



Restoring Efficient Irrigation through Channel Rehabilitation in Village Taimoor Khan



Case Study

Rehabilitation of Irrigation Water Channel

Under the project: *“Building Resilience through Improved Food and Nutrition Security in KP, Punjab, and Balochistan.”*

Background:

Village Taimoor Khan in District Jhal Magsi relies heavily on agriculture for both income and food security. However, the community faced persistent irrigation challenges due to a deteriorated, unlined water channel connecting the local canal to the farmland. Years of soil erosion, seepage, and uneven channel surfaces resulted in nearly **50% water loss** before reaching the fields. This inefficiency reduced crop yields and intensified disputes over water distribution especially for tail-end farmers who often received little to no water. In a region already prone to drought and water scarcity, these challenges threatened the sustainability of agricultural livelihoods.



Intervention

To address these issues, Human Organization for peaceful Environment-**HOPE**, in partnership with Welthungerhilfe (WHH) and the Norwegian Ministry of Foreign Affairs, rehabilitated 800 running feet (rft) of the irrigation channel.

Key activities included:

- Excavation and reshaping of the damaged earthen channel
- Lining the channel with Plain Cement Concrete (PCC) to prevent seepage
- Improving water flow efficiency and minimizing losses
- Providing farmers with basic training on channel maintenance, water regulation, and equitable distribution

Results & Change Achieved

The rehabilitation has produced substantial improvements for the community:

- **Water losses reduced by over 70%** (equivalent to 74.40 cubic meters or **74,404 liters**)
- **43 farmers/households** now benefit from an improved irrigation system
- **68 acres** of farmland receive consistent and adequate water supply
- Enhanced crop productivity, especially for wheat and vegetables
- Noticeable reduction in water-related conflicts among farmers
- Strengthened community cooperation and ownership

Key Technical Summary



Sr. No	Channel Description	Details
1	Length	800 RFT
2	Water Wastage Reduced	74 cubic meters / 74,404 liters
3	Irrigation Capacity	68 acres
4	Farmers / Households Benefited	43

Key Outcomes and Impacts

- Improved irrigation efficiency through durable PCC lining
- Increased crop productivity, resulting in higher household income and better food availability
- Strengthened community ownership through active participation
- Enhanced climate resilience by promoting efficient water use in a drought-prone area
- Direct contribution to the project's goal of building resilient rural livelihoods

Farmer Testimonial:

“Before this project, we used to watch our fields dry while others got enough water. Now, every farmer receives a fair share,” **Shabbir Ahmad**, Farmer, Village Taimoor Khan

Lessons Learned

- Inclusive community engagement ensures long-term ownership and accountability
- Small-scale infrastructure rehabilitation can deliver significant impact in water-scarce areas
- Integrating maintenance planning early helps prevent future structural deterioration

Sustainability & Way Forward

To ensure lasting impact, an Operation and Maintenance (O&M) Committee has been established. The committee is responsible for:

- Routine cleaning and monitoring
- Coordinating minor repairs
- Managing the community maintenance fund, supported by monthly contributions of PKR 200 per household

HOPE has conducted capacity-building sessions for committee members, enhancing their understanding of proper channel management, equitable water distribution, and long-term maintenance practices.