

**Pre-colonial Inundation Canals in Siraiki Area: A Case Study of Dera Ghazi Khan and Bahawalpur**

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**ABSTRACT**

*This article discusses the evolution of inundation canal systems in two arid regions of Siraiki area—the trans-Indus district of Dera Ghazi Khan and the cis-Indus princely state of Bahawalpur—during the late Mughal, precolonial period. Contrary to the common assumption that canal irrigation in this area was a colonial innovation, the historical evidence shows that local autocrats played a crucial role in developing a canal irrigation system well before the arrival of the British. Though this precolonial canal irrigation neither involved any modern, complex technology nor provided round the year supplies of water, its existence refutes stagnation of local economy in the late Mughal period. The article places its temporal focus on the late medieval time when the Mughal empire was losing its control on the peripheral provinces and competing political forces like the Durrani and the Sikhs were claiming control of Punjab. In this changing political scenario, Miranids and their successors in Dera Ghazi Khan, and Abbasids in Bahawalpur, heavily invested in excavation, enlargement, and maintenance of inundation canals that tapped summer flooding of the Indus and its two eastern tributaries—Sutlej and Chenab. Administration of the inundation canal system was not run only by the officials appointed by the rulers but also the water-sharers, or zamindars, who took care of not just the excavation and maintenance of inundation canals but also of fair distribution of water. The irrigation water made available through these inundation canals reorganized the economic and social life of the middle Indus valley. It increased the cropped area, enhanced agricultural output, and allowed surplus production that encouraged transregional trade and commerce. Politically, canal construction consolidated the authority of local rulers, grounding their power in concrete economic bases. By placing the focus on indigenous agency in irrigation, this article reinterprets the history of canal construction in precolonial Punjab as a tale of resilience, adaptation, and regional statecraft.*

**Keywords:** *Inundation canals, precolonial Punjab, indigenous irrigation, Dera Ghazi Khan, Bahawalpur, Mughal period, local rulers.*

**INTRODUCTION**

Much is known about the extensive canal irrigation system introduced by the British colonial administration in Punjab and Bahawalpur state from the 1880s to 1940s. A substantive body of knowledge produced both by the British officials and South Asian scholars is available on the extensive canal irrigation network laid in southwestern parts of Punjab province and princely state of Bahawalpur. According to the reports and documents produced by the colonial engineers and commissions such as Indian Irrigation Commission (1901-03) and the Royal Commission on Agriculture (1928), the nine canal colonies of Punjab and Sutlej Valley Project was a great triumph of British science, boosting settled agriculture economy and securing the state revenue. The praise for canal colonies by the British administrators such as Malcolm Darling is understandable. In his ‘The Punjab Peasant in Prosperity and Debt’, though Darling largely commended the agriculture production realised through modern perennial irrigation system yet he admitted indebtedness and the strains of migration induced by the canal

colonization process.<sup>1</sup> The nationalist economists like Romesh Chandra Dutt, in his ‘The Economic History of India in the Victorian Age,’ criticised the British canal irrigation system. His major criticism on the colonial irrigation was its extractive nature.<sup>2</sup> Imran Ali’s ‘The Punjab under Imperialism’ termed the canal colonies as instrument of colonial power, which transformed landholding and peasant society to serve the political and economic interests of British colonialism in Punjab.<sup>3</sup> Fareeha Zafar in her ‘Canals, Colonies and Class: British Policy in the Punjab 1880-1940’ underlined the social and cultural disruptions brought about by the so-called modern, sophisticated irrigation system.<sup>4</sup> In his unpublished thesis, Zahid Ali Khalid discusses the social, economic and political changes brought about by the Sutlej Valley Project (SVP) in the princely state of Bahawalpur. Though he appreciates the SVP for making positive contributions to economy and society but also criticises it for creating significant environmental and social problems such as polluting the pure desert environment and dividing the local Bahawalpuri society along ethnic lines.<sup>5</sup>

Irrespective of the fact that whether it praised or countered any aspect of colonial irrigation system, the literature on modern, perennial canals has largely created a myth that the intensive agriculture in the province of Punjab and princely state of Bahawalpur became possible only after the British government laid extensive canal network in these areas from 1880s to 1940s. The very myth implies as if the canal irrigation was totally an ignored arena of development and the local agriculture economy was stagnating before the British colonialism in Siraiki area or what is called south Punjab in common parlance. However, some recent works, particularly by David Gilmartin and Richard B. Barnett, brought new insights on the history of canal irrigation in two regions of Siraiki-speaking area—trans-Indus Dera Ghazi Khan and cis-Indus Bahawalpur state. Their works bust the myth that canal irrigation was a purely a colonial innovation in the middle Indus valley. According to their works, the British colonists were not the first to realize the economic and political importance of agriculture to establish their authority. Before the British colonists, this realization prevailed among the local rulers of the regional states, who undertook a project of digging inundation canals and developing an elaborate system of their operation and maintenance in middle Indus valley or Siraiki-speaking area. The feat of inundation canal irrigation, undertaken by Mirranis and their successors in Dera Ghazi Khan and Abbasid Nawabs in Bahawalpur, led to economic and trade growth in these regions. The development of inundation canals and their economic impacts, however, have attained little scholastic attention in the economic history of southwester part of Punjab or Siraiki-speaking area.

This article is an exploratory study aimed at finding (i) the circumstances under which the local rulers recognized the potential of inundation canal irrigation; (ii) the governance structures they established for digging and upkeep of inundation canals; and (iii) the growth of agriculture, economy, trade and commerce through inundation canal irrigation. Major focus of this article is on the inundation canal projects undertaken by Mirranis and their eighteenth century successor in Dera Ghazi Khan and Abbasids in Bahawalpur in late medieval time.

The research method adopted for this study is based on historical-analytical approach, examining the development of inundation canals in Dera Ghazi Khan and Bahawalpur during the late Mughal and precolonial periods. The primary sources cited for this purpose include the *Ain-i-Akbari*, travelogues, chronicles, district gazetteers, settlement reports and historical accounts given by the colonial administrators. These sources are supplemented by the articles written on the geography and history of the

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<sup>1</sup> Malcolm Darling, *The Punjab Peasant in Prosperity and Debt* (Lahore: Vanguard Books Ltd., 1947), 131.

<sup>2</sup> Romesh Chandra Dutt, *The Economic History of India in the Victorian Age: From the Accession of Queen Victoria in 1837 to the Commencement of the Twentieth Century*, 7th ed. (London: Routledge and Kegan Paul, 1950)

<sup>3</sup> Imran Ali, *The Punjab under Imperialism, 1885-1947* (Karachi, Oxford University Press, 2003)

<sup>4</sup> Fareeha Zafar, *Canals, Colonies and Class* (Lahore: Lahore School of Economics, 2017)

<sup>5</sup> Zahid Ali Khalid, “State, Society and Environment in Ex-State of Bahawalpur: A Case Study of the Sutlej Valley Project (1921–1947)” (Unpublished PhD dissertation, University of Sussex, 2017)

area by the colonial officials. The secondary sources consulted for the study include the works of David Gilmartin, Richard B. Barnett, Neeladri Bhattacharya, Imran Ali, Fareeha Zafar and Irfan Habib. These secondary sources provide the interpretative framework and help situate the regional developments within wider historiographical debates on irrigation and agrarian economy. While combining textual and comparative regional analysis, the study integrates historical records with spatial interpretation. Besides, it highlights the role of indigenous agency and statecraft in shaping the inundation canal irrigation system in the middle Indus valley.

The article is divided into three parts. The first part gives an overview of the geography of Dera Ghazi Khan and Bahawalpur regions before the development and expansion of the inundation canal network in the low-lying riverine belt of Indus River and the adjacent uplands. It highlights the economic constraints and opportunities available in the local geographies of these regions. The second part deals with the political circumstances under which the potential of canal irrigation was realized by the local rulers. It gives a snapshot of participatory governance structures adopted by the local rulers for the development and upkeep of inundation canals. The third and last part of the article deals with the economic impacts rendered by inundation canal irrigation network laid by the local rulers. It discusses how the surplus agricultural growth, particularly of indigo crop, through inundation canals boosted the trade of Siraiki-speaking area with the Central Asia.

### **Aptness Of Local Geography For Inundation Canals**

Located on the banks of Indus River, the two regions of middle Indus valley were extremely arid, with average rainfall of around six inches both in Dera Ghazi Khan<sup>6</sup> and Bahawalpur.<sup>7</sup> The rainfall was not only very low but also quite erratic, showing a high degree of variability. Leaving their narrow strips of low-lying riverain belt, a large part of these regions formed the uplands along the Indus River. The upland of Dera Ghazi Khan, locally called Daman and Pachad, is a plain stretching from north to south between the Suleiman range in the west and Indus River in the east. The soil of Daman formed by action of hill-torrents that flow in this upland was rich loam.<sup>8</sup> Using wells for irrigation purposes in Daman was almost impossible<sup>9</sup> as the water table was significantly deep here and the cost of sinking wells was prohibitive to the people.<sup>10</sup>

The upland of Bahawalpur was a sandy desert locally called Cholistan or Rohi. Bounded by the Sutlej and Chenab rivers in the north and the Indus River in the west, the desert of Cholistan merges into the larger Indian desert of Rajasthan in the south east. The surface of Cholistan upland consists of sand dunes with no soil to the lowest depth. Groundwater available in Cholistan was bitter and very deep. Wells sunk in the area were a major source of drinking water. The diameter of wells sunk in Cholistan was three to four feet.<sup>11</sup> Due to scanty rainfall, vegetation cover both in Daman and Cholistan was thin.

Sources of irrigation available to the hilly tract of Suleiman range and the plains of Daman in Dera Ghazi Khan included: (i) *kalapani*, or blackwater, irrigation through perennial streams in the hills;<sup>12</sup> supplemented by (ii) *karez*, or underground water courses, carrying water through tunnels dug into the

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<sup>6</sup> David Gilmartin, *Blood and Water: The Indus River Basin in Modern History* (Oakland: University of California Press, 2015), 28.

<sup>7</sup> J. W. Barns, "Notes on the Physical Geography of Bahawalpur State," *Journal of the Royal Geographical Society* 42 (London: John Murray, 1872), 391.

<sup>8</sup> *Punjab States Gazetteer, Volume XXXVI A: Bahawalpur State with Maps* (Lahore: The "Civil and Military Gazette" Press, 1908), 3.

<sup>9</sup> F. W. R. Fryer, *First Report on the Final Settlement of Dera Ghazi Khan District in Derajat Division (1869-1874)* (Lahore: The Central Jail Press, 1876), 112.

<sup>10</sup> *Gazetteer of the Dera Ghazi Khan District (1893-1898), 2nd ed.* (Lahore: Civil and Military Gazette Press, 1898), 3.

<sup>11</sup> *Punjab States Gazetteer, Volume XXXVI A: Bahawalpur State with Maps* (Lahore: The "Civil and Military Gazette" Press, 1908), 1.

<sup>12</sup> Loralai District, *Baluchistan Gazetteer Series, Vol. II* (Allahbad: Pioneer Press, 1907), 187-92

slopes of the hills; and (iii) *rodkahi*, or torrent-dependent, irrigation through building temporary dams and accumulating water in the fields by constructing *bands*, or embankments, in the plains of Daman.<sup>13</sup>

Contrary to Daman, however, no such surface water irrigation facility was available in Cholistan, the upland of Bahawalpur. In the first millennium B.C.E., a major river complex called Hakra and also known by other names underwent either course change or dried up in Bahawalpur region. Once a green and prosperous land, Cholistan—a cradle of Hakra valley civilization—began to turn into a desolate desert after this geographical development.<sup>14</sup> During the Mughal period, the topography of Bahawalpur, except for Uchh, had been almost all Cholistan desert. Revenue records of the Mughal period designated the area as *Berun Panjnad* or Outer Panjnad. The very term of *Berun Panjnad* conveyed the position of Bahawalpur beyond the settled zone southwest of Multan, implying its character as an unproductive desert. Initially attached to Multan Subah of the Mughal empire, the territory was later transferred to Sarkar Sirhind of Delhi Province. This transfer appears to reflect its limited significance as a source of revenue.<sup>15</sup>

Due to scanty rainfall and too great a depth of groundwater, the potential of relatively fixed irrigated agriculture was limited both in Daman and Cholistan. Compared to these uplands, cultivation in the low-lying riverain belt—locally known by different names such as *kacha*, *kachhi*, *hitthar*, *dariyai*, *nasheb*, etc. and also referred to as Sindh in colonial record—was naturally better and relatively dependable owing to its proximity to the Indus River. Summer spills of the river were a blessings for the locals. Here the seasonal river flooding during summer provided relatively dependable supplies of surface and underground water for irrigation.<sup>16</sup> These low-lying riverine plains were dotted with wells even before the introduction of inundation canals there.<sup>17</sup>

These arid tracts of Dera Ghazi Khan and Bahawalpur were part of an area between the Makaran coast to Central Punjab, where pastoral nomadic mode of existence, involving livestock and rain-fed cultivation, well suited to the regional climatic conditions. The local drought-resilient plant species such as *Jal* and *Jand* in these uplands afforded a pasturage for animal-rearing. This was the land inhabited by pastoral nomads, living around their ponds of rainwater, locally called *tobhas* in Cholistan and *talais* in Daman, and wells largely sunk in the low-lying riverine belt. The pastoral nomads, roamed with their herds of camels, droves of cattle and flocks of sheep and goats to graze their animals on the wild vegetation.<sup>18</sup> *Tirni*, a tax on animal grazing, was one of the major revenue sources of the precolonial governments in the area.<sup>19</sup>

### **Thrust For Inundation Canals**

Inundation canal is a simple irrigation technology—digging a channel from the river and taking water inland. Though inundation canals existed since long but the process of their development and expansion geared up in eighteenth century with the increasing political control of Mirani Baloch and their successors in Dera Ghazi Khan<sup>20</sup> and under Abbasids rulers in Bahawalpur.<sup>21</sup> The great Baloch migration out of Mekran to Suleman range and Indus plains took place in fifteenth century when the Langahs in Multan,

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<sup>13</sup> Henry St. George Tucker, *Settlement Report of Dera Ismail Khan* (Lahore: W. Ball, 1879), 5–8, 197–203.

<sup>14</sup> Samia Khalid and Aftab Hussain Gilani, "Distinctive Cultural and Geographical Legacy of Bahawalpur," *Pakistaniaat: A Journal of Pakistan Studies* 2, no. 2 (2010), 3.

<sup>15</sup> Irfan Habib, *An Atlas of the Mughal Empire* (Delhi: Oxford University Press, 1982), 9–10.

<sup>16</sup> Darling, *The Punjab Peasants*, 94.

<sup>17</sup> Gilmartin, *Blood and Water*, 34.

<sup>18</sup> Neeladri Bhattacharya, *The Great Agrarian Conquest*, (New York: State University of New York, 2019), 69.

<sup>19</sup> Indu Banga, "Ecology and Land Rights in the Punjab," *Punjab University Studies / Journal of Punjab Studies* 11, no. 1 (2004):67.

<sup>20</sup> Gilmartin, *Blood and Water*, 34.

<sup>21</sup> Richard B. Barnett, "Ripping Yarns and Rippling Dunes: State Building in Early Modern Cholistan," in *New Perspectives on Pakistan: Visions for the Future*, ed. S. Shafqat (Karachi: Oxford University Press, 2007), 70.



the Mughals and a number of regional states in Sindh started to seek the services of Baloch chiefs and recruited them.<sup>22</sup> Ghazi Khan Mirrani who came along with Dodai leaders to plains in fifteenth century took service with Langahs in Multan and established himself in trans-Indus region of Damán. He needed an economic base to establish his political authority. To achieve this objective, he commenced construction of small inundation canals from the Indus River in Dera Ghazi Khan. Construction of inundation canals from the Indus to the lands beyond the direct reach of the river provided Mirranis an opportunity first to establish an agricultural base and then transform the political foundation for their authority. By the sixteenth century, the Mirranis controlled a brick fort, considerable revenue, a large army and an important political position in the Mughal empire.<sup>23</sup> By eighteenth century, their influence and authority had expanded to the the cis-Indus region of Thal.<sup>24</sup>

In the eighteenth century, Mirranis' control started to crumble and finally collapsed but their successors, Makhdums and Gujars, continued to develop and expand the inundation canal system to southern reaches of the district. After gaining control much of southern parts of the district by 1740, Makhdum Rajan Shah of Sitpur, governor of Sitpur and *sajjada nishin* (custodian) of a prominent sufi shrine on the Indus, undertook a canal-building project and dug an almost 70-mile long big canal, namely Dhundi canal. In the late eighteenth century, Mahmud Khan Gujar usurped power from the Mirranis and while forging alliances with the Duranis and the Kalhoras, he sought to establish his political authority by encouraging an extensive new program of canal building and re-excavation.<sup>25</sup> By the end of eighteenth century, an extensive network of inundation canal system—including Dhundi Canal, Hamalah, Bisharat Wah, Shoree Nullah and Manka Canal—had been established in Dera Ghazi Khan.

Inundation canal system in Bahawalpur district, where a larger part of land had been mostly a sandy desert and irrigation had been neglected for three millennia, however, started to develop under the Abbasids or Daudputra rulers, whose political history dates back to eighteenth century Sindh. Claiming their descent from Abbas, the prophet's uncle, they styled themselves as Abbasids and had established themselves in Shikarpur, upper Sindh. In the declining years of Mughal Empire, the rivalry of their distant kinsmen, the Kalhora Amirs, became more intimidating. Notwithstanding their continuing assertion, one Daudputra had enjoyed a *mansab* of 5,000 in Akbar's reign.<sup>26</sup> So, Abbasids or Daudputras, after accepting an invitation from Gillani and Bukhari Makhdums of Uchch Sahrif—sufi saints whose *khanqahs* date back to thirteenth century Mongol invasions of Khurassan—started moving to Bahawalpur and settled there just east of the confluence of the Chenab and the Indus rivers.<sup>27</sup>

It provided Amir Sadiq Muhammad Khan a new strategic location, from where he defended the clan against the Kalhoras of Sindh, besides conquering the desert fortress of Derawar from Rawal Akhi Singh, the ruler of Jaisalmer, in 1733. He also took special pains to seek favor from Nadir Shah during his attack in 1739. After several successes and retreats, the whole tribe settled in the area southeast of the Sutlej-Chenab-Indus riverain belt. From time to time, they also took hold of smaller areas across these rivers, directly or on tenancy from the Sikhs or the Durrani.<sup>28</sup> Shortly after their settlement, the Daudputra rulers realized the irrigation potential and began to excavate inundation canals, which turned into an extensive network by the time British arrived in Bahawalpur district. By the nineteenth century, forty-five canals of various sizes, tapping the Sutlej, Chenab and Indus Rivers and totaling 2,176 km had been excavated.

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<sup>22</sup> Brian Spooner, "Baluchistan: Geography, History, and Ethnography," *Encyclopedia Iranica* 3 (1988): 609.

<sup>23</sup> Abu'l-Fazl, *Ain-i-Akbari*, reprint ed. (Lahore: Low Price Publications, 1989), 333.

<sup>24</sup> *Gazetteer of the Muzaffargarh District 1929* (Lahore: Sang-e-Meel Publications, 1990), 33.

<sup>25</sup> Hakam Chand, *Twarikh-i-Zilla Dera Ghazi Khan* [Urdu: History of District Dera Ghazi Khan]. 2nd ed. (Karachi: Indus Publications, 1992), 516-24.

<sup>26</sup> *Punjab State Gazetteer of Bahawalpur State* (Lahore: Civil and Military Gazette Press, 1904), 48.

<sup>27</sup> R. Maclagan, "Fragments of the History of Mooltan, the Derajat and Buhawalpoor from Persian MSS," *Journal of the Asiatic Society of Bengal* 17 (July-December 1848), 559-572.

<sup>28</sup> Barnett, *Ripping Yarns and Rippling Dunes*, 69-70.

Another 4,800 km of water courses branched out of these canals. Virtually all such large and small channels preceded the advent of British supervision.<sup>29</sup>

### **Development And Upkeep Of Inundation Canals**

Achievement of such a great irrigation feat was not possible without putting certain administrative and financial structures in place. In the absence of modern technology, the process of canal digging and silt clearance was a labor-intensive endeavor, requiring a high degree of communal cooperation between those who benefitted from these inundation canals. In the case of Dera Ghazi Khan, Baloch tribal organization provided this communal cooperation. Notwithstanding the incorporation of the district into the Mughal rule, the social technology that founded the new canals of Dera Ghazi Khan were not based on the models provided by the Mughal realm, but from the continuous interaction between pastoralism and agriculture that had long shaped Baloch social and political affairs in the region. The processes of canal construction under the Mirranis and later by their eighteenth-century successors, as suggested by local documents and oral traditions collected by British officials in nineteenth century, were closely related to these interactions of nomadic pastoralism and agriculture.<sup>30</sup> However by defining wells as units of land ownership, the rulers of Dera Ghazi Khan sought to pull the labor of the nomadic population of the area into fixed canal projects, an endeavor that had a possibly transformative effect on the social base of the state. As stated earlier, the low-lying riverine belt of Siraiki-speaking areas were dotted with wells. Proprietary rights to the land in this part of Punjab province were largely determined by these wells.<sup>31</sup> The rulers gathered those who made claims to these wells and paid them monthly cash amounts or seer of flour for excavating the canal, usually dividing the work into sections (*dakhs*) and assembling the ones who had claims (based on old wells) on each section for the work.<sup>32</sup>

The structure of mutual relations among the water sharers was decided largely by the inter-relationships between water rights and labor obligations that had shaped the original canal construction. Indeed, this relationship was constantly reaffirmed by the need for annual silt clearance from the inundation canals that relied on the labor (or, in some cases, capital) of the water sharers, who in this capacity were known as *chhers*. For annual silt clearance, the Miranis and their successors as rulers played an important role in supervising and organizing *chhers*. The *chher* was a labor system under which the irrigators themselves provided labor for silt clearance without pay. The *chher* system was in practice both in Sindh and Siraiki-speaking area of southwestern Punjab. In 1850s, however, it was abolished in Sindh.<sup>33</sup> In the matters related to canal maintenance and water distribution, however, the irrigators were generally supervised by a *maimar* selected on a particular branch or watercourse by the water sharers themselves.<sup>34</sup>

In Bahawalpur, the new Abbasid regime encouraged the resulting increase in cultivated land by levying it at lower rates than the croplands requiring no extra labor. The preparation and maintenance work was seasonal and was assumed in late winter or early spring when landowners had little else to do and when labor was available. As this small scale, *bund* irrigation became a usual aspect of the cropping pattern, so did the unavoidable silting, and such local level entrepreneurs could not manage the silt clearance work. While first acting independently of each other, the Amirs of Bahawalpur responded to this need by providing cash advances to support such upkeep work, and appointed *kardars*, or foremen, to coordinate and supervise the work of canal and channel construction and maintenance. The resulting expansion of canal network was based on highly egalitarian and supportive work at different levels of the involved population, *zamindars* would themselves partake in the manual labor in what was called *oghra* process, carrying baskets of earth and silt 'like coolies' up slopes as high as ten meters. The Amirs, or Abbasid

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<sup>29</sup> Barns, *Notes on the Physical Geography of Bahawalpur State*, 395.

<sup>30</sup> Gilmartin, *Blood and Water*, 34.

<sup>31</sup> Darling, *The Punjab Peasant*, 93

<sup>32</sup> Gilmartin, *Blood and Water*, 34.

<sup>33</sup> *Ibid.*, 123.

<sup>34</sup> *Ibid.*, 30.

rulers of Bahawalpur, rewarded canal building entrepreneurs with *qasur* gants, on *chakdar* tenures, negotiating bond with those inhabiting near an expanding canal network to maintain it, sharing profits from future cash crops with both their workers and the state.<sup>35</sup>

### **Booming Economy, Trade And Commerce With Inundation Canals**

Development of this precolonial inundation canal irrigation network in Dera Ghazi Khan and Bahawalpur state generated economic activity, trade and commerce in these regions. The farmers in these irrigated regions started to grow food crops like wheat, rice and lentils as well as the cash crops like indigo and cotton. The cash crops, particularly indigo, was much in demand in the market of Central Asia. In the eighteenth century, the commercial importance of Dera Ghazi Khan town increased due to its significance in the trade to Kabul and Kandhar, and owing to the increasing number of Shikarpuri Hindu and Afghan Lohani traders in the town. Like Shikarpur, Dera Ghazi Khan had once been known as one of the gates to Khorasan. That investment of Hindu capital in agriculture sector and on canal irrigated lands is suggested by the importance of indigo in agricultural production on the improved inundation canals, a cash crop that also played a vital role in the town's exports, and one in which traders usually had high investments.<sup>36</sup>

The visitors to Bahawalpur in the early nineteenth century were awestruck by the breadth of commercial cropping and the relative ease with which the long distance trade was done amidst chronic political turmoil. Besides the food crops such as wheat and rice, cotton and indigo were the major commercial crops of Bahawalpur and Dera Ghazi Khan regions of the middle Indus valley. Boileau, who visited Bahawalpur in early nineteenth century, mentioned seeing seventeen orchards to the north of Bahawalpur town, producing a large variety of fruits, at least one of which was distilled into liqueur.<sup>37</sup> Mohan Lal mentioned turnips as staple food and reported in December of 1835, an immense apple grove was being protected from frosty night temperatures by matted tree coverings.<sup>38</sup> According to Hough's estimates, the indigo sold annually brought a gross profit of Rs. 600,000 to Rs. 700,000 but that its production cost was Rs. 300,000 to 400,000.<sup>39</sup> Such profit margins show the reason behind the continued expansion of canal irrigation at a fairly rapid rate. Much of the commercial activity, if not all of it, was shared among very few communities, mainly Marwaris, Shikarpur Khatri and Lohani Afghans.

Both the Shikarpuris and Lohani Afghans controlled camel caravan networks covering thousands of miles. The latter had kept their commercial contacts in India and Central Asia since developing trade routes to the Sharqi Sultans of Jaunpur in the fifteenth century. The second most important branch of their east west route, which during the troubles within the Sikh confederacy assumed an even greater importance, centered on Shikarpur in northern Sindh, with Bahawalpur securely positioned by the late 1700s as the main stopping point between the Shikarpur to its southwest, and either Delhi to the east and Bikaner to its southeast.<sup>40</sup>

### **CONCLUSION**

With the declining power of Mughals in the center, peripheral areas like Bahawalpur and Dera Ghazi Khan attained a brief period of relatively political autonomy till these regions came under the direct and indirect control of the British empire in the nineteenth century. The inundation canal network laid by

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<sup>35</sup> Radhika Lal Mehta, *Note on the History of Bahawalpur State Canals* (Bahawalpur: Irrigation Department, 1932), 4–7.

<sup>36</sup> Gilmartin, *Blood and Water*, 36.

<sup>37</sup> A. H. E. Boileau, *Personal Narrative of a Tour through the Western States of Rajwara in 1835, and a Brief Visit to the Indus and Bahawalpur* (Calcutta: Baptist Mission Press, 1837), 70.

<sup>38</sup> Mohan Lal, *Travels in the Punjab, Afghanistan, Turkistan, to Balk, Bokhara and Herat; A Visit to Great Britain and Germany* (London: Wm. H. Allen & Co., 1846), 383.

<sup>39</sup> W. Hough, *Narrative of the March of the Army of the Indus in the Expeditions of Afghanistan, 1838–39* (London: W. H. Allen, 1841), 12.

<sup>40</sup> Barnett, *Ripping Yarns and Rippling Dunes*, 76.

Mirranis and their eighteenth century successors in Dera Ghazi Khan and Abbasids in Bahawalpur helped increase agriculture production and generated economic activity. Between the late Mughal and early precolonial times, the local rulers of regional states in these regions endeavored to build communal cooperation so as to construct and maintain inundation canal irrigation systems. Tribal and communal bonds played an important role in the establishment of some branch canals, but the basic structure of irrigation communities was shaped by the relationship of sharers to the source of water itself. The agricultural production that became possible due to the network of inundation canals thus laid generated economic activity. The surplus agricultural production boosted the potential of transregional trade between Central Asia and India. The inundation canals provided the local rulers an economic base to consolidate their political power and fortify their authority in these peripheral regions of precolonial India. In nutshell, it clearly brings two important economic facts to fore.

First, canal irrigation in middle Indus valley is not an entirely colonial innovation. Though the precolonial inundation canal system was not as technologically sophisticated, administratively complex and geographically expansive as the British canal system, what makes the former stand out was its participatory governance which was quite effective in coping with social and environmental challenges. Second, contrary to common belief, the waning days of the Mughal empire were not just an era of anarchy and instability in the Siraiki-speaking area. The economic growth and booming transregional trade as discussed above was not possible without political stability in the area. Through their policies of communal cooperation and low-taxation policies, the local rulers of Dera Ghazi Khan and Bahawalpur were largely providing the stability required for economic growth and trade to flourish.

#### **BIBLIOGRAPHY**

- Abu'l-Fazl. *Ain-i-Akbari*. Reprint ed. Lahore: Low Price Publications, 1989.
- Ali, Imran. *The Punjab under Imperialism, 1885–1947*. Karachi: Oxford University Press, 2003.
- Banga, Indu. "Ecology and Land Rights in the Punjab." *Punjab University Studies / Journal of Punjab Studies* 11, no. 1 (2004): 67.
- Barnett, Richard B. "Ripping Yarns and Rippling Dunes: State Building in Early Modern Cholistan." In *New Perspectives on Pakistan: Visions for the Future*, edited by S. Shafqat. Karachi: Oxford University Press, 2007.
- Barns, J. W. "Notes on the Physical Geography of Bahawalpur State." *Journal of the Royal Geographical Society* 42. London: John Murray, 1872.
- Bhattacharya, Neeladri. *The Great Agrarian Conquest*. New York: State University of New York Press, 2019.
- Boileau, A. H. E. *Personal Narrative of a Tour through the Western States of Rajwara in 1835, and a Brief Visit to the Indus and Bahawalpur*. Calcutta: Baptist Mission Press, 1837.
- Darling, Malcolm. *The Punjab Peasant in Prosperity and Debt*. Lahore: Vanguard Books Ltd., 1947.
- Dutt, Romesh Chandra. *The Economic History of India in the Victorian Age: From the Accession of Queen Victoria in 1837 to the Commencement of the Twentieth Century*. 7th ed. London: Routledge and Kegan Paul, 1950.
- Fryer, F. W. R. *First Report on the Final Settlement of Dera Ghazi Khan District in Derajat Division (1869–1874)*. Lahore: The Central Jail Press, 1876.
- Gazetteer of the Dera Ghazi Khan District (1893–1898)*. 2nd ed. Lahore: Civil and Military Gazette Press, 1898.
- Gazetteer of the Muzaffargarh District 1929*. Lahore: Sang-e-Meel Publications, 1990.



Gilmartin, David. *Blood and Water: The Indus River Basin in Modern History*. Oakland: University of California Press, 2015.

Habib, Irfan. *An Atlas of the Mughal Empire*. Delhi: Oxford University Press, 1982.

Hakam Chand. *Twarikh-i-Zilla Dera Ghazi Khan [Urdu: History of District Dera Ghazi Khan]*. 2nd ed. Karachi: Indus Publications, 1992.

Hough, W. *Narrative of the March of the Army of the Indus in the Expeditions of Afghanistan, 1838–39*. London: W. H. Allen, 1841.

Khalid, Samia, and Aftab Hussain Gilani. “Distinctive Cultural and Geographical Legacy of Bahawalpur.” *Pakistaniaat: A Journal of Pakistan Studies* 2, no. 2 (2010).

Khalid, Zahid Ali. “State, Society and Environment in Ex-State of Bahawalpur: A Case Study of the Sutlej Valley Project (1921–1947).” Unpublished PhD dissertation, University of Sussex, 2017.

Lal, Mohan. *Travels in the Punjab, Afghanistan, Turkistan, to Balk, Bokhara and Herat; A Visit to Great Britain and Germany*. London: Wm. H. Allen & Co., 1846.

*Loralai District, Baluchistan Gazetteer Series*, Vol. II. Allahabad: Pioneer Press, 1907.

MacLagan, R. “Fragments of the History of Mooltan, the Derajat and Buhawalpoor from Persian MSS.” *Journal of the Asiatic Society of Bengal* 17 (July–December 1848): 559–572.

Mehta, Radhika Lal. *Note on the History of Bahawalpur State Canals*. Bahawalpur: Irrigation Department, 1932.

*Punjab State Gazetteer of Bahawalpur State*. Lahore: Civil and Military Gazette Press, 1904.

*Punjab States Gazetteer, Volume XXXVI A: Bahawalpur State with Maps*. Lahore: The “Civil and Military Gazette” Press, 1908.

Spooner, Brian. “Baluchistan: Geography, History, and Ethnography.” *Encyclopaedia Iranica* 3 (1988): 609.

Tucker, Henry St. George. *Settlement Report of Dera Ismail Khan*. Lahore: W. Ball, 1879.

Zafar, Fareeha. *Canals, Colonies and Class*. Lahore: Lahore School of Economics, 2017.