

INTEGRATED FLOOD RESILIENCE AND ADAPTTAION PROJECT (IFRAP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

OCTOBER, 2023

ISLAMIC REPUBLIC OF PAKISTAN

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ABBREVIATIONS AND ACRONYMS

BEPA	Balochistan Environmental Protection Agency
BIWRMDP	Balochistan Integrated Water Resource Management and Development
BLEP	Balochistan Livelihood and Entrepreneurship Project
BOQ	Bill of Quantity
CSC	Construction Supervision Consultant
CWD	Communication and Works Department
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
ESIA	Environmental and Social Impact Assessment
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
WB-ESSs	World Bank Environmental and Social Standards
FPMU	Federal Project Management Unit
GBV	Gender Base Violence
GDP	geographic information system
GIS	geographic information system
GoB	Government of Balochistan
GRM	Grievance Redressal Mechanism
ICT	information and communication technology
IEE	Initial Environmental Examination
IFRAP	Integrated Flood Resilience and Adaptation Project
IUCN	International Union for Conservation of Nature
LMP	Labor Management Plan
MGD	Millennium Development Goal
MIS	Management Information System
MoPDSI	Ministry of Planning, Development and Special Initiatives
NOC	No Objection Certificate
NSER	National Socio-Economic Registry
OHS	Occupational Health and Safety
PCC	Public Complaints Centre
PDNA	Post-Disaster Needs Assessment
PDO	Project Development Objective
PIS	Project Implementation Manual
PIU	Environmental and Social Impact Assessments
PMD	project development objective
PPE	Proper Personal Protective Equipment
PSC	Project Steering Committee
SEP	Stakeholder Engagement Plan
STAT	Social Technical Assistance Team
SWMPs	Solid Waste Management Plans
VRCs	Village Reconstruction Committees
WB	World Bank

EXECUTIVE SUMMARY

The provincial Government of Pakistan (GoP), through Ministry of Planning, Development and Special Initiatives (MoPDSI) at federal level and Planning and Development Department (P&DD), Government of Blochistan, at provincial level is planning to undertake Integrated Flood Resilience and Adaptation Project (IFRAP)¹. The proposed Project is to be implemented in all calamity hit district of Balochistan. This Environmental and Social Management Framework (ESMF)² is developed to support the environmental and social due diligence provisions for activities financed by the World Bank in the proposed project. This ESMF follows the World Bank Environmental and Social Framework (ESF) as well as prevailing legislation in the country (National/Provincial), in particular Blochistan Environmental Protection Act 2012.

Project Background: Pakistan experienced heavy monsoon rains between June and September 2022. Balochistan has been unduly affected by the 2022 floods. The province has received 5.1 times its 30-year average rainfall³. More than 190,000 housing units across the province were damaged. Infrastructure damage has caused the temporary isolation of most of Balochistan, with 2,222 km of roads and 43 bridges damaged, impeding people's ability to access healthcare, food markets, and other vital services and restricting the delivery of aid to those who need it. 456 flood protection/irrigation schemes were partially damaged or destroyed.⁴ The floods have exacerbated socioeconomic challenges in the province, pushing the multidimensional poverty rate from 70.2 percent to 81.1 percent. Agriculture, which accounts for 52 percent of the provincial GDP and 67 percent of the labor force, is the hardest-hit sector⁵. The floods caused over 500,000 livestock casualties which have negatively impacted livelihoods as 70 percent of households depend on livestock. The damage to 587 primary health facilities in Balochistan has further disrupted essential health services. Integrated Flood Resilience and Adaptation Project (IFRAP) was approved by Planning Commission, aims to revive and enhance the livelihoods of communities affected by the 2022 floods and strengthen adaptive capacity to future extreme flooding events. The Project will primarily target the Balochistan province, the second worst-affected province.

Project Development Objectives: The project development objective (PDO) is to improve livelihoods and essential services and enhance flood risk protection in selected communities affected by the 2022 floods.

Project Components: The project has the following six components.

Component 1: Community Infrastructure Rehabilitation: This component has following three subcomponents: *Sub-component 1.1: Rehabilitation of Irrigation and Flood Control Infrastructure;* *Sub-component 1.2: Restoration of Water Supply Schemes and Sub-component 1.3: Reconstruction and Rehabilitation of Roads and Bridges.* **Component 2: Strengthening**

¹ Proposed Project

² Since, the exact extent and precise location/footprints of individual interventions are yet to be decided, a framework approach has been adopted through this ESMF.

³ Rapid Needs Assessment Report - 2022 Monsoon Floods – PDMA-Balochistan, Pakistan (August 2022)

⁴ Government of Pakistan. 2022. Pakistan Floods: Post-Disaster Needs Assessment. Ministry of Planning Development & Special Initiatives.

⁵ Government of Pakistan. 2022. Pakistan Floods 2022: Post-Disaster Needs Assessment: Supplemental Report. Ministry of Planning Development & Special Initiatives.

Hydromet and Climate Services: This component has following two subcomponents: *Sub-component 2.1: Modernization of the Observation Infrastructure, Data Management, and Forecasting Systems* *Sub-component 2.2: Provision of Technical Assistance, Institutional Strengthening, and Capacity Building.* **Component 3: Resilient Housing Reconstruction and Restoration:** This component has following two subcomponents: Sub-component 3.1: Beneficiary-driven Housing Reconstruction Grants Sub-component 3.2: Technical Assistance and Institutional Strengthening. **Component 4: Livelihoods, Natural Resources and Watershed Management; Component 5: Program Management, Reform Support, and Institutional Strengthening and Component 6: Contingent Emergency Response.**

The Project will be implemented at two levels: (i) at the federal level, the MoPD&SI will be the lead agency responsible for overall project coordination and M&E; and (ii) at the provincial level. The MoPD&SI will be responsible for overall project coordination and M&E through the FPMU. The Balochistan P&DD will be responsible for project coordination through the Provincial Coordination Unit (PCU) for provincially implemented components. BIWRMDP PIU and BLEP PIU will implement Components 1 and 4, respectively. PMD will implement Component 2. A separate PIU will be established at the PMD to manage this component at the federal level. The PMD PIU will report directly to the FPMU. FPMU will implement Component 3. The FPMU will engage competent partner organizations with a strong track record in housing reconstruction using eligibility criteria cleared by the Bank. MoPD&SI (through the FPMU) will be responsible for implementing Component 5 and will ensure overall project management, coordination, and third-party verification; the carrying out of strategic studies crucial for resilience; and the preparation of SoP2. In addition, FPMU will use a PSIA consultant and a pool of experts in different fields to support project management.

The project will benefit approximately 2.7 million people in selected communities affected by the 2022 floods in calamity declared districts across Balochistan province.

Environmental and Social Policies, Regulations and Laws: his ESMF has been prepared to address the requirements detailed in the WB ESF addressing environmental and social aspects and considerations. The Environmental and Social Standards (ESSs) relevant to the proposed Project are **ESS-1: Assessment and Management of Environmental and Social Risks and Impacts, ESS-2: Labor and Working Conditions, ESS-3: Resource Efficiency and Pollution Prevention, ESS-4: Community Health and Safety, ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement, ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources ESS8: Cultural Heritage and ESS-10: Stakeholder Engagement and Information Disclosure.** In addition, the ESMF addresses the requirements defined WB Group General Environmental, Health and Safety Guidelines and in the national and provincial regulations, most importantly, The **Blochistan Environmental Protection Act, 2012.** In the same context a number of other relevant laws, guidelines and policies have been discussed in Chapter 3.

Stakeholder Engagement, Disclosure and Consultations: The project has prepared a separate Stakeholder Engagement Plan (SEP) to describe objectives, process and outcome of the stakeholder engagement carried out during the project preparation and to be carried out during the project implementation – in accordance with the World Bank ESS 10 (Stakeholder Engagement and Information Disclosure). The SEP, being a live document is to be updated

throughout the life of the project to ensure effective, robust and transparent stakeholder engagement. A consultation for integrated flood resilience and adaptation program was organized by the Balochistan Irrigation Department on 20th January 2023 to discuss how to support and promote resilience and adaptation in the aftermath of the 2022 floods. Participants ranged from relevant government departments, NGOs and experts in the relevant fields. Participants shared their views on Lessons from past flood response, recommendations for ensuring climate resilience of infrastructure investments, Recommendations for ensuring sustainability of infrastructure investments, Governance, Capacity and reach, Sustainable and Resilient Livelihoods and GRM. The PMU provided responses to the stakeholders during these consultation meetings and made part of this report.

Grievance Redress Mechanism: The project will have a dedicated GRM for the implementing agency to receive and facilitate the resolution of concerns and grievances of project-affected parties, particularly concerning the project's environmental, social, and gender performance. At this stage, GRM will be revisited and finalized once the project gets effective. In the meanwhile, existing GRMs of WB financed projects, Balochistan Integrated Water Resources Management and Development Project (BIWRMDP) and Balochistan Livelihoods and Entrepreneurship Project (BLEP), which will also serve as the Provincial PIUs for the project, will be made accessible to the complainants, if any. Grievances relating to the project will be handled at the Federal level by the FPMU housed in the MoPDSI. A Grievance Redress Committee (GRC) will be constituted at the MoPDSI managed by the Social Specialist.

Potential Environmental and Social Impacts and Mitigations: The Project interventions have positive impacts by improving livelihoods and essential services in flood-affected communities, restoring essential services and will help strengthen their resilience to floods. Based on the WB ESF standards, the environmental and social risk of the project is categorized as "Substantial". The potential environmental and social risks for project, including but not limited to:., soil erosion and contamination , flooding, seismicity, waste generation, deterioration of air quality, noise pollution, water contamination, flora and fauna, occupational health and safety, community health and safety, labor influx, Gender Based Violence/Sexual Exploitation and Abuse, Sexual Harassment, , Forced Labor and Child Labor, elite capture, exclusion of disadvantaged and vulnerable groups, Chance Findings of Important Physical and Cultural, land acquisition and resettlement issues. Most of the above-stated risks and impacts are temporary site-specific, reversible and manageable by adopting simple mitigation measures provided in this ESMF, in accordance with the mitigation hierarchy under the relevant ESSs. Houses to be supported under the project will be owner-built, constructed in-situ and/or at alternative nearby locations owned by the beneficiary and civil works are of small scale and site-specific. Therefore, significant environmental and social impacts are not anticipated.

Environmental and Social Risks and Impacts Management

The (MoPD&SI), being Implementing Agency, will be responsible for overall project coordination and M&E through the FPMU including this ESMF, with the support of PIUs and partner organizations (for component 3). The Environmental Specialist, Social Specialists and Gender Specialists will ensure plans and procedure mentioned in ESMF are being followed and implemented during project life cycle. These specialists will be responsible for implementation and compliance of ESMF and other E&S instruments with the support of E&S Focal persons at

district/field level and E&S staff of Supervision Consultant. For Component 3: Resilient Housing Reconstruction and Restoration, the FPMU will engage competent partner organizations/Implementing Partners (IPs) to implement ESMF. These IPs will hire their own Environmental and Social Officers (ESOs) who will implement ESMF, conduct screening of sub-project locations, comply with ESMF, LMP and GRM and report to the Environment and Social Management Unit of FPMU. Beneficiaries will construct their houses as per the resilient housing design and minimum construction guideline provided by the Project with the help of village reconstruction committees (VRCs) and Social and Technical Assistance Team (STAT)⁶.

The E&S staff of the project, upon completion of project, will monitor activities with regard to site restoration and landscaping in the affected areas to ensure that the activities are done to an appropriate and acceptable standard before closing the contracts, in accordance with measures identified in the ESMPs and other plans. Throughout the Project implementation stage, training and awareness raising will be provided to relevant stakeholders, such as project staff, selected contractors, and communities, to support the implementation of the environmental and social risk management mitigation measures. Third Party will be recruited by FPMU to Monitor compliance including compliance of E&S instruments of the project on annual basis throughout the project duration. The third party will have E & S Specialists to carryout intermittent monitoring of the project. Contractors will be required to comply with the Project's E&S risk management documents and procedures including the ESMP, LMP, and local legislation. This provision will be specified in the Contractor's agreements.

Reports covering E&S implementation status from the field levels will be submitted to the FPMU, where they will be aggregated and submitted to the World Bank on a quarterly basis. The PIU/FPMU becomes aware of a serious incident in connection with the project, which may have significant adverse effects on the environment, the affected communities, the public, or workers, it should notify the World Bank within 48 hours of becoming aware of such incident.

The E&S instruments including the ESMF, LMP, GBV/SEA SH Action Plan, GRM SEP and E&S screening checklists will be disclosed on the official IFRAP website after necessary approvals. Once finalized, Urdu translation of Executive Summary, will also be disclosed. Hard copies of these documents will also be maintained at all Sub/field offices. In addition, these documents will be disclosed on WB image bank.

ESMF Implementation Budget: The tentative cost estimates to implement ESMF is estimated as **Rs. 497,000,000**. This tentative cost will be included in the overall project cost. This cost will be reviewed and firmed up periodically when the project footprints will be finalized at subproject level to ensure realism. Additional costs could be included in the subproject specific ESMPs that will become part of each bidding/BOQ documents.

⁶ Each IP will establish a Socio-Technical Assistance (STA) Team , responsible for providing providing social mobilization and technical assistance by providing technical assistance and inspecting progress at every stage of the reconstruction process. On average each team will be responsible to look after 10-12 houses every day. Below mentioned is the tentative strength of each STA TEAMS: Engineer/ sub-engineer (1), Social Organizer (M/F) (1) and Govt. Representative 1.

1. INTRODUCTION

The provincial Government of Pakistan (GoP), through Ministry of Planning, Development and Special Initiatives (MoPDSI) at federal level and Planning and Development Department (P&DD), Government of Blochistan, at provincial level is planning to undertake **Integrated Flood Resilience and Adaptation Project (IFRAP)**⁷. The proposed Project is to be implemented in all calamity hit districts of Balochistan.

This Environmental and Social Management Framework (ESMF)⁸ is developed to support the environmental and social due diligence provisions for activities financed by the World Bank in the proposed project. This ESMF follows the World Bank Environmental and Social Framework (ESF) as well as prevailing legislation in the country (National/Provincial), in particular Blochistan Environmental Protection Act 2012. This ESMF will use as a guideline document to prepare site specific Environmental and Social (E&S) instruments during project implementation stage.

PROJECT BACKGROUND

Pakistan experienced heavy monsoon rains between June and September 2022, severely affecting millions of households, mainly in Sindh and Balochistan. Roughly 33 million people have been displaced, and more than 13,000 km of roads destroyed. The flooding has damaged 2.2 million houses, flooded around 9.4 million acres of crops, and killed an estimated 1.2 million livestock, adversely affecting rural livelihoods. The recently completed Post-Disaster Needs Assessment (PDNA) estimated that the need for rehabilitation and reconstruction is at US\$16.3 billion.⁹

Balochistan has been unduly affected by the 2022 floods. The province has received 5.1 times its 30-year average rainfall¹⁰. More than 190,000 housing units across the province were damaged, including nearly 69,000 units destroyed and more than 120,000 partially damaged. Infrastructure damage has caused the temporary isolation of most of Balochistan, with 2,222 km of roads and 43 bridges damaged, impeding people's ability to access healthcare, food markets, and other vital services and restricting the delivery of aid to those who need it. 456 flood protection/irrigation schemes were partially damaged or destroyed.¹¹ The floods have exacerbated socioeconomic challenges in the province, pushing the multidimensional poverty rate from 70.2 percent to 81.1 percent. Agriculture, which accounts for 52 percent of the provincial Gross Domestic Product (GDP) and 67 percent of the labor force, is the hardest-hit sector¹².

The floods caused over 500,000 livestock casualties which have negatively impacted livelihoods as 70 percent of households depend on livestock. In addition, the harvest failure due to the floods

⁷ Proposed Project

⁸ Since, the exact extent and precise location/footprints of individual interventions are yet to be decided, a framework approach has been adopted through this ESMF.

⁹ Government of Pakistan. 2022. Pakistan Floods 2022 Post-Disaster Needs Assessment. Ministry of Planning Development & Special Initiatives.

¹⁰ Rapid Needs Assessment Report - 2022 Monsoon Floods – PDMA-Balochistan, Pakistan (August 2022)

¹¹ Government of Pakistan. 2022. Pakistan Floods: Post-Disaster Needs Assessment. Ministry of Planning Development & Special Initiatives.

¹² Government of Pakistan. 2022. Pakistan Floods 2022: Post-Disaster Needs Assessment: Supplemental Report. Ministry of Planning Development & Special Initiatives.

during the Kharif season (April to September) resulted in production losses compromising livelihoods and food security. Since June 2022, pre-flood commodity prices have significantly increased, with Balochistan reporting the country's highest food insecurity at 23.4 percent. The damage to 587 primary health facilities in Balochistan (305 fully destroyed, 282 partially damaged) has further disrupted essential health services. As a result, the province currently has the highest proportion of people (59 percent) who lack access to health facilities. In addition, a multisectoral rapid needs assessment conducted in 515 villages across 10 districts of Balochistan found that approximately 2,000 classrooms have been damaged and destroyed¹³

PURPOSE OF THE ESMF

The objective of the ESMF is to assess and mitigate potential negative environmental and social risks and impacts of the Project consistent with the Environmental and Social Standards (ESSs) of the World Bank ESF and national requirements. More specifically, the ESMF aims to (a) assess the potential environmental and social risks and impacts of the proposed Project and propose mitigation measures; (b) establish procedures for the environmental and social screening, review, approval, and implementation of activities; (c) specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social issues related to the activities; (d) identify the staffing requirements, as well as the training and capacity building needed to successfully implement the provisions of the ESMF; (e) address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances; and (f) establish the budget requirements for implementation of the ESMF.

This ESMF should be read together with other plans prepared for the project, including the Stakeholder Engagement Plan (SEP), the Environmental and Social Commitment Plan (ESCP) and Labor Management Plan (LMP).

ESMF PREPARATION METHODOLOGY

- Review of project details and description to understand project activities likely to impact socio-economic environment.
- Review of relevant legislations, policies, standards and guidelines to determine the policy, legal and institutional environment for the Project based on World Bank ESF, national and provisional level.
- Review of secondary literature to understand project area, sample safeguards guard documents to guide this assessment; and different published development reports for taking stock of environmental and socioeconomic baseline conditions.
- Conducting consultation with project stakeholders.
- Scoping, screening and impact assessment while developing interaction between project activities and key environmental aspects to screen out the significance of adverse environmental, biological and social impact and proposing generic mitigation measures.

Procedures for environmental and social management, to manage and monitor the environmental and social aspects of the project.

¹³ United Nations Office for the Coordination of Humanitarian Affairs, PAKISTAN: 2022 Monsoon Floods Situation Report No. 13, 14, 15

2. PROJECT DESCRIPTION

This chapter describes the salient features of the Project including development objectives, components and implementation arrangement.

PROJECT DEVELOPMENT OBJECTIVE

The project development objective (PDO) is to improve livelihoods and essential services and enhance flood risk protection in selected communities affected by the 2022 floods.

PROJECT COMPONENTS

The project scope consists of six components, the brief description of each component is given below:

Component 1: Community Infrastructure Rehabilitation

This component aims to rehabilitate the priority community infrastructure damaged by floods, including irrigation and flood protection infrastructure, water supply, roads, bridges, and small community facilities located in calamity-declared districts of Balochistan. The guiding principle is to build back better with improved infrastructure based on climate risks, improved engineering design standards, and improved construction and maintenance to enhance resilience. The component will also include the technical assistance needed for the design and supervision of the works and for the development of operation and maintenance (O&M) of the infrastructure.

Sub-component 1.1: Rehabilitation of Irrigation and Flood Control Infrastructure

This sub-component will support the rehabilitation and reconstruction of priority irrigation, drainage, and flood protection infrastructure to restore agricultural production and protect the population and their assets against future floods. The rehabilitation will restore the damaged infrastructure with added climate resilience through improved engineering designs and the integration of nature-based solutions (such as wetland restoration and vegetative riverbank protection, which also help sequester carbon from the atmosphere, as well as other watershed protection measures) to reduce flood peaks and increase infiltration. This sub-component will only consider small dams and water retention infrastructure and no large dam¹⁴ will be included.

Sub-component 1.2: Restoration of Water Supply Schemes

This sub-component will support the rehabilitation of selected community-level water supply infrastructure affected by the floods, particularly in areas where flood protection infrastructure is rehabilitated. The climate adaptation capacity of households and resilience to flooding

¹⁴ Large dams are those with height of 15 m or greater from the lowest foundation to the crest or dams between 5 m and 15 m with impounding more than 3 million m³.

events will also be improved through these measures by: (i) ensuring that the rehabilitated water supply schemes follow the resilience practices; (ii) creating safe passage for rain and flood waters, accounting for higher precipitation levels in the future so that retention of water in human settlements is reduced; and (iii) mitigate against the mixing of fecal or solid waste with flood water so that water resources and public health are protected.

Sub-component 1.3: Reconstruction and Rehabilitation of Roads and Bridges

It will finance: (i) reconstruction and/or rehabilitation of damaged roads and bridges; (ii) provision of technical assistance to strengthen the capacity of the Communication and Works Department (CWD) of Balochistan; and (iii) carrying out of feasibility studies and technical design of roads and bridges.¹⁵ The selection of priority damaged roads will follow geospatial criteria considering the impact on the accessibility to schools, health facilities, markets, and connectivity within communities and major roads in the province in affected districts. The redesign of the damaged road infrastructure will consider investments that aim to deliver triple benefits: (i) reduce flood and other damages to roads; (ii) reduce land degradation; and (iii) improve the beneficial use of water to enhance community resilience.¹⁶

Improvement of road infrastructure would also include improvement of road safety, the geometry of roads and bridges, the raising of embankments, provision of adequate drainage systems, re-vegetation, enhanced slope protection, adoption of design enhanced standards for pavements adapted to the harsh climate of the province and reflecting a higher level of climate resilience. In addition, selected roads may include ducts for optic fiber.

This sub-component will also include increasing the capacity of the CWD to adopt a modern maintenance regime by establishing a Road Asset Management System and procurement of necessary road/pavement condition testing equipment, which will enable the CWD to prioritize investments for O&M. This sub-component will further assist the CWD in upgrading its design and implementation capacity, including adopting modern standards for building climate-resilient infrastructure.

Sub-component 1.4: Restoration of Small Community Facilities:

This sub-component will finance the restoration of small community facilities including food silos, health, education and community-water storage facilities will be rehabilitated and improved. The selection of facilities is demand-driven and result from consultation with the communities and consider potential low-carbon (e.g., employ renewable energy sources) and climate-resilient design features (e.g., adequate drainage or rain harvesting systems) as appropriate. The selection of facilities related to health and education is prioritized those for women and girls.

¹⁵ The indicative timeline for completing these studies is 18–24 months. These studies will support the preparation of SoP2.

¹⁶ van Steenberg, Frank, Fatima Arroyo-Arroyo, Kulwinder Rao, Taye Alemayehu Hulluka, Kifle Woldearegay, and Anastasia Deligianni. 2021. *Green Roads for Water: Guidelines for Road Infrastructure in Support of Water Management and Climate Resilience. International Development in Focus*. Washington, DC: World Bank.

Component 2: Strengthening Hydromet and Climate Services

This component will improve the capability of the PMD to generate and utilize hydromet information for decision-making. Currently, the PMD has minimal coverage for the western part of the country, which includes much of Balochistan. This component will thus benefit not only Balochistan but also all of Pakistan by improving climate and flood forecasting capabilities, including early warning systems to mitigate the impacts of climate hazards, by expanding networks throughout the country with updated technological interventions.

Sub-component 2.1: Modernization of the Observation Infrastructure, Data Management, and Forecasting Systems

Activities include: (i) technical modernization of the observation networks; (ii) modernization of PMD data management, communication and ICT systems; (iii) improvement of the weather forecasting process, including numerical weather prediction system; (iv) assessment and design of an optimum composite observation network and forecasting and service delivery processes (weather, climate, and hydrological); (v) enhancement of PMD climate services delivery and sustainability, and solarization of PMD facilities; and (vi) outreach and public education, awareness raising, and marketing.

Sub-component 2.2: Technical Assistance, Institutional Strengthening, and Capacity Building

This sub-component will support the PMD in five main areas to improve climate and flood forecasting capabilities, including: (i) provide technical assistance and capacity building and O&M of equipment; (ii) support enhancement of the PMD's various operational facilities, including upgrading the Institute of Meteorology and Geophysics and of the Meteorology Workshop in Karachi; (iii) provide technical assistance and operational costs for implementation including staffing, and M&E associated with the component; and (iv) support dialogue for the preparation of a national hydromet policy.

Component 3: Resilient Housing Reconstruction and Restoration

This component will finance: (i) resilient housing reconstruction grants will be given to the beneficiaries for the reconstruction of core housing units damaged by floods and (ii) institutional strengthening and technical assistance will be provided for the reconstruction. This component will be implemented through an area-based approach whereby the most affected districts will be selected for housing grants support in close coordination with other development partners. Considering the vulnerability of Balochistan to multiple types of disasters, including floods, droughts and earthquakes, the reconstruction and restoration will be multi-hazard resistant.

Sub-component 3.1: Beneficiary-driven Housing Reconstruction Grants

This sub-component will finance the provision of Housing Reconstruction Grants to homeowners for the reconstruction or restoration of damaged houses, including: (i) replacement of a destroyed house with new multi-hazard resilient core unit; and (ii) restoration and strengthening of a damaged house to an acceptable resilience standard, including a basic

rainwater harvesting system and twin pit latrine to improve water, sanitation and hygiene access. Two types of grants will be given (i) reconstruction grants for all houses with structural damage beyond economic repair; and (ii) rehabilitation and strengthening grants for all houses with repairable structural damage. Housing units with non-structural damage will not be eligible for any compensation.

Sub-component 3.2: Technical Assistance and Institutional Strengthening

This sub-component will finance detailed damage assessment and eligibility verification surveys as well as technical assistance for the formulation of strategies for resilient reconstruction of buildings: (i) categorize the level of damage to each housing unit; (ii) establish the status of land ownership; (iii) establish lists of eligible beneficiaries and vulnerable individuals/households that are unable to prove their identity/property ownership; (iv) develop a geographic information system (GIS) enabled Management Information System (MIS) to facilitate the transparent implementation of the housing reconstruction and employ flood hazard mapping/spatial planning and analysis for reconstruction purposes; (v) community mobilization to collectively vulnerable people in rebuilding their houses; (vi) training and capacity building for multi-hazard resilient construction and retrofitting; (vii) promote use of local material; and (viii) develop housing reconstruction standards and train reconstruction artisans.

Component 4: Livelihood Support and Watershed Management

This component will finance the provision of livelihood grants to small-holder farmers and agribusinesses for enhancing agricultural and livestock-based livelihoods and to communities for watershed restoration. These grants will help restore and enhance productive, inclusive, and resilient natural resource-based livelihoods while restoring degraded watersheds for flood resilience. The component aims to promote climate-smart agriculture, support value chain development, and promote livelihoods. This component will support two complementary grant schemes: (i) matching grants for enhancing agriculture and livestock-based livelihoods; and (ii) community grants for watershed restoration.

Matching Grants for Enhancing Agricultural and Livestock-based Livelihoods. These grants will enable cash-constrained farming communities to restore and diversify agriculture and livestock production, add value, and enhance market access. Support will be provided to demand-driven activities identified through community consultation that seek to promote climate-smart agriculture practices. Agricultural activities to be supported will include support for efficient water use. Eligibility criteria will be developed to prioritize the inclusion of female-headed households and women in households with high dependency ratios, women informal workers, especially home-based workers. Beneficiaries will include small-holder farmers and agribusinesses, selected using National Socio-Economic Registry (NSER) data. Details of the grant mechanism will be provided in the Project Implementation Manual (PIM).

Community Grants for Watershed Restoration. These grants will enable the restoration of degraded watersheds. Specific interventions will include soil and water conservation, vegetative stream and riverbank protection, agro-forestry and reforestation, farmer-managed natural regeneration, and rehabilitation of degraded rangelands. Details of the grant scheme will be provided in the PIM.

Component 5: Project Management, Technical Assistance, and Institutional Strengthening

This component will finance provision of support for: (a) Project management for the Federal Project Management Unit (FPMU) and the Provincial Implementing Units (PIUs), provision of a pool of technical experts to support implementing agencies; (b) technical assistance for monitoring and evaluation, Project supervisory and implementation assistance, preparation of the second phase of the project, including river basin planning studies, basin-level flood modeling and resilient infrastructure planning and design, dam safety studies and preparation of community flood resilience plans; (c) institutional strengthening, including an internship program, capacity building and the preparation of draft water act.

Component 6: Contingent Emergency Response

This component has provision of immediate response to an Eligible Crisis or Emergency, as needed. Following an adverse natural event that causes a major disaster or emergency, the government may request the Bank to re-allocate project funds to support response and reconstruction. Resources will be allocated to this component as needed during implementation. A CERC Operations Manual will be prepared by the government and will provide detailed guidelines and instructions on how to trigger the CERC and use funds (including activation criteria, eligible expenditures, and specific implementation arrangements).

PROJECT BENEFICIARIES

The project will benefit approximately 2.7 million people in selected communities affected by the 2022 floods in calamity declared districts across Balochistan province. Direct beneficiaries include communities in the most affected districts that will benefit from the restoration and resilient reconstruction of critical infrastructure under Component 1 (flood protection, irrigation, water supply, roads, and other community facilities)—estimated at 1.8 million inhabitants, of whom approximately 50 percent are women. Component 2 will benefit at least 80,000 households, representing about 640,000 people. Component 3 will benefit at least 35,100 flood-affected households, amounting to 280,000 people (many of whom are among the poorest), through the provision of grants. Around 190,000 households will benefit from the technical assistance under this component, representing approximately 1.5 million people. Component 4 will benefit about 80,000 households, representing approximately 640,000 people.

a) Beneficiary Selection under the Housing Component (Component 3)

- The grants will be geographically targeted to selected tehsils in the most affected districts. The selection, to be undertaken in consultation with the GoB and GoP, will be based on tehsils that contain relatively poorer segments of the population and have high flood impacts. To avoid social tensions arising due to selectivity, efforts will be made to provide universal coverage for all eligible housing units in a selected district, including provision of community support to vulnerable households that lag behind in reconstructing their units.
- The housing grant for reconstruction of completely destroyed homes will be disbursed in successive tranches following on-site inspection and validation at key construction

milestones (plinth level, lintel level, roof level, etc.) by implementation partners. Households will be able to utilize their own labor, hire trained craftsmen, and receive technical assistance from implementation partners to reconstruct or restore their houses.

- The selection of partially damaged houses eligible for restoration grants will focus on transparency and minimal human discretion by using robust engineering principles and documentation. Partially damaged houses will be identified during damage assessment and re-verification survey based on specified engineering parameters. For these selected partially damaged houses located outside of high-risk zones and fulfilling prescribed engineering criteria for resilient restoration, a one-time restoration grant will be provided. Partially damaged homes located in high-risk zones will not be eligible for grants, while those not fulfilling engineering criteria for resilient restoration will be eligible for a reconstruction grant.

b) Beneficiary Selection under the Livelihood and Watershed Component (Component 4)

- Severely impacted districts, talukas, and union councils: Based on the GoB damage assessment, a list of districts (including at the tehsils and union council level) will be prioritized to receive livelihood restoration assistance in the first phase (six months). Once these areas have been served completely, the project will move into the remaining areas of Balochistan.
- NSER Database for identification of poorest/vulnerable beneficiaries: Within the prioritized areas, NSER data will be used to identify the poorest beneficiaries at the village/neighborhood level. Where required, eligibility will be cross referenced to the existing village/neighborhood level registry (prepared by the GoB). Data privacy policies, which have been customized for Pakistan, will be further tailored for this project.
- Village-level household registries to confirm the identification of the poorest beneficiaries: Based on approach already applied under BLEP, the Project will seek communities' feedback to identify and confirm the most deserving households (confirming the NSER and the wealth and well-being rankings) at the village/neighborhood levels. Where such information is not available, BLEP will generate the ranking in collaboration with the communities and maintain a separate registry.

PROJECT IMPLEMENTATION ARRANGEMENT

A Project Steering Committee (PSC), co-chaired by the Federal Minister MoPD&SI and Chief Minister GoB, has been established to provide overall project oversight. The Project will be implemented at two levels: (i) at the federal level, the MoPD&SI will be the lead agency responsible for overall project coordination and M&E; and (ii) at the provincial level. **The MoPD&SI will be responsible for overall project coordination and M&E through the FPMU.** The Balochistan P&DD will be responsible for project coordination through the Provincial Coordination Unit (PCU) for provincially implemented components.

BIWRMDP PIU and BLEP PIU will implement Components 1 and 4, respectively. These PIUs will be progressively strengthened through the use of technical assistance services. Following the closing of the BIWRMDP and BLEP, the PIUs will become regular PIUs of IFRAP. **PMD will implement Component 2.** A separate PIU will be established at the PMD to manage this component at the federal level. The PMD PIU will report directly to the FPMU. **FMPU will implement Component 3.** It will be responsible for the planning, implementation, and monitoring of this project and provide technical assistance for the post-flood housing reconstruction program of the province. In addition, the FPMU will engage competent partner organizations with a strong track record in housing reconstruction using eligibility criteria cleared by the Bank. **MoPD&SI (through the FPMU) will be responsible for implementing Component 5** and will ensure overall project management, coordination, and third-party verification; the carrying out of strategic studies crucial for resilience; and the preparation of SoP2. In addition, FMPU will use a PSIA consultant and a pool of experts in different fields to support project management.

3. ENVIRONMENTAL AND SOCIAL POLICIES, REGULATIONS AND LAWS

This section deals with the current legal and administrative framework required to prepare the ESMF of the proposed Project. Applicable WB Environmental and Social Standards (ESSs) and guidelines and Environmental and Social (E&S) Policies, laws, regulations laid out by the GoP, GoB have been duly discussed and the Project proponent will be required to adhere to these regulations throughout the course of the proposed Project.

RELEVANT NATIONAL POLICIES AND REGULATIONS

This section briefly describes the national and provincial laws and policies, relevant to the project and stipulates the various requirements that have been or will be complied with during the planning and implementation stages of the project. The summary of major relevant policies, acts and legislation are briefly described in Table 3.1.

Table 3-1: National and Provincial Policies Legal Framework and Laws

National & Provincial Policies, Rules and Regulation	Project Relevance
Pakistan Climate Change Act 2017	This Act is relevant. The Project activities will involve a wide range of civil works from medium to relatively large scale, which would contribute to the significant use of natural resources, and generation of waste. The proposed project will ensure efficient use of resources through implementation of measures provided in this ESMF.
National Disaster Management Act, 2010	This Act is relevant. The project as it involves re-construction of infrastructure, affected in Blochistan by the 2022 floods. The aim of the project is to build back better with improved infrastructure based on climate risks, improved engineering design standards, and improved construction and maintenance to enhance resilience.
National Conservation Strategy, 1992	The NCS has 68 specific programs in 14 core areas in which policy intervention is considered crucial for the preservation of natural and physical environment. The core areas that are relevant in the context of the proposed project are pollution prevention and abatement, restoration of rangelands, conserving biodiversity, supporting plantations, and the preservation of cultural heritage.
National Environmental Policy, 2005	The NEP identifies a set of sectoral and cross-sectoral guidelines to achieve its goal of sustainable development. Section 5 of the policy commits for integration of environment into development planning as instrument for achieving the objectives of National Environmental Policy. Management of proposed project will ensure that the project will not add to the aggravation of the environmental issues identified in NEP and mitigation measures would be adopted to minimize or avoid any contribution of the project in these areas.
Balochistan Environmental Protection Act (2012)	The Project activities will involve a wide range of civil works from medium to relatively large scale which could have potential environmental and social risks. The proposed project will respect the provision of this act and prepare the EIA/IEE study, where required, as per Balochistan Environmental Protection Agency (Review of IEE and EIA) Regulations, 2020)) to obtain the No Objection Certificate (NOC)/ Environmental Approval.
Land Acquisition Act, 1894 and later amendments	Land acquisition and resettlement is not anticipated, However, Resettlement Policy Framework (RPF) will be developed prior to commencement of civil works or

National & Provincial Policies, Rules and Regulation	Project Relevance
	infrastructure activities to respond to risks and impacts related to land acquisition and resettlement (if any), land-use, temporary economic and/or physical displacement, Anti Encroachment Drives/forced evictions along with relevant management and mitigation measures. ESMF and RPF will provide criteria to exclude any land that has been subjected to Anti Encroachment Drive (AED).
Balochistan Occupational Safety and Health Act, 2022	The project may create some labor related risks and impacts, which may include lack of skills and compliance with relevant laws and regulations, unsafe and unhealthy working conditions, and GBV/SEA/SH risks. Therefore, this law is applicable and the project will ensure the compliance with the relevant sections during the implementation. Necessary mitigation measures have been provided in this ESMF to manage these risks. Moreover, a separate LMP has been prepared as a part of this Project.
Balochistan Wildlife preservation protection conservation and management Act 2014 (BWPPCMA)	Direct impacts on the biodiversity and natural resources is not anticipated as most of the infrastructure investments are rehabilitation works and anticipated to exist within the existing built environment. Physical investments that could have significant adverse impacts to natural and critical habitats will be excluded from the project.
Balochistan Forest Act 2022	It is assumed that some forests and protected areas have been damaged by floods. The activities proposed under component-4 are proposed to support watershed management and restore damaged rangelands which is expected to overall benefit the biodiversity of the area. Physical investments that could have significant adverse impacts to natural and critical habitats will be excluded from the project.
Balochistan Antiquity Act, 2014	This Act will be applicable, as the project investments include significant amount of civil works which includes excavation, ESMF will include chance find procedures and screening checklist which will guide the handling of cultural heritage discovered during commencement of Project activities. In addition, in case there are impacts recorded on a notified cultural heritage within the project implementation, a Cultural Heritage Management Plan (CHMP) will be prepared accordingly.
Balochistan Factories Act, 2021	This project shall involve in multi-dimensional works and the workers (direct workers, contracted workers, primary supply workers and community workers) which may involve in occupational and health related risks, therefore this act shall be applicable to the proposed project to cover and protect their rights.
Balochistan Payment of Wages Act, 2021	Applicable as different types of workers (direct workers, contracted workers, primary supply workers and community workers) would be involved in this project. The project will respect the provision of relevant sections of this act.
Balochistan Employment of Children (Prohibition & Regulation) Act, 2021	Project interventions would involve different Contractors and sub-contractors for the execution of the project; however, children may involve in direct or indirect employment with the contractors, therefore this act is applicable in the proposed project to cover such type of issues.
The Protection against Harassment of Women at the Workplace Act, 2010	This Act will be applicable to the project if women are employed for the proposed project. The project shall respect the relevant requirements of this act.

WORLD BANK STANDARDS AND KEY GAPS WITH NATIONAL/PROVINCIAL FRAMEWORK

The project will follow the World Bank Environmental and Social Standards (ESSs), as well as the World Bank Group Environmental, Health and Safety Guidelines. Overall environmental and social risk classification of the project is assessed to be Substantial. The identified gaps between ESSs and national and provincial laws for E&S management and how these gaps are addressed in the ESMF are provided in Table 3.2 Where gaps exist between national laws vis-a-vis ESF, the most stringent requirements will prevail and will be followed during the implementation of proposed project.

Table 3-2: Relevant World Bank ESS and Key Gaps with the National Framework

Environmental and Social Standards (ESS)	Project Relevance	Relevant National Provincial Regulations and Laws	Gaps Identified in the Context of Local Laws	Gaps Addressed in ESMF
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant: The Project activities will involve a wide range of civil works from medium to relatively large scale which could have potential environmental and social risks ¹⁷ . The ESMF and the related site-specific E&S instruments will be implemented throughout the project to comply with ESS1.	<ul style="list-style-type: none"> Balochistan Environmental Protection Act, 2012 Guidelines for Environmental Assessment, Pakistan EPA Review of IEE and EIA Regulations, 2020 	<p>The criteria mentioned in the Act for classifying environmental and social impact/risk is different than in the ESF. The categorizes the risk level of a project indirectly – mostly by project type and size. Furthermore, it does require commitment from the proponents for E&S measures implementation but not in the form of a separate environmental and social commitment plan.</p> <p>The different methods and tools (ESIA, environmental and social audit, cumulative impact assessment, ESMP, ESMF, regional and sectoral ESIA, SESA etc.) for environmental and social impact assessments, referenced in the ESF, are not part of the National and Provincial legislation. The ESF highlight to consider the environmental and social risks and impacts associated with primary suppliers and disadvantaged or vulnerable groups while the local relevant laws do not.</p> <p>ESS-1 specifically mentions disadvantaged or vulnerable groups, the Act does not touch upon this theme directly.</p>	E&S risk categorization of the Augmentation Works has been done on the basis of ESS-1 guidelines but also aligned with the BEPA requirements. The environmental and social assessment will be/is carried out as per ESS-1 for the proposed Project. In addition, Resettlement Policy Framework (RPF), Labor Management Procedures (LMP) and Stakeholder Engagement Plan (SEP) have been prepared as part of this Project. Mitigations proposed in this ESMF and the other E&S tools (e.g. RPF, LMP and SEP) have taken into consideration the marginalized and vulnerable groups.
ESS2 – Labor and Working Conditions	Relevant: The Project will involve direct workers, contracted workers, primary supply workers and community workers. Locally hired labor will be preferred where possible, except for skilled workers who may not be available in project locations. The project may create some labor related risks and impacts, which may include lack of skills and compliance with relevant laws and regulations, unsafe and unhealthy working conditions, and GBV/SEA/SH. To comply with the ESS-2, a Labor Management Procedure (LMP) and SEA/SH Action Plan will be developed as a part of the project.	<ul style="list-style-type: none"> Balochistan Occupational Safety and Health Act, 2022 Employment of Child Act 1991 Balochistan Employment of Children (Prohibition & Regulation) Act, 2021 The Balochistan Bonded Labour System (Abolition) Act, 2021 Factories Act 1934 Balochistan Factories Act, 2021 Workmen Compensation Act 1923 and Rules 1961. Balochistan Payment of Wages Act, 2021 The Balochistan Minimum Wages Act, 2021 The Balochistan Shops and Establishment (Amendment) Act, 2022 The Balochistan Industrial and Commercial Employment (Standing Orders) Act, 2021 The Balochistan Employees' Social Security Act, 2022 The Balochistan Maternity Benefits Act, 2022 Road Transport Workers Ordinance, 1961 The Balochistan Industrial Relations Act, 2022 	<p>National and Provincial laws regarding labour rights address most of the requirements of the ESS2.</p> <p>However, the implementation of these laws and the management of certain issues addressed under ESS-2, such as OHS, GBV/SEA and Violence Against Children (VAC), prohibition of children in hazardous work and child labor in general and protection against discrimination of religious minorities (many formal sector workers belong to religious minority groups) are not done effectively as detailed coverage of certain requirements is partial.</p> <p>There is no specific requirement for employers to establish a workers' grievance mechanism except grievance redress mechanisms are available within relevant government departments for citizens to lodge complaints i.e., chief minister complaint cell and citizen portal.</p>	<p>All the relevant risks and measures have been considered in this ESMF. Labor Management Procedures (LMP) have been developed for the proposed Project to mitigate the risks related to OHS issues. The LMP will be noted in the legal agreement and in the Environmental and Social Commitment Plan (ESCP).</p> <p>All of this has been done in accordance with the provincial and national laws and ESS-2 requirements.</p>

¹⁷ Including air and noise pollution, over-extraction of construction and building materials (e.g. sand, gravel, etc), waste water runoff into water streams, disposal of rubble, debris and potentially hazardous waste, surface and ground water contamination, siltation and soil erosion and road safety risks particularly in rehabilitation and reconstruction of roads, occupational and community health and safety risks during construction, dam safety risks in case of small dams, GBV/SEA/SH risks, elite capture in targeting and selection of beneficiaries, unintentionally skewing the labor and livelihood markets, and exclusion of the vulnerable community groups (women, minorities, elderly, disabled, etc.) from receiving benefits, issues with anticipated labor influx, economic and/or physical displacement that can impact livelihoods etc.

Environmental and Social Standards (ESS)	Project Relevance	Relevant National Provincial Regulations and Laws	Gaps Identified in the Context of Local Laws	Gaps Addressed in ESMF
ESS3 – Resource Efficiency and Pollution Prevention and Management	Relevant: The project is planned to have significant investment in re-construction of infrastructure which may cause generation of generate solid waste, dust issues, soil erosion, water pollution and include use of construction materials (like asphalt, sand, cement, gravel stone etc.). However, the project is adopting a ‘building back better’ approach with plans to include nature based solutions (such as wetland restoration, vegetative riverbank protection, and other watershed protection measures), green techniques and includes activities for restoration and sustainable use of natural resources. Resource efficiency and pollution prevention measures have been included in the ESMF to comply with requirements of ESS3.	<ul style="list-style-type: none"> • National Energy Efficiency and Conservation Act, 2015 • Balochistan Environmental Protection Act, 2012 • Pakistan Climate Change Act, 2017 • National Environmental Policy, 2005 	National and provincial laws address most of the requirements of ESS3, particularly on pollution prevention	The project is planned to have significant investment in re-construction of infrastructure which may cause generation of generate solid waste, dust issues, soil erosion, water pollution and include use of construction materials. Resource efficiency and pollution prevention measures have been included in the ESMF to comply with requirements of ESS3.
ESS4 – Community Health and Safety	Relevant: The project may cause community health and safety risks during civil works which include exposure to physical hazards, the traffic and road safety hazards, potential of GBV/SEA/SH risks from presence of project workers, spread of different transmittable communicable diseases, exploitation of economically disadvantaged or otherwise vulnerable individuals by project staff involved in the implementation of the programs, or by other project beneficiaries etc. Relevant measures have been included in the ESMF to ensure the compliance with ESS4 that community health and safety is adequately protected.	<ul style="list-style-type: none"> • Balochistan Occupational Safety and Health Act, 2022 • Pakistan Penal Code, 1860 • National Disaster Management Act, 2010 • Balochistan Environmental Protection Act, 2012 	Local laws address most of the requirements of the ESS-4. However, detailed coverage has not been provided in the local laws (national and provincial) in comparison to ESS-4.	Relevant measures have been included in the ESMF to ensure the compliance with ESS4 that community health and safety is adequately protected.
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant: Land acquisition and resettlement is not anticipated, However, Resettlement Policy Framework (RPF) will be developed prior to commencement of civil works or infrastructure activities to respond to risks and impacts related to land acquisition and resettlement (if any), land-use, temporary economic and/or physical displacement, Anti Encroachment Drives/forced evictions along with relevant management and mitigation measures.	<ul style="list-style-type: none"> • Land Acquisition Act 1894 <p>The Land Acquisition (Amendment) Act, 2009</p>	Screening is limited to physical survey of land, there is no consideration of social risks in the LAA No formal stakeholder consultations required by the LAA, or in host communities in case of resettlement No provisions are made for vulnerable groups in the LAA No provisions for livelihood restoration and improvement, and no additional assistance beyond compensation for land acquired and loss of livelihood in the LAA Land assets and structures are valued at market value in the LAA, instead of replacement cost in the ESS No compensation for non-titleholders in the LAA, while ESS5 requires all parties affected by land acquisition to be compensated.	RPF has been prepared as a part of this project, to address issues related to land acquisition, voluntary land donation, restrictions on land use and involuntary resettlement (if any) ESS5. Moreover, a GRM has been established.
ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant: Most of the infrastructure investments are rehabilitation works and anticipated to exist within the existing built environment. However, it is assumed that some forests and protected areas have been damaged by floods. The activities proposed under component-4 are proposed to support watershed management and restore damaged rangelands which is expected to overall benefit the biodiversity of the area. Physical investments that could have significant adverse impacts to natural and critical habitats will be excluded from the project.	<ul style="list-style-type: none"> • National Forest Policy, 2015 • The Forest Act, 1927 • Balochistan Wildlife preservation protection conservation and management Act 2014 (BWPPCMA) • The Balochistan Forest Act 2022 	Local laws address most of the requirements of the ESS-6 except the categorization of habitats (natural, critical and modified).	Most of the infrastructure investments are rehabilitation works and anticipated to exist within the existing built environment. The activities proposed under component-4 are proposed to support watershed management and restore damaged rangelands which is expected to overall benefit the biodiversity of the area. Physical investments that could have significant adverse impacts to natural and critical habitats will be excluded from the project.
ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not-relevant: Pakistan’s only recognized Indigenous Peoples, the Kalash, live in three valleys in the Chitral district of Khyber Pakhtunkhwa, which is not included in the Project Area.	NA	There is no law, national or provincial, dealing with the rights and protection of Indigenous Peoples	This ESS is not relevant as no indigenous people are found in the Project Area. Pakistan’s only recognized Indigenous Peoples, the Kalash, live in 3 valleys in Chitral district of KP province, and Chitral is not included in the Project districts.

Environmental and Social Standards (ESS)	Project Relevance	Relevant National Provincial Regulations and Laws	Gaps Identified in the Context of Local Laws	Gaps Addressed in ESMF
ESS8 – Cultural Heritage	Relevant: Since project investments include significant amount of civil works which includes excavation, ESMF will include chance find procedures and screening checklist which will guide the handling of cultural heritage discovered during commencement of Project activities. In addition, in case there are impacts recorded on a notified cultural heritage within the project implementation, a Cultural Heritage Management Plan (CHMP) will be prepared accordingly.	<ul style="list-style-type: none"> • Antiquities Act, 1975 • The Antiquities Act, 1975 (amended in 1990) • Balochistan Antiquity Act, 2014 	<p>The provincial legislation is silent regarding the Development of Physical Cultural Resource Management Plan.</p> <p>There is no provision related to tangible and intangible cultural properties.</p> <p>The provincial legislation is silent about the disclosure of information regarding cultural heritage due to the safety or integrity of the cultural heritage or would endanger sources of sensitive information from public disclosure.</p>	This ESMF however, has developed “Chance Find Procedure” to be followed during project implementation in case of any chance find physical culture resource.
ESS 9- Financial Intermediaries	Not relevant: This standard is not relevant, as Financial Intermediaries will not be used.	NA	NA	NA
ESS10 – Stakeholder Engagement and Disclosure	Relevant: Effective stakeholder engagement and information disclosure will be crucial to the project. This ESMF follows a structured approach to stakeholder engagement and public outreach that is based upon meaningful consultation and disclosure of appropriate information. A standalone SEP has been prepared, which will be periodically updated through the Project life.	<ul style="list-style-type: none"> • Review of IEE and EIA Regulations, 2000 • Balochistan Environmental Protection Act, 2012 • Guideline for Public Consultation, 1997 	Stakeholder engagement in public sector development projects is not done effectively. The regulations do not demand continued stakeholder engagement after the NOC has been granted, leading to a potential disconnect between the project and the affected people during construction and operations phases. Also, there is no proper mechanism to record the grievances.	The SEP and GRM have been developed as a part of this ESMF as per ESS10. The SEP outlines the process and frequency of stakeholder engagement at all project stages, and also establishes the contours of an effective GRM

The relevant policies to project other than ESSs are described in **Table 3.3**.

Table 0-3: Applicability of World Bank Policies

Sr. No.	WB Safeguard Policies Triggered by the Subproject	Triggered		Explanation
		Yes	No	
1.	The World Bank OP 7.50 Projects on International Waterways	[√]	[]	This policy is triggered since will rely on water from the Indus River, the Dasht River, Helmand River and the Rakshan/Hamun-i-Mashkel system, which are considered an international waterway as defined in paragraph 1 of the Policy. Project activities will finance water resources surveys and feasibility studies, and infrastructure rehabilitation or reconstruction to improve the functioning of existing flood control and irrigation schemes in areas prone to flash flooding. These structures will reduce runoff, increase recharge, and mitigate the impact of flashfloods and improve livelihoods. The activities are not expected to increase water abstraction or pollute water of the international waterways mentioned. As works are limited to rehabilitation and do not cause appreciable harm and that the terms of reference for any relevant studies will include an assessment of riparian issues, the exception to the notification requirement under paragraphs 7 (a) and (b) applies. The exception to the notification requirement was approved by the South Asia Regional Vice President on March 08, 2023.
2.	The World Bank OP 7.60 Projects in Disputed Areas	[]	[√]	NA

OBLIGATIONS UNDER INTERNATIONAL TREATIES

Pakistan is signatory to several multilateral environmental and social agreements. The proposed Project is obliged to respect the applicable agreements, which are provided in the following sections.

Environmental Obligations

- Paris Agreement, 2015.
- Stockholm Convention on Persistent Organic Pollutants, 2004.
- Vienna Convention, 1985.
- Convention on Conservation of Migratory Species of Wild Animals, 1979.
- UNESCO Convention on the Protection of the World's Cultural and Natural Heritage, 1972.
- Convention on Biological Diversity (CBD), 1994.
- United Nations Framework Convention on Climate Change (UNFCCC), 1992.
- Kyoto Protocol, 1992.
- The Rio Declaration, 1992.
- Montreal Protocol 1987.
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1975.

SOCIAL OBLIGATIONS

-
- Convention for Safeguarding the Intangible Cultural Heritage, 2003.
- Convention on the Rights of the Child, 1989.
- Convention on the Elimination of all Forms of Discrimination against Women, 1979.
- International Covenant on Civil and Political Rights, 1966.
- International Covenant on Economic, Social and Cultural Rights, 1956.
- International Labor Organization (ILO) Conventions – Ratified by Pakistan¹⁸
- C138 - Minimum Age Convention, 1973 (No. 138).
- C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111).
- C107 - Indigenous and Tribal Populations Convention, 1957 (No. 107).
- C029 - Forced Labor Convention, 1930 (No. 29).
- C001 – Hours of Work (Industry) Convention, 1919 (No. 1)

¹⁸ The Pakistan has ratified 36 ILO's conventions (At present, 31 are enforced) including its eight Core Conventions covering four areas, namely; child labor, forced labor, discrimination, right of freedom of association and to bargain collectively - (All ILO Conventions are available at ILO's website at <https://www.ilo.org/global/lang-en/index.htm>)

4. ENVIRONMENTAL AND SOCIAL BASELINE

This chapter provides an overview of the baseline environmental and socioeconomic conditions the project areas. This baseline has been prepared based upon the secondary literature resources.

4.1 PHYSICAL ENVIRONMENT

7.2.1 Geography

Balochistan province is the largest in size and the smallest in population with about 12.344 million people. The province covers 44%¹⁹ of the country's land mass. The province is located in south-western side of Pakistan bordering by Iran to the west, Afghanistan to the north-west, Khyber Pakhtunkhwa and FATA to the north and Punjab to the northeast and Sindh to the southeast of the province.

Topography

About 80 percent of the area of the province is inter-mountainous. The remaining 20 percent consists of flood plains and coastal plains. Due to dominated mountainous terrain, only 15 percent of the landscape is available for landforms on which most human settlements, farms, and roads are developed. The important mountains ranges are Suleiman Range, Kirthar Range, Central Brahui Range, Toba-Kakar, Kakar-Khorasan Range, Marri-Bugti Hills, Chagai Hills, Ras Koh Range and Makran Coastal Range.

Geology

Geologically, the province is divided into four main geological regions, Central Mountains Range, Chagai Hills and Ras Koh Range, Makran Mountains Range and Chagai – Kharan Basin. The hills and mountains ranges consist predominantly of folded and faulted Mesozoic to middle Tertiary limestone. Mesozoic and tertiary sedimentary rocks, mostly inter bedded limestone, sandstone, shale and marls make up the bulk of the Central Mountains Range. Similar sedimentary rocks in addition to the Calcalkaline and ultramafic intrusions are found together with young quaternary volcanic rocks in the Ras Koh Range²⁰. This range is favorable for copper, iron and Sulfur deposits (Saindak). The Makran Mountains Range includes central and coastal ranges and is mainly made up of uniform sequence of tertiary and quaternary sedimentary rocks. The Chagai-Kharan Basin is mostly desert basin partly filled with younger sedimentary rocks derived from surrounding mountains ranges.

¹⁹World Bank. 2007. *Balochistan Province, Pakistan: Procurement Systems Performance Assessment*. © Washington, DC.

²⁰ESIA Study, BGEB Project, August 2012.

Land Use and Soil Erosion

The principal land uses in the province are agriculture which is about 2.5 million hectare (7.2 percent), forests about 1.71 million hectare (4.94 percent), rangelands about 15.4 million hectares (44.45 percent) and area not available for cultivation is about 9.83 million hectares (28.3 percent). Out of the total cultivated area, 43.54 percent is irrigated land while 56.45 percent is rain-fed area or flood irrigated area.

Salinity and soil erosion are the major environmental issues. About three quarter of the piedmont basin soils is naturally saline. Man-made salinity occurs on the piedmont plain in the command area of Kirthar Canal which is caused due to unsustainable design of irrigation practices, lack of proper drainage structures leading to water logging and salt accumulation. About 30 to 40 percent of Kirthar Canal command area is affected by man-made salinization. Rangeland degradation is another issue usually associated with grazing. However, a major factor causing range degradation in Balochistan is the cutting and uprooting of native trees and shrubs by peoples for fuel wood. Cutting of trees and shrubs is more severe in about 5 km radius of villages and towns, particularly refugee's camps in Balochistan. This has also contributed toward desertification and degradation of environment²¹.

Seismology

According to the seismic zoning map of Pakistan proposed by the Building Code of Pakistan (BCP; 2007), Pakistan is divided into five seismic zones (Zones 1, 2A, 2B, 3, and 4) considering the severity of seismic hazard; zone 1 is the lowest, and zone 4 is the highest seismic zone. Southern Balochistan lies in Zone-4.

Water Resources

Balochistan is water scarce and land rich area of Pakistan. Surface water mainly comes from precipitation in the form of surface runoff and its share of water from the Indus River. Surface water resources are very limited in most parts of Balochistan except Naseerabad and Jaffarabad and Sohbatpur, which are fed by the pat Feeder, the Desert and Kirthar Canals emanating from Guddu and Sukkur Barrages on the Indus River. Remaining part of the province depends on rainfalls, tube-wells, Karez, flows, flood flows, hill torrent and diversions from non-perennials streams, which bring substantial runoff during the rainy seasons²².

Ground water resources are divided into three hydrological regions; the Indus Basin, the Kharan closed Basin and the Makran Coastal basin, which constitute approximately 73 small or large rivers and streams. According to an estimate the total water potential of the province are 22.116²³ million acre feet. Water, in most of the area is found biological contaminated. Turbidity is also a common factor in most of the areas. The excessive quantity of TDS is found in few districts.

²¹ *Arid steppes of Balochistan (Pakistan)*, Scientific article published in *Secheresse* (2006), 17(1-2)203-9

²² *Water Resources Management Research Issues in the Highlands of Balochistan*, Report No. R92, Pakistan National Program, IWMI (July 1999)

²³ <http://siteresources.worldbank.org/PAKISTANEXTN/Resources/293051-1114424648263/Session-VII-Nadir.pdf>

Climate

Balochistan is generally an arid region with scanty rainfall varying 2 to 20 inches (50 to 500 mm). Maximum precipitation falls in the northeastern areas with annual average rain fall ranging from 8 to 20 inches (200 to 500 mm). It decreases in the south and the eastern parts and is minimum in Naukundi. Kharan and Dalbandin area, where rainfall ranges between 1 to 2 inches (25 to 50mm). Evaporation rates are higher than the precipitation and generally vary from 72 to 76 inches (1830 to 1930 mm) per annum.

The climate of the upper highlands is characterized by very cold winters and warm summers. Winters of the lower highlands vary from extremely cold in the northern districts to mild conditions closer to the Mekran coast. Summers are hot and dry. The arid zones of Chaghi and Kharan districts are extremely hot in summer. The plain areas are also very hot in summer with temperatures rising as high as 120 degrees F (50 degrees C). Winters are mild on the plains with the temperature, never falling below the freezing point. The desert climate is characterized by hot and very arid conditions. Occasionally strong windstorms make these areas very inhospitable.

4.2 BIOLOGICAL ENVIRONMENT

Balochistan province has the potential of wildernesses for a diverse flora and fauna. The diverse climatic zones have contributed to a set of ecological zones resulting in unique faunal and floral biodiversity. The number of well-known plant species in Balochistan is at least 1,750 and the documented status of animal species richness in Balochistan includes: 71 Mammals 71, 356 Birds, 94 reptiles, 08 amphibians and 61 freshwater fish²⁴.

Migratory Birds, Mammals and Reptiles

Several species migrate to province, including grey herons, mallards, houbara bustard, falcons and Siberian cranes. Migratory birds arrive in the areas of Quetta, Kharan, Zhob, Nuskhi, Chagai, Lasbela, Loralai and Hab district. However, now these regions are experiencing decline in the number of migratory birds due to the excessive hunting pressure and climatic changes. In the province, several species of mammals are present in a wide range. Amongst migratory birds the Hobart Bustard, Cranes and falcons have suffered to great extent. Some of the animals found in Balochistan such as Leopard, Asiatic Cheetah, Wolf, Balochistan Black Bear, Chiltan Markhor and Straight Horned Markhor are listed in the International Red Data Book of IUCN.

According to IUCN red list of threatened animals, in Balochistan four species of mammals are at a great risk, among which two are critically endangered mammal including chiltan wild goat and Balochistan black bear and the two are endangered mammal including afghan urial and straight horned markhor. In recent decades two species of mammal have become extinct from Balochistan, including Indian wild ass and the Asiatic cheetah Government of Balochistan and IUCN Pakistan. In Balochistan, Chagai desert is dominated by a variety of reptiles including

²⁴ <https://forestrypedia.com/wildlife-resources-in-balochistan>

Lumsdeni gecko, short-toed sand swimmer, mountain dwarf gecko, Caspian desert lacerta, dark headed gamma snake, spiny tailed lizard, sharp tailed spider gecko and many others²⁵.

Game animals in the province have been on decline because of unsustainable hunting, food and furs. Universal netting and capitulating of birds has led to sharp decline of some species or even some of these became extinct. Habitat destruction due to land use changes is another cause of decline in wildlife.

Forests

Balochistan has one of the largest areas of juniper forests in the world. They cover approximately 141,000 hectares. The most extensive (86,000 hectares) and best-known examples are Ziarat and Zarghoon hills. Scrub forests are found at elevations of 500–1,500 meters in the province including the following three categories:

- Dry Temperate Scrub - Quetta, Mastung, Kalat, Killa Abdullah, Pishin, Killa Saifullah;
- Dry Sub-tropical broad-leaved Forests – Suleiman Mountains; and
- Tropical Thorn Forests – Sibi Plains and Nok-Kundi.

Cultivated forests by Forest and Wildlife Department of Balochistan on road and canal side plantations in Naseerabad, Jaffer Abad, Sibi, Quetta, Bolan, Kalat, Khuzdar, Zhob and Pishin districts cover a length of 700 average kilometer. Sand dunes in Mastung, Musakhel, Pasni, Gwadar, Pishukan and Nushki areas have been planted. Cultivated plantation spread over an area of 5000 acres, and are well protected. Plantation is also raised by community in irrigated plantations and on farm- land. Irrigated plantations are limited to about 298 hectares in Lasbela, Sibi, Zhob, Pishin and Quetta districts. In Naseerabad and Sibi districts, plantations are irrigated with water from the Pat Feeder and Kirthar canals and from Nari River. In other areas, they depend on water from tube-wells²⁶.

Deforestation

About three percent of Balochistan has been gazette state forests. Major parts (70-80 percent) of the state forests are grass and shrubs. The remaining state forests are sparse to open coniferous wood, riverine forests in the Sibi – Kachhi Plain and widely scattered shrubs. In state forests, green trees and wildlife are protected under the forests and wildlife regulations²⁷.

Exploitation rights (fuel-wood, grazing, fruit collection) are specifically included in the notification of each state forest area. Several state forests have been destroyed due to settlement of Afghan Refugees, e.g. Popalzai Jungle. In Kalat district partly juniper, partly Pistachio and Olive wood forests are under degradation. Juniper forests in Ziarat are in very poor conditions. Many trees show signs of lopping for fodder and debarking for roofing. The juniper woods are often the only source of fuel-wood in the cold winter and timber supply for house construction over vast areas

²⁵ Biodiversity and its Conservation in Balochistan, J. of Life Sci ISSN 2415-623X (Print) IJSSN 2415-6221 (Online) Scholars Middle East Publishers, Dubai, United Arab Emirates Journal.

²⁶ Balochistan Conservation Strategy (May 19,2000)

²⁷ Balochistan Forest Regulation (Amendment) Act, 1974 and Balochistan Wildlife Protection (Amendment) Act, 1980 and 2014

in the province with poor and rapidly growing population. Mangroves in the coastal area are exploited for fuel wood and forage due to scarcity of other trees in coastal belt²⁸.

Notified Protected Areas and Management

The Balochistan Forests and Wildlife Department, at present, is managing following notified Protected Areas: One (01) Biosphere Reserves, Three (03) National Parks Fourteen (14) Wildlife Sanctuaries, Eight (08) Game Reserves, Five (05) RAMSAR sites, Four (04) Community Game Reserves, One (01) Co-management Area (Takatu State Forest & Zavar Kan Game Reserve) and One (01) Marine Protected Area (Astola MPA). These are covering a total area of about 2.192 million hectares. This represents about 6.320% of the total land area of the province and is legally covered by the Balochistan Wildlife (Protection, Preservation, Conservation and Management) Act, 2014 and Protection Rules made there under.

SOCIO-ECONOMIC CONDITIONS

Balochistan has clustered population and is smallest in proportion as compared to that of other provinces. Its estimated current population recorded in 2017 was 12.344 million, having a density of 23.8 persons per square kilometer (based on 1998 census) with an average growth rate of 2.47 percent per annum²⁹. The fertility rate is approximately 4.08 percent. With the existing growth rate, the population is expected to double in 30 years.³⁰ The average household size in Balochistan province was 6.9 in 2017 as compared to 6.7 in 1998 recording an increase of 3%. The household size for rural and urban areas was 6.8 and 7.2 in 2017, whereas in 1998 it was 6.4 and 8.0 respectively.

Balochistan is relatively scarce in its endowments of human capital, agricultural growth and industrial investment comparing with rest of the provinces. For the last fifteen years, the overall share of Balochistan in the national GDP has remained constant at 4 percent. In the service sectors, Balochistan's growth potential appears to be closely connected to its integration with the national economy and other regional economies³¹.

Agriculture, both crops and livestock, is the main income generator as well as employment sector in Balochistan. Agriculture accounts for about 65 percent of GDP and employ about 65 percent of the workforce full or part time. Agriculture continues a source of growth, its relative potential in Balochistan is circumscribed by the chronic scarcity of water over much of the province. The irrigated Kachhi plains account for a high proportion of all crop production. Livestock and horticulture dominate the agricultural sector in the rest of the province. Persistent droughts and chronic water scarcity has meant the loss of grazing land, and hence reduction in livestock's sector. Only one third of the total land of the province can be deemed reasonably productive grazing land³².

²⁸ *Environmental Profile Balochistan, LARUS-IT, Enschede: Netherland, 1992*

²⁹ *Pakistan Bureau of Statistic: Provisional Results of Census 2017.*

³⁰ http://en.wikipedia.org/wiki/Balochistan,_Pakistan#Demographics

³¹ <http://www.researchcollective.org/documents/balochistan-economic-report.pdf>

³² *Environmental Profile Balochistan, LARUS-IT, Enschede: Netherland, 1992*

Fisheries are significant in the economy of the small coastal towns, but not so far the GDP. Fisheries sector contributed to 9 percent of the national fisheries sector in 2004-2005. The catch is supplied to domestic and international markets through Karachi and Kech. The fisheries sector is also a source of employment for many in the coastal areas. Nearly 70 percent of the total employed persons in the coastal districts are associated with the fisheries sector³³.

Balochistan has a very rich cultural heritage of ancient times reflected through specimens of art and craft, literature, and architect. There are total 389 officially notified sites of cultural and archaeological importance in Pakistan protected under the Federal Antiquities Act, 1975 and UNESCO. Out of these 389 sites, 27 sites are located in Balochistan province.

The population is predominantly of Muslims but minorities populations of Hindu's, Sikh and Christian lives in urban and rural areas. Pashto, Balochi and Brahui are the native languages spoken widely, particularly in rural areas. A strong tribal system exists with number of tribes constitute to make people of Balochistan. Three major tribes are Baloch, Pashtoon and Brahvi. Most of the tribes are bi-lingual and are quite fluent both in the Balochi and Brahvi languages. The religious and social festivals are celebrated by the people of Balochistan. Besides, major religious festivals, colorful social festivals are also source of jubilation. Sibi festival that traces its roots to Mehargar, an archeological site of ancient human civilization, attracts people from across the country.

The security situation of Balochistan Province has deteriorated and different incidents have caused loss of human lives and infrastructure particularly in the remote regions. Acts of vandalism, intimidation, violence, and landmine blast are potential risks which may effect project staff involved in the implementation of subproject activities. Existing social conflicts may also be exacerbated by the project (e.g. due to grievances or perceived inequity in project benefits) which may put project staff at risk. Keeping in view these incidents, security measures for the IFRAP teams and at all working sites will be considered. The IFRAP stretches across a vast area, therefore, there may be security threats to the contractor and project staff.

Women in Balochistan are marginalized and deprived of their basic right and opportunities. Though, they have the potential to participate in every sphere of life but constraints to domestic chores rather than to serve the society beyond the boundaries of home with respect and dignity. This disempowerment is due to socio-cultural restrictions, which causes financial and economic difficulty for women in the province. Lack of self-confidence, conservative family background, and lack of support from the government are the few factors which cause disempowerment of women. Women are supposed to be remained within the boundaries of house³⁴. Tribal conventions in some ethnic groups do not allow property ownership on the part of women. Entitlements to common property resources in these ethnic groups are also regulated and measured with reference to male family members.

³³ *Environmental Profile Balochistan, LARUS-IT, Enschede: Netherland, 1992*

³⁴ *Women disempowerment in Baloch and Pashtoon culture of Baluchistan; causes and constraints TAKATOO Issue, 19 Volume 1047, Jan-June 2018.*

POST FLOOD SITUATION

The devastating floods of 2022, Balochistan experienced widespread damage to critical infrastructure, especially housing³⁵, transport, and communications; WASH, community-level facilities and livestock³⁶. The damage to health facilities resulted, highest proportion of people (59 percent) who lack access to health facilities. Infrastructure damage has caused the temporary isolation of most of Balochistan. The limited preparedness of the provincial disaster management system and the inability of national weather forecasting agencies to correctly predict the scale of the rains resulted in significant loss of lives and damage to livelihoods and properties, which the province could have partially avoided.

Women and girls in Balochistan lag in key socioeconomic outcomes, and these gaps are expected to widen in the wake of the 2022 floods. About 98 percent of women do not own land or a house, and the few that own assets lack possession of property and identification documents. This renders women ineligible for post-disaster relief and reconstruction assistance. Only 26 percent of women in Balochistan aged 15 or above are literate, compared to 46 percent across Pakistan; and at around 12 percent, female labor force participation in the province is the lowest in the country. These disparities are expected to widen in the context of the 2022 floods as households engage in harmful coping mechanisms, such as rationing food for female family members, selling personal belongings (such as gold or jewelry), marrying off adolescent daughters, or pulling girls out of school to improve household economic security and offset the increased burden of domestic and caregiving work. The floods have also disproportionately impacted female informal home-based workers, those working in the livestock sub-sector, and those in on-farm and off-farm employment.

³⁵ Specifically, the floods have caused damage to more than 190,000 housing units across the province, including nearly 69,000 units destroyed and more than 120,000 partially damaged

³⁶ The floods caused over 500,000 livestock casualties (63 percent of the national total), amounting to production losses of PKR 79,619 million.

5. STAKEHOLDER ENGAGEMENT, DISCLOSURE AND CONSULTATIONS

The project has prepared a separate Stakeholder Engagement Plan (SEP) to describe objectives, process and outcome of the stakeholder engagement carried out during the project preparation and to be carried out during the project implementation the mode of consultations, frequency and responsibilities – in accordance with the World Bank ESS 10 (Stakeholder Engagement and Information Disclosure). The SEP, being a live document is to be updated throughout the life of the project to ensure effective, robust and transparent stakeholder engagement.

Through the ESS 10, the ESF requires the timely, relevant, understandable, and accessible disclosure of project information in a way that is free of manipulation, interference, coercion, discrimination and intimidation.

SUMMARY OF STAKEHOLDER CONSULTATIONS CONDUCTED

Stakeholder consultations for the proposed Project was organized by the Balochistan Irrigation Department on 20th January 2023 to discuss how to support and promote resilience and adaptation in the aftermath of the 2022 floods. The consultation was divided into two sessions: Resilient Infrastructure and Disaster Risk Management, and Sustainable and Resilient Livelihoods. Participants ranged from relevant government departments, NGOs and experts in the relevant fields. Vulnerable and marginalized groups were represented by Balochistan Rural Support Program (BRSP) who have a province wide network focusing on improving living conditions of the rural poor, disadvantaged and marginalized people. Key findings of the sessions are provided in Table 5.1 and made a part of this report.:

Table 5-1: Stakeholders’ Concerns/ Feedback and Response

Sr. No.	Build back better	
a.	Lessons from past flood response	<ul style="list-style-type: none"> ➤ Need to enhance govt capacity ➤ Better infrastructure design (green infrastructure) using new tech, methods and results-based research as well as a robust policy framework promoting climate resilience ➤ Improved early warning systems and community engagement
b.	Recommendations for ensuring climate resilience of infrastructure investments	<ul style="list-style-type: none"> ➤ Hydrological modeling to provide improved data on frequency of floods, information on flood routes and flood forecasts ➤ Development of floods early warning system ➤ Investment in watersheds/natural mechanisms for mitigating damage done by floods ➤ Adopting a climate adaptation approach to mitigate effects of climate change
c.	Recommendations for ensuring sustainability of infrastructure investments	<ul style="list-style-type: none"> ➤ Improve capacity of local communities regarding disaster risk management ➤ Improved operations and maintenance practices using a participatory approach ensuring long term infrastructure investments ➤ Improved infrastructure planning mechanisms ensuring disaster mitigation

Prioritization		
a.	Given the level of damages, how should the investments be identified and prioritized?	<ul style="list-style-type: none"> ➤ Adopting a participatory approach with relevant line departments, NGOs and local experts, identify and prioritize investments based on needs ➤ Restoration of infrastructure (roads, bridges etc.) ➤ Providing housing/shelters to affectees ➤ Establish Basic Health Units and Rural Health Centers
b.	List three most significant gaps in planning and implementing rehabilitation	<ul style="list-style-type: none"> ➤ Lack of coordination between stakeholders ➤ Delays in assessment of flood damage ➤ Limited capacity of stakeholders on climate change issues ➤ Lack of community participation in rebuilding efforts
c.	Recommendations on prioritization of infrastructure to be rehabilitated	<ul style="list-style-type: none"> ➤ Building adequate housing/shelter, improved water, drainage and sewage systems ➤ Improved infrastructure i.e., resilient road networks, dams, bridges etc. ➤ Improved canals/water networks for local communities and farmers
Governance, Capacity and reach		
a.	What is the government's capacity to rehabilitate priority infrastructure? Rate as Low, Medium High.	<ul style="list-style-type: none"> ➤ Rated as low by stakeholders
b.	List capacity needs for the government in order to successfully rehabilitate infrastructure:	<ul style="list-style-type: none"> ➤ Need to improve planning through availability of data and improving capacity of relevant departments ➤ Management improvements through have more transparent mechanisms and improved risk preparedness ➤ Improved coordination and monitoring mechanisms for better oversight ➤ Increased provincial autonomy and involvement of NGOs, local communities for improved geographical reach
Sustainable and Resilient Livelihoods		
a.	Identify most vulnerable groups which require urgent assistance	<ul style="list-style-type: none"> ➤ Farmers and landowners ➤ Shepherds/livestock owners ➤ Labor (daily wages, small business owners) ➤ Women, children, persons with disabilities and elderly persons
b.	Identify challenges leading to exclusion of these groups	<ul style="list-style-type: none"> ➤ Lack of CNIC ➤ Lack of relevant documentation with respect to land/housing ownership ➤ Tribal differences ➤ Ethnic differences ➤ Gender disparity
c.	Considering the urgency of needs and inclusion of different groups, please rate the following livelihood delivery mechanisms in terms of their effectiveness? (Low, Medium, High) <ul style="list-style-type: none"> • Cash for Works • Asset transfers for agriculture and livestock • Cash transfers • Matching Grants 	<ul style="list-style-type: none"> ➤ Cash for Works (low to high) ➤ Asset transfers for agriculture and livestock (medium to high) ➤ Cash transfers (low) ➤ Matching Grants (medium to high)
d.	Given the priority groups, list in terms of suitability the following livelihood assistance mechanisms.	<ul style="list-style-type: none"> ➤ Old age, Women, Children, disable (Cash Transfers) ➤ Villagers, Shopkeepers, Small Business Entrepreneurs, etc. (Matching Grants)

		<ul style="list-style-type: none"> ➤ Farm Labor, share cropper (Cash for Work/ Asset Transfer). ➤ Small Farmers (Asset Transfer) ➤ Livestock owners (Asset Transfer)
	sectors which can ensure livelihood resilience	<ul style="list-style-type: none"> ➤ Agriculture ➤ Livestock ➤ Handicraft (small industry) ➤ Microenterprises ➤ Fisheries
Governance, Capacity and Reach		
a.	Based on your experience, what is the government's capacity to provide livelihood assistance? Rate as Low, Medium High:	Low to medium
b.	Based on the above rating and the identified sectors, delivery mechanisms etc. list the capacity needs for the government in order to successfully provide livelihood assistance: <ul style="list-style-type: none"> ➤ Planning ➤ Management ➤ Oversight ➤ Geographical reach 	<ul style="list-style-type: none"> ➤ Planning <ul style="list-style-type: none"> ○ Adopting a bottom to top approach ○ Mechanisms to conduct needs assessments ➤ Management <ul style="list-style-type: none"> ○ Having a needs-based approach ○ Empowerment of relevant line departments ➤ Oversight <ul style="list-style-type: none"> ○ Third party monitoring mechanisms ○ Community sensitization/empowerment/ownership ➤ Geographical Reach <ul style="list-style-type: none"> ○ Having an established database ○ Networking systems between all stakeholders
c.	List successful livelihood assistance programs implemented by Government of Balochistan	<ul style="list-style-type: none"> ➤ Ehsaas Programme ➤ Benazir Income Support Programme ➤ Various Endowment Funds ➤ Area Development Programme ➤ Minor Irrigation Programme ➤ Awaran Rehabilitation Programme
Grievance Redress Mechanism		
a.	What is needed to make GRM appropriate and accessible for livelihood assistance program?	<ul style="list-style-type: none"> ➤ Empowered Ombudspersons ➤ Establishment for alternate dispute resolution mechanisms ➤ Involvement and strengthening of NGOs

6. GRIEVANCE REDRESSAL MECHANISM (GRM)

The project will prepare a Grievance Redress Mechanism (GRM) through which, the project affected persons as well interested persons, local communities and the public are able to raise issues on the project. The GRM will guarantee privacy and confidentiality on the part of the aggrieved party.

The main objective of a Grievance Redress Mechanism (GRM) is to assist resolve complaints in a timely, effective and efficient manner. Project-level GRMs can provide the most effective way for people to raise issues and concerns about project activities that affect them. The project-level GRM will be culturally appropriate, effective, accessible and should be known to the affected population. The PIUs will conduct awareness raising for the affected communities about the presence of the GRM and inform their right to file any concerns, complaints and issues they have related to the project.

The GRM provides a transparent and credible process for fair, effective and lasting outcome. It also builds trust and cooperation as an integral component of broader community consultation that facilitates corrective actions. Specifically, the GRM:

- Provides affected people with avenues for making a complaint or resolving any dispute that may arise during the project implementation;
- Ensures that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants; and
- Avoids the need to resort to judicial proceedings.

Complaints received through the GRM will be consolidated daily into a central project grievance database. Each database entry will correspond to a single complain, and will include all pertinent details such as the complainants name and contact information, nature of the complaint, location, time of receipt, steps taken to address, resolution status, etc.

Consolidated grievances will be screened and classified into three categories on the basis of priority. Criteria will be developed to determine the classification of grievances. Grievances will then be investigated and resolved within a timeframe specified to the complainant at the time of receiving the grievance—this timeframe shall not be longer than 10 days from receipt of the grievance. In the event that resolution demands a longer timeframe, the complainant will be notified. Upon resolution of a grievance, the complainant will be contacted within two days of resolution to ensure that they are satisfied with the outcome.

The GRM will also include a system for appeals. If a complainant is unsatisfied with the resolution of the grievance, they will be able to lodge an appeal, which can be escalated to the Project Director.

To address any complaints related to GBV/SEA/SH, the project will ensure mechanisms to refer GBV and SEA/SH specific grievances directly to the GBV service provider who will follow a survivor centered referral approach. Dedicated trained female staff will be appointed to receive GBV related complaints. Special considerations will be taken to ensure that the complainant's identity is treated as privileged information, and the option to lodge the complaint anonymously

will also be provided. Additionally, all GRM response teams as well as PIU staff will be trained on GBV, SEA, and SH. Further details on the handling of GBV and SEA/SH related complaints and an Accountability and Response Framework will be provided in the GBV Action Plan, to be prepared within 60 days of project effectiveness.

APPROACH TO GRM ESTABLISHMENT

At this stage, following structure for the Project GRM is proposed, which will be revisited and finalized once the project gets effective. In the meanwhile, existing GRMs of WB financed projects, Balochistan Integrated Water Resources Management and Development Project (BIWRMDP) and Balochistan Livelihoods and Entrepreneurship Project (BLEP), will be made accessible to the complainants, if any. A summary of each is provided in the next section.

Grievance redress committees will be established at the Federal and provincial levels to ensure accessibility and transparency of the GRM. The GRM will serve as a location for addressing grievances related to the project with provision of appropriate training for the committee members regarding the requirement in the project.

Grievances relating to the project will be handled at the Federal level by the FPMU housed in the MoPDSI. A Grievance Redress Committee (GRC) will be constituted at the MoPDSI managed by the Social Specialist. The GRC will (tentatively) comprise of the following members:

Designation	Department
Head of the GRC	MoPDSI
Social Specialist/Secretary to GRC	FPMU
Environmental Specialist	FPMU
Gender Specialist	FPMU
Member from BIWRMDP	PIU
Member from BLEP	PIU

For activities and implementation of component 1 and component 4 grievances shall be handled at the provincial level by the PIUs. These will build upon and use the existing GRM systems developed for the ongoing World Bank projects. They will ensure the GRM guidelines detail the procedure, timing, indicative committee members, etc. as defined in the ESCP. Resources will be allocated for the GRM. The complaints recorded, resolved and referred will be reported quarterly and annually together with the environmental and social implementation performance report.

GRM SYSTEM

As a first step, an online complaint registration system will be set up for the project at the Federal Level, which will also link with the existing system of the PIUs under BIWRMDP and BLEP. Thus, it will pick up relevant complaints from the website and social media, as well as complaints registered on it directly. Complaint registration will be structured such that complaints can be entered directly on the project website (in English or Urdu or any other local language); can be posted to a designated address as letters or written messages; or can be narrated to operators

on a helpline. All complaints, however made, will be consolidated into a database on a daily basis, and separated by location as well as nature of grievance.

As a second step, grievances/complaints will be screened and classified into categories by order of project activities, with those identifying grave malpractices being classified as high priority. All registered grievances/complaints will be acknowledged through a text message or phone call. If no telephone number is supplied by the complainant, he or she will be responded through a letter about the status of his/her complaint. This acknowledgement will be issued within one day of receipt of the grievance/complaint. Each complainant will be given an estimated timeframe for resolution of the grievance/complaint.

Grievances will be investigated and resolved in no longer than 20 days. Grievances which require cooperation of a number of departments, or which are otherwise complicated, will be referred to the GRC who will specify how resolution is to take place.

Records of all grievances/complaints will be maintained in a database, including details of actions taken to resolve the issue, and dates on which resolution was achieved. At the conclusion of action to resolve grievances, the complainants will be informed of the outcome. The system will include a process for appeal. If a complainant remains unsatisfied, he/she will be able to lodge an appeal, which will be escalated to the Project Steering Committee.

EXISTING MECHANISMS

While IFRAP gets effective, all complaints pertaining to the project can be filed using the existing GRMs of WB financed projects in Balochistan, which will also serve as the Provincial PIUs for the project. A summary of these is provided below.

BIWRMDP: The BIWRMDP has a well-established and a functional GRM comprising of four different levels. It provides a mechanism for grievance redressal through online form as well as form for written filing of grievance, in accordance with the procedures and guidelines by the World Bank. The receipt of complaints is key and hence a simple and understandable procedure is adopted for receiving grievances, suggestions and comments relating to the project. The complainant may submit, containing his/her personal information, suggestions and/or comments on the prescribed form or simple paper, to the Focal Persons of Grievance Redress Committee. In case the concerned Focal Person is not available in the office the Aggrieved Person/Complainant can drop his/her written complaint, suggestion/comments in a Box placed at a visible location for the purpose. Alternatively, grievances may be submitted by (i) filing an application on the Project web site (www.biwrmdp.org.pk), (ii) sending an SMS or WhatsApp message on a prescribed number, or (iii) use of the postal mail service. Once received and acknowledged, the grievance shall be redressed within 20 working days. The complaint is handled by the GRC constituted at PMU level and chaired by the Project Director with the Project Steering Committee dealing with appeals.

BLEP: BLEP also has a functional GRM comprising of 2 levels. It provides a comprehensive mechanism for grievance redressal through online form as well as form for written filing of grievance, in accordance with the procedures and guidelines by the World Bank. Similar to the BIWRMDP, the complaint is submitted online, or in person, on a prescribed form or simple paper.

Once received and acknowledged, the grievance shall be redressed within 20 working days. The complaint is handled by the GRC constituted at PMU level and chaired by the Project Director with the Project Steering Committee dealing with appeals.

7. ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

This chapter identifies the potential environmental and social risks and impacts envisaged due to the implementation of proposed Project. The appropriate mitigation and remedial measures of each environmental and social impact are proposed in this chapter keeping in view the mitigation hierarchy, which will guide the preparation of E&S instruments of the proposed project interventions.

7.1 SUMMARY OF ENVIRONMENTAL & SOCIAL POSITIVE IMPACTS

- The rehabilitation of irrigation and flood control infrastructure, restoration and upgradation of roads network, and restoration of water supply and sanitation schemes will restore social and economic activities. The project interventions are expected to enhance disaster resilience;
- The Project will improve the capability of the PMD to generate and utilize hydromet information for better decision-making. The improved capability will result in more accurate flood forecasting, data management, and ICT systems;
- The Project will provide multi-hazard resilient housing to a significant proportion of affected population (35,100 housing units are to be reconstructed or rehabilitated, of which a significant proportion will be female-headed households);
- The Project aims to provide matching grants for enhancing agriculture and livestock-based livelihoods and community grants for watershed restoration;
- Watershed restoration has the potential to double the amount of carbon stored in the soil, estimated at net emissions of -57,145 tons of carbon dioxide equivalent (tCO₂-eq) per year and a cumulative -1,142,908 tCO₂-eq across the Project's economic lifetime under Component 4. This project aims to benefit 20,000 ha of land through watershed management;
- The Project aims at institutional strengthening and financing project management;
- Saving of human lives and housing assets in future disasters;
- Positive effect on local economies and will support the livelihoods of a significant number of people;
- Awareness related to the banking procedures and financial inclusions; and
- Awareness related to GBV for the locals.

The Project activities will involve a wide range of civil works from medium to relatively large scale which could have potential environmental and social risks, assessed as substantial³⁷. Since the project footprints are not finalized at this stage fore, it is anticipated that following are the components/subcomponents which may have adverse E&S impacts:

- Component 1: Community Infrastructure Rehabilitation (Sub-component 1.1: Rehabilitation of Irrigation and Flood Control Infrastructure, Sub-component 1.2: Restoration of Water Supply Schemes, Sub-component 1.3: Reconstruction and Rehabilitation of Roads and Bridges and Sub-component 1.4: Restoration of Small Community Facilities.);

³⁷ PAD, 2023.

- Component 2: Strengthening Hydromet and Climate Services (Sub-component 2.1: Modernization of the Observation Infrastructure, Data Management, and Forecasting Systems and Sub-component 2.2: Provision of Technical Assistance, Institutional Strengthening, and Capacity Building);
- Component 3: Resilient Housing Reconstruction and Restoration (sub component 3.1: Beneficiary-driven Housing Reconstruction Grants and Sub component 3.2: Technical Assistance and Institutional Strengthening; and
- Component 4: Livelihood Support and Watershed Management.

The ESMF has accordingly assessed the potential impacts for these types of subprojects and suggests the generic mitigation measures in line with the relevant local legislation and WB ESSs. Houses to be supported under the project will be owner-built, constructed in-situ and/or at alternative nearby locations owned by the beneficiary. The civil works are of small scale, site-specific, and take place at different locations over a large geographical area. Therefore, significant environmental and social impacts are not anticipated.

Most of the potential impacts are temporary, localized in nature with low to moderate severity and are reversible. Further, with the help of appropriate mitigation and control measures, these potential impacts will either be avoided altogether, or their likelihood of occurrence and severity will be reduced, thus making these schemes environmentally responsible and socially acceptable. Potential adverse impacts envisaged from the implementation of the proposed Project along with their proposed remedial or mitigation measures are detailed in the following sections.

7.2 POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Natural Hazards

Balochistan is prone to natural disasters, primarily earthquakes³⁸ and flash floods. These disasters tend to compound the problems faced by the province's vulnerable communities, who are already contending with poverty, food insecurity, and limited supply of health, education, and other essential services. The effects of climate change and environmental degradation (such as deforestation) also increase the risk of severe adverse impacts due to natural hazards. The provincial capacity to respond to natural disasters is also limited, particularly in the more remote regions. The infrastructure under the subprojects and project workers could potentially be impacted by natural disasters during the course of the project. The impact is high to medium adverse.

Mitigation Measures

- The structures (where applicable) under the proposed subprojects shall be designed and constructed to withstand earthquake hazards considering the peak ground acceleration of the area;
- Only shortlisted/pre-qualified Contractors shall be hired for the reconstruction, rehabilitation works and supply of construction materials; and

³⁸ The proposed Project area is located in four seismic zones Seismic Zone: 2A, 2B,3 and 4 considering the severity of seismic hazard representing peak horizontal ground acceleration from 0.8 to 0.16 g, 0.16 to 0.24 g, 0.24 to 0.32 g and respectively.

- Project activities design will take disaster risk reduction into consideration and will employ approaches to improve disaster resilience where possible.
- Considering the above mitigation measures, the significance of impact will be medium to low adverse.

7.2.1 Soil Erosion and Contamination

The construction and rehabilitation activities under components/subcomponents (1.1 to 1.4, 2.1,2.2,3.1 and 4) will potentially involve excavation, quarrying/creation of borrow areas, land clearing, and land leveling. These activities may disturb the surrounding soil, making it more susceptible to erosion due to wind or rain and degrading its quality. Whereas contamination of soil may be caused by solid and liquid waste (also from the construction camps, if established) generated at sites and by accidental leakage of fuel/lubricant. These impacts are expected to be limited to the immediate vicinities of subproject areas. This impact is medium to low adverse in nature.

Mitigation Measures

- Embankments and excavated slopes will not be left untreated/unattended for long durations. Appropriate slope stabilization measures will be taken as per the design. The excavation for the foundation will be carried out only in specified area, as per the approved engineering design and the excavated material will be used for filling and compaction to the maximum extent possible;
- Avoid or minimize vegetation removal/clearing which would accelerate erosion;
- Sites disturbed by construction activities will be restored to their original conditions upon completion of construction work and photographic record will be maintained to ensure pre-post project conditions intact;
- If any contaminated soils are found, it shall be removed and disposed appropriately at designated sites (as per advice of Environmental Specialist). All the waste generated at sites shall be properly disposed at designated sites;
- Vehicles must be properly maintained and regularly checked for possible leak of fuel. Waste oils will be collected in drums and sold to the recycling contractors;
- The Contractor will not leave the borrow pits in such a condition that they are unusable and could be filled with rainwater and cause the problems for the community;
- The inert recyclable waste from the site (such as card board, drums, broken/used parts, etc.) will be sold to recycling contractors. The hazardous waste will be kept separate and handled according to the nature of the waste; and
- Ensure the training of beneficiary (particularly for component 3.1) and workforce in the storage, handling of materials and waste management. Material Safety Data Sheets (MSDS) will be strictly followed.

The significance of impact is expected to be low after taking the above-mentioned mitigations.

7.2.2 Wastes Generation

Wastes including discarded construction material, asphalt, steel, oil, fuel, empty containers and bags, excavated material and municipal waste (particularly from the construction camps, if established) will likely be generated during the civil work construction and rehabilitation activities. If waste is not well managed or properly dumped, it may negatively impact on the surrounding area including causing blockages in water channels and soil contamination. Discarded materials and equipment may also pose safety risks for the workers and pedestrians if left on the routes/unattended. The impact is moderate adverse in nature.

Mitigation Measures

- Construction waste will be routinely collected and safely disposed of in clearly demarcated waste disposal sites located near each proposed project intervention. Waste disposal will ensure that there are no negative impacts on, water bodies, existing waste management systems, transport routes, and the aesthetic value of the area;
- Left over construction and demolition waste materials will be reused at other proposed project intervention sites, as far as possible in an effective way to save money while protecting natural resources.
- Site-specific Solid Waste Management Plans (SWMPs) will be developed and implemented by the contractors and workforce will be trained in the handling, storage, and disposal of construction waste. Construction materials and stockpiles of soils will be covered to reduce material loss;
- Stockpiles, lubricants, fuels, and other materials will be located away from steep slopes and water bodies and kept in adequately protected areas; and
- Burning of waste material will not be allowed.

The impact significance will likely to be low after taking the above-mentioned mitigations.

7.2.3 Ambient Air Quality

A decline in the ambient air quality within the vicinity of works is expected during the construction and rehabilitation activities due to the movement of construction machinery (operation of concrete batching and concrete mixer, diesel generator,) and activities (excavation, site clearance and leveling, filling of earth material, demolition, loading/unloading of material etc.). The overall impact on air quality is assessed to be temporary and moderate and is unlikely to have lasting impacts after the construction and rehabilitation work is complete. The impact is low to moderate adverse in nature.

Mitigation Measure

-
- Vehicles and other equipment (such as generator) used during construction and rehabilitation activities shall be kept in good working condition and be properly tuned and maintained with designated fuel in order to minimize the exhaust emissions and to ensure fuel efficiency;
- All dust raising locations shall be kept wet with water sprinkling. Fugitive dust emissions will be minimized by appropriate methods such as spraying water on material where required and appropriate. It will be ensured that the construction debris is removed on regular basis;

- Construction material such as cement, loose material, sand, or aggregates and spoil materials will be transported in a covered truck. Impose speed limits on all vehicle movement at the worksite to reduce dust emission;
- Road damage caused by project activities will be promptly attended with proper road repair and maintenance work;
- Proper Personal Protective Equipment (PPE) shall be provided to the site workers and staff and make sure the workers wear the PPE properly during working on site;
- Ensure compliance with the BEQS and IFC/WHO guidelines whichever is stringent (as per advice of Environment Specialist).

The impact will likely to be low after taking the above-mentioned mitigations.

7.2.4 Noise Pollution

Since the proposed project involve medium to large scale civil works, therefore an increase in ambient noise and the vibration is predictable due to the operation of construction machinery (such as bulldozers, excavators, pneumatic machinery, etc), generators, offloading of materials, and construction activities. Noise pollution generated by the construction activities may likely to have impacts on the nearby sensitive receptors (if any), workers, nearby communities and local wildlife. However, the impacts are likely be short-term in nature and are unlikely to have any lasting effects once the construction work is completed. The impacts are medium adverse in nature.

Mitigation Measures

- Vehicular traffic through the communities shall be avoided as far as possible. Project routes shall be authorized by the Contractor. The main roads will be used by the construction traffic to the maximum extent possible;
- Construction vehicles and machinery shall be kept in good working condition and be properly tuned and maintained throughout construction work to minimize excessive noise/vibration;
- Noisy construction work shall be limited to normal working hours to minimize disturbance to nearby communities, avoid excessive use of horns and vehicle speeds will be kept low;
- PPEs shall be provided and worn by the personnel involved in construction and rehabilitation activities and training them in their use;
- Noisy construction activities will be displaced from the construction sites to a fair distance from the nearest sensitive receptors (if any). Construction schedules shall be disclosed to the nearby communities, where required/as per advice of Environmental Specialist; and
- Ensure the compliance with BEQS and IFC/WHO guidelines whichever is stringent (as advice of Environment Specialist). Ensure the effective implementation of GRM.

The impact will significance will likely to be low after taking the above-mentioned mitigations

7.2.6 Water Contamination

The project may operate in areas containing local water resources (surface and ground) which may be at risk of contamination from construction site runoff³⁹ and wastes from the worker camps (if established) is not managed properly. Contamination of surface water resources may have adverse impacts on aquatic life (if available) and also pose health and livelihood risks to communities that depend on them for household and agricultural use. The impact is medium adverse in nature.

Mitigation Measures

- Construction camp will not be located within 500m of any water body. The contractor will develop camp layout and waste disposal system, and obtain approval from Supervisory Consultant (as per advice of Environmental Specialist);
- The construction wastewater from the work site will be disposed through a settling tank of appropriate capacity, which will be levelled back after completion of construction work;
- It will be ensured that the wastes are not released into any water bodies, cultivation fields, or critical habitat;
- Ensure the compliance with BEQS and IFC/WHO guidelines whichever is stringent (as advice of Environment Specialist);
- Construction machinery will be kept in good working condition and be properly tuned and maintained throughout construction to avoid spills and leaks; and
- Fuels and chemicals will be stored on concrete-floored, bounded, covered to provide shade and prevent the ingress of rain and should be located away from the open water sources.

The significance of impact is expected to be low after taking the above-mentioned mitigations.

7.2.6 Solarization of PMD Facilities

Incompatible layout plan and design may have potential impact of visual effects. The solar panels and their support structure may be damaged by the windstorm. Installation of solar systems may also generate small amount of waste, may cause damages to plumbing and electric wiring, and roof leakage. Solar panels may add weight and increase wear and tear on the roof, potentially reducing its lifespan, especially if the roof is already weakened or damaged. This impact is low adverse in nature.

Mitigation Measures

- Only shortlisted/pre-qualified service providers should be hired for the supply of solar systems;

³⁹ Runoff is likely to contain oil and other automotive/mechanical fluids, as well as chemicals and materials used in the construction process.

- The technical design for installation of solar panel must consider all the above-mentioned factors and load bearing assessment of roof as well. The supporting structure will need to be designed adequately to avoid any damage during the wind storms;
- Lead/acid/cadmium-based batteries will not be procured for solarization;
- Ensure panels are treated with anti-reflective coating which reduces the sun's reflection from PV panels;
- Ensure that no waste material left behind after the completion of work; and
- The Contractor will be made responsible to repair any damaged caused by the installation of solar panels.

7.2.7 Flora and Fauna

Most of the infrastructure investments are rehabilitation works and anticipated to exist within the existing built environment. The activities proposed under component-4 are proposed to support watershed management and restore damaged rangelands which is expected to overall benefit the biodiversity of the area.

However, the activities under the Components/subcomponents (1.1 to 1.4, 2.1,2.2,3.1 and 4) such as clearing of sites, establishment construction camps (if established) and mobility of construction machinery may affect the local agriculture land/vegetation/trees and causing disturbance to fauna, particularly due to the increase in noise level and decline in ambient air quality. The Contractor's workers may also damage and cut the ornamental plants and trees, for use as fire-wood to fulfil their requirements. Moreover, the movements of the mammals and reptiles will be restricted during the construction phase. Birds and animals may tend to move away from the construction areas and find shelter and food elsewhere due to the activities mentioned above for fear of being hunted / trapped. The significance of this impact is considered medium to low.

Mitigation Measures

- The proposed project will specifically exclude physical investments that could have significant adverse impacts to natural and critical habitats;
- Sites, for the installation of construction camps (if required) and mobility of construction machinery shall be properly planned to avoid or minimize the cutting of trees/shrubs/herbs and loss of agriculture land;
- Compensatory plantation will be carried out with a ratio of five trees for each tree fell/cut. Forest and Wildlife Departments shall be consulted to fulfill the legal requirements, where applicable;
- The construction crew will be provided with LPG as cooking (and heating, if required) fuel. Use of fuel wood will not be allowed;
- The Contractor's staff and labour shall be strictly directed not to damage any nearby agriculture land/vegetation/trees;
- The speed of construction vehicles shall be kept low to avoid killings of reptiles and other fauna. If there is any specie and habitat found of special concern, Wildlife department should be informed to take care of asset;

- Hunting, poaching and harassing of wild animals and birds shall be strictly prohibited, and Contractor shall be required to instruct and supervise its labour force accordingly; and
- In addition to above, ensure the compliance with the relevant measures provided for air and noise pollution and waste management.

The significance of impact is expected to be low after taking the above-mentioned mitigations.

POTENTIAL SOCIAL IMPACTS AND MITIGATION MEASURES

7.2.8 Occupational Health and Safety (OHS) Risks

Occupational Health and Safety related risks may arise during the rehabilitation and restoration activities, under Components/subcomponents (1.1 to 1.4, 2.1,2.2,3.1 and 4) during installation of contractor camps, deep excavations, steel fixing, installation of a batching plant, concrete pouring, installation of solar panels, movement of various heavy machines, manual handling during loading-unloading operation, bad housekeeping and improper management of hazardous and non-hazardous wastes etc. This impact is moderate adverse in nature.

Mitigation Measures

- The Contractor will prepare Site Specific Occupational Health and Safety Plan according to Balochistan Occupational Safety and Health Act, 2022 and Labour Management Procedure (LMP) and will submit it to the PIU for review and approval. When approved, the Contractor will implement the plan during the project implementation through dedicated staff;
- Community liaison will be maintained during the construction stage and GRM will be established to address complaints related to safety hazards;
- Ensure compliance with the Worker's Code of Conduct;
- Ensure that the site will be restricted for the entry of irrelevant people particularly children, disabled and elderly peoples. Ensure the use of appropriate safety signs at the construction and rehabilitations sites;
- Ensure the provision of appropriate use PPEs to all workers and compliance with BEQs;
- All the occupational incidents, accidents and diseases will be recorded and reported;
- Ensure the provision of fire prevention and firefighting equipment;
- Ensure the training of workers in construction safety procedures, use of PPEs, fire safety, waste management, defensive driving, hygienic conditions, emergency prevention, preparedness and response arrangements, communicable diseases;
- The Contractor shall make available the first aid kit, snake bite kits and bandages at all times and all the sites. Moreover, paramedic staff will be available on-site and the cost of hiring will be a part of the BOQ item. The location of these kits shall be marked and shall be easy to access by all; and
- Identify and minimize, so far as reasonably practicable, the causes of potential hazards to workers, including communicable diseases such as HIV/AIDs and vector borne diseases.

With the help of the above mitigation measures, the residual impact is likely to be low significant.

7.2.9 Community Health and Safety

Community health and safety issues may arise during the rehabilitation and restoration activities of proposed subprojects (subcomponents 1.1-1.4, 3 and 4) including dust and noise, road side accidents/incidents, physical injuries due to falls in excavated sites, exposure to hazardous materials, inappropriate disposal of liquid and solid wastes. Conflicts may arise between the local community and the workers, which may be related to religious, cultural or ethnic differences, or based on competition for local resources. The labor works with different transmittable diseases may cause spread out of those diseases in the locals of nearby community. The impact significance is moderate adverse.

Mitigation Measures

- The Contractor will prepare site specific community health and safety plan in compliance with relevant sections of the WBG General Environmental Health and Safety Guidelines (WBG 2007);
- Ensure that the site will be restricted for the entry of irrelevant people particularly children, disabled and elderly peoples. Ensure the use of appropriate safety signs at the construction site;
- The Contractor shall provide adequate fencing around the working areas and excavations;
- Ensure the compliance with the mitigation measures provided for air, noise and waste management;
- Vehicle limit shall be kept low and horns will not be used while passing through or near the communities;
- Effective implementation of GRM will be ensured to timely address the issues;
- Contractor will take due care of the local community and observe sanctity of local customs and traditions. Contractor will warn the staff strictly not to involve in any unethical activities and to obey the local norms and cultural restrictions; and
- Awareness sessions will be conducted regularly for community, and workers on road safety, communicable diseases, emergency procedures, worker code of conduct and basic medical services.

With the help of the above mitigation measures, the residual impact is likely to be low significant.

7.2.10 Site Security

The IFRAP stretches across a vast area, therefore, there may be security risks during the implementation of project, particularly in the remote regions. Since the law-and-order situation is not good and it is not entirely normal. This may lead to security related issues including travel safety and premises safety. The impact is assessed as substantial adverse.

Mitigation Measures

- The Project will continue to rigorously engage with the local communities to ensure a positive image amongst the people in the project area;

- The contractor shall maintain communication through employer with local police and law enforcement agencies and inform about construction activities particularly for sensitive areas;
- The contractor shall prepare emergency evacuation procedure and display emergency contact numbers;
- A detailed Security Management Plan will be developed by the Contractor as part of Site specific ESMP. This plan will be strictly implemented, and also reviewed and updated periodically in view of the current security situation of the area; and
- Ensure the effective implementation of GRM.

7.2.11 Labor Influx

The proposed project activities are likely to require the use of labor from outside the proposed project intervention. This labor influx may have several potential adverse impacts, including conflicts between local communities and outside labor, increased illicit behavior and crime, increased burden on local public services and utilities, the spread of communicable diseases, and risk of GBV/SEA/SH. The impacts are assessed as substantial adverse.

Mitigation Measures

- Labor management will be done while following the ESS2 - Labor and Working Conditions. This standard applies to all project workers, including full-time, part-time, temporary, seasonal, and migrant workers;
- A Labor-Management Procedures will be prepared which will include project GRM for communities in and around the proposed project intervention areas to raise concerns and make complaints, including on labor influx-related grievances;
- Ensure the compliance of workers code of conduct;
- Locals will be given preference in hiring where possible, for both skilled and unskilled labor; and
- Contractors and their employees will be required to respect local cultural norms and will receive training on cultural sensitivity and conduct.

With the help of the above mitigation measures, the residual impact is likely to be low.

7.2.12 Gender Base Violence (GBV)

GBV, including sexual exploitation and abuse (SEA) and sexual harassment (SH) risks may arise for women and children (especially of minorities), other vulnerable groups and project staff during project implementation. In particular, for components 3 and 4 SEA/SH risks may arise such as abuse of power by Government officials, Project staff and partners, financial service providers, etc.; Increase household tensions and violence after women in the household receive cash; during travel to and from cash distribution points. The impacts are assessed as substantial adverse.

Mitigation Measures

- A separate Action Plan on GBV/SEA/SH will be prepared for the Project and same will be implemented;

- The GBV/SEA/SH complaints received through the GRM will be redirected to the dedicated staff who are trained on the GBV Action Plan with the required sensitivities and confidentiality. It will be ensured that safe and confidential accountability mechanism is established for complaints;
- Labor and or other staff engaged by the contractor will be educated and made aware of the civil, social, and legal rights of women and vulnerable groups (poor women, single women living alone, elderly, infirm or ill, orphans), and about the actions taken in the event of GBV and SEA/SH;
- Awareness session will be conducted regularly for community and workers through skilled trainers/ service providers. Targeted communications and awareness to women regarding potential SEA / GBV risks, especially as literacy rates amongst women are lower. This could include organizing consultations during times when women are not busy with their household chores, holding consultations in areas accessible to women;
- Project staff (skilled and unskilled) will sign the code of conduct before commencement of civil works, describing acceptable and prohibited behaviors and communicated through training and publicized;
- Service providers will be identified and mapped to address SEA/SH issues; and
- Provision related to SEA/SH or GBV will be incorporated in the bidding document.

With the help of the above mitigation measures, the residual impact is likely to be moderate to low significant.

7.2.13 Force/Child Labor

Project activities may involve the use of child forced/child labor. This includes indentured labor, and hiring of under age children. These risks are likely to be higher in economically disadvantaged and remote areas of the province.

Mitigation Measures

- Contractors will be prohibited from hiring children below the age of 15 for any type of labor, and below the age of 18 for hazardous work. Contractor through contractual agreement will be bound to follow the provincial labour laws and World Bank requirements during hiring the labor force;
- Project staff will monitor sites to check for child labor and will hold regular consultations to keep a check on forced labor at project sites;
- Awareness will be created among the local communities and project staff about the adverse impacts of child labor. Contractors will be required to follow the LMP with regard to contracts and terms of employment for labor;
- Beneficiaries (particularly for component 3 and 4) and primary suppliers will be made aware of the provincial labour laws and World Bank regulations regarding child/forced labor.

7.2.13 Elite Capture and Disadvantaged or Vulnerable Groups

There is potential that influential people might interfere in the selection of beneficiaries. The presence of vulnerable groups in the project area will require careful attention to be paid to

stakeholder engagement. There is a risk that vulnerable groups and communities may be excluded from stakeholder consultations, limiting their ability to provide feedback on project design and impacts, and potentially preventing them from fully benefiting from the project. This risk is proportionate to their degree of disadvantage/vulnerability and is additionally relevant for communities living in remote or historically underserved areas.

Mitigation Measures

- A comprehensive Stakeholder Engagement Plan (SEP) has been developed and will be implemented during course of project;
- Ensure the compliance with the GRM and criteria for the project beneficiaries particularly for component 3 and 4;
- Ensure that only the genuine beneficiaries are enlisted for the project support; and
- Project staff will be trained on social inclusion and stakeholder engagement.

7.2.14 Chance Findings of Important Physical and Cultural Resources

Project may encounter the chance finding of important physical cultural resources during the construction and rehabilitation phase.

Mitigation Measures

- Subprojects sites will be screened for the presence of physical cultural resources prior to commencement of construction and rehabilitation work;
- Ensure the compliance with the chance find procedure provided in Annex-A

7.2.14 Land Acquisition and Involuntary Resettlement

Land acquisition and resettlement is not anticipated at this stage, however, if involved then this may result in social disturbances, loss of livelihoods and may exaggerate the social and cultural conflicts among the people. In most of the proposed interventions, land requirement will be minimal and shall be fulfilled through Government lands or Voluntary Land Donation (VLD)⁴⁰ approach. Little to no private land acquisition requirement is envisaged at this stage. Therefore, the impact of land acquisition will be minor to moderate and localized.

Mitigation Measures

A separate Resettlement Policy Framework (RPF) has been prepared⁴¹ and same will be implemented. The RF provides guidance and formats for Voluntary Land Donation, and preparation of site-specific Resettlement Plans (RPs) that will be prepared for all subprojects

⁴⁰ This use of voluntary donation option will be limited to small scale community infrastructure subprojects.

⁴¹ In accordance with the Land Acquisition Act, 1894 and WB ESF Environmental and Social Standard 5 (ESS5) on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.

where land acquisition and involuntary resettlement (if any) will take place. The project will mostly adopt in-situ reconstruction, thereby minimizing resettlement requirements for housing component.

INSTITUTIONAL CAPACITY LIMITATIONS

Due to a lack of experience working with the ESF, there is a risk that the implementing agency will not have sufficient capacity to mitigate environmental and social risks by implementing this ESMF. Without adequate capacity, many of the risks in this document may go unmitigated, potentially reducing project effectiveness significantly.

The project will hire the dedicated E&S staff for the implementation of the E&S instruments in line with the WB ESF and local requirements. The project will ensure that all project staff are trained in the E&S instruments especially those that will be involved in implementing the E&S instruments.

SUSTAINABILITY OF INTERVENTIONS

Rehabilitated & Improvement infrastructure work may fall into destruction if they are not regularly maintained according to the best practices. This risk may be particularly relevant in remote areas, where access and routine maintenance may be challenging.

- Continued maintenance of the proposed project interventions after project closure will be carried out;
- Rehabilitated and Improvement interventions will be built using climate-resilient approaches to minimize deterioration caused by climate impacts;
- Rehabilitated schemes/sub- projects will be handed over to the concerned department and the O&M budget of the same will be ensured in the annual budget.

8. IMPLEMENTATION OF ESMF

This chapter summarizes the mitigation, monitoring requirements, screening procedure, institutional arrangement monitoring and measures to be taken during the implementation and implementation budget.

KEY STEPS FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT

- E&S screening and categorization of each subproject using the E&S Screening Checklist;
- Information disclosure and stakeholder consultations as per guidance provided in the SEP;
- Preparation of Environmental and Social Management Plan (ESMP)/checklist with mitigation measures/other E&S instruments, indicative budget for E&S management.
- Clearance/approval of ESMP/E&S instrument from World Bank.
- Inclusion of ESMP and other E&S instruments in bidding documents and agreements with Contractors.
- Implementation of ESMP and other E&S instruments by implementing agencies/contractors.
- Monitoring the compliance with E&S instruments.
- Integration of Recommendations in Project Design / E&S Instruments
- Sufficient budget should be allocated for the effective implementation of mitigation measures;
- Strengthening and capacity building through trainings/awareness sessions/workshops of the E&S staff;
- Induction of qualified Environmental, Social and Gender Specialists at PMU and PIU level.
- Information pertaining to impacts identified and mitigation measures adopted should be reported in detail in the progress reports;
- Roles and responsibilities of key players involved in the implementation of ESMF should be defined;
- Ensure the incorporation of ESMP/ E&S instrument in the contract Documents to bound the Contractor for compliance; and
- Engagement of relevant stakeholders should be ensured for effective implementation of ESMF/E&S instruments.

SCREENING ANALYSIS-E&S SCREENING

As a first step, all proposed activities should be screened to ensure that they are within the boundaries of the Project's eligible activities, and they are not considered as activities listed in the E&S Exclusion List as below:

Table 8-1. E&S Exclusion List

- | |
|--|
| <ul style="list-style-type: none"> • Any construction in protected areas or priority areas for biodiversity conservation, as defined in national law. • Activities having "significant adverse cumulative/transboundary impacts. • Activities that have the potential to cause any significant loss or degradation of critical natural habitats, whether directly or indirectly, or which would lead to adverse impacts on natural habitats |
|--|

- Activities that involve extensive harvest and sale/trade of forest resources (post, timber, bamboo, charcoal, wildlife, etc.) for large-scale commercial purposes.
- Activities that involve the use of international waterways.
- Any activity affecting physical cultural heritage such as graves, temples, churches, historical relics, archeological sites, or other cultural structures.
- Activities that may cause or lead to forced labor or child abuse, child labor exploitation or human trafficking, or subprojects that employ or engage children, over the minimum age of 14 and under the age of 18, in connection with the project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral, or social development.
- Any activity that will cause physical relocation of households or will require the use of eminent domain.
- Areas under Anti Encroachment Drive.
- Cause any displacement or severe loss of livelihood
- Any activity with significant environmental and social risks and impacts that require an Environmental and Social Impact Assessment (ESIA).

All the subprojects will be screened for E&S impacts using the screening checklist provided in Annex-B: Environmental and Social Screening Checklists (a & b) ⁴². Since exact extent and precise location/footprints of individual interventions (subprojects) to be implemented under the proposed Project are not known at this stage, therefore, a framework approach has been adopted for the present E&S assessment for this ESMF. This ESMF provides screening procedure following the ESF for the type of E&S instrument to be used before implementing a subproject.

The screening criterion is based on the nature of activities and potential E&S impacts as described below:

- **High-risk (H)** proposed project interventions that have the potential for severe adverse environmental and social impacts that are diverse, irreversible or unprecedented. However, such type of subprojects will be avoided and not supported under the proposed Project.
- **Substantial-risk (S)** proposed project interventions may have the potential for adverse environmental and social impacts, but are less adverse than those of high-risk proposed project interventions. **These proposed project interventions will require the preparation and submission of ESMP/RP** (Generic Template of ESMP is attached as Annex-C).
- **Moderate-risk (M)** proposed project interventions would have moderate levels of environmental and social impacts. These impacts are likely to be temporary and reversible and are not expected to have lasting effects on the proposed project intervention areas. For these proposed project interventions, the preparation and submission of a **checklist with mitigation measures will be required. An ESMP/RP may also be prepared if needed.**

⁴² Environmental and Social Screening Checklist "a" is for Component 3: Resilient Housing Reconstruction and Restoration and "b" for other components which have E&S impacts.

- **Low-risk (L)** proposed project interventions will have negligible to no negative impacts, and no further environmental assessment will be needed following the initial screening process and followed by monitoring and supervision through a monitoring checklist.

Table 8.1 shows the IFRAP subprojects environmental screening, anticipated classification and guides on preparation of relevant E&S management instrument/tool. The exact instrument will however be decided as per screening outcome of individual subproject.

The ESMPs, prepared for subprojects based on the screening criteria, will also be submitted to the World Bank for prior review and no objection. The PIU will coordinate with Blochistan Environmental Protection Agency to fulfil the legal requirements of the Blochistan Environmental Protection Act 2012 for environmental approval, if required, before any project activities begun.

Table 8-2. Subprojects Environmental and Social Screening

Project Components/Subcomponents	Type of Subprojects	Nature of Environmental and Social Impacts	Indicative E&S Management Instrument
Sub-component 1.1: Rehabilitation of Irrigation and Flood Control Infrastructure	Flood Protection Structures	Likely to have moderate to low adverse environmental and/or social impacts	ESMP/RP ⁴³ Checklist with mitigation measures
	Dam & Spillways	Likely to have moderate adverse environmental and/or social impacts	ESMP/RP
	Flood & Perennial Irrigation Schemes	Likely to have moderate to low adverse environmental and/or social impacts	ESMP/RP/Checklist with mitigation measures
Sub-component 1.2: Restoration of Water Supply Schemes	Community-level water supply infrastructure	Likely to have moderate to low adverse environmental and/or social impacts	ESMP/RP/Checklist with mitigation measures
Sub-component 1.3: Reconstruction and Rehabilitation of Roads and Bridges	Roads and bridges (Reconstruction & Rehabilitation of Provincial & Local Roads)	Likely to have moderate to low adverse environmental and/or social impacts	ESMP/RP/Checklist with mitigation measures
Sub-component 1.4: Restoration of Small Community Facilities	Small community facilities (including food silos, health, education and community-water storage facilities)	Likely to have low to moderate adverse environmental and/or social impacts	Checklist with mitigation measures
Sub-component 2.1: Modernization of the Observation Infrastructure, Data Management, and Forecasting Systems	Solarization of PMD facilities	Likely to have low to moderate adverse environmental and/or social impacts	Checklist with mitigation measures
Sub-component 2.2: Provision of Technical Assistance, Institutional Strengthening, and Capacity Building	Upgrading the Institute of Meteorology and Geophysics and of the Meteorology Workshop in Karachi	Likely to have low to moderate adverse environmental and/or social impacts	Checklist with mitigation measures
Sub-component 3.1: Beneficiary-driven Housing Reconstruction Grants	Reconstruction or restoration of damaged houses	Likely to have low to moderate adverse environmental and/or social impacts	Checklist with mitigation measures
Component 4: Livelihood Support and Watershed Management	Matching Grants for Enhancing Agricultural and Livestock-based Livelihoods	Likely to have low to moderate adverse environmental and/or social impacts	Checklist with mitigation measures
	Community Grants for Watershed Restoration	Likely to have low to moderate adverse environmental and/or social impacts	Checklist with mitigation measures

⁴³ RAP or ARAP, finalized upon confirmation of project footprints.

ENVIRONMENTAL AND SOCIAL REQUIREMENTS IN BIDDING DOCUMENTS

The ESMPs will be prepared based on the guidelines provided in this ESMF before the Contract award. The ESMP will be included in the bidding/ contract documents and their implementation will be a contractual binding for the Contractors. To ensure the effective implementation, the ESMP cost will be the part of BOQ.

Environmental, Social, Health and Safety (ESHS) conditions will be included in the bidding documents to ensure all mitigation measures proposed in the relevant ESMPs are effectively implemented as provided in Table 8.3.

Table 8-3: E&S Requirements in Bidding Documents

Condition	Rationale	Specifications to be Included in Bidding Documents
Past performance of the Contractor on E&S and OHS	The contractor’s past performance on compliance with E&S and OHS considerations is an indicator of the contractor’s commitment and capability for implementation of the screening checklists/ESMF/ESMP	Record of past E&S and OHS performance
The Contractor shall propose E&S Specialists in its team	The Contractor’s staff should include E&S specialists who will be responsible for the implementation of the mitigation measures in compliance with the relevant instruments	The bidder will include CVs of the proposed, suitably qualified E&S Specialists
Contractor shall obtain performance bond for compliance with E&S obligations	The Contractor should have a financial implication if it fails to comply with E&S requirements.	The Contractor will obtain a performance bond
Contractor shall implement construction related mitigation measures provided in the E&S instruments	Mitigation measures from E&S instruments will be included on the tender	Tender documents will contain site-specific construction related mitigation measures
Code of Conduct for all site personnel	All workers hired by the Contractor should sign a Code of Conduct to ensure compliance with E&S requirements	The Contractor will submit a Code of Conduct with the bidding documents

INSTITUTIONAL ARRANGEMENTS FOR E&S IMPLEMENTATION

The proposed Project will be implemented at two levels: at the federal level and at the provincial level. The ESMF implementation arrangements have been suggested to keep it well aligned with the overall Project implementation and institutional setup as described below:

a) Federal Level

The MoPDSI, being an implementing agency, will be responsible for managing the project's overall implementation, including this ESMF through FPMU. An Environment and Social Management Unit will be established in the FPMU with designated E&S staff/ E&S Focal Persons

(FPs). The Environment and Social Management Unit will ensure plans and procedures mentioned in ESMF/E&S instruments are being followed and implemented during the project life cycle.

A separate PIU will be established at the federal level at the PMD (for component 2). The designated E&S FPs will implement ESMF/E&S instruments at the field level and report to the Environment and Social Management Unit of FPMU.

b) Provincial Level

BIWRMDP PIU and BLEP PIU will implement Components 1 and 4, respectively. The dedicated E&S staff of the PIUs will be responsible for implementing the ESMF/E&S instrument with the support of designated E&S FPs at the district and field levels. The E&S staff of the PIUs will report to respective Project Directors and maintain liaison with the Environment and Social Management Unit of the FPMU for the effective implementation of the ESMF/E&S instrument.

The E&S Team (in each PIU) shall supervise the implementation and monitoring of the ESMF/E&S instruments using the E&S monitoring Checklist. The E&S Specialists (Environmental, Social and Gender) will be hired in PIUs to ensure the effective implementation of E&S instruments, where required.

For Component 3: Resilient Housing Reconstruction and Restoration, the FPMU will engage competent partner organizations/Implementing Partners (IPs) to implement ESMF. These IPs will hire their own Environmental and Social Officers (ESOs) who will implement ESMF, conduct screening of sub-project locations, comply with ESMF, LMP and GRM and report to the Environment and Social Management Unit of FPMU. Beneficiaries will construct their houses as per the resilient housing design and minimum construction guideline provided by the Project with the help of village reconstruction committees (VRCs) and Social and Technical Assistance Team (STAT)⁴⁴.

ROLES AND RESPONSIBILITIES ENTITIES INVOLVED IN E&S MANAGEMENT

a. PIUs

Roles and responsibilities will be:

- Provide support, oversight, and quality control to field staff (FPs) working on environmental and social risk management.

⁴⁴ Each IP will establish a Socio-Technical Assistance (STA) Team, responsible for providing providing social mobilization and technical assistance by providing technical assistance and inspecting progress at every stage of the reconstruction process. On average each team will be responsible to look after 10-12 houses every day. Below mentioned is the tentative strength of each STA TEAMS: Engineer/ sub-engineer (1), Social Organizer (M/F) (1) and Govt. Representative 1.

- Review, and provide quality assurance and approval to E & S Screening checklist and ESMPs as relevant. Keep documentation of all progress.
- Oversee overall implementation and monitoring of environmental and social mitigation and management activities, compile progress reports from subprojects, and report to the World Bank on a quarterly basis.
- Train field staff, contractors and communities who will be responsible for implementing the E&S instruments.
- Ensure that all bidding and contract documents include all relevant E&S screening checklists and other E & S instruments.
- Ensure project activities do not fall under the Exclusion List.
- Maintain the close liaison with the World Bank, Government Departments (where applicable), E & S FPs at field level and E&S unit of FPMU for smooth and effective implementation of E&S aspects.
- The PIU will also track grievances/beneficiary feedback (in line with the SEP) during project implementation to use as a monitoring tool for implementation of project activities and environmental and social mitigation measures.

The PIU/FPMU becomes aware of a serious incident in connection with the project, which may have significant adverse effects on the environment, the affected communities, the public, or workers, it should notify the World Bank within 48 hours of becoming aware of such incident. The Incident reporting Form is attached as Annex-D.

Upon completion of Project activities, the PIU will review and evaluate progress and completion of project activities and all required environmental and social mitigation measures. Especially for civil works, the PIU will monitor activities with regard to site restoration and landscaping in the affected areas to ensure that the activities are done to an appropriate and acceptable standard before closing the contracts, in accordance with measures identified in the ESMPs and other plans. The sites must be restored to at least the same condition and standard that existed prior to commencement of works. Any pending issues must be resolved before a subproject is considered fully completed.

b. Supervision Consultant

Roles and responsibilities will be:

- To oversee the performance of the Contractors, through dedicated Environmental and Social Specialists, to make sure that the Contractors are complying with ESMP requirements.
- Ensuring that the day-to-day construction activities are carried out in an environmentally and socially sound and sustainable manner;
- Strong coordination with the Contractors and E&S staff- PIU;
- To supervise and monitor E & S activities being performed at site;
- To organize periodic E & S training programs and workshops for the relevant E & S staff including PIU and contractor.
- Ensure periodic reporting of ESMP to PIU.
- Suggest any additional mitigation measures (if required).

c. Construction Contractor

Roles and responsibilities will be:

- Comply with the Project's environmental and social mitigation and management measures as specified in ESMPs and contract documents, as well as national and local legislation, in particular, the requirements of Balochistan Environmental Protection Act (BEPA), 2012.
- To appoint Environmental and Social Specialists for effective implementation of ESMPs;
- Take all necessary measures to protect the health and safety of workers and community members, and avoid, minimize, or mitigate any environmental harm resulting from project activities.
- To develop Site Specific Environmental and Social Management Plan (SSESMP) (only for those subprojects which may require preparation of an ESMP) with the support/consent of E&S staff of relevant PIUs and the guidelines provided in the ESMP, prior to mobilization/start of civil works.
- To train its dedicated E & S Specialists on regular basis for effective implementation of E & S aspects.

d. Third Party Validation

Third Party will be recruited by FPMU to Monitor compliance including compliance of Environmental and Social aspects on annual basis throughout the project duration. The third party will have E & S Specialists to carryout intermittent monitoring of the project. The objective of this, will be to review the entire ESMF and/or ESMPs implementation process and its effectiveness, to identify any environmental and/or social issues caused by the project that may exist on ground, and to frame recommendations for course correction and to improve ESMF and ESMPs and its various components.

e. Partner Organization (PO)

Roles and responsibilities will be:

- Ensure project activities do not fall under the Negative List. Fill out Screening Forms for relevant subproject activities and submit forms to the FPMU.
- If required, formulate site-specific ESMPs for subproject activities and submit document to the E&S Unit of FPMU, WB and approved it from BEPA.
- The Social Technical Assistance Team (STATs) of IPs will monitor the implementation of environmental and social measures on daily basis.
- The E&S officers (ESO) of IPs will oversee implementation and monitoring of environmental and social mitigation measures on weekly basis, and report progress and performance to the E&S Unit of FPMU on a monthly basis.
- Provide training to local workers and communities on relevant environmental and social mitigation measures, roles and responsibilities.

f. Beneficiaries

Beneficiaries will construct their houses as per the resilient housing design and minimum construction guideline provided by the Project.

ENVIRONMENTAL AND SOCIAL MITIGATION AND MONITORING PLAN

Environmental and Social mitigation and Monitoring Plan, refer Table 8.4 will be used as the management tool for mitigation measures. The plan includes the envisaged impacts and their recommended mitigation measures and; the person/organization directly responsible for adhering to or executing the required mitigation measures and suggest frequency of monitoring the mitigation measures. Detailed E&S impacts and mitigation measures have been provided in Chapter 7.

Table 8-4: Environmental and Social Mitigation and Monitoring Plan

Sr. No.	Project Impacts	Mitigation Measure	Implemented by	Monitoring Frequency ⁴⁵	Performance Monitoring Indicators	Monitored By
Environmental Mitigation and Monitoring						
1.	Natural Hazards Infrastructure under the subprojects and project workers could potentially be impacted by natural disasters during the course of the project.	<ul style="list-style-type: none"> Project activities design will take disaster risk reduction into consideration. Only shortlisted/pre-qualified Contractors shall be hired. 	Design Consultant	As and when required basis/Monthly	Confirmation of design incorporation. Audits and Checks.	PIU
2.	Soil Erosion and Contamination Construction and rehabilitation activities may disturb the surrounding soil and degrading its quality due to waste generation.	<ul style="list-style-type: none"> Embankments and excavated slopes will not be left untreated/unattended. Approved Engineering design will be followed. Avoid or minimize vegetation removal/clearing. Sites will be restored upon completion of project. Waste generated at sites shall be properly managed. Vehicles must be properly maintained and regularly checked. Ensure training and awareness sessions for the project staff. 	Contractor	Monthly Daily	Visual checks and photographic record Site restoration and rehabilitation.	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
3.	Waste Generation Wastes including discarded construction material, asphalt, steel, oil, fuel, empty containers and bags, excavated material and municipal waste will likely be generated during the civil work construction and rehabilitation activities.	<ul style="list-style-type: none"> Ensure proper waste management including storage, handling, transportation and disposal. Left over construction and demolition waste materials will be reused, where possible. Compliance with site specific waste management plan. MSDS shall be followed strictly, where applicable. 	Contractor	Monthly Daily	Visual checks and photographic record. Waste Management plan implementation Training Record	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
4.	Ambient Air Quality Movement of construction machinery (operation of concrete batching and concrete mixer, diesel generator,) and activities (excavation, site clearance and leveling, filling of earth material, demolition, loading/unloading of material etc.) may cause decline in air quality.	<ul style="list-style-type: none"> Vehicles and other equipment shall be properly tuned and maintained. All dust raising locations shall be kept wet with water sprinkling, where required. Construction material will be transported in a covered truck. Vehicle speed shall be kept low. Ensure provision of PPEs to project workers and trained them on their use. Ensure compliance with the BEQS and IFC/WHO guidelines whichever is stringent (as per advice of Environment Specialist). 	Contractor	Monthly Daily	Visual checks Vehicle maintenance records Water sprinkling records. Training Record	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
5.	Noise Pollution Operation of construction machinery (such as bulldozers, excavators, pneumatic machinery, etc.), generators, offloading of materials, and construction activities may increase the noise level.	<ul style="list-style-type: none"> Main roads will be used to the maximum extent possible. Vehicles and machinery shall be properly tuned and maintained. Noisy construction work shall be limited to normal working hours. Avoid excessive use of horns and vehicle speeds will be kept low; Noisy construction activities will be displaced to a fair distance from the nearest sensitive receptors (if any). Construction schedules shall be disclosed to the nearby communities, where required. Ensure the compliance with BEQS and IFC/WHO guidelines whichever is stringent (as advice of Environment Specialist). Ensure the effective implementation of GRM. 	Contractor	Monthly Daily	Physical observation Vehicle maintenance records Training records GRM Record	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
6.	Water Contamination Water resources may be at risk of contamination from construction site runoff and wastes, if not managed properly, impacting aquatic life (if available) and also pose health and livelihood risks to communities.	<ul style="list-style-type: none"> Construction camp will not be located within 500m of any water body. Wastewater from the work site will be disposed through a settling tank of appropriate capacity, which will be levelled back after completion of construction work. It will be ensured that the wastes are not released into any water bodies, cultivation fields, or critical habitat. Ensure the compliance with BEQS and IFC/WHO guidelines whichever is stringent. Construction machinery will be kept properly tuned and maintained. Fuels and chemicals will be stored on concrete-floored, bounded, covered to provide shade and prevent the ingress of rain and should be located away from the open water sources. 	Contractor	Monthly Daily	Regular monitoring Waste Management plan implementation Training Record	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
7.	Solarization of PMD Facilities Incompatible layout plan and design may have potential impact of visual effects. Installation of solar systems may generate small	<ul style="list-style-type: none"> Only shortlisted/pre-qualified service providers should be hired for the supply of solar systems. Potential aspects shall be considered in the designing and planning. Lead/acid/cadmium-based batteries will not be procured for solarization. 	Design Consultant and Contractor	Monthly Daily	Visual Checks Regular monitoring Use of PPEs	E&S Staff of PIU SC

⁴⁵ For Component -3: E&S Staff of Implementing Partners will conduct monitoring on monthly basis, while the Beneficiary/Labor on daily basis. STATs will also supervise the work on a daily basis. However, for other components the monitoring frequency will be at least Monthly.

Sr. No.	Project Impacts	Mitigation Measure	Implemented by	Monitoring Frequency ⁴⁵	Performance Monitoring Indicators	Monitored By
	amount of waste, cause damages to plumbing and electric wiring, and roof leakage, wear and tear on the roof.	<ul style="list-style-type: none"> • Ensure panels are treated with anti-reflective coating which reduces the sun's reflection from PV panels. • Ensure that no waste material left behind after the completion of work; and • Repair any damaged caused by the installation of solar panels. 				
8.	<p>Flora and Fauna</p> <p>Activities such as clearing of sites, establishment construction camps (if established) and mobility of construction machinery increase in noise level and decline in ambient air quality may disturb the flora and fauna. Damage and cut the ornamental plants and trees, for use as fire-wood to fulfil their requirements. restricted movements of the mammals and reptiles will be during the construction phase. Birds and animals may tend to move away due to fear of being hunted / trapped.</p>	<ul style="list-style-type: none"> • Project will specifically exclude physical investments that could have significant adverse impacts to natural and critical habitats. • Properly planned to avoid or minimize the cutting of trees/shrubs/herbs and loss of agriculture land. • Compensatory plantation will be carried out with a ratio of five trees for each tree fell/cut. Forest and Wildlife Departments shall be consulted to fulfill the legal requirements, where applicable. • Project staff shall be strictly directed not to damage any nearby agriculture land/vegetation/trees; • Vehicle speed shall be kept low. • Construction crew will be provided with LPG as cooking (and heating, if required) fuel. Use of fuel wood will not be allowed. • Hunting, poaching and harassing of wild animals and birds shall be strictly prohibited, • Ensure the compliance with the relevant measures provided for air and noise pollution and waste management. 	Contractor	<p>Monthly</p> <p>Daily</p>	<p>Visual checks</p> <p>Regular monitoring, audit and checks</p> <p>Departmental consultations record</p>	<p>E&S Staff of PIU</p> <p>SC</p> <p>E&S Staff IP & STAT</p> <p>Beneficiary/Labor</p>
Social Mitigation and Monitoring						
9.	<p>Occupational Health and Safety (OHS) risks</p> <p>Deep excavations, steel fixing, installation of a batching plant, concrete pouring, during installation of contractor camps installation of solar panels, movement of various heavy machines, manual handling during loading-unloading operation, bad housekeeping and improper management of hazardous and non-hazardous wastes etc., may cause OHS risks.</p>	<ul style="list-style-type: none"> • Ensure compliance with the LMP and approved site specific ESMP. • Community liaison will be maintained during the construction stage and ensure compliance with GRM. • Ensure compliance with the Worker's Code of Conduct; • Ensure that the site will be restricted for the entry of irrelevant people and appropriate safety signs at sites; • Ensure the provision of appropriate use PPEs to all workers and compliance with BEQs; • All the occupational incidents, accidents and diseases will be recorded and reported; • Ensure the provision of fire prevention and firefighting equipment; • Ensure the training of workers in construction safety procedures, use of PPEs, fire safety, waste management, defensive driving, hygienic conditions, emergency prevention, preparedness and response arrangements, communicable diseases. 	Contractor	<p>Monthly</p> <p>Daily</p>	<p>Implementation of OHS Plan.</p> <p>Use of PPEs.</p> <p>Training Records.</p> <p>Work permits</p> <p>Implementation of Emergency Response Plan.</p> <p>Implementation of GRM</p> <p>Accident/Incident reported.</p> <p>LMP</p>	<p>E&S Staff of PIU</p> <p>SC</p> <p>E&S Staff IP & STAT</p> <p>Beneficiary/Labor</p>
10.	<p>Community Health and Safety</p> <p>Dust and noise, road side accidents/incidents, physical injuries due to falls in excavated sites, exposure to hazardous materials, inappropriate disposal of liquid and solid wastes, conflicts between local community and the workers, spread out of communicable diseases.</p>	<ul style="list-style-type: none"> • Ensure compliance with site specific community health and safety plan. • Site will be restricted for the entry of irrelevant people particularly children, disabled and elderly peoples. Ensure the use of appropriate safety signs at the construction site. • Provide adequate fencing around the working areas and excavations. • Ensure the compliance with the mitigation measures provided for air, noise and waste management. • Vehicle limit shall be kept low and horns will not be used while passing through or near the communities. • Effective implementation of GRM will be ensured to timely address the issues. • Ensure due care of the local community and observe sanctity of local customs and traditions. • Warn the staff strictly not to involve in any unethical activities and to obey the local norms and cultural restrictions. • Training and awareness sessions will be conducted regularly. 	Contractor	<p>Monthly</p> <p>Daily</p>	<p>Implementation of CH&S Plan.</p> <p>Community Concerns Record.</p> <p>Training Records.</p> <p>Implementation of GRM</p> <p>Medical reports of worker.</p> <p>Accident/Incident reported.</p>	<p>E&S Staff of PIU</p> <p>SC</p> <p>E&S Staff IP & STAT</p> <p>Beneficiary/Labor</p>
11.	<p>Site Security</p> <p>Security risks may arise during the implementation of project, particularly in the remote regions since the law-and-order situation is not good and it is not entirely normal. This may lead to security related issues including travel safety and premises safety.</p>	<ul style="list-style-type: none"> • Project will continue to rigorously engage with the local communities. • Maintain communication through employer with local police and law enforcement agencies and inform about construction activities particularly for sensitive areas. • Compliance with Security Management Plan, also reviewed and updated periodically in view of the current security situation of the area. • Ensure the effective implementation of GRM. 	Contractor	<p>Monthly</p> <p>Daily</p>	<p>Regular Monitoring</p> <p>Implementation of Security Plan</p> <p>Consultation with Security Agencies</p>	<p>E&S Staff of PIU</p> <p>SC</p> <p>E&S Staff IP & STAT</p> <p>Beneficiary/Labor</p>

Sr. No.	Project Impacts	Mitigation Measure	Implemented by	Monitoring Frequency ⁴⁵	Performance Monitoring Indicators	Monitored By
12.	Labour Influx Conflicts between local communities and outside labor, increased illicit behavior and crime, increased burden on local public services and utilities, the spread of communicable diseases, and risk of GBV/SEA/SH.	<ul style="list-style-type: none"> Ensure compliance with LMP and workers code of conduct. Ensure compliance with GRM. Locals will be given preference in hiring where possible, for both skilled and unskilled labor. Respect local cultural norms and will receive training on cultural sensitivity and conduct. 	Contractor	Monthly	Visual checks, GRM Implementation Training Records LMP	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
13.	Gender Base Violence (GBV) Risks may arise for women and children (especially of minorities), other vulnerable groups and project staff during project implementation. In particular, for components 3 and 4 SEA/SH risks may arise such as abuse of power by Government officials, Project staff and partners, financial service providers, etc.; Increase household tensions and violence after women in the household receive cash; during travel to and from cash distribution points.	<ul style="list-style-type: none"> A separate Action Plan on GBV/SEA/SH will be prepared for the Project and same will be implemented. GBV/SEA/SH complaints received through the GRM will be redirected to the dedicated staff who are trained on the GBV Action Plan with the required sensitivities and confidentiality. Labor and or other staff will be educated and made aware of the civil, social, and legal rights of women and vulnerable groups and about the actions taken in the event of GBV and SEA/SH. Awareness session will be conducted regularly for community and workers through skilled trainers/ service providers. Targeted communications and awareness to women regarding potential SEA / GBV risks, especially as literacy rates amongst women are lower. Project staff (skilled and unskilled) will sign the code of conduct before commencement of civil works. Service providers will be identified and mapped to address SEA/SH issues. Provision related to SEA/SH or GBV will be incorporated in the bidding document. 	Contractor	Monthly Daily	Regular Monitoring Grievance Record Training and awareness Record Compliance with GBV/SEA/SH Action Plan Implementation	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
14.	Force/Child Labor Project may involve the use of child forced/child labor. These risks are likely to be higher in economically disadvantaged and remote areas of the province.	<ul style="list-style-type: none"> Hiring children below the age of 15 for any type of labor, and below the age of 18 for hazardous work will be prohibited. Ensure regular monitoring to check for child labor and will hold regular consultations to keep a check on forced labor. Follow the provincial labour laws and World Bank requirements during hiring the labor force. Awareness will be created among the local communities and project staff. Beneficiaries (particularly for component 3) and primary suppliers will be made aware of the provincial labour laws and World Bank regulations regarding child/forced labor. 	Contractor	Monthly Daily	Regular Monitoring Grievance Record Compliance with LMP	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
15.	Elite Capture and Disadvantaged or Vulnerable Groups Influential people might interfere in the selection of beneficiaries. There is a risk that vulnerable groups and communities may be excluded from stakeholder consultations, limiting their ability to provide feedback on project design and impacts, and potentially preventing them from fully benefiting from the project.	<ul style="list-style-type: none"> A comprehensive Stakeholder Engagement Plan (SEP) has been developed and will be implemented during course of project. Ensure the compliance with the GRM and criteria for the project beneficiaries particularly for component 3 and 4. Ensure that only the genuine beneficiaries are enlisted for the project support. Project staff will be trained on social inclusion and stakeholder engagement. 	Contractor	Monthly Daily	Grievance Record, Compliance with SEP Compliance with Project Criteria for beneficiaries	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
16.	Chance Findings of Important Physical and Cultural Resources Project may encounter the chance finding of important physical cultural resources during the implementation.	<ul style="list-style-type: none"> Subprojects sites will be screened prior to commencement of civil work; Ensure the compliance with the chance find procedure provided. 	Contractor		Visual Monitoring Compliance with Chance find Procedures	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor
17.	Land Acquisition and Involuntary Resettlement Land acquisition and resettlement is not anticipated at this stage, however, if involved then this may result in social disturbances, loss of livelihoods and may exaggerate the social and cultural conflicts among the people. In most of the proposed interventions, land requirement will be minimal and shall be fulfilled through Government lands or VLD approach.	<ul style="list-style-type: none"> A separate Resettlement Policy Framework (RPF) has been prepared⁴⁶ and same will be implemented. The project will mostly adopt in-situ reconstruction, thereby minimizing resettlement requirements for housing component. 	Contractor	Monthly Daily	Regular Monitoring Compliance with RPF	E&S Staff of PIU SC E&S Staff IP & STAT Beneficiary/Labor

⁴⁶ In accordance with the Land Acquisition Act, 1894 and WB ESF Environmental and Social Standard 5 (ESS5) on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.

MONITORING

Monitoring will be carried out to ensure that the mitigation plans are regularly and effectively implemented. It will be performed at PIUs and field level levels and by the Contractor. Two complementary methodology approaches are being applied to monitor the proposed actions under the ESMF:

Compliance monitoring; which checks whether the actions proposed by the ESMF/ E&S Instruments have been carried out by visual observation, photographic documentation and the use of checklists prepared for the ESMF; and Effects monitoring; which records the consequences of program activities on the biophysical and social environment; as applicable, these effects are repeatedly measured by applying selected indicators.

A separate monitoring checklist will be developed by PIUs based on the ESMPs, which will be used by field monitor on monthly basis.

For Component-3: Resilient Housing Reconstruction and Restoration, the implementing organizations, hired by the FPMU, will be responsible for monitoring of the mitigation measures provided in the ESMF and Screening checklist throughout the project implementation. The E&S Officers (ESOs) of IPs will conduct weekly site inspections in at least one district and verify that the E&S measures are effectively implemented at working sites and will provide guidance and training to the beneficiaries in case of any noncompliance. The monitoring checklist is provided in Annex-E.

The implementation of environmental and social measures, provided in the ESMF, will be done by the beneficiary during reconstruction activities with the help of village reconstruction committees (VRCs) and Social Technical Assistance Team (STAT)⁴⁷. These VRCs and STATs will also supervise the work on a daily basis.

REPORTING AND DOCUMENTATION

At a minimum, the reporting will include (i) the overall implementation of E&S risk management instruments and measures, (ii) any environmental or social issues arising as a result of project activities and how these issues will be remedied or mitigated, including timelines, (iii) Occupational Health and Safety performance (including incidents and accidents), (iv) community health and safety, (v) stakeholder engagement updates, in line with the SEP, (vi) public notification and communications, (vii) progress on the implementation and completion of project works, and (viii) summary of grievances/beneficiary feedback received, actions taken, and complaints closed out, in line with the SEP. For component 3, daily reporting by the STAT team to the ESOs of IPs. Monthly environmental & social monitoring reports by the

⁴⁷ Each Implementation Organization will establish a STAT, responsible for providing providing social mobilization and technical assistance by providing technical assistance and inspecting progress at every stage of the reconstruction process. On average each team will be responsible to look after 10-12 houses every day. The tentative strength of each STA TEAMS: Engineer/ sub-engineer (1), Social Organizer (M/F) (1), Govt. Representative (1)

IPs ESOs on the status of implementation of environmental, social, health and safety aspects will be carried out.

Reports from the field levels will be submitted to the FPMU, where they will be aggregated and submitted to the World Bank on a quarterly basis.

TRAINING AND CAPACITY BUILDING

To ensure the successful implementation of ESMF and compliance of the E&S mitigation measures, strengthening capacity of project staff and workers is essential. This will be achieved through a series of customized trainings and awareness sessions. **Table 8.5** below provides capacity building / training framework for the proposed project.

Table 8.5: Capacity Building and Training Framework

Sr. No.	Key Areas	Key Aspects to Cover	Potential Participants	Frequency of Training	Responsibility
1.	E&S Orientation / Awareness	E&S awareness; WB Environmental and Social Standards (ESSs); OHS and CHS aspects; Local E&S Legal requirements ESMF findings; Checklist /ESMP and its components; and GBV and GRM. Reporting on incidents and accidents and emergency preparation and response preparedness Labor Management Procedures Resettlement and Land Acquisition	IFRAP Project staff including Implementing Partners ⁴⁸	At the start of the project; and Refresher afterwards as and when required./bi-annual basis	Environmental, Social & Gender Specialists of IFRAP
2.	GBV/SEA/SH	Prevention of GBV/SEA/SH GRM for GBV/SEA/SH	IFRAP Project staff including Implementing Partners	At the start of the project; and Refresher afterwards as and when required/ bi-annual.	Social & Gender Specialists of IFRAP

⁴⁸ Component 3: Resilient Housing Reconstruction and Restoration

Sr. No.	Key Areas	Key Aspects to Cover	Potential Participants	Frequency of Training	Responsibility
3.	ESMF/ESMP Implementation	ESMF components; Key steps for the implementation of ESMF; Checklists used in the field; GRM & GBV; Checklist /ESMP implementation; and Documentation and reporting.	IFRAP Project staff including. Implementing Partners	At the start of the project; and Refresher afterwards as and when required/ bi-annual	Environmental, Social & Gender Specialists of IFRAP
4.	E&S Management	E&S mitigation plans; Stakeholder mapping and engagement OHS and CHS aspects Sensitize and aware project women beneficiaries on financial assistance for cash grants and the construction of multi hazard resilient houses Sensitization and awareness of women beneficiaries on GRM and for potential disasters Emergency Prevention, preparedness and response planning Resource Efficiency and Pollution Prevention and Management	IFRAP Project staff including Implementing Partners staff /Masons community groups/ women beneficiary	At the start of the project; and On-going/informal	Environmental, Social & Gender Specialists of IFRAP Gender FP (Implementing Partners)

ESMF DISCLOSURE

The ESMF and other E&S documents after review and clearance from the bank will be disclosed on the official website of IFRAP, and shall also be available in World Bank repositories. ESMP and other site-specific E&S instruments will also be disclosed through the same channels. Executive summaries of each instrument will be translated into Urdu/Pashto/Balochi and will also be made available.

TENTATIVE ESMF IMPLEMENTATION BUDGET

Table 8.6 presents the estimated cost of ESMF implementation. This tentative cost will be included in the overall project cost. This cost will be reviewed and firmed up when the project footprints will be finalized at subproject level to ensure realism. Additional costs could be included in the subproject specific ESMPs that would become part of each bidding/BOQ documents. The Contractor(s) however shall be paid against the actual execution with evidential proof of relevant E&S instruments activity.

Table 8-6: Estimated Budget

Item	Frequency	Estimated Cost (PKR)	Remarks
Environmental Specialist (PIUs and FPMU)	03	90,000,000	500,000 PKR per month for 5 years
Social Specialist (PIUs and FPMU)	03	90,000,000	500,000 PKR per month for 5 years
Gender Specialist PIU (PIUs and FPMU)	03	90,000,000	500,000 PKR per month for 5 years
Trainings for project staff	30	45,000,000	30 trainings at 1,500,000 PKR per training, including all setup costs
ESMP Preparation Cost	Lump sum	60,000,000	Project foot prints and relevant districts number are not cleared as yet.
GRM Implementation Cost	Lump sum	1,000,000	-
Implementation Cost of GBV/SEA/SH Action Framework	Lump sum	1,000,000	-
PPEs Cost	Lumps sum	145,000,000	Including the PPEs (helmet, vest, gloves, shoes) cost to beneficiaries under component 3.
Supervision Cost		50,000,000	E&S Field Staff cost
Third party Audit/Monitoring	Annual	60,000,000	Lump sum
Miscellaneous Cost		10,000,000	
Total		497,000,000	Tentative for five year project construction period. The cost shall be updated based on the current market prices during construction phase.

ANNEXES

ANNEX – A

CHANCE FIND PROCEDURES

Chance Find Procedures Project may involve excavations. Therefore, the possibility of chance find is not ignorable. In case of any chance find, the contractor will immediately report through Supervision Consultant to DG Directorate General of Archaeology, Blochistan and Project Director of PMU/PIU, to take further suitable action to preserve those antique or sensitive remains. Representative of the Director will visit the site and observe the significance of the antique, artefact and Cultural (religious) properties and significance of the project. The report will be prepared by representative and will be given to the Director. The documentation will be completed and if required suitable action will be taken to preserve those antiques and sensitive remains. In case any artefact, antiques and sensitive remains are discovered, chance find procedures should be adopted by contractor workers as follows:

- Stop the construction activities in the areas of chance find.
- After stopping work, the contractor must immediately report the discovery to the Supervision Consultant.
- The Director decides to take over the antiquity for purposes of custody, preservation and protection, the person discovering or finding it shall hand it over to the Director or a person authorized by him in writing.
- Delineate the discovered site or area.
- Consult with the local community and provincial Archaeological Department.
- The Director shall, constitute a team of archaeologists for undertaking preliminary investigation and will decide about further course of action in light of findings of the team.
- The suggestion of the local communities and the concerned authorities will be suitably incorporated during taking the preventive measures to conserve the antique, artefact and cultural (religious) properties; and Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remain, a night guard shall be arranged until the responsible local authorities take over.
- Avoid the use of heavy construction machinery during the excavation process.
- The Contractor staff must have relevant qualification and experience of similar projects.
- Plaster and Painting Works: New Plaster, painting walls and other roof treatment should consider the original color scheme, layout and design to keep the aesthetic and visual impact of the site. Operational Phase: The authority responsible for the O & M of sub project activities will be responsible for housekeeping of the facilities and shall prepare and adopt SOPs for O & M of the subproject facilities. E&S experts/specialists will ensure that O&M plan is operationalized and will do monitoring visits for compliance of O & M plans.
- Training and Capacity Building: The civil work activities shall be carried out by Pre-qualified trained Contractor under supervision of technical staff. The Contractors shall contain team of skilled labors having past experience in similar works. Trainings of the work force should be conducted before start of civil works and during project implementation by the PMU safeguards specialists and Contractor's.
- Monitoring and Supervision: Strict Monitoring and supervision as per monitoring plan given in ESMP should be enforced during works.
- GRM: The record of any complaints as per GRM mechanism of the project should be implemented.

ANNEX – B

ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST (a)

Component 3: Resilient Housing Reconstruction and Restoration

A	General Information:	Name of Surveyor				Date:		
1)	<i>Project Location (District):</i>							
2)	<i>Site Location (Tehsil, UC, Village/Settlement, Coordinates):</i>							
3)	<i>Pictures of Existing Site Location</i>							
4)	<i>Project Activities:</i>	Reconstruction/Construction of House				No. of Units:		
5)	<i>Number of Total units in Settlement</i>							
6)	<i>Number of Damaged Houses (Pakka) - As per Damage Assessment</i>							
7)	<i>Number of Damaged Kaccha (Kaccha) - As per Damage Assessment</i>							
8)	<i>Implementing Partner:</i>							
9)	<i>Important Geographical Features (If available)</i>							
10)	<i>Sensitive Receptors (Within 200 m)</i>							
11)	<i>Important Biological Features (If Any)</i>							
12)	<i>Is this project located in an area with wastewater network</i>							
13)	<i>Existing solid waste management practices</i>	Government	Self	Public	Private	Pit Burning	None	Any Other:
14)	<i>Specify local GRM System if Any.</i>							
B	Sub Project E&S Issues:							
	Issues		Risk Level			Remarks/ Mitigation Measures		

Sr. No		No/Yes	Low	Moderate	Substantial	High	
a. Environmental Parameters							
1.	Is there any waste present at the reconstruction location which needs to be cleared before start of construction?						
2.	Will the sub project involve significant land disturbance or site clearance?						
3.	Will the sub project require large amounts of raw/construction materials?						
4.	Is the sub project expected to generate large amounts of residual waste, construction waste?						
5.	Is the sub-project expected to result in soil erosion or pit due to extraction of soil						
6	Will the sub-project result in potential soil/water contamination as a result of runoff/construction activities?						
7	Will the sub project involve storage, handling and transport of hazardous substances?						

8	Will the sub project have an impact on ambient air quality and air emissions?						
9.	Will the sub project increase ambient noise levels?						
10.	Will there be any impact on flora due to project activities?						
11.	Will there be any impact on fauna due to project activities?						
12.	Will the sub project have an impact on archaeological and historical sites?						
b.	Social Parameters						
1.	Will the reconstruction process entail the possibility of displacing individuals or communities?						
2.	Will the provision of basic services, such as water, sanitation, and healthcare, be negatively impacted for local communities?						
3.	Will the reconstruction process negatively affect traditional or cultural practices of local community?						
4.	Will the reconstruction process have a detrimental impact on the utilization of land or other natural resources						

	relied upon by local communities?						
5.	Will the activities supported by the project have an adverse effect on any marginalized population, including ethnic and religious minorities, migrants, individuals with disabilities, transgender individuals, or isolated individuals such as widows, widowers, the elderly, orphans?						
6.	Will the reconstruction process not have complied with national labor laws including working hours, minimum wage and working conditions?						
7.	Will the activities supported by the project anticipate the occurrence of child labor, forced labor, or bonded labor?						
8.	Will the project activities involve a significant inflow of labor?						
9.	Is there a possibility that the project's implementation process might overlook the involvement of pertinent stakeholders, particularly women and other marginalized						

	groups, in the consultation process?						
10.	Is there a possibility that the project's team might overlook the inclusion of all eligible HHs whose houses were impacted by the flood, particularly women and other marginalized groups, in the re-verification process?						
11.	Will the sub project pose occupational health and safety risks?						
12.	Will the sub project pose community health and safety risks?						

Overall Risk of Settlement and Approval

Overall Risk Level of the Settlement _____

Checked by (Surveyor) _____

Approved by (STAT Supervisor) _____

Approval by IP E&S Specialist _____

Approved by (PIU Environmental Specialist) _____

Approved by (PIU Social Specialist) _____

ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST (b)

(Component 1: Community Infrastructure Rehabilitation, Component 2: Strengthening Hydromet and Climate Services, Component 4: Livelihood Support and Watershed Management)

A	General Information	
1	Subproject Location	District: Village:
2	Subproject Activities	
3	Proposed Date of Commencement of Work	
4	Important geographic / topographic feature (if any)	
5	Important biological feature (if any)	
6	Sensitive Receptors within 200 m	

B: Environmental Issues

Sr. No	Issues	No/Yes	Risk Level				Remarks/Mitigation Measures
			Low	Moderate	Substantial	High	
1	Will the subproject involve significant land disturbance or site clearance?						
2	Will the subproject require the setting up of ancillary facilities?						
3	Will the subproject require a large amount of raw or construction materials, energy and/or water?						
4	Will the subproject generate large amounts of residual wastes, construction material waste?						
5	Is the sub-project expected to result in soil erosion?						
6	Is the sub project expected to create borrow pits for construction material?						
7	Will the subproject result in potential soil or water contamination (e.g., from oil, grease and fuel from equipment yards)?						

Sr. No	Issues	No/Yes	Risk Level				Remarks/Mitigation Measures
			Low	Moderate	Substantial	High	
8	Will the subproject involve the storage, handling, or transport of hazardous substances?						
9	Will the sub project disturb the ambient air quality and/or increase the level of harmful air emissions (due to generation of dust from construction activity, vehicular/ machinery exhaust emissions, etc.)						
10	Will the subproject increase ambient noise levels?						
11	Are there any protected areas on or around the locations which could be affected by the subproject?						
12	Will there be any adverse impact on the flora due to subproject activities?						
13	Will there be any adverse impact on the fauna due to subproject activities?						

C: Social Issues

Sr. No	Issues	No/Yes	Risk Level				Remarks/Mitigation Measures
			Low	Moderate	Substantial	High	
1	Will the subproject activities involve a significant inflow of labor?						
2	Will there be any social conflicts arising from the interaction of laborers with locals, particularly by the induction of outside labor and establishment of construction camps (if any)?						
3	Will the activities supported by the project anticipate the occurrence of child labor, forced labor, or bonded labor?						
4	Will the subproject activities pose risks to nearby sensitive receptors (mosque, temple, church,						

Sr. No	Issues	No/Yes	Risk Level				Remarks/Mitigation Measures
			Low	Moderate	Substantial	High	
	graveyard, hospital, school/college/university), if any?						
5	Will the sub project pose occupational health and safety risks?						
6	Will the sub project pose community health and safety risks?						
7	Risk of increase in traffic and pedestrian safety due to the construction vehicle movement, particularly near sensitive receptors.						
8	Will there be land acquisition? If yes, is the site for land acquisition and ownership status and current usage of land to be acquired known?						
9	Will there be a loss of shelter and residential land due to the land acquisition or clearance of the existing site?						
10	Are any informal settlers or flood-affected persons present on the subproject site where construction and rehabilitation activities will be carried out?						
11	Has there been any Anti-Encroachment Drive to forcefully evict/move people at the site where the works are planned to be carried out?						
12	Will there be a loss of agricultural land, crops, trees, and fixed assets due to land acquisition?						
13	Will people lose access to natural resources, communal facilities and services due to involuntary land use restrictions or access to legally designated parks/protected areas?						
14	Any estimate of the likely number of persons affected by the subproject? If yes, approximately how many? Are any of them falling into disadvantaged/vulnerable groups such as Female/child headed households, Internally Displaced Persons (IDPs), Refugees, Ethnic and religious minorities, Persons with disabilities, Transgender communities, Senior citizens, or economically marginalized groups)?						

Sr. No	Issues	No/Yes	Risk Level				Remarks/Mitigation Measures
			Low	Moderate	Substantial	High	
15	Have there been any past security-related issues at the subproject site?						
16	Has stakeholder engagement taken place with relevant stakeholders (Provincial/District level Government Departments/Communities/NGOs/CSOs) for the subproject?						
17	Is the subproject being implemented in an area with natural hazard risk? (e.g., floods, earthquakes, cyclones etc.).						
18	Will there be any impact on women that may hinder their mobility during reconstruction and rehabilitation activities?						
19	Will the proposed subproject potentially involve shifting of public utilities?						
20	Are any indigenous peoples (as per World Bank ESS7) present in the subproject area?						
21	Will the construction and rehabilitation activities cause socio-cultural issues and damage any cultural heritage site ?						

No Objection Certificate (NOC)

Blochistan Environmental Protection Agency (BEPA) NOC / Environmental Approval Required	Yes [] No, if Yes, select the required study from below
Type of Environmental and Social Study	EIA [], IEE [], Environmental Checklist []
Any other NOC from Government of Bochistan (GoB)/ Government of Pakistan (GoP) Required	[] Yes, [] No, if Yes, please specify

For World Bank Approval

Further assessment required	[] Yes [] No, if Yes, select the required study from below
Type of Environmental and Social Assessment	ESIA [], ESMP [], E&S Checklist shall suffice [], RAP [], PCRMP [], Water Balance Study [], GHG Estimation [], BAP [], E&S Audit []

Conducted by:

Name: _____ Designation: _____ Signature: _____ Date: _____

Reviewed and approved by:

Name: _____ Designation: _____ Signature: _____ Date: _____

ANNEX-C

TEMPLATE OF ESMP

The Project will engage the consultants to prepare the Environmental and Social Management Plans (ESMPs) identified under Environmental and Social Management Framework (ESMF) of IFRAP, in order to ensure that the activities carried out under the proposed Project are (i) environmentally sound and sustainable in the long run; and (ii) consistent with the environmental safeguard guidelines, rules and regulations of the Government of Pakistan (only those which are applicable) and , as well as those of the World Bank's Environmental and Social Framework (ESF).

Proposed ESMP Structure

The content of the ESMP will include, but not limited to the following:

- **Abbreviations And Glossary**
- **Executive Summary:** Concisely discusses significant findings and recommended actions including summary Table of ESMP.
- **Introduction**, including background, objective of ESMP, Approach and Methodology, Project Area; Study Team
- **Legal and policy framework**, GoP/ Balochistan requirements (legislation; guidelines and rules; policies; international treaties signed by Pakistan; national and provincial authorities; environmental procedures), their applicability, and compliance status for the Project. World Bank requirements (ESF and ESS; and WBG Environmental Health and Safety guidelines) and their triggering and compliance status for the Project.
- **Description of the proposed subprojects**, including need of the project, layout and location, salient features, resource requirements, wastes to be generated, manpower requirement, a brief description of construction activities, and a brief description of operation and maintenance activities.
- **Baseline description**, primarily describing the proposed site and its immediate surrounding aided with maps, photographs and schematics, key environmental and social aspects/resources of the surroundings such as land form and land use, water resources, settlements, any critical habitat or protected area, any cultural heritage sites or graveyards, any sensitive receptor such as schools and hospitals, access routes, and other relevant details.
- **Stakeholder consultations**, recording the key concerns and suggestions of the community regarding the proposed subprojects and its potential impacts, and a description of the way these concerns will be addressed.
- **Impact assessment:** methods and techniques for analyzing the anticipated environmental and social impacts.
- Discussion of the potentially adverse **environmental and social impacts** of the proposed sub-project along with their significance.
- **Mitigation plans**, listing all the impacts, their mitigation measures, assigning responsibility of implementing these measures, and also assigning responsibility for monitoring. Also identifying cumulative impacts if applicable.
- **Institutional Arrangement** including roles and responsibilities and capacity available

- **Monitoring plan**, describing the monitoring requirements, frequency, and responsibility of conducting the monitoring.
- **Capacity development and training plan**, describing the training requirements, contents, frequency, training recipients, and responsibility of conducting the desired trainings.
- **Documentation and reporting**, describing the requirement, frequency, and responsibility of documentation and reporting.
- **Grievances redress mechanism (GRM)**, a mechanism to define roles and responsibilities of the persons responsible to address the grievances of the affectees.
- **ESMP implementation budget**, providing the cost estimate of its implementation.

ANNEX-D Incident Reporting Form

B1: Incident Details			
Date of Incident:	Time:	Date Reported to PIU:	Date Reported to WB:
Reported to PIU by:	Reported to WB by:	Notification Type: Email/phone call/media notice/other	
Trading Name of Main Contractor:		Trading Name of Subcontractor:	

B2: Type of incident (please check all that apply) ¹
Fatality <input type="checkbox"/> Lost Time Injury <input type="checkbox"/> Displacement Without Due Process <input type="checkbox"/> Child Labor <input type="checkbox"/> Acts of Violence/Protest <input type="checkbox"/> Disease Outbreaks <input type="checkbox"/> Forced Labor <input type="checkbox"/> Unexpected impacts on heritage resources <input type="checkbox"/> Unexpected impacts on biodiversity resources <input type="checkbox"/> Environmental pollution incident <input type="checkbox"/> Dam failure <input type="checkbox"/> Other <input type="checkbox"/>

S

B3: Description/Narrative of Incident
<p><i>Please replace text in italics with brief description, noting for example:</i></p> <ul style="list-style-type: none"> <i>I. What is the incident?</i> <i>II. What were the conditions or circumstances under which the incident occurred (if known)?</i> <i>III. Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?</i> <i>IV. Is the incident still ongoing or is it contained?</i> <i>V. Have any relevant authorities been informed?</i>

See Annex for definitions

B4: Actions taken to contain the incident			
Short Description of Action	Responsible Party	Expected Date	Status
<p>For incidents involving a contractor: Have the works been suspended (for example, under Contract GCC7.6 or GCC8.9 of Works)? Yes <input type="checkbox"/>; No <input type="checkbox"/>; Please attach a copy of the instruction suspending the works.</p>			

B5: What support has been provided to affected people

C1: Investigation Findings

Please replace text in italics with findings, noting for example:

- I. *where and when the incident took place*
- II. *who was involved, and how many people/households were affected*
- III. *what happened and what conditions and actions influenced the incident*
- IV. *what were the expected working procedures and were they followed*
- V. *did the organization or arrangement of the work influence the incident*
- VI. *were there adequate training/competent persons for the job, and was necessary and suitable equipment available*
- VII. *what were the underlying causes; where there any absent risk control measures or any system failures*

C2: Corrective Actions from the investigation to be implemented (to be fully described in Corrective Action Plan)

Action	Responsible Party	Expected Date

C3a: Fatality/Lost time Injury information

Cause of fatality/injury for worker or member of the public (please check all that apply):

- 1. Caught in or between objects
- 2. Struck by falling objects
- 3. Stepping on, striking against, or struck by objects
- 4. Drowning
- 5. Chemical, biochemical, material exposure
- 6. Falls, trips, slips
- 7. Fire & explosion
- 8. Electrocution
- 9. Homicide
- 10. Medical Issue
- 11. Suicide
- 12. Others
- Vehicle Traffic: 13. Project Vehicle Work Travel
- 14. Non-project Vehicle Work Travel
- 15. Project Vehicle Commuting
- 16. Non-project Vehicle Commuting
- 17. Vehicle Traffic Accident (Members of Public Only)

Name	Age/DOB	Date of Death/Injury	Gender	Nationality	Cause of Fatality/Injury	Worker (Employer)/Public

C3b: Financial Support/Compensation Types (To be fully described in Corrective Action Plan template)

- 1. Contractor Direct
- 2. Contractor Insurance
- 3. Workman’s Compensation/National Insurance
- 4. Court Determined Judicial Process
- 5. Other
- 6. No Compensation Required

Name	Compensation Type	Amount (US\$)	Responsible Party

C4: Supplementary Narrative
<p>For incidents involving a contractor:</p>

ANNEX-E
ENVIRONMENTAL AND SOCIAL MONITORING CHECKLIST

Project Name: _____

Activities Inspected _____

Location _____

Weather Condition _____

Date: _____

Time: _____

Sr. No	Performance Indicators	Yes	No	N/A	Description	Remarks
1.	Heavy Dust					
2.	Excessive noise or vibration					
3.	Water sprinkling at the construction and disposal sites					
4.	Discharge of waste water to nearby water course/water body					
5.	Any spillage of fuel/oil observed					
6.	Dumping of solid waste at designated Site					
7.	Dumping of construction waste/spoil at designated Site					
8.	Protection of Flora/Fauna					
9.	Availability of Drinking water					
10.	Site housekeeping					
11.	Warning signs displayed near construction zone.					
12.	Use of PPEs by the beneficiaries and workers					
13.	Any incident/accident (use separate proforma)					
14.	Any GBV/SEA and privacy related complaints					
15.	Availability of first aid boxes at site					
16.	Any land ownership provided to women beneficiaries					
17.	Any involuntary resettlement under the project					
18.	Proportion of local labor in the project					
19.	Child/Force Labor					
20.	Is the GRM properly in place					
21.	Regular monitoring of complaint register is in practice					

22.	Any exclusion, specially to women, disadvantaged groups and marginalized people from project forums					
23.	Any elite capture related grievance					
24.	Participation of women, children, and vulnerable groups in consultations and project activities					
25.	Any Unusual Conditions (e.g., heavy rain, extreme weather)					
26.	Chance finds during construction					
Note If any:						
Filled By: _____ Signature Name: _____ Position: _____		Extra Note if needed:				

Note: mention the location and extent of degradation of exceeding indicators in description column or in a note if necessary.