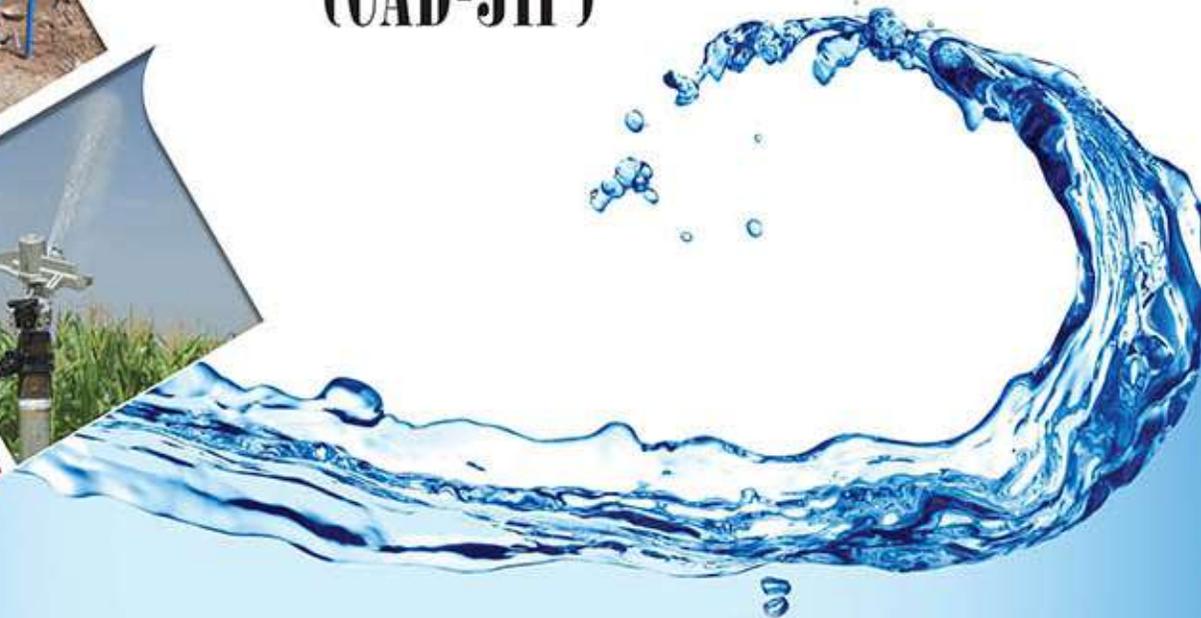




COMMAND AREA DEVELOPMENT OF JALALPUR IRRIGATION PROJECT (CAD-JIP)



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WATER

is a Key Factor for Agriculture

Water has become the most important strategic resource for socio-economic development in the Punjab, Pakistan. It is a key driver of provincial economy and plays an intrinsic role in rural development and its transformation to the economic uplift of the rural community. On the contrary, Pakistan's water resources are decreasing day by day due to exponentially increasing population, less storage capacity, climate change etc. Owing to this situation, the additional water requirement can be met through increased crop yields and/or expanding the irrigated area, wherever opportunities exist.

Recognizing the key role of water in sustainable development, a standalone goal six of the Sustainable Development Goals (SDGs) has been dedicated to water unfolded as "ensure availability and sustainable management of water". It also speaks about substantial increase in water-use efficiency and ensure sustainable withdrawals and supply of freshwater across all sectors to address the issue of water scarcity by 2030.

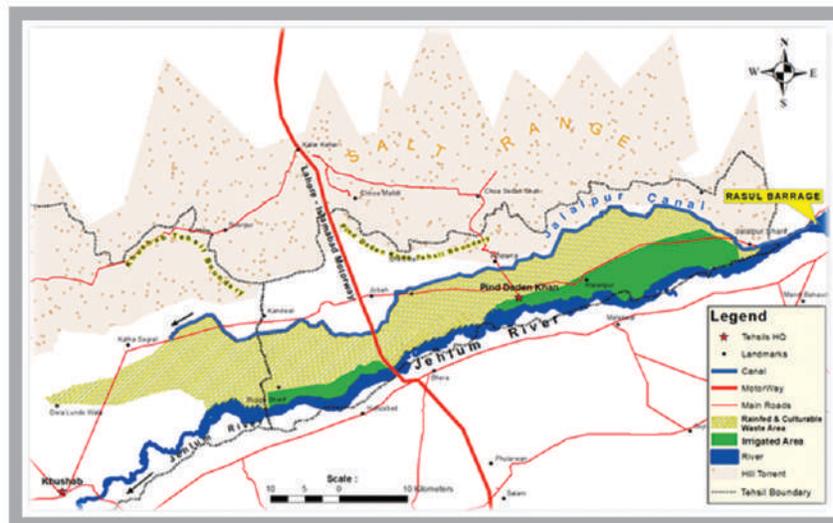
The Punjab's agro-based economy largely depends on irrigated agriculture as it accounts for about 28 percent of GDP and employs around 50 percent of labor force as well as contributes in the growth of other economic sectors by supplying raw materials to agro-based industry. The Government of Punjab has taken an initiative in accordance with the Sustainable Development Goals (SDGs) and launched a flagship project titled "Construction of Jalalpur Canal & Its System" with the assistance of Asian Development Bank.

The Command Area Development (CAD) of Jalalpur Irrigation Project (JIP) is part and parcel of this project which is being implemented by the Agriculture Department through its Water Management and Agriculture Extension wings. The overall Project Development Objective (PDO) is to develop the culturable wasteland for agriculture development in Jalalpur Canal command and promote irrigated agriculture with efficient utilization of limited/ seasonal water resources being made available through construction/ development of new canal system to alleviate poverty by generating enhanced employment opportunities and maximizing farm profitability.

INTRODUCTION

The Jalalpur Irrigation Project (JIP) is located between longitude from 720-20' to 730-31' (east) and latitude from 320-25' to 320-43' (north) along right bank of River Jhelum in the Punjab in Jhelum and Khushab districts. The project area is bounded by the salt range hills in the north-west and the River Jhelum in the Southwest. The groundwater and discharge brought by Hill Torrent is Saline. The project area is assessable through six lane Motorway and National Highway at two-hour drive from the Capital Islamabad and three-hour drive from the provincial capital, Lahore.

The Jalalpur canal is a non-perennial irrigation canal which will irrigate about 168,684 acres (68,263 ha) of virgin land located in Pind Daden Khan and Khushab tehsils of Jhelum and Khushab districts, respectively. The canal system comprises of 116 Km long main canal and 210 Km long 23 distributaries & 10 minors, 485 outlets as well as 17 drinking water outlets. Presently, farmers are practicing mainly rainfed agriculture and tubewell irrigation in patches in the project area. The main crops are wheat, cotton, rice, sugarcane, maize, fodder, potatoes, onion, vegetables, and citrus orchards. The crop productivity vis-à-vis farm profitability in the project area are low mainly due to lack of irrigation facilities, which often result in crop failures and secondary salinization.



Note: Area in green represents the presently irrigated cultivated area in Jalalpur Canal Command

PROJECT COMPONENTS

The main components envisaged for command area development of JIP include, inter alia, the followings:

A. **Community Watercourse Development**

A-1 Organization of 485 water users associations (WUAs) for mobilizing the farming community to actively participate in developments related to tertiary level irrigation network, farm layouts, rough / precision / LASER land leveling and adoption of new water management interventions.

A-2 Watercourse development through earthen construction of 485 watercourses in the command areas as per engineering design and lining of their critical reaches upto 50% of total length for efficient water conveyance to the farmer fields.

B. **Improving Water Productivity**

B-1 Extend technical assistance to the farmers for farm layout planning and demonstration of precision / LASER land leveling on 30,000 acres in watercourse commands for improving water application efficiency.

B-2 Installation of High Efficiency (drip/ sprinkler) Irrigation Systems on 2,000 acres for orchards, vegetables and other high value/ cash crops.

B-3 Construction of 20 Water Storage Ponds and Solar Powered Pumping Stations for Irrigating Un-commanded Area in Outlet Command.

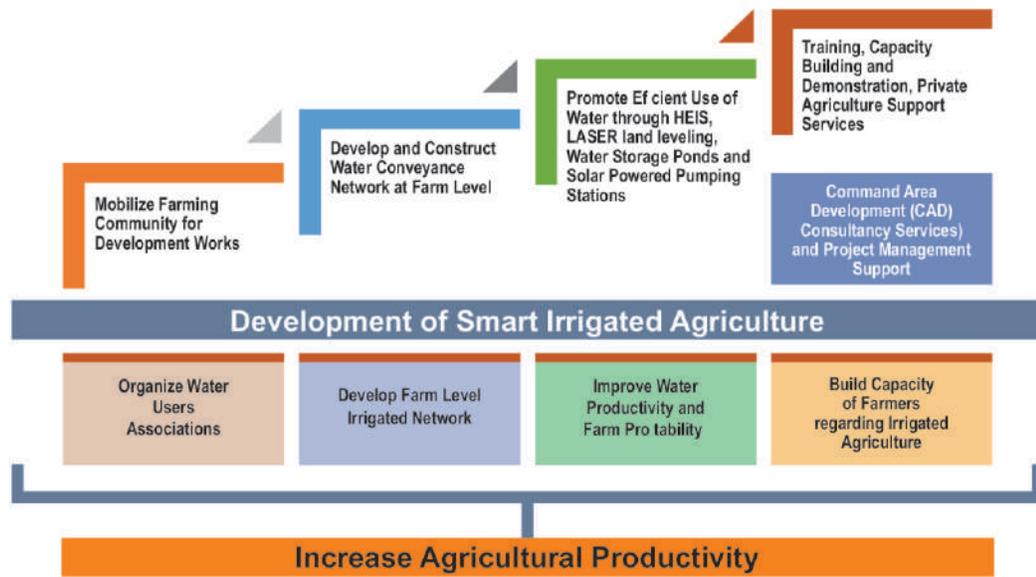
C. **Awareness Creation, Training, Capacity Development, Demonstration and Private Agriculture Support Services**

C-1 Awareness creation and capacity building of about 3,000 farmers/ water users associations/other stakeholders for operation and maintenance of watercourses and adoption of improved OFWM interventions.

C-2 Demonstration of suitable cropping patterns and provision of technical and financial support to the farmers (664 D-plots, 120 Rabi Drills, 1,200 hand sprayers and 400 FFs) for adoption of modern production technologies/ practices through extension services by the Extension wing of Agriculture Department.

C-3 Provision of Private Agriculture Support Services (PASS)

(Conceptual Layout for CAD)



Financial Assistance to the Farmers under the Project

Sr.No.	Activities	Financial Assistance
1	Development/ Improvement of Watercourses	Cost of earthen development of watercourse and entire cost of construction materials
2	Installation of High Efficiency (drip/ sprinkler) Irrigation Systems	80% of scheme cost
3	Provision of LASER land leveling services	80% (upto 4,800 Rs./acre)
4	Construction of Water Storage Ponds and Solar Powered Pumping Stations for Irrigating Un-commanded Area in Outlet Command	80% of scheme cost
5	Provision of Rabi Drills	Max. upto Rs. 45,000
6	Provision of Hand Sprayers	Max. upto Rs. 4,000
7	Demonstration Plots of field crops	Max. upto Rs. 35,000/ plot
8	Establishment of orchards	Max. upto Rs. 85,000/ plot
9	Demonstration plots of vegetables	Max. upto Rs. 52,000/ plot
10	Farmer days/ seminars/ workshops	Max. upto Rs. 52,000/ session

SALIENT FEATURES OF THE PROJECT

- a) River Jhelum
- b) Offtake Right bank of Rasool Barrage
- c) Name of Canal Jalalpur Irrigation Canal
- d) Funded by Asian Development Bank
- e) Counterpart Funding Government of Punjab
- f) Canal Operation Non-perennial (April to October)
- g) Discharge 1,350 Cusec
- h) Total Length of Main Canal 116 Km (25 km Lined)
- i) Gross Command Area 176,000 Acres (110 villages)
- j) Culture able Command Area 168,684 Acres
- k) Distributaries 23 Nos.
- l) Minors 10 Nos.
- m) Length of Distributaries/ Minors 210 Km
- n) Total Outlets/ Mogha 485 Agriculture + 17 Drinking Water Outlets
- o) Duration of CAD Component 2019-20 to 2022-2023
- p) Development/ Lining of WCs 485 Nos.
- q) Laser Land Leveling 30,000 Acres
- r) High Efficiency Irrigation Systems 2,000 Acres
- s) Water Storage Ponds along with Solar Pumping Stations 20 Nos.
- t) Demonstration Plots 664 Nos.
- u) Provision of Rabi Drills 120 Nos.
- v) Provision of Hand Sprayers 1,200 Nos.
- w) Farmer Field Schools (FFSs) 400 Nos.
- x) Farmer days/ seminars/ workshops 100 Nos.



PROJECT OBJECTIVES

The key objective of the project is to develop the culturable waste land for agriculture in Jalalpur Canal command and promote irrigated agriculture with efficient utilization of limited water resources being made available from new canal system through sustainable infrastructure development at the farm level to alleviate poverty in the project area by generating enhanced employment opportunities and maximizing farm profitability. The key objectives of the project include, inter alia, the followings.

- i) Develop culturable waste land for agriculture through developing water conveyance network at the farm level
- ii) Promote irrigated agriculture through sustainable OFWM interventions by utilizing limited available water resources from newly constructed canal system
- iii) Enable farmers to operate & maintain smart irrigation water distribution system
- iv) Develop capacity of participating farmers in better management of water and non water inputs to maximize profitability
- v) Alleviate poverty by generating employment opportunities, maximizing farm returns, and improving livelihoods in rural areas.



PROJECT BENEFITS

a) Financial Benefits

Due to project interventions, increase in crop yields, cropping intensity, cropped area, better change in cropping pattern, good quality produce etc. will have an indirect impact on farmers' income/ profits by conversion of rainfed agriculture to irrigated agriculture.

b) Economic Benefits

The project would have a transformational impact on irrigated agriculture in the Jhelum and Khushab districts and surrounding areas. All interventions under the project for command area development are economically viable with very high Internal Rate of Returns (IRR).

c) Social Benefits

Irrigation water being made available through development of farm level water infrastructure and its subsequent use through improved irrigation application (drip/sprinkler, LASER land leveling) would increase the cropped area, crop yields, cropping intensity and farm profitability in the project area. Accordingly, increased income level of the farming community will improve their livelihood and generate more economic activities.

d) Environmental Benefits/ Impact Assessment

The research studies clearly indicate that the improvements in water conveyance and application have positive affects in controlling waterlogging and rising watertable, improving water management, reducing the drainable surplus, and reducing soil salinity risks.

e) Employment Generation

About 400,000 man-days of skilled and unskilled labor would be generated through water-course development and construction activities. More than 50 LASER service providers would be engaged for LASER land leveling of about 30,000 acres of land in the project area. Moreover, about 200 persons will be engaged as operators and helpers in operation of high efficiency irrigation systems. Improvement in crop yields will also boost economic activity in rural areas of the province that will create further employment options.

**OVERALL
ANTICIPATED IMPACT
OF CAD INTERVENTIONS**







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