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Canal Irrigation System and Socio Economic Development in British Multan

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Abstract:

The British Authorities introduced a fine irrigation system in the south west region of the Punjab, because the south western part of the province was lacked to receive the monsoon rainfall which was vital for the agriculture products. The winter season rainfall was also not sufficient for the winter crops. The most of the farmer used the well irrigation it was costly and insufficient for the agricultural need of the farmers of the south western part of the British Punjab. Inundation canal was the second traditional irrigation system in the Multan and its adjoining areas of the British Punjab. But these canals were the seasonal canals operational only during the high level of water in the rivers especially in the summer flood period. The Inundation canals were unable to irrigate the large area of land in the south western part of the province. Therefore, the most land was arid and the people of this area were lived like nomadic society in the rural areas of the Multan region. The perennial canal started to construct by the British from 1885 onwards. The government also started canal colonies in this region which change the socio economic position of the people of the south western region of the Punjab Province during the British rule.

Keywords: Canal Irrigation, Agriculture Development, Canal Colony

I. Introduction

When Punjab annexed with the British only one fourth of the total area of the province was under cultivation and one fifth to one sixth of the total cultivated land was irrigated by the canal water in the province. (Banerjee, 1983) British ruler very soon realized the importance of the canal irrigation and extended the canal water capacity in the province. The British constructed new canals in the different areas of the Punjab and extended the old ones. Although the government canals were the main source of irrigation but supplemented by other irrigation sources such as private canals, tanks and wells. All these developments by the British governments were made to increase the cultivated land and production of the agriculture.

Multan was primarily an agricultural district and division as well. The development in agriculture leads to improve the social and economic status of the people and improved their standard of living. There were several methods of irrigation used in

the Multan region. The soil was classified in the government records according to the method of irrigation. The soil classification of Multan region was such as;

- Chai; irrigated by well alone.
- Chai Nahri; irrigated by canals and wells.
- Nahri; irrigated by canals alone.
- Jhalari; irrigated by canal alone, but lift.
- Chai Jhalari; irrigated by wells, but assisted by lift irrigation from canals.
- Slab; subject to river flood.
- Chai Sailab; well land assisted by river flood.
- Abi; land irrigated by direct lift from rivers, ponds, etc.
- Barani; depend on rainfall.

Canal irrigation facilities were necessary for the agriculturist in the southwest part of Punjab province, because most of the part of south west Punjab was practically rainless. The people of Multan region were mostly depended on agriculture to improve their social and economic life. The land irrigation was complementary for agricultural growth. The people of the Multan region used traditional method of irrigation and cultivated the land at small scale level. Therefore the people of Multan and its adjoining areas used different methods of irrigation (Haris, 1976).

The most of the irrigated land was matured by the inundation canals. When Punjab came under the British rule the inundation canals were already existed in the Punjab (Saini, 1975). These canals were silted and useless in some parts of the Multan region. The British Government made efforts to restore them about to working condition and new canals were excavated (Report of the Indian Irrigation Commission, 1901-03). Bari Doab Canal and Lower Chenab canal project was the most wide-ranging irrigation system in the British Punjab as well as in India. The construction of the Lower Bari Doab Canal was the turing point in the socio economic history of the Punjab and southwestern Multan region as well. This canal annually irrigated the twenty-five lakhs acres' land of Punjab province.

In 1901 Lord Curzon appointed irrigation commission in India. The commission was consisting of irrigation and revenue experts and commission visited whole India in 1901-02 and presented its report in 1903 (Ibid). The most important irrigation work constructed in the Punjab following the recommendations of the irrigation commission was the Triple Canal Project which linked up Jhelum, Chenab, and Ravi rivers and made it possible to construct the Upper Jhelum, the Upper Chenab, and the Lower Bari Doab canals (Dutt,1906). In 1901-02 the position of the government canals in operation were such as shown by table 1.

The British government work at canal irrigation at top priority, but the private canals were also very useful for the cultivation in Punjab as well in the south western region of the province. In 1901 the total irrigation area from the private canals were 4,10,610, acres. The cultivated land from the private canals were increased in the early decades of the 20th century and was 4,44,098 acres in 1938-39 (Saini,1975).

Table 1

Sr.	Canal	Area irrigated in1901-02 (acres)
1	Bari Doab Canal	856041
2	Chenab Canal	65367
3	Sidhnai Canal	114132
4	UpperSutlej Inundation canals	170849
5	Indus Inundation canals	174220
6	Lower Sutlej canal	163775
7	Chenab Inundation canals	114617
8	Muzaffargarh Inundation canals	291797

Source; B.S. Saini, The Social and Economic History of the Punjab; 1901-1939, Dehli,1975.

II. Triple Canal Project

Triple canal project was the largest and main irrigation project by the British in India till 1905. The main object of the Triple Canal Project was to irrigate the Ganji Bar in the watershed between the river Ravi and the Sutlej. A scheme for a canal was prepared and submitted to the Irrigation Commission in 1901. At the recommendation of Irrigation Commission of 1901, a Triple Canal Project started in January 1905(Administration Report of the Punjab and Dependencies,1904-05). The Triple Canal Project embraces the construction of the Upper Jhelum, the Upper Chenab, and Lower Bari Doab canals to irrigate the Ganji Bar by the surplus water from the river Jhelum. The whole Triple Canal Project was completed in March 1917 at a total cost of Rs.10.1 crores(Administration Report of the Punjab and Dependencies,1916-17). Other three main irrigation projects (the Sutlej Valley Project, Haveli Project and Thal Project) were started under triple canal project in 1919. According to the Montagu Chelmsford reforms of 1919, a dyarchy system was introduced in the provinces and irrigation department became the transfer subject under the dyarchy system. Irrigation department made more progress when this department came under the transfer subject.

III. Upper Chenab Canal

It was designed to irrigate chiefly in Gujranwala district and to carry supplies to the river Ravi for the Lower Bari Doab. Work on this project was started in 1906-07 at an estimated cost of Rs.3.61 crores and canal opened for irrigation in April 1912(Administration Report of the Punjab and Dependencies, 1911-12). As a matter of fact, this canal was being a greater measure feeder for the lower Bari Doab Canal as a commercial proposition. It can be judged only by its own financial results. In 1912-13 it irrigated 1.16 lakh acres and the net revenue realized fell short of the expenditure by nearly Rs.6000 (Ibid).The area irrigated in 1938-39 was 6.52 lakh acres and the canal realized an income of Rs.37.84 lakhs. In 1938-39 it earned a net profit of Rs.10.07 lakhs 0r 2.39 percent on capital expenditure (Saini, 1975).

A. Lower Bari Doab

The headwork of the canal is situated at Balloki in the Lahore district. The canal was designed to irrigate annually 8.77 lakh acres in the Okara and Montgomery tehsils of Montgomery district and the Khanewal tehsil of the Multan district (Multan District Gazetteers, 1923-24). The area served lies between the Ravi and the old bead of Beas and consisted of a narrow strip 134 to150 miles in length. This canal was constructed at an estimated amount of Rs. 2.16 crores (Saini,1975).The construction work of the canal was started in 1906-07 and it was formally opened for irrigation in April 1913 and in the early years did not earn any profit. But soon it became a commercial asset of the government.

In 1921-22 it earned 10.56 percent of the total capital expenditure of the project(Report on Review of the work of the Irrigation Department, 1921-22). In 1928-29 the irrigated area was 12.62 lakhs and it earned profits of 24.77 percentages of the total capital outlay (Administration Report of the Canals in the Punjab, 1928-29). This was the most remunerative canal of the Triple Canal Project. The Lower Bari Doab has thirty six major and minor distributaries with a total length of over 1000 miles (Multan District Gazetteers, 1923-24). The sixty percent of the Crown area had been allotted to the peasant of colonists and indigenous population and eight percent had been acquired by the auction purchasers. The remaining one third was devoted to special objects. This includes grants to land holder gentry, in service conditions, for irrigation plantation and cattle farms (Ibid). The project of the canal had, moreover restored to prosperity several of the leading families of the district. Those people were very lucky who had sufficient piece of own land on it or to whom the British government had made large grant.

B. The Sutlej Valley Project

The Sutlej Valley Project was the direct outcome of the great Triple Canal Project. There were many inundation canals on the right and left bank of the Sutlej drawing their supplies from the river. There were no proper weirs at their heads at the rivers. In case of some canals there were no means of controlling the volume of water entering them (Administration Report of the Punjab and Dependencies, 1921-22). All the surveys related with the project were completed in 1909-10 and the work was estimated to cost Rs.19.75 crores (Administration Report of the Punjab and Dependencies, 1910-11). However, the project received approval from the secretary of state for India in December 1921. The work was started immediately on four main canals namely, Pakpattan, Dipal-pur, and Mailsi. Pakpattan canal was ready for irrigation in 1926 and remaining three canals were opened for irrigation in 1927-28. However, the whole project was completed in March 1933 (Review of the work of the Irrigation Department, 1938-39). In 1931-32 total expenditure of the project stood at Rs.21.37 crores including Rs.11.51 crores from the partner states Bahawalpur and Bikaner (Saini,1975).

In the 1st year of its operation 1926-27 the Pakpattan Canal irrigated 26256 acres and in next year irrigated area was much increased and reached nearly 77751 acres. In 1928-29 it reached 3 lakh acres (Administration Report of the Canals in the Punjab, 1928-29).The irrigated areas steadily increased and reached at 4.60 lakhs in 1931-32. The area of Pakpattan canal increased and reached 6.68 lakhs acres in 1938-39. The area irrigated by the Dipal-pur, Mailsi, and Eastern Canals were 3.35 lakh acres, 2.26 lakh acres and 1.06 lakh acres in 1928-29 respectively (Multan Gazetteers, 1936). In 1938-39 irrigated area of Dipal-pur, Mailsi and Eastern canals were 4.79 lakh acres, 3.85 lakh acres and 1.54 lakh acres respectively (Administration Report of the Canals in the Punjab, 1938-39). During 1928-29 the Sutlej Valley Project worked at loss of Rs.30.13 lakhs. The loss was due to the fact that the system had not fully developed and also because heavy rains damaged the crops irrigated by the Eastern canal. The total income of the project in 1938-39 was Rs. 98.64 lakhs and the net profit was Rs. 38.58 lakhs (Saini,1975). By the end of 1938-39, the Sutlej Valley Project had become fairly remunerative and was one of the greatest commercial assets of the Punjab province.

C. The Haveli Project

According to the Haveli Project Trimmu barrage was constructed at the river Chenab and divert the waters of the rivers Jhelum and Chenab in to the river Ravi near Sidhnai. This project was originally planned in 1916 and a fresh estimate and a new design was made in 1926-27. The Haveli Project was designed to irrigate 15.50 lakhs acres under perennial and non-perennial irrigation at an estimated cost of Rs.5.36 crores (Administration Report of the Canals in the Punjab, 1938-39). This project was sanctioned by the government in April 1937 and work was started in October 1937. This project was completed in the year 1938-39 and was opened in April 1939. The Karam, Ganesh and Taliri canals of Muzaffargarh canal system as well as Sidhnai canal and Chenab inundation canals were amalgamated with the system during 1938-39. In the same year the total area irrigated by the Haveli Canals System amounted to 7.23 lakh acres (Saini, 1975). This was the first year of its working and showed satisfactory results and therefore held out hopes for the future.

Besides, the excavation of new canals and the makeover of old ones, the colonization of the unfertile land of the South Western part of the Punjab was another important project of the British. According to Imran Ali, the main purposes of the British Government was to promote agricultural development, increase the revenue base, protected the political support and enable the recruitment in the army (Ali, 1988). The British achieved some objectives of the new irrigation policy. Firstly, the British government was succeeded to transfer the peoples from the most populous districts of the Punjab province to the new canal colonies areas. Secondly, new settlers brought under cultivation vast barren land because they were expert in agriculture. These developments not only increased the socio-economic position of the people of this area but also enhanced the revenue of the British. Besides the regular canals, several inundation canals were taken off from the lower course of rivers Sutlej, Ravi, Chenab and Indus. These canals irrigated the area of Multan, Muzaffargarh, Jhang, and Dera Ghazi Khan. The lengths of the main canals in the Punjab were 2810 miles and the length of its distributaries, 14,827 miles by 1936-37 (Singh, 1983).

D. The Sidhnai Canal

The first proposal of Sidhnai canal was submitted to the British in 1875. However the Sidhnai canal project did not sanction by the government due to heavy expenditures on other large schemes that were in progress. In 1882 the government of India announced a new scheme for the construction of new irrigation project. The Punjab government resubmitted the proposal for the Sidhnai Canal project with an estimated cost Rs.774480 to the government of India in 1883. The government of India sanctioned the project and work was started in December 1883 and the canal was opened for irrigation in May 1886. In the first year of canal opening 26455 acres of crops were cultivated. In the following year (1886-87) the irrigated area rose to 75284 acres (Ibid). Land ownership right were allotted to the local and agricultural immigrant groups from the other districts of the Punjab (Beazley, Puckely, 1922). The people of the villages situated on both sides of the Ravi submitted petitions regarding the probable effect of the new channel on their existing irrigation from the river. It was proposed to provide irrigation for such of their lands by subsidiary canals taking out from the right and left bank of the weir. For this purpose, the Kuranga and the Fazal Shah canals were built from the right and left bank of the Sidhnai weir in June July 1890 respectively. The Abdul Hakeem

canal was to take out from the left bank of the river about 3.5 miles above the weir (Multan District Gazetteers, 1923-24).

The main line of the Sidhnai extended from the head at Sidhnai to a point below the Lahore Multan Road, beyond this point known Rangho. At the tail, two rajbahas take off on the right bank known as Rowan and Makhdum Rashid. These two Rajbahas were in fact the largest distributaries in the Sidhnai taking together thirty percent of the total supply entering the canals (Lal,1973). There were thirteen distributaries on the Sidhnai which were named as: Choparatta, Hashmat Mirali, Kotli Bhutta, Kukarhatta, Mangan wala, at the right bank of the canal and Makhdumpur, Hataran, Vanoi, Kabirwala, Chawan, Mahni Siyal were at the left bank of the canal. Makhdum Rashid and Rawan distributaries were at the tail of Sidhnai Canal (Multan District Gazetteers, 1923-24). The Sidhnai project was different from the inundation canals of the Chenab and Sutlej because it had a weir and it was different from the perennial canals because its supply was more liable to fail at critical seasons of the year. The strict rules of governing the distribution of water was that the main canal has the prior claim and the surplus water being divided between subsidiary canals. The canal irrigates the greater portion of Kabirwala and a considerable portion of Multan. In both tehsils the area served by it compares favorably in every way with the area depending on the inundation canals. This superiority was due to mainly the better supply and distribution, which approximate closely to conditions on the perennial canals.

IV. Colonization

The Sidhnai canal mostly commanded the government waste land. This could not be cultivated without the water irrigation. The colonization of the waste land scheme was monitored by Mr. Hutchinson Deputy Commissioner of Multan. In the colonization scheme ninety acres' land was given out to the agriculturist of the district and the remaining was given to other than Multan district (Ibid). The colonization of Sidhnai canal was the first successful example in history of Punjab province. A large number of agriculturists' immigrants were transferred from the central Punjab to the less thickly populated tracts. The British government started the Lower Bari Doab scheme in the south of river Ravi. (The Lower Bari Doab Scheme discussed in detail in the first part of this chapter) A large of agriculturist immigrants came from the congested district of the Punjab. It was trying to give up a large portion of land to the Muslim grantees (Wace, 1934). The Nili Bar Canal project was started in 1925. It was situated to the north of the river Sutlej around Pakpattan, Mailsi and Lodhran (Darling, 1947).

All these canals were under the control of the superintending Engineer Derajat, whose head-quarters were in Multan. The Sidhnai canal and Chenab Inundation canals were under the Executive Engineer Multan Canals. The Inundation canals of Sutlej and Hajiwah were under the Executive Engineer Lower Sutlej canal (Multan District Gazetteers, 1923-24). The British enhanced the agriculture production to bring the barren land under cultivation in Punjab province specially the western part of the province. This agriculture development was mostly in the canal colonies areas in the Punjab province. The farmers used the new agricultural techniques as sugarcane-crushers, Persian wheels, harrows and drills. These new agriculture techniques were used commonly in all new canal irrigated areas in the entire province. The British Government took many initiatives to increase the agriculture production. In this way government introduced new varieties of crops and good seeds of the major crops. The production of powerful cattle breeds also

changed the characters of the agriculture. These new developments change the socio-economic position of the people of the Punjab as well south west region of the province. Renowned researcher Sukhwant Singh said that on the whole Punjab and colonies areas of the province were among the largest wheat cotton and oil seeds producing areas (Singh, 1983).

V. Conclusion

Multan was basically an agricultural region. All the agricultural production was consumed within the province. The need for agricultural improvement was necessary from many points of view. It had led to an improvement in the economic conditions of the masses and it also improved their standard of living. It will also have a bearing in the industry since the purchasing power of the rural masses will tend to provide a large home market for absorbing the products of the home manufactures. At the old time endeavors were made to make use of the sources of water supply such as being available in the circumstances. The sources of artificial irrigation in the Multan and its neighboring districts were embankments streams, rain and large irrigation wells. When Multan was annexed with the British Rule, the only canals of any importance in existence were the inundation canals. Which had been excavated from the rivers Sutlej, Chenab, and Indus to irrigate the low land in the valleys of those rivers? The British government introduced a magnificent system of irrigation in the province. It changed the agricultural statistics of the province and socio-economic condition of the masses. Because increased facilities for irrigation means increase in general wealth, prosperity of the community resulting from the increase in the produce of the cultivation.

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