techniques required for agriculture.¹⁴ With the passage of time, they developed their own system of irrigation.

The rigid cast system that characterized Indian society in the later period was absent in the early period. Initially, the society was stratified into two classes: aryavarana and dasyavarna, the later being the local inhabitants of the Indus valley made slaves by the victorious Aryans. The introduction of agriculture was accompanied by an extended system of sacrifices, which increased the importance of priest class.¹⁵ This resulted in social stratification of the Vedic society into different classes. The priest class at this time developed as distinct from the warriors, and the political elite thus representing the earlier forms of Brahmna and Khashtria castes of the Hindu society.

Land at that time was communally owned; although there are certain references in Vedic literature that suggest private ownership of the land.¹⁶ However, it can be said for sure that the institution of private property as it came into being during the colonial period was non-existent. Again, through land and water management, the central authority extended its control on the local population, and in

¹⁴ It is generally believed that Aryans were wandering tribes, and, though they had basic knowledge of agriculture, their way of life did not allow them to practice it at length. Their adoption of agriculture and sedentary way of life went through a number of phases. For details, see Lallangi Gopal and V. C. Srivastava, eds., *History of Agriculture in India (upto c. 1200 AD)* (New Delhi: Centre for Studies in Civilizations, 2008).

¹⁵ The consolidation of priest class as a major contender of political power took place when agriculture started. This was accompanied by institutionalization of an elaborate system of rituals and sacrifices. This is thought to be a shift in mainly spiritual and abstract religion of Vedas to an increased emphasis on rituals and sacrifices. For details, see A. K. Sinha, "The Spirituality and the Development of Agriculture in Vedic Age," in Gopal and Srivastava, *Agriculture in India*.

¹⁶ See *ibid.*, 219–34.

this kind of arrangement, those closer to the ruling authority were better placed to extract maximum out of the existing socio-political settings.

India, under Muslim rule, witnessed a similar sort of arrangement. The central authority provided security and irrigation facilities, and farmers tilled the land. Agriculture was a major source of revenue for the government; and governments ensured that maximum lands be cultivated in order to extract maximum revenue. Commenting on agriculture during the Mughal period, Irfan Habib writes: “An important aspect of Indian agriculture is artificial irrigation to supplement the natural bounty of the monsoons. The principal means employed for this purpose have been the constructions of wells, tanks, and canals.”¹⁷ Wells were major sources of irrigation for Upper Gangetic plains; parts of Dakhin; and the regions of Lahore, Dipalpur, and Sirhind. Abundance of tanks in Central India and Dakhin prove that they were major sources of irrigation in these areas. Tanks were made by damming water in natural depression in order to harvest rainwater. The central authority not only encouraged such projects but, at times, financed and commissioned them.¹⁸

A great number of canals were also built during this period, and the excavation of silted natural channels was executed in order to ensure proper supply of water. Large canals were mainly built in Northern India. The social structure of the rural society, which was the mainstay of agrarian economy of the Mughal period, betrays a high level of dependence on agriculture. The social stratification was mainly influenced by the division of labor in agrarian economy. At the apex stood the Zamindars, in the middle the peasants, and at the bottom were the workers. Zamindars were not entitled to

¹⁷ Irfan Habib, *The Agrarian System of Mughal India, 1556-1707* (New York: Asia Publishing House, 1963), 26.

¹⁸ Irfan Hibib, referring to *Adab-e-Alamgiri*, writes: “In the later years of Shahjehan, we find the Mughal Administration proposing to advance nearly Rs. 40,000 to 50,000 to cultivators in Khandesh and the Painghat portion of Berar, for the purpose of erecting bunds or dams.” *Ibid.*, 27.

proprietary rights over land but were entitled to a fixed share of the produce of land cultivated by peasants. At the lowest rung of the society were weavers, carpenters, blacksmiths, and potters. Thus, with the help of land and water, the whole social structure was fashioned in a way to perpetuate exploitation and control over the population.

Colonial rule made best use of this tradition in the Indian history. In the latter half of the 19th century, equipped with modern scientific techniques,¹⁹ the colonial rulers of India embarked on hydraulic mission, the purpose of which was to harness the water potential of India and extract maximum out of it. A number of canals were built in the Indus Basin and other parts of India. The Punjab became the main beneficiary of canal projects. The Punjab was annexed by the British Empire in India in 1849. The ruling groups, which sided with the British during Anglo-Sikh War, were patronized. This ingenious strategy bore fruits in the War of Independence 1857, when Punjabis' intervention on the side of British saved the Empire. Thus developed a time tested partnership between the Punjabi elite and the colonial rulers, which David Gilmartin recognizes as *patron-client relationship*.

The hydraulic mission, which, by means of control over water, made abundant lands available for cultivation, provided an opportunity to the colonial rulers to reward their allies. With the help of hydraulic engineering, the colonial rulers of India devised a system that served many purposes. On one hand, the allies of the empire were rewarded, and thus their loyalties were ensured; and on the other hand, a lot of land was brought under plough, which meant increased production, and hence increased revenue.²⁰ The

¹⁹ David Gilmartin is of the view that science not only served the purpose of consolidating empire but also was used to extract maximum out of the colonies. Therefore, the imperial science sided with the empire against the nature and the colonized. David Gilmartin, "Scientific Empire and Imperial Science: Colonialism and the Irrigation Technology in the Indus Basin," *The Journal of Asian Studies* 53, no. 4 (1994): 1127–49

²⁰ "Between 1885 and the end of British rule in 1947, the canal-irrigated area in the Punjab, excluding the princely states, increased from under

landowners, in their turn, served the purpose of British Empire by exercising control and ensuring order in local communities. Not only this, the landed elite also acted as recruiting agents for the Imperial Army.²¹ The agricultural extension resulted in increased production, and within no time, the Punjab emerged as the breadbasket of the empire.

With the introduction of representative system of government in India, these landed elite were better placed to secure representation and ensure a great deal of political power for themselves. The dominance of Unionist Party in politics of the Punjab throughout the electoral phase of the colonial rule testifies the fact that this class was deeply entrenched in the political power structure of the state.²² Thus, treading on the traditional path of the Indian history, the colonial rulers based the strength of their rule on the control of land and water, and they were enthusiastically assisted by the landed elite of the province, as they were the main beneficiary of the colonial rule. Masses pictured nowhere in the preference list of the colonial rulers, except silencing them in the time of crisis. Institutionalization of private property and large land grants made to the well-wishers of the colonial rule laid the foundation of huge economic disparity that plagues the state and society of Pakistan even today.

II

At the time of partition of India, the landed elite were well ensconced in political and economic power structure of the society. Not only this, during their heydays of colonial rule, they had been able to secure a great deal of presence in military and bureaucracy.

3,000,000 to around 14,000,000 acres.” Imran Ali, *The Punjab under Imperialism, 1885–1947* (Princeton: Princeton University Press, 1988).

²¹ During the period between the two World Wars, the Punjab’s presence in the imperial army was never under 60 per cent of the total Imperial Indian Army. For details of the Punjab’s special position in the empire, see Ian Talbot, *Punjab and the Raj, 1849–1947* (New Delhi: Manohar, 1988).

²² See *ibid.*

So a permanent partnership was established between civil-military bureaucracy and the landed elite of the Punjab. Thus, a great deal of power imbalance existed among the federating units of Pakistan at its inception. The Punjab was better placed in the new political entity of Pakistan as it was in imperial setting. Particularly after the secession of East Pakistan as independent state of Bangladesh in 1971, the Punjab has achieved a predominant position in the federation of Pakistan. Its share in the total population is 55 per cent, and its representation in the parliament is thus more than the combined representation of the remaining three provinces. Thus, the Punjab in the federation of Pakistan is better placed to secure its interests. Within the Punjab, the landed elite, with its strong connections in military and bureaucracy, stands as the single most potent interest group.

The landed elite in the other provinces are also similarly placed. This interest group, with land as their main source of power, has successfully stalled any attempts at redistribution of land, and with their deeply embedded position in the political power structure, has been able to secure and appropriate most of the available supply of irrigation water. In this political and economic set up, the real sufferers are the small landholders and landless tenants. Thus, the access to the water for irrigation is a function of one's political and economic standing in the society.

The issue of water politics within the federation of Pakistan came to fore in 1948. The political boundaries of newly created India and Pakistan were cut across the natural boundaries of the Indus Basin. On April 01, 1948, India stopped the waters of the canals that originated in India but irrigated land in Pakistan. The committee that was given the responsibility of reaching some settlement over the issue of future supply of water from canals originating in India slept over it. However, the authorities in Indian Punjab only waited for the term of Dispute Tribunal to expire, and on the very next day, stopped the waters of these canals. Pakistan faced the threat of water aggression at the hands of India, which was in a position to render a great mass of land unfit for cultivation in the Punjab. This posed a vital threat to the state of Pakistan in general but more direct one to the Punjab and its landed elite. The

negotiation process that followed did not include any representative from Sindh, which as lower riparian, had genuine stakes in the process.²³ Not only this, the Punjab had a major say in the process of trilateral negotiations between India, Pakistan, and the World Bank. Sindh was the real sufferer as the link canals that were constructed to make for the loss of three eastern rivers to India plundered the waters of the Indus. Thus, the Punjab appropriated waters of the Indus and its tributaries at the cost of Sindh.

The dam controversy in the wake of dwindling water supplies and the energy deficit has brought the issue of water politics in limelight again. The responses of the different provinces to the need for new dams are markedly different. Punjab, being better placed politically, tries to depoliticize the issue. Depoliticization makes the issue purely technical and frames it in 'inevitability' perspective. The other three provinces, disliking the hegemony of the Punjab in the federation, try to frame it as an issue of identity and survival. For the first time ever, the Punjab has been unable to bring about the desired results, although its allies in military and bureaucracy pressed for it to the maximum. However, it still is the major beneficiary of the existing irrigation facilities and enjoys the largest share in the country's waters.

As has been the case of the Punjab in the centre, so is the case of landed elite in the local politics of water. They appropriate most of the available water for irrigation by right or wrong means. Firstly, having political and economic power, they are better placed to get their rightful share approved by the 'hydrocracy', a job which is difficult for a common man to easily achieve. Secondly, with the help of local officials, they acquire more than their due share. Thirdly, it is easy for them to breach a water channel or pump through it illegally. There are a lot of obstacles and deterrents in the way of general masses to get their due share of water.

²³ For details concerning Sindh's grievances concerning the issue of water, see Rasul Bux Palijo, *Sindh-Punjab Water Dispute, 1859-2003* (Hyderabad: Centre for Peace and Civil Society, 2004).

Conclusion

The areas that constitute Pakistan today have almost always remained predominantly agrarian. Agrarian society, in an arid or semi arid region, depends a lot on the continuous supply of water. This need to secure water supply in the capricious climates of arid and semi-arid areas requires a systematic arrangement and management of irrigation facilities by the central authority. Thus, water plays a major role in delineating social, political, and economic contours of an agrarian society. Control over land and water not only provides a semblance of legitimacy to the central authority but also becomes a major source of revenue for it. The central authority, then, generally aligns itself with its proxies at the local level. These proxies, in addition to the central authority itself, are generally the real beneficiaries of the system thus created. Thus, access to the common resources like water in an agrarian society becomes a function of one's position in the economic and political hierarchy of the society.

Contemporary state of affairs in connection with water resources in the Indus Basin calls for revisiting the water management and distribution approaches that have been for long practiced in the region. At the federal level, an eschewed power configuration results in an unjust distribution of water: the smaller units ending up with very few of their water related demands being fulfilled as compared to the larger units getting the lion's share of the Indus waters. Similarly, at the local level, the landed elite have been the real beneficiaries of the existing water-power configurations. In this case, the impending water scarcity makes things worse for the smaller federating units, with less say in water policy, and the common masses in general, with little power to influence both formal and informal water distribution practices. With the surpluses and scarcities distributed disproportionately, the water question seems to become increasingly more contentious than ever. So, framing of any water policy must take into account the whole complex web of water-power relations to avoid potential conflicts among people and communities advocating different uses and/or users of water.

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