

EXECUTIVE SUMMARY

1. PROJECT BACKGROUND

Balochistan, the largest province of Pakistan, remains one of the most water-stressed and climate-vulnerable regions of the country. Its fragile irrigation infrastructure, arid climate, and dispersed rural settlements make it highly susceptible to both droughts and floods. The catastrophic monsoon floods of 2022 caused extensive damage to dams, irrigation systems, and flood protection infrastructure, disrupting livelihoods, destroying crops, and endangering rural communities.

In response, the Government of Pakistan, with financial assistance from the World Bank, launched the Integrated Flood Resilience and Adaptation Project (IFRAP) under the broader *Post-Flood 2022 Reconstruction Programme: Resilience Enhancement and Livelihood Diversification in Balochistan*. IFRAP aims to restore and strengthen the province's water and flood management systems, enhance agricultural productivity, and integrate climate resilience into infrastructure planning and implementation.

Initially, 55 sub-projects were included in the PC-I under the Integrated Flood Resilience & Adaptation Project (IFRAP). During initial surveys twenty (20) sub-projects couldn't meet the World Bank's selection criteria given in Project Appraisal Document (PAD), hence, dropped, whereas the remaining thirty five (35) sub-projects were shortlisted for detailed design.

These Thirty-five (35) shortlisted sub-projects as shown in Figure -1-1 below are located in 19 Districts of Balochistan, including Districts Awaran, Lasbela, Hub, Naseerabad, Jaffarabad, Sohbat Pur, Jhal Magsi, Harnai, Musakhel, Sibi, Kachhi, Killa Saifullah, Pishin, Ziarat, Kalat, Mastung, Kharan, Nushki, and Washuk. The portfolio consists of 11 dams /storage structures, 11 Perennial/ Flood Irrigation schemes, and 13 flood protection structures, which have been grouped in thirteen Packages. The Construction of 2 Nos. Village Road Bridges (VRBs) at different reaches of Uch Canal in District Sohbatpur is one of the sub-projects being implemented under Package-V of IFRAP to improve connectivity, ensure safe access across the canal system, and enhance the resilience of local communities, agricultural areas, and associated infrastructure against flood-related disruptions and seasonal accessibility constraints.

The sub-projects site lies near villages Goth Rasul Bakhsh, Goth Abdul Rauf Khan, Goth Khan and Gul Sher at coordinates 28°31'13.70"N, 68°41'29.40"E. Most of the project area, are underlain by unconsolidated alluvial sediments. These deposits consist of clay, silt, sand, and gravel laid down by fluvial processes of the Indus and its tributary streams. The alluvium forms a flat to gently sloping plain, which is highly susceptible to flooding and surface runoff during monsoon rains. These deposits are generally loose, porous, and variable in thickness, influencing seepage conditions and foundation considerations for hydraulic structures.

The project aims to:

- Improve safe and reliable connectivity across the Uch Canal for local communities;
- Facilitate access to agricultural lands, markets, health, and education facilities;
- Enhance climate resilience by ensuring safe passage during high-flow and flood conditions; and

- Support socio-economic development and mobility of communities in Sohbat Pur District.

The proposed works will be confined to previously disturbed areas and do not intersect with any protected areas, wetlands, or ecologically sensitive zones.

2. OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The Environmental and Social Management Plan (ESMP) has been prepared in line with the World Bank Environmental and Social Framework (ESF), the Environmental and Social Commitment Plan (ESCP), and relevant national and provincial environmental legislation. The ESMP provides a practical framework for identifying, mitigating, and monitoring potential environmental and social risks during project planning, construction, and operation. Its primary objectives are to:

1. Ensure that environmental and social impacts associated with the construction of the VRBs are effectively managed and mitigated.
2. Promote compliance with the World Bank Environmental and Social Standards (ESS 1–10).
3. Enhance occupational health, safety, and welfare of workers and nearby communities during construction and operation phases.
4. Maintain stakeholder participation and transparency through effective consultation and grievance redress mechanisms; and
5. Ensure long-term sustainability, climate resilience, and safe operation of the bridge infrastructure across the Uch Canal.

ESMP will form part of the tender and contract documents to ensure that the Construction Contractor (CC) and Construction Supervision Consultant (CSC) fully integrate environmental and social compliance requirements into their respective roles.

3. LEGAL AND POLICY FRAMEWORK

The ESMP is guided by the following frameworks and instruments:

- World Bank Environmental and Social Standards (ESS 1–10), covering risk management, labor and working conditions, pollution prevention, community health and safety, biodiversity, and stakeholder engagement.
- IFC and World Bank Group Occupational Health and Safety Guidelines.
- Pakistan Environmental Protection Act, 1997, and Balochistan Environmental Protection Act, 2012.
- National Environmental Policy, 2005, National Conservation Strategy, Pakistan Climate Change Act, 2017, and National Disaster Management Act, 2010; and
- Relevant international conventions on biodiversity, climate change, labor standards, and cultural heritage to which Pakistan is a signatory.

4. ENVIRONMENTAL AND SOCIAL BASELINE

The subproject area for “Construction of 2 Nos. VRBs at Different Reaches of Uch Canal, District Sohbat Pur” lies within a semi-arid region characterized by low vegetation cover, flat terrain, and seasonal variations in climate. The geological conditions generally consist of alluvial soils with sandy and silty compositions. Groundwater availability is limited and its quality varies across locations. The area is influenced by irrigation through the Uch Canal and supports agriculture and livestock-based livelihoods.

There are no protected ecological habitats, forests, wetlands, or significant cultural heritage sites within or in close proximity to the project footprint.

Socio-economically, the local communities are rural and largely dependent on agriculture and livestock for their livelihoods. The implementation of the subproject is expected to generate short-term employment opportunities during construction, improve connectivity across the canal, and enhance access to markets and essential services, thereby contributing to improved livelihood conditions and socio-economic well-being of the local population.

5. IMPACT ASSESSMENT AND MITIGATION

Potential environmental and social impacts were identified for both construction and operation phases. These include:

- Temporary dust, noise, and air emissions from machinery.
- Disposal of construction waste and spoil.
- Occupational and community health and safety risks; and
- Temporary traffic disruptions during material transport.

No permanent displacement or land acquisition is required.

Mitigation measures include:

- Implementation of Contractor’s ESMP (CESMP) including site-specific management plans for waste, traffic, health and safety, and emergency response.
- Provision of Personal Protective Equipment (PPEs), first aid, and safety training.
- Controlled disposal of waste through licensed entities at designated locations.
- Restoration of disturbed surfaces post-construction.
- Continuous environmental and social monitoring and reporting; and
- Active stakeholder engagement and a functional Grievance Redress Mechanism (GRM) for workers and communities.

5.1 CUMULATIVE IMPACTS:

In line with the World Bank’s ESS1 requirements, the potential for cumulative environmental and social impacts was assessed for the subproject “Construction of 2 Nos. VRBs at Different Reaches of Uch Canal, District Sohbat Pur.” The review confirmed that no significant concurrent or planned projects exist within the subproject’s area of influence that could interact with the proposed interventions. As the subproject involves the construction of two Village

Road Bridges (VRBs) at selected locations along the Uch Canal within an existing and managed corridor, the anticipated impacts are localized, temporary, and manageable through the prescribed mitigation measures. Overall, no adverse cumulative impacts are expected; rather, the subproject is likely to generate positive outcomes by improving local connectivity, facilitating safer access across the canal, and supporting socio-economic activities of surrounding communities.

6. INSTITUTIONAL ARRANGEMENTS

Environmental and social management will be coordinated through the Project Implementation Unit (PIU) under the Irrigation Department, Government of Balochistan, with oversight by the World Bank. The Construction Contractor will implement the ESMP on-site, under supervision of the Construction Supervision Consultants (CSC) and periodic audits by the PIU.

Capacity building, training, and awareness programs will be conducted for project staff to ensure effective ESMP implementation. A dedicated Environmental and Social Specialist Team has been mobilized to oversee compliance and reporting.

7. GRIEVANCE REDRESS MECHANISM (GRM)

A transparent and accessible Grievance Redress Mechanism will be operational throughout the project lifecycle to address concerns of both workers and community members. The GRM includes a Public Complaint Cell, Grievance Redress Committee (GRC) at site and PIU level, and clear timelines for acknowledgment, investigation, and resolution of complaints.

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT BUDGET

The Environmental and Social Management Plan (ESMP) includes provisions for implementation of environmental and social mitigation measures, monitoring activities, institutional strengthening, capacity building, awareness programs, occupational health and safety measures, and contingency arrangements. The required resources shall be integrated within the overall project implementation framework to ensure effective environmental management, regulatory compliance, and sustainable execution of the proposed Subproject.

9. CONCLUSION

The Construction of 2 Nos. Village Road Bridges (VRBs) at different reaches of Uch Canal represents a critical intervention for improving connectivity, enhancing flood resilience, and supporting vulnerable communities in District Sohbatpur. Implementation of this ESMP will ensure that environmental, social, and occupational risks are effectively managed and that construction and operational activities are carried out in a safe, sustainable, and socially inclusive manner. Through integration of environmental safeguards, stakeholder engagement, and climate-resilient infrastructure design, the project is expected to contribute significantly to improved access, protection of local communities and agricultural areas, reduction of flood-related disruptions, and the broader resilience-building objectives of the Integrated Flood Resilience and Adaptation Project (IFRAP) in Balochistan.