

Environmental & Social Management Framework

June 2026



	Environmental & Social Management Framework			
	Sindh Floods Emergency Housing Reconstruction Project			
	Doc. No.: SFEHRP/ESMF-AF/001	Rev.: 01	Table of Contents	

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ABBREVIATIONS AND ACRONYMS

ACM	Asbestos Containing Material
AED	Anti-encroachment drive
EA	Environmental Assessment
EC	Environmental Checklist
EIA	Environmental Impact Assessment
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standards
ESSC	Environmental and Social Screening Checklist
ESCAP	Environmental & Social Code of Practice
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
GAP	Gender Action Plan
GoS	Government of Sindh
GRM	Grievance Redress Mechanism
IP	Implementing Partner
LMP	Labor Management Plan
MFI	Micro-Finance Institution
M & E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OA	Occupancy Agreement
O&M	Operation and Maintenance
PIU	Project Implementation Unit
PO	Partner Organizations
SEA	Sexual exploitation and abuse
SEP	Stakeholder Engagement Plan
SEPA	Sindh Environmental Protection Agency
SFEHRP	Sindh Floods Emergency Housing Reconstruction Project
SH	Sexual harassment
SPHF	Sindh Peoples Housing for Flood Affectees
SPVO	Sindh Peoples Village Organizations
STAT	Social Technical Assistance Team
RPF	Resettlement Policy Framework
VLD	Voluntary Land Donation
WB	World Bank
WASH	Water, Sanitation & Hygiene
CIs	Community Institutions
VOs	Village Organizations
LSOs	Local Support Organizations

EXECUTIVE SUMMARY

The Government of Sindh (GoS) as part of a consolidated effort for emergency rehabilitation of flood affectees, is implementing the “Sindh Floods Emergency Housing Reconstruction Project” (SFEHRP) with the World Bank funding. A private company “Sindh Peoples Housing for Flood Affectees (SPHF)” under Section 42 has been established for the design and execution of the program, which will also serve as the Project Implementation Unit (PIU) for this project.

To address the generic environmental and social impacts of the proposed project this ESMF document has been prepared in compliance with relevant national and provincial laws and regulations, and World Bank’s Environmental and Social Standards (ESSs) of the Environmental and Social Framework policy (ESF).

Project Background

Pakistan experienced heavy monsoon rains over June-August 2022 leading to catastrophic and unprecedented flooding. The 2022 floods had enormous human and economic impacts. Over 33 million people are affected; and about 2.2 million houses are reported to have been damaged or destroyed; 1.2 million animals have perished and over 13,000 km of roads are reported to have been affected. Economic impacts are concentrated in the agricultural sector, with over 3.6 million acres of cultivated land destroyed, comprising 30 percent of total agricultural land, resulting in significant losses to cotton, date, wheat, and rice crops. Flooding will impose a lingering drag on output through infrastructure damage, disruption to crop cycles, possible financial sector impacts (microfinance institutions report major solvency problems), and loss of human capital. Preliminary estimates suggest that as a direct consequence of the floods, the national poverty rate will increase by 4.0 percentage points, pushing 9 million people into poverty.

The project contributes to the rehabilitation and resilience of flood-affected communities in Sindh. The project provides housing subsidy grants targeted at a subset of the affected population. The technical assistance component benefits the entire province by supporting the design of the overall housing reconstruction, WASH and settlement improvement program of the GoS rehabilitation and reconstruction initiatives for post 2022 floods. Any additional funding channeled for housing reconstruction in Sindh will be aligned with the housing reconstruction policy, standards, and principles established under this project. The Project has specific benefits for people living in the geographical locations served through the housing subsidy grants for reconstruction/restoration of destroyed houses. Through an owner-driver approach, approximately 778,000 multi-hazard resilient core housing units will be supported by the WB out of the overall estimated 1.6 million completely destroyed houses. Roughly half of these beneficiaries are estimated to be female, based on demographic information available for these areas.

The WASH initiative, scaled up under Additional Financing that was processed in 2024, and will be aligned with other financing partners for sustainability and effectiveness through the standardization of approach in accordance with communal needs and a sustainable O&M model.

Moreover, beneficiaries are trained in multi-hazard resilient construction techniques through capacity-building activities supported by the project along with capacity building/awareness raising for behavior change, O & M and other necessary skills for implementation, monitoring and sustainability including WASH initiative. This will improve the long-term resilience of communities in Sindh by improving the construction designs and practices of the housing and community infrastructure, and WASH facilities in view of the challenges posed by climate change.

Project Overview

The parent project focuses on owner-driven reconstruction of multi-hazard resilient core housing units damaged by the 2022 floods in selected districts of Sindh. Key principles include providing technical support, cash grants, in-situ rebuilding where feasible, avoiding high-risk zones, and using familiar, accessible materials.

The Additional Financing (AF) aims to expand housing support to more flood-affected beneficiaries identified through re-verification by the Government of Sindh. It also includes the provision of safely managed WASH (Water, Sanitation, and Hygiene) services to approximately 1.16 million people

across 24 districts in Sindh. WASH investments will emphasize water quality (E. coli-free), safe fecal waste disposal, sustainable water sourcing, and clear institutional roles for operations and maintenance.

WASH/Settlement Improvement interventions will be implemented through small-scale, site-specific civil works across rural settlements in Sindh, minimizing the likelihood of significant environmental or social impacts. EA Consulting has been engaged to provide resident supervision for 50 prototype WASH and Settlement Improvement interventions, which will serve as reference models for scaling. Upon successful evaluation of these prototypes, the approved designs will be replicated by the Implementation Partners. EA Consulting will also ensure top-level technical oversight in 1,450 settlements to monitor compliance with quality, environmental, and social standards, thereby supporting sustainable, safe, and community-responsive WASH improvements. SFEHRP is a five-year project, and it comprises of the following three components:

- Component 1: Housing Reconstruction grants
 - Subcomponent 1.1: Housing Reconstruction
 - Subcomponent 1.2: WASH Facilities
- Component 2: Institutional Strengthening and Technical Assistance
- Component 3: Project Management and Implementation Support

The project development objective is to support the Government of Sindh in the delivery of owner-driven, multi-hazard resilient reconstruction of core housing units' post-2022 floods. Around 43% affectees live either on state or village land mostly without land title. In such cases if the eligible beneficiary does not have land title, the GoS will provide them with residential land entitlements as per residential land title ship policy post approval of the same by the competent forum i.e., GoS (Sindh Cabinet). For the non-titleholders the first preference of the project is to provide them with in situ reconstruction support and formalize their ownership in case they are located on state land in the form of a settlement in an area already earmarked as declared villages; or through VLD in case they are located on private land.

The project currently only considers voluntary resettlement. This voluntary resettlement option is solely available to SFEHRP beneficiaries seeking to move to their privately owned land, particularly if their current location poses hazards or other concerns. voluntary resettlement is not applicable in other scenarios. Prior to proceeding with voluntary resettlement, beneficiaries must provide legal or other documentation confirming their ownership of the land where they intend to resettle.

In line with the Cabinet's decision¹ to use private land under the project, the following options are considered: voluntary land donation (VLD) or long-term Occupancy Agreement. For non-title holders located on private lands, the project preference is to get the land transferred in the name of the beneficiaries through Voluntary Land Donation (VLD). The VLD Checklist will be filled with the proposed VLD site. The land proposed for VLD will only be eligible if it fulfills the criteria as set out in VLD Checklist.

In case of the privately owned land is voluntarily donated to any project beneficiary for house reconstruction under the project, the VLD process must be completed before initiating/implementing such project activities as given below.

In case the owner is not willing to donate the land, but voluntarily agrees for occupancy, the landowner(s) and the occupant(s) will fill the Occupancy Agreement (OA), which must be duly signed by the Landowner/s, Occupant and two witnesses. Both parties will also provide documents, ie: CNICs of Landowner and Occupant, Land title documents, which mentioned that the land is free from any disputes regarding ownership or other encumbrances. In addition to this in the case of joint ownership of the land, the occupancy agreement (attached as Annexure-13) will be signed by all owners, and the land title documents will be verified by Mukhtiarkar. SPHF may also require additional evidence or documentation or conduct inquiries as deemed accordingly. All the provided information will also be

¹ No. SOVI(SGA&CD)/7(30)/2024 Government of Sindh, Services General & Coordination Department (Cabinet Section) Minutes of the cabinet meeting. Dated: 11-07-2024

verified by the designated officer of the Implementing Partner (IP).

The Resettlement Policy Framework (RPF) prepared for the project details requirements for VLD and OA.

Institutional and Policy Framework for Environmental and Social Management

The key regulatory institutions for the management of environmental and social aspects of the proposed project is the Sindh Environmental Protection Agency (SEPA) and Sindh Environmental Protection Act 2014 (SEPA 2014) is the overarching legislation. SEPA 2014 is a comprehensive legislation and provides the legislative framework for protection, conservation, rehabilitation and improvement of the environment. The project will follow the requirements of SEPA 2014. The project has obtained environmental approval from the Sindh EPA. Other relevant laws and policies include Pakistan Climate Change Act (2017), National Disaster Management Act (2010), Sindh Environmental Protection Regulations (2021), Sindh Solid Waste Management Act (2021), Sindh Cultural Heritage (Preservation) Act (1994), Sindh Wildlife Protection, Preservation, Conservation and Management Act, 2020, The Sindh Occupational Safety and Health Act, 2017, The Sindh Prohibition of Employment of Children Act, 2017, The Protection Against Harassment of Women at the Workplace Act, 2010, and The Sindh Local Government (Amendment) Act, 2021. In addition to the national/provincial legal requirements, the project will also comply with the World Bank's Environmental and Social Framework (ESF) as well as the Environmental and Social Standards (ESSs) requirements.

Baseline Description

The Sindh Flood Emergency Housing Reconstruction Project (SFEHRP) area lies in 24 districts of Sindh. Geographically Sindh is the third largest province of Pakistan, stretching about 579 km from north to south and 442 km (extreme) or 281 km (average) from east to west, with an area of 140,915 square kilometers (54,408 square miles) of Pakistani territory. Sindh is bounded by the Thar Desert to the east, the Kirthar Mountains to the west, and the Arabian Sea in the south. In the center is a fertile plain along the Indus River. During floods 2022, all the 4 distinct parts of Sindh: (a) Kirthar range on the west; (b) a central alluvial plain bisected by the Indus River; (c) a desert belt in the east; and (d) the Indus delta in the South were affected by the floods. Sindh is divided into three climatic regions: Siro (the upper region, centered on Jacobabad, Kashmore, Kandhkot, Shadadkot, Larkana, Khairpur, Suukur, Ghotki), Wicholo (the middle region, centered on Hyderabad, Jamshoro, Dadu, Shaheed Benazirabad, Sangarh, Nausharo Feroze), and Lar (the lower region, centered on Karachi, Thatta & Badin). The province of Sindh is situated in a subtropical region; it is hot in the summer and cold in winter. The selected districts have a total population of 24,755,427. Approximately 51% (17,851,577) of the population of the selected districts live in rural areas whereas, the remaining 49% (6,891,905) live in urban areas with Tharparkar at 92% rural population topping the chart. Khairpur Mirs is the most urban of the selected districts but even there, only about 32% of the population resides in urban areas.

Hydrologically, the Indus River serves as the primary surface water source and plays a critical role in aquifer recharge. However, excessive reliance on canal irrigation has contributed to groundwater depletion, waterlogging, and salinity issues, especially in the Indus Plain.

Sindh's soils, primarily alluvial clays deposited by the Indus, are fertile yet fragile. They are prone to salinity and erosion, affecting both agriculture and infrastructure resilience. The nature of soil varies by region, requiring context-specific foundation depths for flood-resilient housing reconstruction.

Recent data from the 2017 Census indicates that 85.58% of households in Sindh have access to drinking water within premises, with tap water and electric/hand pumps being the most common sources. Sanitation coverage has improved, with 82.01% of households having access to latrines—up from 65.92% in 1998.

Water quality monitoring across districts reveals significant contamination, including the presence of E. coli and arsenic in several locations. Many areas exceed WHO and national standards for turbidity, TDS, and EC, indicating serious water safety concerns.

From a health perspective, Sindh has faced multiple disease outbreaks, with the 2022 floods

exacerbating conditions. Damage to over 500 health facilities, coupled with stagnant water and limited access to healthcare, has led to surges in malaria, diarrhea, dengue, measles, and severe malnutrition, especially among children.

Rural Sindh faces major challenges in sanitation and solid waste management. While 82% of households have access to latrines, many rely on basic or poorly maintained facilities, and open defecation still occurs in some areas. There is no structured fecal sludge management, and septic systems are often unsafe.

Solid waste management is largely absent, with most waste dumped in open areas, leading to environmental pollution and an increased risk of disease. The lack of formal collection systems, public awareness, and institutional support highlights the urgent need for improved, community-based sanitation and waste management solutions.

Environmental and Social Impacts and Mitigation Measures

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. Experience from the initial screening of the project indicates that the on-ground activities are likely to have low to moderate level environmental and social impacts.

The potential environmental and social impacts during the construction phase of the project included (a) dust generation (b) soil erosion and degradation (c) risk of surface and ground water contamination (d) soil contamination (e) waste generation (f) noise generation (g) site clearance and impact on flora/fauna (h) occupational health and safety (i) community health and safety issues (j) influx of labor and working conditions (k) child labor (l) GBV/SEA/SH (m) land ownership (n) exclusion risks to women, marginalized and disadvantaged group (o) elite capture and (p) resettlement issues. Mitigation measures are proposed to tackle these environmental and social impacts during the construction phase of the project. These mitigation measures will be implemented at the construction sites.

WASH/Settlement Improvement

The WASH/Social infrastructure will be implemented in selected settlements predominantly having up to 150 households and in a few cases up to 220 households. The civil works are of small scale, site-specific, and take place at different locations. Keeping in view the scale of works, no significant environmental and social impacts are anticipated. However, the potential environmental and social impacts of the initiative will be identified during the detailed topographic survey of potential settlements.

Once the sub-project locations and their respective scales and scopes have been identified, Environmental and Social Screening checklists (ESSC) will be completed for each sub-project. ESSC will be completed based on subproject site visits, discussions with local environmental protection authorities and other relevant stakeholders as necessary.

Stakeholder Consultations

For housing initiative initial stakeholder consultations were carried out from 13th May 2023 to 26th May 2023 with various stakeholders including donors, line departments, and implementing partners, and the potential beneficiary and non-beneficiary communities in flood affected areas. Apart from that, stakeholders' consultations are ongoing throughout the project implementation. This engagement aimed to ascertain institutional needs, inform stakeholders about planned activities, improve project design, create synergies, and enhance the socio-environmental sustainability of the project activities across different components. In addition to that Sindh People's Housing for Flood Affectees (SPHF) organized a coordination meeting in April 2023 to share objectives of SPHF and the project with partner organization for their clear understanding of the project. The main concerns raised during these consultations were related to the (i) problems in account opening (ii) banking procedures (iii) beneficiaries not fully aware of access to the funds and other project requirements. The project teams provided detailed responses to the communities during these consultation meetings and made part of this report. A stand-alone Stakeholder Engagement Plan (SEP) has been prepared, which includes a

communications strategy to inform key stakeholders, including the affected communities, to effectively understand, engage in and support the development of the project.

For WASH/Settlement Improvement initiative stakeholder's consultations were carried out in November – December 2023, and June 2024. The main areas of discussions during the consultation included but not limited to program implementation strategy, capacity assessment of implementing partners, success models, lessons learnt, and recommendations for a sustainable O&M regime.

Methodology for ESMF

The sequence of various activities to be followed for the environmental and social management of the proposed activities.

- Screening of proposed subprojects before the start of construction activities.
- E&S aspects have been considered during the preparation of Project Design Document of WASH and allied facilities.
- Preparation of site specific EHSMP. The ESMP will comprise an Occupational Health and Safety Plan (OHS), Community Health and Safety Plan (CHS), Traffic Management Plan (TMP), and Waste Management Plan (WMP).
- Consultation with the stakeholders including affected communities during the screening and project implementation. Disclosure of ESMF, E&S screening reports, and ESMPs on the SPHF Website.
- Submission of settlement level ESSCs/ESMPs for housing and WASH/Settlement Improvement initiative after approval from SPHF to the World Bank for clearance.
- Inclusion of environmental and social provisions as part of the IP's Contracts for effective implementation and monitoring at construction sites.
- Implementation of ESMF, Screening Checklist, ESMPs for WASH, and /ESCoPs for housing by implementing partners during the construction phase.

Site specific ESMPs will be prepared and part of the PDD and subsequent submission of the same for World Bank for clearance post approval by SPHF.

Institutional Arrangements

SPHF being the implementing agency will be responsible for managing the overall implementation of the project, including this ESMF and site-specific instruments. The Environmental Specialist, Social Specialists and Gender Specialist will ensure plans and procedures mentioned in ESMF are being followed and implemented during project life cycle.

Implementing Partners (IPs): to support Environmental Specialist, Social Specialists and Gender Specialist in implementing, monitoring and reporting on the ESMF, conduct screening/site specific instrument development of sub-projects, comply with ESMF, RPF, LMP, SEP and GRM.

Beneficiaries: Beneficiaries will construct their houses as per the resilient housing design and minimum construction guideline provided by the SPHF. For WASH/Settlement improvement CIs/VOs will be responsible for implementation as per the approved project design document with technical support from engineering consultants, implementing partners and SPHF.

Third Party Monitoring Firm: A third-party firm will be hired to monitor compliance, including compliance with ESMF and other social and environmental management instruments. This would be done on a random and continual basis throughout the Project duration. The monitoring system will also be linked to the payment mechanism to ensure effective resolution of issues prior to payments to the beneficiaries.

WASH Engineering Consultants: WASH engineering consultants will be responsible for preparing site-specific E&S instruments and undertaking environmental and social studies (including but not limited to Land Acquisition through voluntary donation only, and resettlement plan, health and safety management plans, gender action plans) along with supporting preparation and review of Project Design Documents (PDDs) while addressing environmental & social concerns based on environmental, health and safety management plans.

Grievance Redressal Mechanism (GRM)

An accessible GRM for the beneficiaries and staff is made available publicly to receive and facilitate resolution of concerns and grievances in relation to the project. The main objective of GRM is to assist in resolving complaints and grievances in a timely, effective and efficient manner that satisfies all parties involved. Specifically, it provides a transparent and credible process for fair, effective and lasting outcomes.

For SEA/SH and GBV-related matters, SPHF and IPs staff responsible for receiving complaints will be provided training on handling complaints regarding GBV, VAC and SEA/SH from a certified and reputable organization/firm. The project will also draw up a list of established service providers who can provide support to GBV, SEA/SH and VAC survivors and all relevant cases will be referred accordingly.

As part of the GRM, stakeholders or their representatives (grievance reporters) may communicate their grievances verbally or in writing using the appropriate communication channels of GRM document. However, given this Project's scale and potential impact on the affected communities, grievances may come from several official and unofficial channels.

Whatever the case, all persons responsible for implementing the GRM (must record grievances expressed through appropriate channels, either officially or unofficially, into the GMIS grievance redress web portal upon receiving them. The system will disallow the entry of complaints that do not carry adequate contact information (i.e., complete phone number, e-mail address, and mailing address) unless the reporter wishes to remain anonymous. However, in such cases, the grievance reporter must provide locational information to enable authentication and follow-up for further details on required data fields. The VRC may maintain a physical register, called a Grievance Log until they can either make the entry themselves or contact the relevant FGRO. Once entered, the system will auto-generate a unique Grievance Token Number (GTN) for each grievance record received. The system will automatically transmit this GTN and an acknowledgement to the grievance reporter on the communication medium stated at entry.

Cost of ESMF

The cost of ESMF (Parent Project) implementation is PKR 190.81 million (~USD 0.68 m). This includes the cost of training to the implementing partners and the cost of provision of PPEs to the beneficiaries at the settlement level. For AF 1.6 million has been added to the total cost, totaling up to 191.3 million (~USD 0.67m).

1 INTRODUCTION

As part of a consolidated effort for emergency rehabilitation of the flood affectees, the Government of Sindh (GoS) is implementing the “Sindh Floods Emergency Housing Reconstruction Project” (SFEHRP) with World Bank (WB) funding. As part of this, a separate company under Section 42 has been established for the design and execution of the program (namely, the Sindh Peoples Housing for Flood Affectees – SPHF), which will also serve as the Project Implementation Unit (PIU) for this project.

This ESMF document has been prepared in compliance with relevant national and provincial laws and regulations, and the World Bank’s Environmental and Social Framework (ESF) policy. The project encourages in-situ reconstruction, WASH/Settlement Improvement and no involuntary settlement will be required, whereas the people who willingly want to reconstruct their house to a new location will be facilitated. Hence, the project does not envisage any major resettlement. For the cases of minor resettlement, a rapid assessment would be carried out to safeguard the households who choose to resettle voluntarily to a new place away from their old location. In such cases, the assessment will also specify the social safeguards provided for the relocated families.

1.1 Project Background

Pakistan experienced heavy monsoon rains over June-August 2022 leading to catastrophic and unprecedented flooding. The 2022 floods had enormous human and economic impacts. Over 33 million people are affected; and about 2.2 million houses are reported to have been damaged or destroyed; 1.2 million animals have perished, while over 13,000 km of roads are reported to have been affected. Economic impacts are concentrated in the agricultural sector, with over 3.6 million acres of cultivated land destroyed, comprising 30 percent of total agricultural land, resulting in significant losses to cotton, date, wheat, and rice crops. Flooding will impose a lingering drag on output through infrastructure damage, disruption to crop cycles, possible financial sector impacts (microfinance institutions report major solvency problems), and loss of human capital. Preliminary estimates suggest that as a direct consequence of the floods, the national poverty rate will increase by 4.0 percentage points, pushing 9 million people into poverty.

The Government of Sindh launched house to house physical survey (Joint Survey) with collaboration of Federal and Provincial Agencies. This recently completed joint survey estimates that about 2.1 million houses have been damaged (1.7 million fully damaged and 0.35 million partially damaged houses) in the province. Rural houses were particularly impacted, which accounts for more than 83 percent of the total housing damage. The extent of damage incurred to katcha (mud) houses has been higher than that of pucca (brick/stone) houses. As per the PDNA report, housing damages are estimated at about US\$5.5 billion, mostly affecting Sindh. The actual cost of housing damage in Sindh is higher than PDNA estimates (2.1 million vs 1.7 million houses), given that 0.35 million more houses have been ascertained to be damaged as per the recently completed joint survey. The devastating floods also significantly damaged the infrastructure of cities like K. N. Shah, Thari Mirwah, Kot Diji, etc.²

The proposed project contributes to the rehabilitation and the resilience building of flood-affected communities in Sindh. The project will provide housing subsidy grants targeted at a subset of the affected population. The technical assistance component would benefit the entire province by supporting the design of the overall housing reconstruction WASH/Settlement Improvement program of the GoS for 2022 floods rehabilitation and reconstruction. Any additional funding channeled for housing reconstruction and WASH/Settlement Improvement in Sindh will be aligned with the policy, standards, and principles established under this project.

The Project has specific benefits for people living in the geographical locations served through the housing subsidy grants for reconstruction/restoration of destroyed houses. Through an owner-driven approach, approximately 778,000 multi-hazard resilient core housing units and environment & social responsive infrastructure such as WASH/Settlement Improvement etc. will be supported by the WB.

Moreover, an estimated 778,000 beneficiaries will be trained in multi-hazard resilient construction

²<https://pnd.sindh.gov.pk/storage/resourcePage/6HlIheXyEgXgsTGiYMYVR2TJ1NZAzS9eckS5GIlZ1.pdf>

techniques through capacity-building activities supported by the project. This will improve the long-term resilience of communities in Sindh by improving the construction designs and practices of the housing sector and WASH/Settlement Improvement in view of challenges posed by climate change.

1.2 Project Overview

The parent project aims to deliver owner-driven, multi-hazard resilient reconstruction of core housing units affected by the 2022 floods in selected districts of Sindh. The project design was guided by the following set of principles based on the Bank's experience in post-disaster housing reconstruction programs and understanding of the complex nature of the housing sector, particularly in the Sindh province: (i) undertake an owner-driven housing reconstruction and restoration; (ii) provide technical assistance and trainings; (iii) provide housing subsidy cash grants to replace damaged houses with new core units built to multi-hazard resilient standards; (iv) rebuild in situ as far as possible; (v) avoid reconstruction or restoration in high risk zones; and (vi) rebuild with easily accessible materials and familiar methods.

The Additional Financing (AF) is intended to scale up the housing reconstruction in Sindh Province, covering additional eligible beneficiaries whose homes were affected by the 2022 floods based on the Detailed Damage Re-Verification (DAV) conducted by the Government of Sindh (GoS).

AF is furthermore needed to provide access to safely managed WASH services. This will include the provision of clean drinking water, safe fecal waste disposal, and behavior change for hygienic practices that are critical for reducing stunting under Component 1 in the parent project. The infrastructure designs for WASH will address hydrological and spatial variations across WASH settlements to cover approximately 1.16 million people. All the WASH investments supported by SFEHRP will ensure a focus on: (i) water quality management (including regular testing) to ensure E.coli free drinking water; (ii) comprehensive fecal waste management to reduce total fecal burden on communities; (iii) preference for sustainable water sources, which could be one or a combination of localized groundwater resources, groundwater pumped from banks of irrigation canals, surface water, and harvested rainwater; and (iv) a clearly defined relationship between beneficiary communities and a designated institution to cover operations and maintenance (O&M) functions of WASH services and ensure *modus operandi* to backstop dysfunctionality.

WASH/Settlement Improvement interventions will be implemented through small-scale, site-specific civil works across rural settlements in Sindh, minimizing the likelihood of significant environmental or social impacts. EA Consulting has been engaged to provide resident supervision for 50 prototype WASH and Settlement Improvement interventions, which will serve as reference models for scaling. Upon successful evaluation of these prototypes, the approved designs will be replicated by the Implementation Partners. EA Consulting will also ensure top-level technical oversight in 1,450 settlements to monitor compliance with quality, environmental, and social standards, thereby supporting sustainable, safe, and community-responsive WASH improvements.

The proposed project will have 3 components listed below:

- Component 1: Housing Reconstruction Grants
 - Subcomponent 1.1: Housing Reconstruction
 - Subcomponent 1.2: WASH/Settlement Improvement
- Component 2: Institutional Strengthening and Technical Assistance
- Component 3: Project Management and Implementation Support

The project will be executed with the support of five (5) Implementing partners procured for the project. Project details are given in Chapter 2.

1.3 Environmental and Social Assessment of the Project

The project will follow the World Bank Environmental and Social Framework (ESF) and its Environmental and Social Standards (ESSs). Based on ESSs, the environmental and social risk of the project is categorized as "Substantial".

The rating is driven by the fragile environment created by the large-scale disaster which has caused social and environmental damage as well as limited experience of institutions in implementing ESF. Although the on-ground activities are likely to have low to moderate level impacts both socially and environmentally. However, considering the scale of the project and number of entities involved in implementation and potential E&S capacity related limitations, the overall rating of the project remains substantial. Furthermore, the actual construction will be performed by the beneficiaries thereby increasing the OHS and CHS risks. This increases the cumulative risk not only in terms of environmental and social implementation but monitoring, reporting and remedial activities as well. The ESMF has been prepared considering the “substantial” risk rating given above.

Environmental Risks

As Component 1 includes reconstruction of units that are spread over large geographical areas the associated environmental impacts such as construction waste management, dust generation, impacts on flora & fauna, community health and safety, occupational health and safety and heritage sites (if any) can be mitigated by the implementation of appropriate mitigation measures. For WASH/Settlement Improvement the following environmental impacts are anticipated but not limited to: soil erosion, noise, air quality, solid waste generation, health and safety risks, impacts on geological factors, runoff, odour, and pollution, as well as the protection of flora and fauna and groundwater contamination. Additionally, due to the increase in demand for construction material it is expected that there will be pressure on the use of natural resources, but it will be managed through phased construction in each settlement. However, the environmental risks are not likely to be significant in nature, and the risks and impacts are expected to be reversible and site specific without the likelihood of impacts going beyond the action footprint of the project.

Social Risks:

The project showcases a profound commitment to delivering substantial social benefits to communities affected by floods and seeks to address various challenges associated with reconstruction and rehabilitation. The following key aspects highlight the project's social focus:

Economic Relief for Affected Households: The project's implementation of grants under component 1 will play a pivotal role in alleviating the economic burden faced by families with completely or partially damaged houses due to floods. By providing financial assistance, the project aims to facilitate the rebuilding process and support affected households in their recovery journey.

In-situ Reconstruction and Land Utilization: The decision to prioritize in-situ reconstruction of houses, wherever possible, is a socially responsible approach. This choice not only fosters the preservation of community ties but also eliminates the need for land acquisition, mitigating potential disputes and ensuring that residents can continue living in their familiar surroundings.

Ethical Relocation Measures: In instances where relocation of houses or settlements is required, the project demonstrates a commitment to ethical practices by giving preference to government-owned land for the new sites. This approach safeguards communities from arbitrary displacements and fosters trust between the government and the affected populations.

Fair Land Acquisition Policies: For cases where private land acquisition becomes necessary, the project diligently adheres to applicable Bank policies. This ensures that the rights of landowners are protected, and compensation is provided fairly, thus promoting social equity and justice. Following the Cabinet's decisions to allow use of the private land, the project pursues either a Voluntary Land Donation or long-term Occupancy Agreement. Activities on private land cannot commence until the land ownership question is properly resolved. A separate Resettlement Policy Framework have been prepared for the project. It was further updated to reflect the AF and modified approach to the private lands.

Addressing Vulnerabilities: Recognizing the heightened risks of sexual exploitation and abuse (SEA) as well as sexual harassment (SH), particularly among women and children from minority communities living in insecure environments, the project incorporates a comprehensive strategy to prevent and address such risks during civil works and Cash for Work (CfW) activities. By focusing on privacy and

safe sanitation facilities, the project aims to create an inclusive and safe environment for all beneficiaries. The project also adheres to principles of universal access and provision of relevant and reasonable design accommodations for housing construction (through retrofitting) and WASH initiative.

Rigorous Risk Assessment: The project displays a strong commitment to safeguarding vulnerable populations by employing social protection and civil works risk screening tools for initial risk assessment. By identifying potential vulnerabilities and challenges, the project can better tailor its interventions to meet the specific needs of each community.

Both social protection and civil works risk screening tools were used for initial risk assessment and to determine the substantial risk rating.

1.4 Environmental and Social Documents

In compliance with the national/provincial regulations and WB ESF, the following specific environmental and social documents were prepared for the parent project and have been updated after incorporating activities under additional financing.

Table 1.1: Environment and Social Instruments		
Document	Objective	Status
Environmental and Social Management Framework	To address the generic environmental and social impacts of the proposed project this document has been in compliance with relevant national and provincial laws and regulations, and the World Bank's ESF.	Approved
Stakeholder Engagement Plan	To identify project stakeholders and describe the various modes of stakeholder engagement including consultations and grievance redress mechanism.	Approved
Labor Management Procedures	To describe assessment of potential labor related risks, overview of labor legislation, staff responsibility, policies and procedures.	Approved
Environmental & Social Commitment Plan	To summarize the various actions taken and responsibilities to be fulfilled for environmental and social aspects in compliance with WB ESF.	Approved
Environmental & Social Code of Practices (ESCoPs) for Housing and WASH/Settlement Improvement	To serve as minimum standards during the reconstruction phase of the project, and pre-construction, construction and operations phase for WASH/Settlement Improvement, addressing potential environmental and social impacts and will be made part of the ESMF. (Attached as annex 1 and 2 respectively).	Approved
Environmental & Social Screening Checklist	To identify appropriate E&S measures and instruments for mitigating and monitoring environmental and social risks/impacts associated with each subproject on settlement level.	Approved
Resettlement Framework	The project encourages the in-situ reconstruction, and no involuntary settlement will be required, whereas the people who willingly want to reconstruct their house to a new location will be facilitated. If there are any small-scale voluntary resettlement, it will be handled by a rapid assessment in line with the RFP for each case to safeguard the households who choose to resettle voluntarily to a new place away from their old location. The assessment will also specify the social safeguards provided for the relocated families. The RPF also detail the procedures in case project activities occur on private land.	Approved

1.5 Objectives of the ESMF

The proposed project is likely to have minor environmental and social impacts. This ESMF document has been prepared to identify generic environmental and social impacts and to formulate a framework for future detailed assessments to be carried out once the nature and location of subprojects are fully

determined.

The ESMF has been developed to:

- Integrate the environmental and social concerns into the identification, design, and implementation of all the Project interventions in order to ensure that those are environmentally and socially sustainable;
- Ensure all relevant environmental and social issues are mainstreamed into the design and implementation of the subprojects;
- Consider in an integrated manner the generic environmental and social risk, benefits and impacts of the project and identify generic measures to avoid, minimize and manage risks and impacts while enhancing benefits;
- Provide guidance to prepare Environmental and Social Instruments for the subprojects in compliance with the government's policies, acts, and rules as well as with the World Bank ESF.
- To establish clear procedures and methodologies for environmental and social planning, assessment, review, approval and implementation of subprojects to be financed under the Project;
- To develop methodology for screening of subprojects and to recommend appropriate E&S instruments for mitigating and monitoring of environmental, social, and resettlement risks/impacts associated with each subproject;
- To specify appropriate roles and responsibilities of all implementing agencies and outline the necessary reporting procedures for managing and monitoring environmental and social concerns related to subprojects;
- To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF.

This ESMF updates and supersedes the version disclosed in August 2023, reflecting the fulfillment of commitments under the Additional Financing as outlined in the Environmental and Social Commitment Plan (ESCP). The scope of this document has been expanded to include (i) integration of WASH-specific environmental and social mitigation measures; (ii) beneficiary selection criteria for WASH; (iii) procedures addressing exclusion errors; and (iv) alignment with revised Program Implementation Guidelines

1.6 Environmental and Social Methodology

The methodology followed in preparing the present ESMF consists of the following steps:

1.6.1 Review of the relevant Legislation, Policies and Guidelines

In order to determine the policy, legal and institutional environment for the project, the applicable policies, guidelines, and legislation concerning the project's environmental and social aspects were reviewed. As the project is to be implemented in twenty-four districts of Sindh (nineteen districts to be funded by the World Bank), the following policies and legislations were reviewed:

- Policies and legislations of Government of Pakistan, and Government of Sindh.
- The World Bank Standards, Guidelines, Policies and Directives.

The present ESMF has been prepared following the requirements defined in the WB Environmental and Social Framework (ESF).

During the present study, the above legislations, regulations, and framework were studied in depth to determine their relevance and applicability to the proposed project, in addition to determining and specifying actions to be taken by the project proponents / implementing partners to fulfill the associated requirements. Further details of legislation, regulations, and framework are presented later in the document.

1.6.2 Review of Secondary Literature

Under this task, relevant published and unpublished reports and documents were identified and reviewed. These include among others similar environmental assessment reports particularly of donor-funded projects, project documents, environmental and social management frameworks, environmental monitoring reports, news articles, and research reports. The primary objective of this task was to determine the potentially negative environmental and social impacts of similar projects and the associated mitigation/management strategies that were proposed to address those impacts. Secondary data was also collected where it is applicable to obtain baseline conditions of the project area and its surroundings.

1.6.3 Stakeholder Engagement

For housing initiative stakeholder consultations were carried out from 13th May 2023 to 26th May 2023 with various stakeholders including donors, line departments, and implementing partners, and the potential beneficiary and non-beneficiary communities in flood affected areas. This engagement aimed to ascertain institutional needs, inform stakeholders about planned activities, improve project design, create synergies, and enhance the socio-environmental sustainability of the project activities across different components. In addition to that SPHF organized a coordination meeting in April 2023 to share objectives of SPHF and the project with partner organization for their clear understanding of the project.

For WASH/Settlement Improvement initiative stakeholder's consultations were carried out in November – December 2023, and June 2024. The main areas of discussions during the consultation included but not limited to project implementation strategy, capacity assessment of implementing partners, success models, lessons learnt, and recommendations for a sustainable O&M regime.

1.6.4 Collection of Baseline Data

Baseline data was collected for housing and WASH and compiled, in order to develop an initial baseline of the project area's physical, biological, and socio-economic environment. For this purpose, mostly secondary sources were used to the extent possible.

1.6.5 Environmental and Social Impact Assessment

After the completion of baseline data impact assessment was carried out to determine the potentially negative but generic impacts of the proposed project activities and generic mitigation measures were identified to address the potential impacts. In addition to the above, screening criteria, beneficiary selection criteria, negative list were developed to determine the level and extent of environmental assessment to be carried out at settlement level.

1.7 Sequence of E&S Activities

The sequence of various activities to be followed for the environmental and social management of the proposed activities.

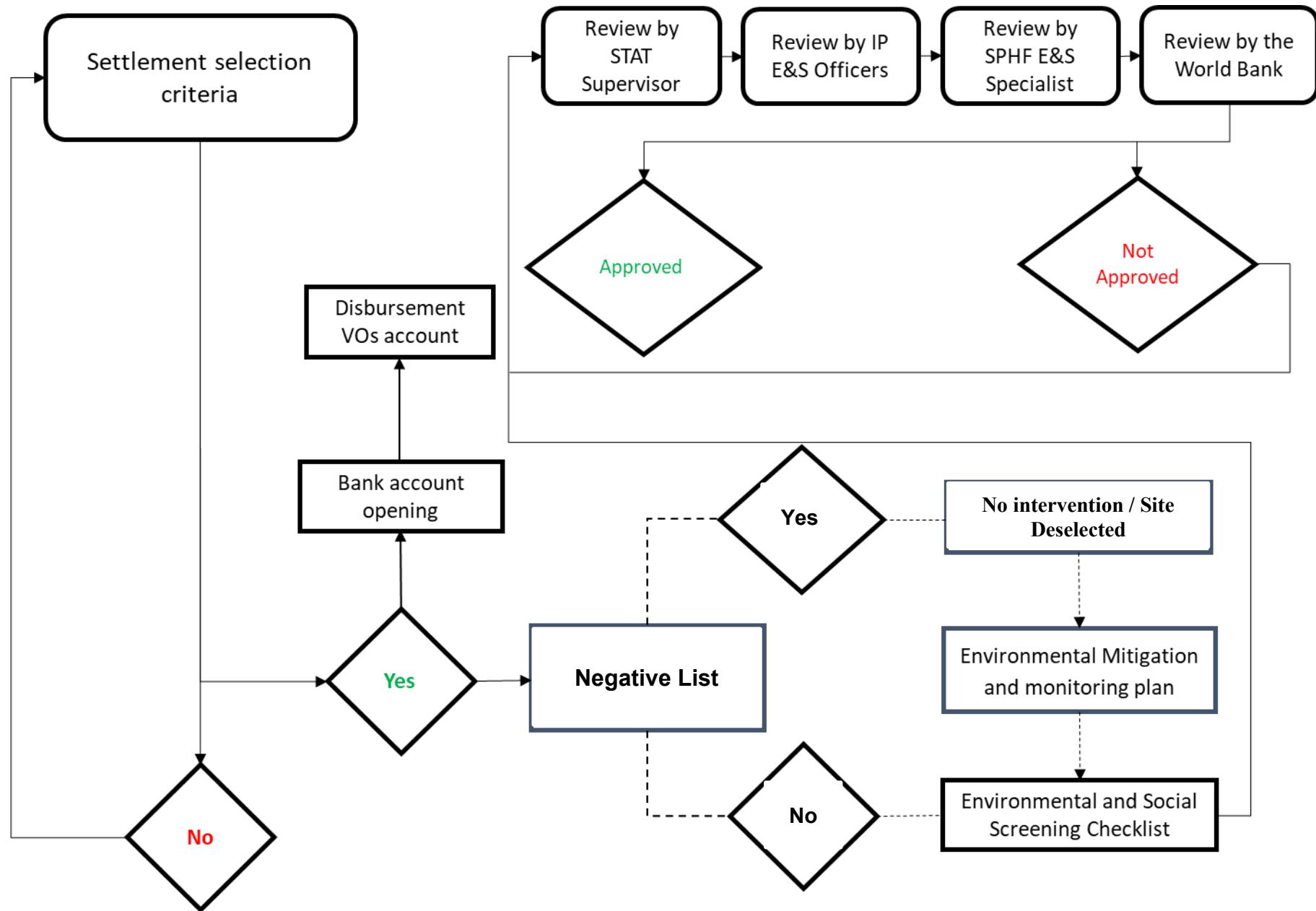
Step	Activity	Description of the Activity	Timing/Status	Responsibility
1	Screening against the negative/positive list (Annex 6)	Screening is conducted during subproject identification to ensure early assessment and management of environmental and social risks, supporting optimal site selection and design decisions.	Before selection of subproject	SPHF/ Implementing Partners
2	Environmental and Social Management Framework	E&S Screening of proposed sub-projects to assess the environmental and social requirements.	Before starting the reconstruction activity	IPs
3	ESCOPs and related E&S considerations, such as ESMPs,	ESCOPs and related E&S aspects are considered (ESMPs) during the preparation of the design of resilient housing structures and the	During the design stage	SPHF

	in the project design.	WASH/Settlement Improvement initiative, respectively		
4.	Preparation of EHSMP and Submission of EHSMP inclusive PDD to the World Bank for clearance.	Environmental, Health and Safety Management Plan will be prepared for each site and will be made part of each PDD. EHSMP will contain OHS Plan, CHS plan, WMP and TMP. Each PDD will be submitted to the WB for clearance.	Design stage	Engineering Consultants/Implementing Partner
5	Consultations and Disclosure	Consultation with the stakeholders including affected communities during the screening and project implementation Disclosure of ESMF and E&S screening reports on the SPHF Website	During project implementation After completion of E&S Screening	SPHF and IPs
6	Submission of settlement level screening checklist to the World Bank for clearance	Submission of SPHF approved settlement level E&S Checklist to the WB	Before starting construction activity	SPHF
7	Environmental and social provisions for IP's Contracts.	Training of staff Implementation of E&S Instruments	Signing of contract	SPHF and Implementing Partners
8	Signing of ToP for housing and WASH infrastructure. MOU between the beneficiary constructing the house and SPHF	ToPs are signed with the VRCs for housing and Sindh Peoples Village Organizations (SPVOs) for WASH MoU is signed before housing reconstruction with the beneficiary	Signing of ToP Signing of MOU	SPHF and VRC/SPVOs SPHF and Beneficiary
9	Implementation of ESMF, Screening and monitoring Checklist/ ESCoPs and EHSMP	IP will implement ESMF, Screening and monitoring Checklists, ESCoPs and ESMP	During Construction	Implementing Partners and SPHF

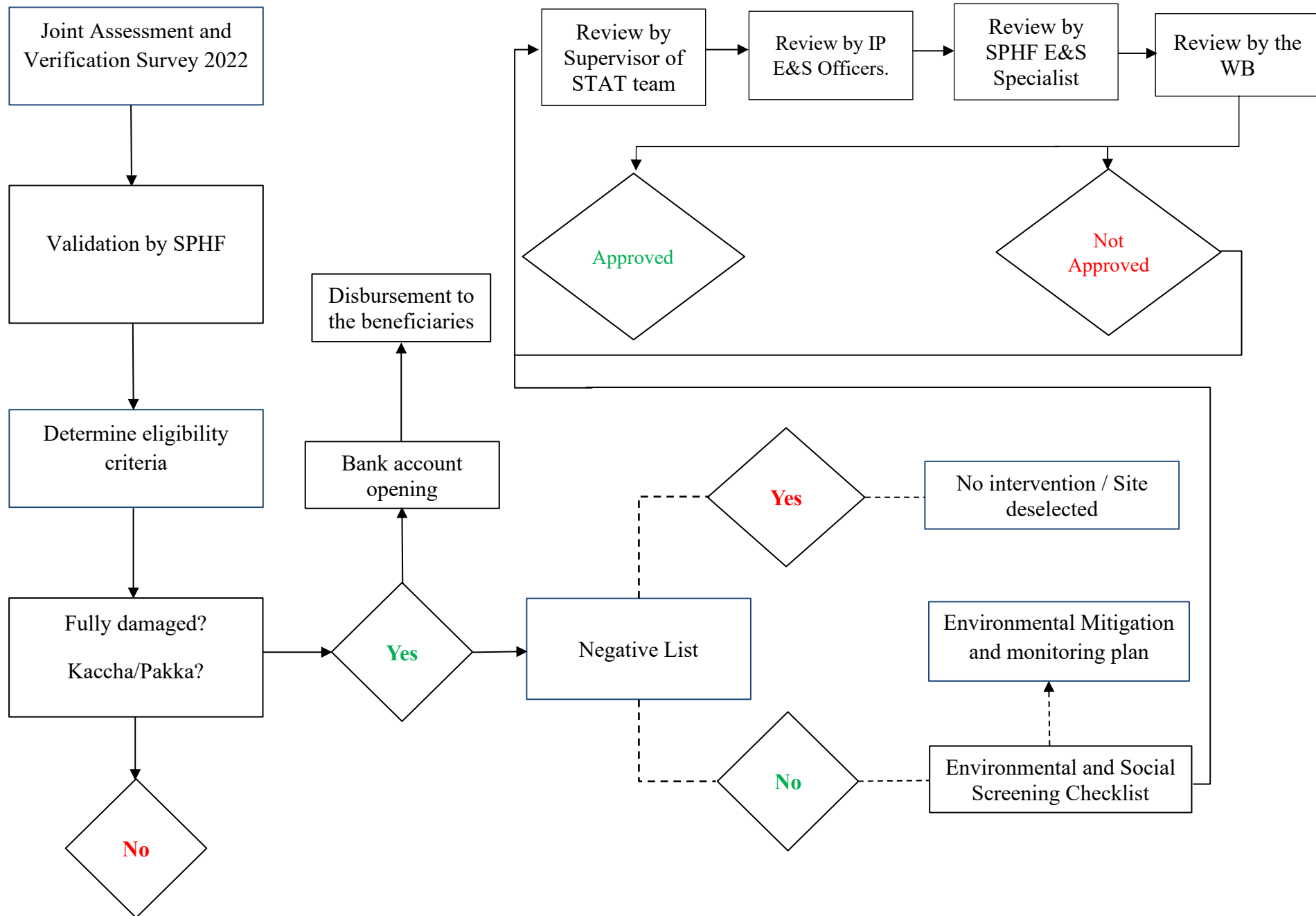
1.7.1 Screening

The project has developed a negative and positive list for the environmental and social management framework which is being followed during project implementation. The project will not be implemented in the areas which falls under the negative list (negative and positive lists are attached as Annexure 6). The Environmental and Social Screening checklist was developed to assess the environmental and social requirements of the sub projects under SFEHRP. Screening is being done as per the below given procedure. E&S Screening Checklist for housing is attached as Annex 9 and E&S Screening Checklist for WASH is attached as Annex 10.

Environmental & Social Screening for WASH



Environmental & Social Screening for Housing



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1.7.2 Environment & Social Consideration in the Design

Environmental and social codes of practices for the reconstruction of resilient houses and WASH under SFEHRP has been integrated into the planning, design, and implementation of projects to ensure that they are environmentally responsible, socially inclusive, and contribute to the long-term resilience of affected communities.

1.7.3 Consultation and disclosure

Stakeholder's consultation will be carried out during all phases of the project in accordance with the requirement and guidance provided in the SEP to improve sub project design and implementation and increase project sustainability and ownership.

The primary stakeholders include the intended beneficiaries and people affected by the proposed activities. The secondary stakeholders are implementing departments and agencies. Stakeholder participation are central to design and implementation of the project and provide for information sharing, consultation and collaboration measures.

The Environmental & Social management instruments including Environment and Social Management Framework, Labor Management Procedures, Gender Action Plan, Grievance Redressal Mechanism and Stakeholder's Engagement Plan and E&S screening checklists will be disclosed on SPHF's website after approval from the WB.

1.7.4 Submission of Screening Checklist

SPHF acquired formal NOC (Annexure – 3) from Sindh EPA before the start of housing reconstruction activities. The project does not fall into any schedule of EIA/IEE Regulation of Sindh 2021. The sample number of screening checklists filled by the IPs and approved by SPHF for each settlement will be submitted to the WB for clearance and approval before the start of reconstruction activity.

1.7.5 Environmental and Social Management Plan (ESMP) for WASH

For each sub-project or settlement, the Engineering Consultants and Implementing Partners will prepare a site-specific Environmental, Health and Safety Management Plan (EHSMP) as part of the Project Design Document (PDD). The EHSMP will be tailored to the specific conditions of the site and will include a concise Occupational and Community Health and Safety Management Plan (OCHSMP), a Waste Management Plan (WMP), and, where required, a Traffic Management Plan (TMP). These plans will collectively define the procedures, mitigation measures, and monitoring requirements necessary to manage environmental and safety risks during the implementation of sub-project activities.

To ensure proactive risk management, a structured process of Job Safety Analysis (JSA) and Hazard Identification and Risk Assessment (HIRA) will be implemented. Prior to the commencement of each construction activity, such as excavation for pipelines, excavation for Anaerobic Baffled Reactors (ABRs), construction of toilets, or work at height, a task-specific JSA will be conducted. This process will systematically identify potential hazards, assess associated risks, and define appropriate mitigation measures to be adopted on-site.

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The JSA forms (attached as Annex 15) will be completed on a daily basis by the site engineer and supervisor before initiating any activity. This daily exercise will serve as a critical tool for continuous monitoring and control, ensuring that risks are minimized and that workers and surrounding communities are protected from potential incidents. Through this approach, the project will maintain a strong emphasis on preventive safety management and compliance with applicable Environmental and Social Standards

1.8 ESMF Structure

- **Executive Summary:** This provides a general summary of the ESMF contents and key findings, in a vocabulary that is easily understood by the public at large. It summarizes all aspects of the report.
- **Chapter 1 – Introduction:** This Chapter describes the ESMF purpose, objectives, principles and methodology. This Chapter introduces SPHF and provides other relevant information. The layout of ESMF is also described in it to facilitate its reading.
- **Chapter 2 - Project Description:** This Chapter provides a simplified description of the proposed Project. The project description includes background and purpose of the project, components of the project.
- **Chapter 3 - Environmental and Social Management Requirement:** This Chapter describes the relevant national/provincial environmental and social legal requirements as indicated in various legislation, regulations and guidelines relevant to the project and ESMF as well as the World Bank's ESF applicable to the project and its subprojects. The Chapter states how such requirements will be complied with during various phases of the project.
- **Chapter 4 - Environmental and Socio-Economic Characteristics:** This Chapter covers the dimensions of the study area and reviews relevant physical, biological, land-use, and socioeconomic conditions. This Chapter has been compiled on the basis of baseline data collection described in Section 1.6.3.
- **Chapter 5 – Environmental & Social Risks and Impacts:** This Chapter describes the generic E&S impacts to be potentially caused by the proposed project along with the associated generic mitigation measures to address these impacts.
- **Chapter 6 – Stakeholder Consultations:** This Chapter summarizes the stakeholder engagement activities carried out so far in addition to presenting a summary of the stakeholder consultations carried out.
- **Chapter 7 – Environmental & Social Management:** This Chapter describes the E&S management framework including institutional arrangements, monitoring framework and training and capacity building plan.
- **Chapter 8 - Grievance Redress Mechanism (GRM):** This Chapter describes the GRM proposed for the project in order to address the complaints and grievances raised by project affected persons and other stakeholders.
- **Chapter 9-** ESMF budget is presented in Chapter 9.

1 PROJECT DESCRIPTION

1.1 Sindh Flood Emergency Housing Reconstruction Project (SFEHRP)

In the aftermath of exceptionally heavy monsoon rains in June 2022 GoS has initiated Sindh Flood Emergency Housing Reconstruction Project.

Under this Project, the Govt. of Sindh will provide Ex-gratia financial assistance of PKR 300,000/- for fully destroyed houses to the affected people whose houses have been fully damaged during the recent unprecedented rains in various districts of Sindh.

Moreover, WASH/Settlement Improvement will be implemented under the same project providing clean drinking water, safe fecal waste disposal, behavior change for hygienic practices that are critical for reducing stunting under Component 1 in the parent project. The strategy is fully aligned with the World Bank supported Punjab Rural Sustainable Water Supply and Sanitation Project (PRSWSSP, 2021-2028), and the (forthcoming) Pakistan CPF expected outcome to reduce child stunting. The infrastructure designs for WASH will address hydrological and spatial variations across settlements.

Collectively this project will cover 24 districts (list attached as Annex 4).

1.2 SFEHRP Objectives

The SFEHRP project aims to support (i) Housing subsidy grants for beneficiary-driven reconstruction of multi-hazard resilient core housing units; (ii) Provision of water, sanitation, and hygiene (WASH) facilities and services as well as settlement level improvements; (iii) development of communities on multi-hazard resilient construction practices; and (iii) assistance to Government of Sindh for the design, implementation, and management of the housing reconstruction program.

The project will measure progress towards the PDO with the following indicators:

- Core housing units reconstructed/restored to multi-hazard resilient standards (of which at least 25 percent are female-headed households and households with vulnerable women) and WASH/Settlement improvement initiative in selected settlements
- Beneficiaries that have received project trainings for multi-hazard resilient reconstruction practices (of which 15 percent are female).
- Households reporting satisfaction with project interventions.
- Infrastructure for safe drinking water, improved sanitation, and basic hygiene facilities in flood-affected areas are provided to target communities.
- Community Institutions (CIs) strengthen planning, implementation, and operation & maintenance (O&M) of WASH services.
- Improved public health outcomes and reduce waterborne diseases particularly among women and children including reducing child stunting.
- Increased resilience of communities against climate risks such as floods, droughts, and heatwaves through sustainable infrastructure and behavior change.

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1.3 Project Principles

Given the complex nature of the housing sector, particularly in the Sindh province, the project design is guided by the following set of principles based on the Bank's experience

- Owner-driven rebuilding with financial assistance through cash grants as a housing subsidy for constructing a core unit – a mode well-suited to large-scale post-disaster emergency reconstruction.
- Provide technical assistance and training for rebuilding to multi-hazard resilient standards.
- Housing cash grants to replace/restore damaged houses with a new core unit built/restored to multi-hazard resilient standards. The extensive damage to the housing sector was largely due to the poor quality of construction. The reconstruction effort needs to ensure a focus on resilient materials and construction techniques to provide protection from future disasters. Each core unit will be equipped with a water collection system, a twin pit latrine, and solar power solutions, wherever possible.
- Rebuild in situ, except for rural landless or those without land title, as far as possible, to minimize resistance to relocation and the need to ensure provision of livelihood opportunities in new locations, including provisions of physical and social infrastructure.
- Rebuild with easily accessible materials and familiar methods reflecting cultural preferences. The multi-hazard resilient standards and designs must relate to the use of economical and readily available materials, familiar modes of construction, and cultural preferences in design for sustainability.
- Offer an equitable assistance package for a core unit that is not compensation-based. Compensating households proportionate to the replacement value of their loss would increase the government's liability significantly and encourage litigation. The project will refer to the Sindh R&R Policy, for beneficiaries without land title [these provisions are consistent with the Sindh Resettlement and Rehabilitation (R&R) Policy 2022].
- For beneficiaries on land designated as other private land, there are provisions for Voluntary Land Donation and Occupancy Agreement, described under the RPF prepared under the Project.
- Following disability survey, the Project will also pursue retrofitting of constructed homes to accommodate the needs of differently abled beneficiaries or their family members residing in the same house.
- All the WASH investments supported by SFEHRP, irrespective of the size of settlement, will ensure a focus on:
 - **Water Quality:** Water quality management (including regular testing) to ensure *E. Coli* free drinking water;
 - **Water Supply Systems:** Installation of household and communal water systems, filtration units, and groundwater recharge solutions tailored to local hydrogeology.

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- Preference for reliable water sources, which could be one or a combination of localized groundwater resources, groundwater pumped from banks of irrigation canals, surface water, and harvested rainwater;
- **Sanitation Solutions:** Construction of flood-resilient toilets, waste management systems, and decentralized wastewater treatment where feasible.
- **Lifecycle Costing Model:** Integration of long-term O&M financing mechanisms to ensure sustainability beyond project implementation. A clearly defined relationship between beneficiary communities and a designated institution to cover operations and maintenance (O&M) functions of WASH services and ensure modus operandi to backstop dysfunctionality.
- **Hygiene Promotion:** Behavior change campaigns on handwashing, menstrual hygiene management, and safe water handling using participatory and gender-inclusive tools.
- **Community-Led Implementation:** Mobilization of CIs for village-level planning, resource contribution, execution, oversight.
- **Accessibility:** All WASH facilities will be designed and constructed to ensure accessibility for persons with disabilities and individuals with special needs, in line with the principles of universal access, emphasizing equitable access to project benefits, particularly for vulnerable and disadvantaged groups.”

RURAL AREAS:

The following two options for resettlement will be implemented:

- Option A - in proximity to larger towns and cities (of a 100,000+ population) where the landless poor can be reskilled, have better livelihood opportunities, enhance social mobility, and improve access to quality services. This option would ultimately also enable the development of "agglomeration economies" across Sindh.
- Option B - in the largest settlement within each village to increase settlement size and reduce scatter, enabling effective efficient service provision.
- For other private land, the landowner(s) who chose to donate the land, a Voluntary Land Donation Protocol should be followed.
- For other private land, the landowner(s) who chose to lease the land, a long-term Occupancy Agreement should be completed.

URBAN AREAS:

- The following two options will be implemented (as appropriate and in compliance with the provisions of ESS5)
- Option A - regularization of land where they are currently residing.
- Option B - resettled within the same city/town limits and as close as possible to their place of work/economic opportunity or with good connectivity
- For all the options in rural and urban areas, where requisite state land is not available for resettlement sites, the government should first identify pertinent sites owned by

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the state, create consensus amongst the potential beneficiaries for voluntary resettlement, and then give leases to beneficiaries receiving housing units.

1.4 Project Components

The following are the project components supported by the World Bank.

Component 1: Housing Reconstruction Grants

Subcomponent 1.1: Housing Reconstruction

This component supports the provision of cash grants to homeowners for owner-driven reconstruction or restoration of damaged houses. The grant finances: (a) replacement of a destroyed house with a new multi-hazard resilient core unit; or (b) restoration and strengthening of a damaged house to acceptable resilience standards.

The cash grants under this component are geographically targeted to selected talukas in nineteen affected districts. The grants will fund the reconstruction and restoration of approximately 350,000 units, out of 1.4 million fully destroyed units to be reconstructed. The remaining units will be funded as per provisions available with the GoS and other multi-lateral bi-lateral donors along with additional financing etc.

Subcomponent 1.2 WASH/Settlement Improvement:

The subcomponent aims to provide approximately 30,000 WASH (Water, Sanitation, and Hygiene) facilities and services, ensuring that all investments align with established principles stated above. Private land acquisition is not anticipated. Construction is expected to take place on village land, land owned by the beneficiary or donated land. The guidelines for VLD is provided in the RPF.

The project will prioritize clustered settlements for greater environmental, communal, and health impacts, particularly addressing stunting. At least three clusters will be selected where freshwater sources are available. Smaller settlements (under 150 households) will receive clean water through motorized pumps and communal waste management systems, with ongoing operation and maintenance (O&M) transferred to village organizations.

The WASH interventions include but are not limited to:

- Single house sewerage collection, treatment, and disposal/reuse;
- Multiple-house sewerage collection, treatment, and disposal/reuse;
- Inter-connected pour-flush toilet provision for sewerage collection, treatment, and disposal/reuse;
- Community sewerage network for sewerage collection, conveyance, treatment, and disposal/reuse;
- Installation/rehabilitation and construction of water supply infrastructure, mainly boreholes and supply systems for flood affected families in villages selected within all flood affected districts who do not have access to sufficient quantity of potable water;
- Implementation of water quality monitoring to ensure water safety and propose long-term and short-term water treatments for the drinking water sources (surface water and ground water sources) where the contaminations found;

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- Any other which fits according to the specific location/village characteristics where the drinking water and sanitation facilities will be provided.

In addition to the above, there are provisions for hand washing facilities along with household toilets, hygiene awareness/education, and behavior change activities. To focus on promoting hygienic practices and ensuring sustainable use of water resources, the SPHF WASH/Settlement Improvement component will focus on settlement approach through cascading model to end open defecation, hygiene education activities that emphasize handwashing with soap, safe water storage and handling practices, and proper maintenance of sanitation facilities. Engaging local community through forming community institutions who will implement WASH and other infrastructures. The implementing partners (IPs) will conduct regular training and awareness through well-designed behaviour change strategies to foster long-term behavioral changes and improve public health outcomes in rural communities.

Component 2: Institutional Strengthening and Technical Assistance

This component funded by the World Bank covers the entire flood affected areas of the province.

Subcomponent 2.1: Detailed Damage Assessment & Eligibility Verification Survey: The survey will be conducted to: (a) categorize the level of damage to each housing unit; (b) establish the status of land ownership; and (c) establish lists of eligible beneficiaries and vulnerable individuals/households that are unable to prove their identity/property ownership, including households with disabled persons and households headed by women with high dependency ratios.

The survey teams will ideally comprise a minimum of three to four persons - a government representative, a female social organizer, a male social organizer, and an engineer. Between around 800 - 1,000 teams will be hired (assuming each team covers an average of 15 to 20 units per day) and trained over about one and a half months. The component will cover the costs of developing the survey instrument, as well as administering the survey. The instrument will be designed, and initial training of trainers and the teams will be done by the agency, i.e., SPHF and/or specialized consultants, with overall administration and oversight by the implementing agency.

For additional financing, the subcomponent will augment the capacity of IPs to cover additional beneficiaries for housing reconstruction (Subcomponent 1.1); and to support the implementation of the WASH facilities (Subcomponent 1.2). This may include: (i) recurring capacity building and training sessions for IPs on inclusive social mobilization, multi-hazard resilient construction minimum guidelines, accessible design guidelines, and WASH facilities technical guidelines; (ii) completion of outstanding DAVs necessitated by issues such as exclusion errors to support the overall program, following the same methodology as the parent project

Subcomponent 2.2: Technical Assistance for Reconstruction Project: This will include support for: (i) Formulation of Housing Reconstruction Strategy: This strategy will provide the policy framework for the overall housing reconstruction project of the Government of Sindh, including eligibility criteria, compensation policies, and technical standards; (ii) Developing Multi-Hazard Resilient Housing Solutions which are efficient, economical, and suited to local norms and locally available materials. These solutions will be standardized across the reconstruction project to ensure transparency and efficiency; (iii) Skills Training activities for

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Communities and Artisans including resilient construction practices for artisans and orientation of beneficiaries on project participation. Specialized training programs will also be introduced to train masons in responding to the needs of persons with disabilities, as well as to benefit persons with disabilities beyond the life of the project.

For WASH/Settlement Improvement interventions, this component will support in implementing small-scale, site-specific civil works across rural settlements in Sindh, minimizing the likelihood of significant environmental or social impact. Supporting the hiring of an engineering firm/consultants to provide resident supervision for 50 prototype WASH and Settlement Improvement interventions, which will serve as reference models for scaling. Upon successful evaluation of these prototypes, the approved designs will be replicated by the Implementation Partners. The engineering consultants will also ensure top-level technical oversight in 1,450 settlements to monitor compliance with quality, environmental, and social standards, thereby supporting sustainable, safe, and community-responsive WASH improvements.

Subcomponent 2.3: Implementation Support through Partner Organizations: In view of the extensive outreach needed for the credible administration and monitoring of the housing reconstruction, existing public sector institutional capacity will require considerable reinforcement. This component will assist in enhancing the public sector's delivery capacity through partnerships with reputable Implementing Partner Organizations (IPOs) which will include Non-governmental Organizations (NGOs) and Micro-finance Institutions (MFIs) having strong existing outreach at community level.

Specific IPs will also be engaged to: (i) support women and other vulnerable groups in demonstrating property ownership and eligibility for grants, managing construction activities and dealing with any instances of coercion, violence or abuse; (ii) coordinate participatory land adjudication and verification processes, as well as community-driven reconstruction services for women and other vulnerable groups; and (iii) undertake outreach to women, vulnerable groups and the wider community. Wider engagement activities may also be required to obtain support for women's inclusion in the project among men and other 'gatekeepers' within the community. These vulnerable groups will be largely informed about the existing GRM and will be helped to have access to it.

Component 3: Project Management and Implementation Support

This component will support the management and implementation of the project, including the establishment and operationalization of SPHF. The activities supported will include: (i) incremental operating costs including recruitment of incremental operating staff and individual consultants as required; (ii) consultancy firm costs; and (iii) expenditure on fiduciary systems, environmental and social management requirements, Communications, and setting up of a Grievance Redressal Firm.

Overall project management, implementation, liaison/coordination, capacity building, internal monitoring and coordinated project reporting will be the responsibility of "Sindh Peoples Housing for Flood Affectees" (SPHF)

1.5 Project Beneficiaries

The project contributes to the rehabilitation and resilience building of flood-affected communities in Sindh. While the housing subsidy grants are targeted to a subset of the affected population, the project, through its technical assistance component, benefits the

entire province by supporting the design of the overall housing reconstruction program of the GoS for 2022 floods.

The Project has specific benefits for people living in the geographical locations served through the housing subsidy grants for reconstruction/restoration of damaged houses. Through an owner-driven approach, approximately 350,000 multi-hazard resilient core housing units and community-lead multi hazard resilient WASH/Settlement Improvement infrastructure will be supported. Roughly half of these beneficiaries are estimated to be female, based on demographic information available for these areas.

Moreover, beneficiaries will be trained in multi-hazard resilient construction techniques through capacity-building activities supported by the project. This will improve the long-term resilience of communities in Sindh by improving the construction designs and practices of the housing sector in view of challenges posed by climate change.

1.6 Beneficiary Selection Criteria for Housing

Though the report suggests 2.1 million households were damaged either partially or fully due to floods 2022, the current project does not include almost 0.7 million pakka houses that were partially damaged. The potential beneficiaries of the project are summarized in terms of their land ownership status and the expected extent of project support in the following table.

Table 1.1: Beneficiary Status and Project Support Criteria				
Type of Land Ownership	No. of Damaged Houses	%age of Total (Eligible for Project Support)	Potential Project Support	WB Funded (Yes/No)
Government Department Land	17,951	0.77%	In-situ reconstruction (regardless of land ownership status)	No
			Voluntary resettlement on state land with Land titles. Resettlement Policy & Assessment Checklists attached as Annex-12	Yes
Joint Ownership Private Land	48,391	2.08%	In-situ reconstruction	Yes
Other Private Land	406,100	17.45%	For the beneficiaries living on Private Land, the	No

Table 1.1: Beneficiary Status and Project Support Criteria

Type of Land Ownership	No. of Damaged Houses	%age of Total (Eligible for Project Support)	Potential Project Support	WB Funded (Yes/No)
			Cabinet³ approved that the beneficiary housing grant can be disbursed to those beneficiaries where actual landowner is willing to transfer land to their names and or the landowner agrees in writing not to dislodge the beneficiary at least for a period of ten years, and extendable to further period of time with mutual consent. In the case of beneficiary who want to voluntarily relocate themselves to a new place identified by themselves and deemed appropriate by the project will be provided with land title ship and reconstruction support as per the policy.	
Owner Willing to Donate or Not	9	0.00	- For beneficiaries living on private land and where owners are not willing to donate the land on a voluntary basis, a committee under Minister Law, Senior Member, Board of Revenue and Chief Executive, SPHF be constituted to examine the matter and to recommend an appropriate option to the cabinet - The project activities cannot commence until the land tenure/ land use is resolved with the land owner in line with the project documents	
Self/Owned Private Land	533,815	22.94%	In-situ reconstruction	Yes
State Land	776,325	33.36%	- Land titles - In-situ construction - Existing settlements: land titles will be awarded	Yes
Uncertain Ownership	13,689	0.59%	Ownership status to be confirmed/revalidated through data cleaning	TBD

³ No. SOVI(SGA&CD)/7(30)/2024 Government of Sindh, Services General & Coordination Department (Cabinet Section) Minutes of the cabinet meeting. Dated: 11-07-2024

Table 1.1: Beneficiary Status and Project Support Criteria				
Type of Land Ownership	No. of Damaged Houses	%age of Total (Eligible for Project Support)	Potential Project Support	WB Funded (Yes/No)
Under Litigation in a Court of Law	138	0.01	-	No
Village Land/Community	209,489	9.00%	- Land titles - In-situ construction - Existing settlements: land titles will be awarded	Yes
Data Not Available/ under validation	321,132	13.80%	-	TBD
Total	2,327,039	100%		

The data in the above table reveals that around 43% affectees live either on state or village land mostly without land title. In such cases if the eligible beneficiary does not have land title, the GoS will provide them with residential land entitlements as per residential land title ship policy post approval of the same by the competent forum i.e., GoS (Sindh Cabinet). It is to be noted that eligibility for reconstruction support supersedes any applications for land entitlements under the project.

For the non-titleholders the first preference of the project is to provide them in situ reconstruction support and formalizing their ownership in case if they are located on a state land in the form of a settlement in an area already earmarked as declared villages; or through VLD in case they are located on private land.

In case of the privately owned land is voluntarily donated to any project beneficiary for house reconstruction under the project, the VLD process must be completed before initiating/implementing such project activities as given below.

The VLD Checklist will be filled with the proposed VLD site. The land proposed for VLD will only be eligible if it fulfills the criteria as set out in VLD Checklist which is attached as Annex A, Checklist 3.

In cases the owner is not willing to donate the land, but voluntarily agrees for occupancy, the landowner(s) and the occupant(s) will fill the Occupancy Agreement (OA) on stamp paper, which must be duly signed by the Landowner/s, Occupant and two witnesses. Both parties will also provide documents, ie: CNICs of Land owner and Occupant, Land title documents, which mentioned that the land is free from any disputes regarding ownership or other encumbrances. In addition to this in the case of joint ownership of the land, the occupancy agreement (attached as Annexure-13) will be signed by all owners and the land title documents will be verified by Mukhtiarkar. SPHF may also require additional evidence or documentation or conduct inquiries as deemed accordingly. All the provided information will also be verified by the designated officer of the Implementing Partner (IP).

For non-title holders located on government lands which are not declared villages, the project will strive to get these settlements declared as villages. In rare cases they could be voluntarily resettled on existing declared village lands where possible. In these cases, the applicant will have to establish that they incurred losses in the form of complete destruction of their previous housing structure (the structure owned by the applicant whereas land is not owned by the

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applicant).

For non-title holders located on private lands, the project preference is to get the land transferred in the name of the beneficiaries through VLD. Where the existing owner is not willing for VLD or occupancy, the beneficiaries could be voluntarily resettled on declared village lands where possible. In these cases, the applicant will have to establish that they incurred losses in the form of complete destruction of their previous housing structure (the structure owned by the applicant whereas land is not owned by the applicant). A detailed checklist for voluntary land donation process is attached as Annex 12 (Assessment Checklist # 4: Voluntary Land Donation Process).

1.7 Settlement Selection Criteria for WASH/Settlement Improvement

- i. The settlement where the number of housing units is below 150 and the houses are reported as 100% damaged will be given priority;
- ii. The settlement severely affected by 2022 floods (e.g., percentage of housing units damaged by the floods) and validated as an eligible settlement to be benefited by SPHF;
- iii. The settlement declared as a village or habitant area by respective government (e.g., SPHF) or sought permission of reconstruction works with no objection;
- iv. The settlement where drinking water supply (e.g., handpump), sanitation (e.g., sewerage, septic tank), and drainage has been severely affected by the 2022 floods (or not properly established for the essential community's sustainability);
- v. The settlement where the proposed community infrastructure is located within the state land or communal land with agreement of (re)construction of community infrastructure project by the community (or the landowner);
- vi. The settlement where village organization (e.g., village reconstruction organization) is well established and has a willingness to (re)construct the community infrastructure through a community-led project (i.e., construction, and O&M) with the support from IPs and SPHF;
- vii. The settlement agrees to generate savings on a monthly basis for O&M of the community infrastructure project to support the required O&M cost.

1.8 Project Implementation Schedule

According to the updated schedule, the project implementation for housing initiative will continue till Mid 2026 after the additional financing of 367,200 beneficiaries. WASH/Settlement improvement initiative is expected to be completed in Mid-2027.

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Sindh Flood Emergency Housing Reconstruction Project (SFEHRP)																
PROJECT WORK PLAN																
“===” denotes process/continuity, and “*” denotes milestone achievement																
Component Description	2022-23		FY 2023-24				FY 2024-25				FY 2025-26				FY 2026-27	
	Q1	Q2	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Component 1 – Housing Reconstruction Grants																
1.1 Replacement of a destroyed house with new multi-hazard resilient core units		===	===	===	===	===	===	===	===	===	===	===	===	===	===	*
1.2 Restoration and strengthening of a damaged house to acceptable resilience standards.																
1.3 Supportive Infrastructure @ 5% of compensation																
Component 2 – Institutional Strengthening and Technical Assistance																
Subcomponent 2.1: Detailed Damage Assessment & Eligibility Verification Survey																
2.1.1 Damage Assessment and Verification Survey	===	===	===	*												
Subcomponent 2.2: Technical Assistance for Reconstruction Program																
2.1.2 Formulation of Housing Reconstruction Strategy	===	*														
2.1.3 Developing Multi-Hazard Resilient Housing Solutions and its Revision	===	===	===	*												
2.1.4 Skills Training Program					===	===	===	*								
2.1.4a Training of IP Staff in the areas of social mobilization, environment, gender, grievance redressal, disaster		===	===	===	===	===	===	===	===	===	===	===	===	===	===	
2.1.4b Trainings of Community in the areas of multi-hazard resilient and inclusive Housing, grievance redressal, disaster preparedness & risk reduction, Financial Management, Supervision of Construction, Environment, and Social Management.		===	===	===	===	===	===	===	===	===	===	===	===	===	===	
2.1.4c Trainings of Artisans (Masons, Carpenters, Plumbers, Electricians)		===	===	===												
Subcomponent 2.3: Implementation Support through Partner Organizations																
2.3.1 Engagement of Implementation Partners																
2.3.2 Organize Project Inception Mission/Workshop																
2.3.3 Design and Supervision Consultancy for Infrastructure																
Component 3 – Project Management and Implementation Support																
3.1 Establish a Company "Sindh Peoples Housing for Flood Affectees (SPHF)" under section 42																
3.2 Recruitment of CEO, COO, CFO, Specialists and other required Staff																
3.3 Develop Web Database and Project CMIS	===															
3.4 Support and upgrade Web Database and Project MIS		===	===	===												
3.5 Develop Mobile Application and Dashboard	*															
3.6 Hiring of 3rd Party Independent Technical Verification Consultants	===															
3.7 Hiring of 3rd Party M&E Firm		===	===	===	*	===	===	===	===	===	===	===	===	===	===	===
3.8 Development of ESMF, ESMP, LMP, GRM, GAP, SEP		===	===	===	*											
3.9 Statutory Audit Firms		*	===	===	===	===	===	===	===	===	===	===	===	===	===	===
3.10 Internal Audit Firm		*	===	===												
3.11 Engineering Support Services Consultants		*	===	===	===											
3.12 Media and Communication Support Consultants		===	*	===	===	===	===	===	===	===	===	===	===	===	===	===
3.13 Project Reporting		===	===	===	===	===	===	===	===	===	===	===	===	===	===	===
3.14 WB Implementation Support Missions			*		*		*		*		*		*		*	

Figure 1: Project Work Plan

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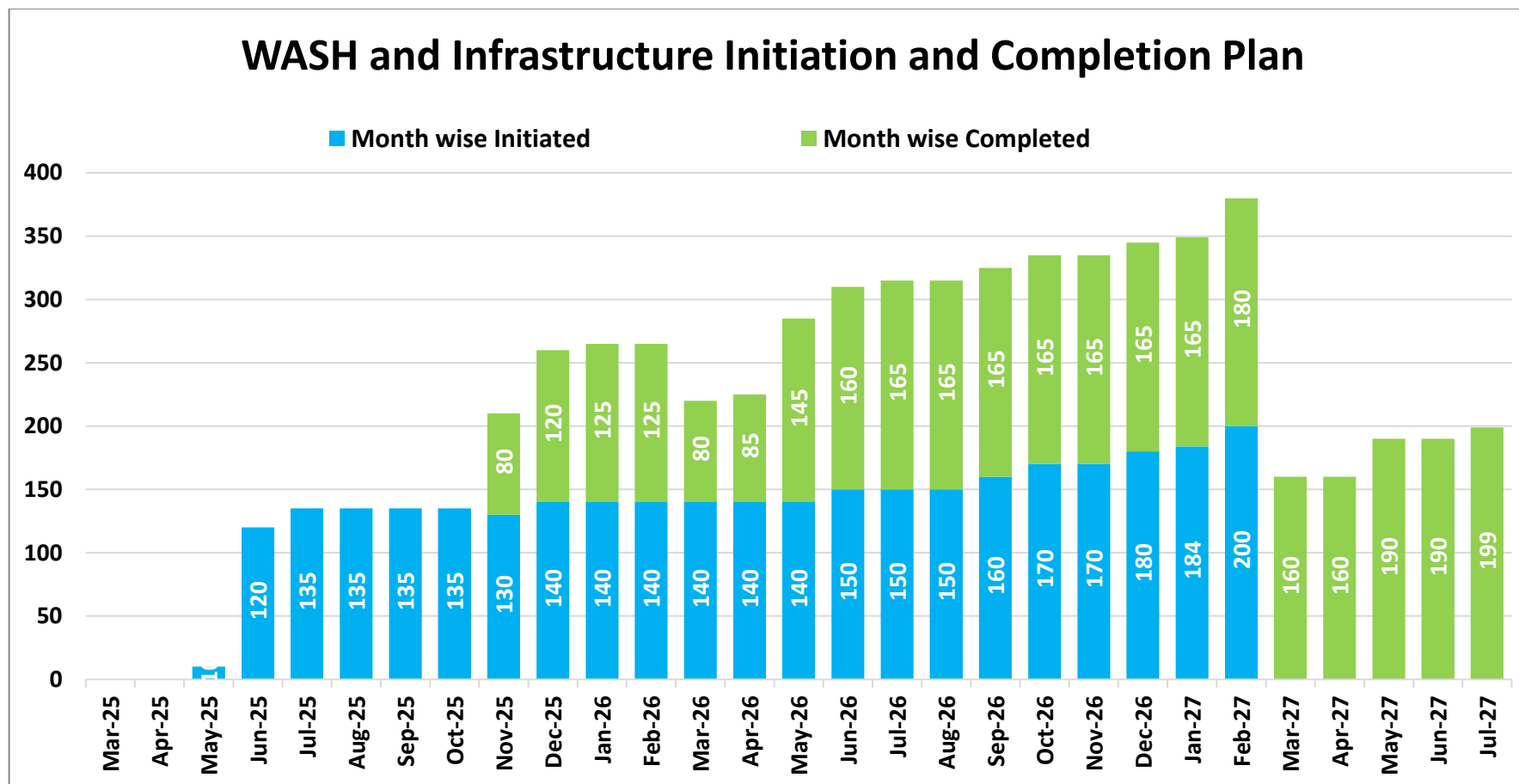


Figure 2: WASH and infrastructure initiation and completion plan

1.9 Project Implementation Arrangement

1.9.1 SPHF

The operational management of this project will be handled by the SPHF, a Section 42 government-owned not-for-profit entity registered with the Securities & Exchange Commission of Pakistan. SPHF functions as the Project Implementation Unit (PIU) and operates with a lean structure, mirroring the efficiency of a private sector organization. The Board of Directors, led by the Chairman P&DD Sindh, consists of six members. SPHF will act as a crucial link between the Government of Sindh (GoS), the NGOs serving as implementing partners (IPs), and the flood-affected people.

1.9.2 Implementing Partners

The proposed housing reconstruction project will be implemented with the support of five (5) implementing partners, district wise arrangement is presented in the table below:

Table 2.2: Implementing Partners (IPs) for Housing			
S. No.	IP	Project Area	
		WB Supported Districts	Other Project Districts
1	National Rural Support Program (NRSP)	Badin, Matiari, Mirpur Khas, Sanghar, Sujawal, Tando Muhammad Khan, Tando Allahyar	-
2	Sindh Rural Support Organization (SRSO)	Jacobabad, Kamber-Shahdadkot, Khairpur Mirs, Larkana and Shikarpur	-
3	Health & Nutrition Development Society (HANDS)	Kashmore, Sukkur, Thatta and Umerkot	Ghotki, Hyderabad, Karachi-Malir
4	Thardeep Rural Development Programme (TRDP)	Dadu, Jamshoro, and Tharparkar.	-
5	Sustainable Actions to Access Financial Capital Opportunities Support Foundation (SAFCO)	-	Naushero Feroze and Shaheed Benazirabad

Whereas the proposed Water, Sanitation, and Hygiene (WASH) interventions will be implemented with the support of four (4) implementing partners, with the district-wise distribution outlined in the table below.

Table 2.3: Implementing Partners (IPs) for WASH		
S. No.	IP	Project Area
1	National Rural Support Program (NRSP)	Badin, Matiari, Mirpur Khas, Sanghar, Sujawal, Tando Muhammad Khan, Tando Allahyar
2	Sindh Rural Support Organization (SRSO)	Jacobabad, Kamber-Shahdadkot, Khairpur Mirs, Larkana and Shikarpur
3	Health & Nutrition Development Society (HANDS)	Kashmore, Sukkur, Thatta, Umerkot, Ghotki, Hyderabad and Karachi-Malir
4	Sustainable Actions to Access Financial Capital Opportunities Support Foundation (SAFCO)	Dadu, Jamshoro, Tharparkar, Naushero Feroze and Shaheed Benazirabad

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2.7.3 Third Party M&E Consultants

A third-party firm will be hired to monitor compliance including compliance of Environmental and Social Management Framework and other social and environmental management instruments. This would be done on an annual basis throughout the Project duration. The monitoring system will also be linked to the payment mechanism to ensure effective resolution of issues prior to payments to the beneficiaries.

Third party monitoring/validation will ensure that the required outcomes as per acceptable standards have been achieved. The firm will also review and comment on the continuing adequacy of the FM system, and any actions that IPs need to take. In addition, innovative supervision strategies such as geo-referenced photographs and videoconferencing are expected to be utilized since the geographic scope of the project is widely spread.

2 ENVIRONMENTAL & SOCIAL POLICIES REGULATIONS & LAWS

Chapter 3 describes the WB standards applicable to the project and its subprojects as well as relevant national and provincial environmental and social legal requirements as indicated in various legislation, regulations and guidelines relevant to the project and ESMF scope.

2.1 National & Provincial Legal Framework

This section briefly describes the national and provincial laws, policies, strategies, guidelines, codes, and procedures 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.

Table 3.1: National & Provincial Legal Framework

National & Provincial Policies, Rules and INRegulations	Description	Project Relevance
Pakistan Climate Change Act 2017	To monitor implementation of the international agreements relating to climate change, approve and monitor implementation of comprehensive adaptation and mitigation policies, strategies, plans, programs, projects and other measures formulated by the authority to meet Pakistan's international obligations, monitor the implementation of National Adaptation Plan and its constituent provincial and local adaptation action plans, approves guidelines for the protection and conservation of renewable and nonrenewable resources, species, habitats and biodiversity adversely affected or threatened by climate change.	This Act is relevant. The project involves reconstruction on a massive scale which contributes to the significant use of natural resources, and generation of solid waste.
National Disaster Management Act, 2010	The Act was passed in backdrop of 2010 Floods in Pakistan and strengthens Disaster Management system in the country. Most pertinent sections of this Act include section 6 that explains the functions of local authorities in terms of disaster management, and section 9 that explains how the sources of funding the government use finance the new disaster management projects.	This Act is relevant. The project involves reconstruction and rehabilitation of those who were affected in Sindh by the 2022 floods. The aim of the project is to build back better in the form of disaster resilient houses, considering the potential for any future floods or disasters.
Sindh SDGs Framework, 2021	Based upon its seven pillars, the vision 2025 states, in line with the Sustainable Development Goals, that the government will focus on seven key areas including: 1) developing social and human capital, 2) achieving sustained, indigenous, and inclusive growth, 3) Governance, institutional reforms and modernization of the public sector,	The framework is relevant as it touches upon themes relevant to the project also, particularly pillars 1, 2, and 3
Sindh Sanitation Policy, 2017	Provides a broad framework and policy guidance to the Sindh Government to enhance and support sanitation coverage in the country through the formulation of their sanitation strategies, plans, and programs, at all respective levels for improving the quality of life of the people of Pakistan and the physical environment necessary for a healthy life. The policy envisions creating an open defecation free environment with safe disposal of liquid and solid waste promoting health and hygiene practices in the country.	This policy is relevant as reconstruction on this massive a scale will require mitigation of solid waste through proper disposal and WASH/Settlement Improvement subcomponent.
Sindh Environment Protection Act, 2014	SEPA 2014 provides legislative framework for protection, conservation, rehabilitation and improvement of the environment. It contains concrete action plans and programs for the prevention of pollution and promotes sustainable development.	With the reconstruction efforts focusing on Sindh, the project falls under the jurisdiction of the Sindh EPA, where the department will be the responsible authority for governing the environmental compliance of the project with local guidelines as necessary.
Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021	Defines the categories for different projects, where the type of study/ assessment required (checklist, IEE, EIA) against each category of project is defined to fulfill local legal requirements pertaining to the environment.	For housing, the project does not fall in any category listed in Schedules-I, II and III shall not be required to file an EC, IEE or EIA with SEPA. This understanding has been confirmed by SEPA through a formal NOC (Annex 3). For WASH, the project does not fall under any schedule of EIA/IEE Regulation. Therefore, filing for EC, IEE or EIA with SEPA will not be required. This understanding has been confirmed by SEPA through

Table 3.1: National & Provincial Legal Framework

National & Provincial Policies, Rules and INRegulations	Description	Project Relevance
		a formal NOC (Annex 4).
Sindh Solid Waste Management Act, 2021	The Sindh Solid Waste Management Act, 2021 for collection and disposal of all solid waste, to arrange effective delivery of sanitation services, to provide pollution free environment and to deal with other relevant matters..	The Sindh Solid Waste Management Board (SSWMB) is the main agency in charge of solid waste collection, handling, transport, and disposal for the province. Hence, they will be in charge of ensuring that solid waste generated from the project is disposed off properly.
Sindh Cultural Heritage (Preservation) Act, 1994	The cultural heritage laws of Pakistan are uniformly applicable to all categories of sites regardless of their state of preservation and classification as monuments of national or world heritage.	Provisions of this act are also relevant, if any accidental archaeological discoveries may occur during the excavation works for the construction of resilient housing and WASH/Settlement Improvement subcomponent.
Sindh Wildlife Protection, Preservation, Conservation and Management Act, 2020	The Sindh Wildlife Protection, Preservation, Conservation and Management Act was approved in August 2020. The Act was passed to make provisions for protection, conservation, preservation, and sustainable use of wildlife for establishment, management and maintenance of protected areas in the Province of Sindh. The Act introduces the establishment of a Council for the Conservation of Wildlife, and other measures which guarantee and protect the rights and ensure the safety of wildlife in the province of Sindh.	Provisions of the Act will be applicable pertaining to the preservation, conservation and management of wildlife for project activities in or around the areas classified under the Act (e.g. protected areas, etc.).
The Sindh Occupational Safety and Health Act, 2017	The act makes provisions for occupational safety and health conditions at all workplaces in the province for the protection of workers during work.	Applicable as IPs and SPHF will have to ensure that the work being done is in line with the Act and the safety provisions described therein for workers (beneficiaries in the case of this project).
The Sindh Occupational Health and Safety Rules 2019	Defines the need to make provisions for occupational safety and health conditions at all workplaces for the protection of persons at work against risk of injury arising out of the activities at work places and for the promotion of safe, healthy, and decent working environment adapted to the physical, physiological, and psychological needs of all persons at work and to provide for all matters connected therewith or ancillary thereto.	Applicable as IPs and SPHF will have to ensure that the work being done is in line with the rules and the safety provisions described therein for workers (beneficiaries in the case of this project).
Sindh Minimum Wages Act, 2015 (Sindh Act No. VIII of 2016)	To provide the regulation of minimum rates of wages and various allowances for different categories of workers employed in certain industrial and commercial undertakings and establishments.	Applicable to the different types of workers identified in the LMP, including direct and contracted (not necessarily the beneficiaries).
The Sindh Prohibition of Employment of Children Act, 2017	Prohibition of Child Employment Act (PCEA) 2017 disallow child labor in Sindh. The PCEA defines a child as a person who has not completed his/her fourteenth years of age, and an adolescent means a person who has completed fourteenth year of age but has not completed eighteenth years of his age. No child shall be employed or permitted to work in any establishment including construction, but an adolescent can be employed or permitted to work under strict guidelines provided in the PCEA and	Defines the term children, along with adolescent and adult, along with the different types of work they may be involved in. beneficiary driven reconstruction will have to be done as per the provisions of this Act.

Table 3.1: National & Provincial Legal Framework

National & Provincial Policies, Rules and INRegulations	Description	Project Relevance
	rules. An adolescent shall not be employed in any hazardous work included in the schedule to the PCEA.	
The Protection Against Harassment of Women at the Workplace Act, 2010	The Act provides legal protection to women against harassment at the workplace. It focuses on sexual harassment experienced at the workplace by employees and facilitates the transformation of the work environment, so that it is free of sexual harassment, intimidation, and abuse. The law makes it a special crime to use force against a woman, or even threaten to use force, if the intention is to “disturb her modesty”	With women beneficiaries also present and part of the reconstruction process, efforts will be made to ensure that they are not harassed or made to feel any less than male beneficiaries under the project.
The Sindh Local Government (Amendment) Act, 2021	Under the Sindh Local Government Act 2013 (SLGA), Chapter VI, land use planning; implementation of building by-laws; management of environmental and health hazards; food adulteration; provision and maintenance of water supply schemes and public sources of drinking water; and mobilization of communities for the upgrade of local infrastructure (transportation, landscaping, and removal of encroachments) are the responsibilities of municipal corporations/committees. The 2021 amendment served to define municipal corporations and committees, along with establishing a relationship between elected councils and provincial departments working in administrative boundaries.	This Act is applicable as the project's location and nature of use of public sources falls under the overall jurisdiction of the Local Government Department.
Sindh Water Policy (2023)	The Sindh Water Policy (SWP) 2023, approved by the Sindh cabinet on July 23, 2023, aims to provide a framework for managing and developing the province's water resources sustainably. It focuses on ensuring the long-term safe usage of water resources and guiding decision-making for the provincial government, local authorities, and water users. The policy aims to address water scarcity, improve water quality, and optimize water utilization.	The policy is applicable to the component 1.1 i.e., Water, Sanitation and Hygiene/Settlement Improvement Initiative.
Sindh Strategic Plan for WASH (2016-2026)	The Sindh Strategic Plan for Water, Sanitation, and Hygiene (WASH) 2016-2026 outlines a comprehensive framework for improving WASH services in Sindh province. It focuses on providing safe drinking water and adequate sanitation, particularly in public schools, and aims to improve overall hygiene and health outcomes. The plan incorporates strategies for monitoring, evaluation, and integration of WASH indicators into the Education Management Information System (EMIS)	The Sindh Strategic Plan for WASH (2016–2026) provides the strategic direction, technical standards, and policy coherence that underpin the WASH component of the Sindh Flood Emergency Housing Reconstruction Project , ensuring that the project not only addresses immediate post-disaster needs but also contributes to long-term WASH sector development goals in the province.

2.2 World Bank Environmental & Social Framework

As part of the project preparation, environmental and social assessment of proposed project will be carried out in accordance with the World Bank's Environmental and Social Framework (ESF). The Environmental and Social Standards (ESSs) as embedded in the ESF are discussed in the table below.

Table 3.2: World Bank ESS and Relevance		
Environmental and Social Standard	Description	Relevance to the Project
ESS1 – Assessment and Management of Environmental and Social Risks and Impacts	This standard sets out the Client's responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through IPF, in order to achieve environmental and social outcomes consistent with the ESF.	ESS1 is relevant. Potential environmental and social risks related to construction of housing units include: hazardous waste, environmental pollution; due to project; OHS risks for project beneficiaries; social exclusion; GBV/SEA/SH risks. Potential environmental and social risks related to WASH/Settlement Improvement include: solid waste, environmental pollution, OHS risks, ground water contamination. The ESMF and E&S Screening/related site-specific instruments will be implemented throughout the project to comply with ESS1.
ESS2 – Labor and Working Conditions	ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers fairly and providing safe working conditions. This standard applies to project workers, including full-time, part-time, temporary, seasonal, and migrant workers.	ESS2 is Relevant. The project is expected to involve direct workers as project beneficiaries. The project may create some labor related risks and impacts which include: lack of skills and compliance with relevant laws and regulations, unsafe working conditions, and GBV/SEA/SH. To comply with the ESS-2, a Labor Management Procedure (LMP) has been developed.
ESS3 – Resource Efficiency and Pollution Prevention and Management	ESS3 establishes the requirements for resource efficiency and pollution management and prevention during the entire project lifecycle. The objectives of this standard are to enhance the sustainable use of resources, including energy, water, and raw materials. It also aims to promote favorable conditions for human health and the environment by minimizing pollution from project activities, and or minimize generation of waste.	ESS3 is Relevant. Housing and WASH/Settlement Improvement construction activities may generate solid waste, dust issues and soil erosion due to the excavated pits and burrows. WASH/Settlement Improvement operational activities may generate sludge, energy inefficient pumping, mismanagement of wastewater, and downstream contamination of natural water bodies. Resource efficiency and pollution prevention measures have been included in the ESMF and the ESCOPs to comply with requirements of ESS3.
ESS4 – Community Health and Safety	This standard recognizes that project activities, equipment, and infrastructure can increase community exposure to adverse risks and impacts. The objectives of ESS4	ESS4 is Relevant. Reconstruction works may cause temporary disturbances to local communities due to construction material

Table 3.2: World Bank ESS and Relevance

Environmental and Social Standard	Description	Relevance to the Project
	are to avoid or mitigate these adverse impacts on project-affected communities.	placed, waste, noise, dust, etc. WASH/Settlement Improvement may cause temporary disturbances at the settlement level during construction phase. Relevant measures have been included in the ESMF to ensure that community health and safety is adequately protected.
ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	This standard recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.	Relevant ESS5 is relevant in case any involuntary resettlement or land acquisition occurs. Though no large-scale private land acquisition is anticipated, the project has prepared a Resettlement Policy Framework (RPF) to address the involuntary resettlement impacts associated with, among others, acquisition of private land. The RPF also includes procedures for Voluntary Land Donation and Occupancy Agreements for the use of land designated as other private lands.
ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources	This standard recognizes biodiversity conservation and protection, and sustainable management of living natural resources. It gives importance to maintaining the core ecological functions of habitats and wildlife, and promotes the sustainable management of primary production and harvesting of living natural resources. The objectives of this standard are to protect and conserve biodiversity and habitats, and avoid adverse impacts on biodiversity and habitats as a result of project activities.	Not relevant. The houses will be reconstructed in the same area/location. The domestic wastewater will be treated using an underground STU containing a settler followed by 3 Anaerobic Baffled reactors for further treatment. The treatment will be done naturally without any mechanical/electrical component in the STU. Therefore, there is no possibility for it to malfunction. Furthermore, if the treated water does not meet local standards, secondary treatment will be done (wetland or soak away) to meet the standards.
ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	The objectives of the standard are to ensure that the development process adopts full respect for the rights, dignity, aspirations, identity, culture of traditional local communities, and to avoid adverse impacts on Indigenous Peoples while providing them with sustainable development benefits and opportunities in an accessible, culturally appropriate, and inclusive manner.	Not Relevant – There are no indigenous people in the project area.
ESS8 – Cultural Heritage	ESS8 recognizes the importance of cultural heritage as a valuable source of scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity. This standard sets out measures to protect cultural heritage throughout the lifecycle of the project.	Not Relevant.
ESS10 – Stakeholder	This standard recognizes the importance of open and transparent engagement between	ESS10 is relevant as effective stakeholder engagement and

Table 3.2: World Bank ESS and Relevance

Environmental and Social Standard	Description	Relevance to the Project
Engagement and Disclosure	the Client and project stakeholders as an essential element of good international practice. The objectives of ESS10 are to establish a systematic approach to stakeholder engagement that will build and maintain constructive relationships, assess the level of stakeholder interest and support for the project, and to enable stakeholders' views to be taken into account in project design and E&S performance. It also provides guidance on promoting and providing means for effective and inclusive stakeholder engagement throughout the life of the project.	information disclosure will be crucial to the project. Stakeholder Engagement Plan (SEP) is part of the project design and bid document.

2.3 World Bank EHS General Guidelines 2007

The Environmental, Health, and Safety (EHS) Guidelines⁴ serve as technical reference documents that provide general and industry-specific examples of Good International Industry Practice (GIIP). These EHS Guidelines address broader, cross-cutting environmental, health, and safety issues applicable across a wide range of sectors. In line with these guiding principles and established best practices, the project has developed Environmental and Social Codes of Practice (ESCOPs) for housing, to be implemented during both construction and operational phases.

2.4 World Bank EHS Guideline for Water and Sanitation 2007

The Environmental, Health, and Safety (EHS) Guidelines for Water and Sanitation⁵ provide specific guidance on environmental, health, and safety considerations relevant to WASH-related activities. These include key aspects such as wastewater and sludge treatment and disposal, management of liquid effluents, solid waste handling, drinking water treatment and distribution, control of air emissions and odors, use and management of hazardous chemicals, and mitigation of ecological impacts. Drawing on these sector-specific guidelines and best practices, the project has developed corresponding ESCOPs for WASH interventions, which will be applied throughout the implementation and O&M stages of the project.

⁴ <https://documents1.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General-EHS-Guidelines.pdf>

⁵ <https://www.ifc.org/content/dam/ifc/doc/2000/2007-water-and-sanitation-ehs-guidelines-en.pdf>

3 ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE

This Chapter presents an overall profile of the existing environmental and socioeconomic situation in the Sindh Province as the baseline conditions for project and its ESMF, since the sites for the interventions included in the proposed project are likely to be spread all over the province. This baseline has been prepared based upon the secondary literature resources.

3.1 Geography

The project (SFEHRP) area lies in 24 districts of Sindh. Geographically Sindh is the third largest province of Pakistan, stretching about 579 km from north to south and 442 km (extreme) or 281 km (average) from east to west, with an area of 140,915 square kilometers (54,408 square miles) of Pakistani territory. Sindh is bounded by the Thar Desert to the east, the Kirthar Mountains to the west, and the Arabian Sea in the south. In the center is a fertile plain around the Indus River.

During floods 2022, all the 4 distinct parts of Sindh: (a) Kirthar range on the west; (b) a central alluvial plain bisected by the Indus River; (c) a desert belt in the east; and (d) the Indus delta in the South were affected by the floods.

3.2 Topography

Built-up areas in Sindh are primarily urban and suburban areas that have been developed for residential, commercial, and industrial purposes. The most populous cities of Sindh are Karachi, Hyderabad, Sukkur and Larkana. Rangelands are areas of natural grasslands and shrublands that are used for grazing livestock lies in the district of (Karachi, Dadu, Thatta, Tharperkar/Umerkot)⁶. These areas are found in the arid and semi-arid regions of Sindh and are an essential resource for the livestock industry. Bare areas, also known as wastelands, are areas that are devoid of vegetation and are not suitable for cultivation or grazing. These areas are found in the desert regions of Sindh (Thar, Mirpurkhas, Sanghar Khairpur and Sukkur) and are characterized by arid and barren landscapes.

The Central Plains are fertile alluvial plains constituting the valley of the Indus River. They gradually slope downwards from North to South. The plain area is a vast region, rising to a maximum of 100 m above sea level. The lower part of this area, which starts near Hyderabad, is predominantly covered with flood silt. There are a few limestone ridges in this area. One of these ridges is near Rohri (Sukkur in the upper Sindh region), commonly known as the Rohri Cuesta. It extends about 50 km South of Rohri and reaches an average height of about 75 m above sea level. Another such ridge is the Ganjo Takkar, a cuesta of limestone which stretches southward from Hyderabad covering a distance of 25 km. There are also a few depressions and lakes in the Central Plains.

3.3 Temperature

Sindh is divided into three climatic regions: Siro (the upper region, centered on Jacobabad, Kashmore, Kandhkot, Shadadkot, Larkana, Khairpur, Suukur, Ghotki), Wicholo (the middle region, centered on Hyderabad, Jamshoro, Dadu, Shaheed Benazirabad, Sangarh, Nausharo Feroze), and Lar (the lower region, centered on Karachi, Thatta & Badin). The province of Sindh is situated in a subtropical region; it is hot in the summer and cold in winter.

The thermal equator passes through upper Sindh, where the air is generally very dry. The

⁶ <https://sindhforests.gov.pk/page-rangelands>

highest temperature ever recorded in Sindh was 53.5 °C. Temperatures frequently rise above 46 °C between May and August, and the minimum average temperature of 2 °C occurs during December and January.

Central Sindh's temperatures are generally lower than those of upper Sindh but higher than those of lower Sindh. Dry hot days and cool nights are typical during the summer. Central Sindh's maximum temperature typically reaches 43–44 °C.

Lower Sindh has a damper and humid maritime climate affected by the southwestern winds in summer and northeastern winds in winter, with lower rainfall than Central Sindh. Lower Sindh's maximum temperature reaches about 35–38 °C. Figure 1 below shows the average temperature in Sindh.

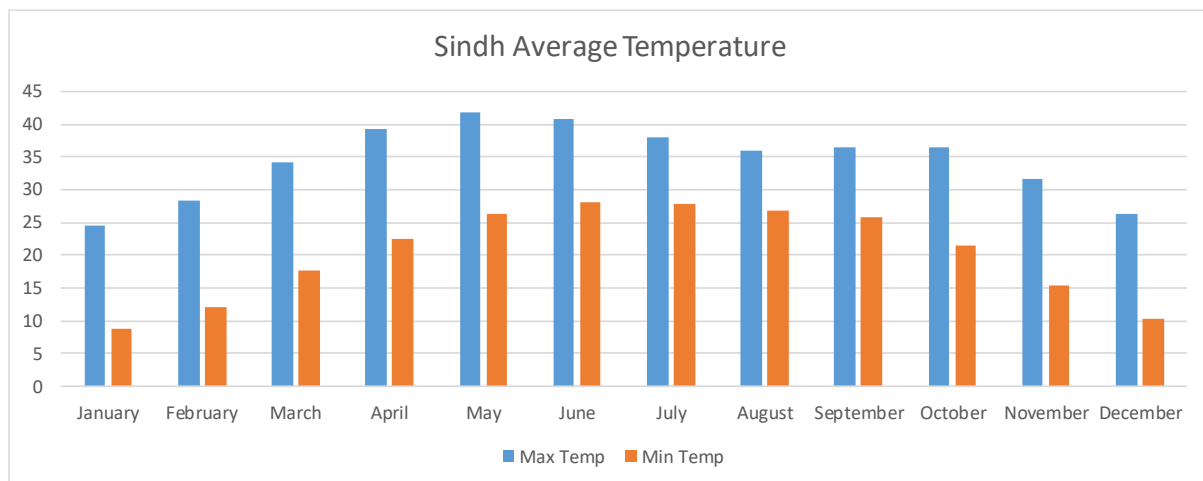


Figure 4.3: Average Temperature in Sindh

Source: www.worlddata.info

3.4 Geological Setting

The prevailing geologic conditions in the region are the results of extensive inundation, depositions, coastal movements, and erosions over a long period of time in the geological ages. Most parts of Sindh are covered either by recent alluvium or wind-borne sand. The principal features of geological significance are found in the hilly portions, towards the west of the Indus. Outlying extensions of this hilly tract occur east of the Indus as well, near Sukkur, Hyderabad and Jerruck. In the lower Indus the isolated hills of Nagarparkar on the northern border of the Rann of Kutch belong to quite a different system both geographically and geologically. The community living in the areas of this geological setting were also affected during the floods 2022.

3.5 Soils

The soil in the plains of Sindh is plastic clay that has been deposited by the Indus. Combined with water it develops into a rich mould and without water it degenerates into a desert. Nearly the entire Indus valley has soil which is extremely friable and easily disintegrated by the flow of water. As a result, the water always contains a large amount of suspended silt.

Salinity is one of the major soil problems confronting agriculture in Sindh. The problem is generally considered to be the result of the canal irrigation system, but countrywide soil surveys have established that most of the existing saline/saline sodic soils are not related to the present irrigation system, and their formation is the consequence of the gradual redistribution of salts already present in the soil.

The minimum construction guidelines of the multi hazard resilient housing also considers

various soil conditions over which the reconstruction activities will be taken place such as variable depth of foundation depending on the soil types given in the table below.

Table 4.1: Soil Types		
S. No.	Districts	Soil Types
1	Thatta, Badin	Clayey and Silty
2	Hyderabad, Sangarh, Dadu, Khairpur, Larkana, Shikarpur Jacobabad	Calcareous, Loamy, Silty, Clayey and Sandy
3	Tharparker, Nawabshah, Mirpur Khas	Sandy, Clayey and Loamy

3.6 Water Resources

Sindh typically receives about 15.76 millimeters (0.62 inches) of precipitation and has 19.72 rainy days (5.4% of the time) annually. The province experienced the heaviest rainfall in the months of July and August with an average annual rainfall of 128.80 mm/yr. However, the impact of climate change on Sindh is evident from floods in the years 2022 and 2010. The recent 2022 flooding occurred as a direct consequence of the extreme monsoon rainfall throughout the summer 2022 season exacerbated by shorter spikes of very heavy rain particularly in August hitting the province.

The primary source of water available to Sindh is the Indus River and its tributaries for its water supply. The river provides water for irrigation, domestic use and industrial purposes. Water from Indus River is regulated through three Barrages such as Guddu barrage, Sukkur barrage and Kotri barrage. The province also has significant groundwater resources, which are mainly used for domestic and industrial purposes although ground water is generally brackish, except near the canals and the Indus. The groundwater is extracted from wells and tube wells, particularly in the arid regions of the province. The province also has several lakes and reservoirs that contribute to the water supply, particularly for domestic and industrial purposes. The major lakes include the Keenjhar Lake, Manchar Lake, Haleji Lake, and the Hadero Lake. Canal water is the primary source of water supply in the project area. The majority of canal water is used for irrigation purposes, then domestic and then industrial purposes. In most areas of Sindh, groundwater needs to be mixed with canal water before it can be effectively utilized for agricultural purposes.

The available groundwater resource in Sindh is about 5-million-acre foot (MAF) and has ample potential for irrigation however, the use of groundwater is comparatively lesser (4.3 billion cubic meter) than surface water because of two primary reasons: firstly, most of the area is lying on saline or brackish water; secondly, canal command areas are provided with surface irrigation supplies. The river Indus, having an influent behavior, loses water to the underlying aquifer, as it lies on a slight ridge, which slopes away in a lateral direction up to Larkana District. A part of the flow drains towards the desert in the east, whereas the other flows towards the Kirthar Hills. During the harvest season of winter crops, the flow in the river below Sukkur Barrage becomes negligible, so the river starts receiving groundwater, especially from the left bank.

Studies have revealed contamination of groundwater by a variety of contaminants in Sindh province. Some of the water bodies are severely deteriorated by microbial contamination; 53% of the area is affected by the calamitous outcomes of salinity and water-logging; excessive fluoride exceeding the World Health Organization (WHO) and local thresholds has been reported in Nagar Parkar area; and recent physiochemical analyses reveal elevated arsenic concentration in Matiari, Khairpur and Jamshoro districts. Multiple approaches in the past few decades have been employed to address hydro geochemical characterization and groundwater quality assessment for drinking and irrigation purposes. Categorically, the lower

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Indus plain comprises 14 cultivatable irrigation areas. The situation in the central Sindh, Rohri canal command area is vulnerable to surface and groundwater contamination which ultimately risks the potability and agricultural utilization of groundwater.

3.6.1 Hydrology

The river Indus is the major source of surface water which flows in the middle of the province (Hyderabad, Jamshoro, Dadu, Shaheed Benazirabad, Sangarh, Nausharo Feroze), The lower Indus Plain and the irrigated area (Karachi, Thatta & Badin) is the most critical sink for groundwater potential in Sindh province and is recharged by the rich irrigation network and meandering Indus River. The Indus River flows on a ridge and hence feeds the aquifer system alongside. The Indus River has built a distinct distributive type of fluvial system at the downstream of Sindh province, called the Indus fluvial mega-ridge. This fluvial system is in a convex form that shows maximum aggradation near the Indus River and gradually tapers out towards the Indus Plain edges. The groundwater level remains high in the Indus Plain aquifer that feeds the Indus River in the Rabi season (October–March) when there is little or no flow as several barrages and dams have been constructed on the Indus River, intensive canals transfer water to 5.45 million hectares of agricultural land. Eventually water flow in the Indus River declines and is supplemented by the aquifer especially in the Rabi season as mentioned above. The groundwater, which is an underutilized resource in the irrigated area due to the fine surface water irrigation system, has resulted in water logging and salinity.

3.6.2 Water Quality

Alarming increase in population is the single important driving force affecting the water sector and causing water scarcity problems in the province. Water pollution is another major problem which is deteriorating the quality of the remaining small portion of water. According to Sindh Environmental Agency “every day almost 500 million gallons of industrial waste and human consumption falls into Arabian Sea”. According to Pakistan Council of Research in Water Resources (PCRWR) 80% of samples from 14 different districts of Sindh are not safe for drinking as well as 78% of water used in hospitals is above standard limits. 90% of water had bacterial contamination and was not fit for drinking in Karachi only. Several studies have been conducted in different cities of Sindh, Pakistan⁷ (Table 4.2).

⁷ <https://lupinepublishers.com/environmental-soil-science-journal/fulltext/water-quality-assessment-in-sindh-pakistan-a-review.ID.000156.php>

Table 4.2: Water quality in different districts of Sindh										
S. No.	Division	Area	pH	EC	Turbidity	Hardness	TSS	TDS	Arsenic	E. Coli
1.	Karachi	Karachi	7.1	402	3.5	123		289		Present
		Malir			13.8	1610		3725	5	Present
2.	Hyderabad	Hyderabad	7.4	584	5	170		37.3	6.51 – 9.98	Present
		Jamshoro	7.41	1764.4	6.31			1064.84	6.66	
		Thatta	7.32		32.73	796	150.3	1099	5	1684.64
		Keenjhar Lake	7.2	637.2	2.317			273.1		3.571
		Badin	7.5	1355	0.37			677		
		Dadu	7.98	2.86	9.73			1832	24.78	22.56
3.	Shaheed Benazir Abad	SBA	8.18			13200		22912	52.3 – 85.2	
		Nausharo Feroze							18.0 – 50.6	
4.	Larkana	Shikarpur	7.3	620		238		695		Not Present
		Jacobabad	7.8	2544		680		1650		Present
5.	Mirpurkhas	Mirpur Khas	7.1	2030		430		1292		Not Present
		Tharparker	7.98	1095.9		264.58		701.43	6	
6.	Sukkur	Sukkur	7.2	648	4.5	239		487	26.0 – 98.2	Not Present
		Kahirpur	7.8	50		13.11		20.5		Not Present
		Rohri	7.41	1570.97	7.82	421.12		993.92	21.95	
		Ghotki	6.9	1858		530		980		Present
WHO			6.5 – 8.5	1562µS/cm	<5NTU	500mg/L	5mg/l	1000mg/L	10ppb	0CFU
NSDWQ			6.5 – 8.5		<5NTU	<500	NA	<1000	50ppb	0CFU

3.7 Health

Country's health system is already battling multiple concurrent health threats including outbreaks of cholera, typhoid, measles, leishmaniasis and HIV. Even before the recent floods, there was a significant disparity in access to health services between rural and urban areas. The current situation will highly likely increase the spread of disease especially if/when response capacities are hindered.

In the floods, around 59 health facilities have been damaged completely and 461 were partially damaged⁸. Access to health facilities, healthcare workers, and essential medicines and medical supplies remain the main health challenges in the flood affected areas. The stagnant water also provided breeding grounds for mosquitoes and subsequent disease spread. From July to early October 2022 over 540,000 malaria cases have been reported in Sindh including diarrheal diseases, dengue fever, measles, and diphtheria⁹. Due to disease outbreak there were concerns of high rates of severe acute malnutrition observed in the flood affected areas¹⁰.

The health conditions in rural Sindh are shaped by a combination of environmental, climatic, and infrastructural challenges that significantly impact both community well-being and the effectiveness of Water, Sanitation, and Hygiene (WASH) initiatives. Frequent flooding, contaminated water supplies, and inadequate sanitation systems have led to widespread communicable diseases and malnutrition, particularly affecting vulnerable groups including children, women, the elderly, and individuals with disabilities.

1.8.1 Waterborne and Sanitation-Related Diseases

Waterborne diseases continue to pose a significant public health challenge in rural Sindh. By early 2024, cases of acute watery diarrhoea (AWD) had reached critical levels, with more than 36,000 cases reported weekly, accounting for a substantial share of the 1.8 million cases recorded nationally¹¹. The rural population is particularly vulnerable due to dependence on unsafe water sources, inadequate sewage systems, and widespread open defecation. Additionally, outbreaks of typhoid and cholera are frequently observed, especially during and following the monsoon season, when access to clean water is disrupted, and surface water becomes heavily contaminated. Hepatitis A and E, primarily transmitted through the fecal-oral route, also remain common in low-income rural settings.

1.8.2 Vector Borne Diseases

Sindh remains a malaria-endemic region, with a particularly severe spike in March 2024 when over 46,000 cases were reported in a single week, up 83% of the total malaria cases across Pakistan¹². Contributing factors include stagnant wastewater, inadequate drainage infrastructure, and unprotected water sources, all of which create ideal breeding grounds for mosquitoes. These conditions not only drive high malaria transmission but also increase the risk of other vector-borne diseases such as dengue and emerging infections like chikungunya.

1.8.3 Child Health and Nutritional Impacts

Health challenges linked to inadequate water, sanitation, and hygiene (WASH) are major

⁸https://www.acaps.org/sites/acaps/files/products/files/20221130_acaps_rat_briefing_note_on_pakistan_floods.pdf

⁹<https://news.un.org/en/story/2022/11/1130082#:~:text=Multiple%20disease%20threats&text=%E2%80%9CFrom%20July%20to%20early%20October,rates%20of%20severe%20acute%20malnutrition.>

¹⁰<https://news.un.org/en/story/2022/11/1130082#:~:text=Multiple%20disease%20threats&text=%E2%80%9CFrom%20July%20to%20early%20October,rates%20of%20severe%20acute%20malnutrition.>

¹¹ World Bank (2024); Government of Sindh Health Surveillance Data; WHO Weekly Epidemiological Reports

¹² Directorate of Malaria Control, Pakistan (2024); Government of Sindh Health Department

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contributors to the high rates of child under nutrition in rural Sindh. The National Nutrition Survey (2018) reported that 49.9% of children under the age of five were stunted, while 17.7% were wasted, statistics that have seen little improvement in recent years due to ongoing exposure to contaminated water and poor hygiene practices. The situation worsened following the 2022 floods, which led to widespread displacement, loss of livelihoods, and disease outbreaks, leaving an estimated 2.6 million children in southern Sindh affected by severe acute malnutrition¹³.

3.8 Biological Environment¹⁴

Sindh province is home to a diverse range of flora and fauna, including several species of mammals, birds, reptiles, and amphibians. However, many of these species are threatened due to habitat loss, poaching, and pollution. The province is also home to several protected areas, including the Kirthar National Park, which are important for biodiversity conservation. The list of protected areas in Sindh is presented in Annex 4.

The variation in climate between Upper and Lower Sindh is not reflected in any difference in the flora of the two zones. The vegetation is characteristic of the edaphic conditions of the region viz. arid climate and sandy and calcareous soil, largely impregnated with salts. The apparent contrast between the verdure of the riverine and irrigated tracts on the one hand, and the hilly and desert tracts on the other; is largely a matter of its intensity and distribution. The dwarf palm, Kher (*Acacia ruprstris*), and Lohirro (*Techoma undulata*) are typical of the western hill region as are Khip (*Periploca aphylla*) and Phog (*Calligonum polygonides*) of the eastern sandy desert. In the central valley, the Babbur (*Acacia nilotica*) tree is the most dominant and occurs in thick forests along the Indus Banks. The Neem (*Azadirachta inidica*), Ber (*Ziziphus vulgaris*) or Jujuba, Lai (*Tamarix Orientalis*), Kirir (*Cappcaris aphylla*) and Kandi (*Prosopis cineraria*) are the more common trees. Mango, date palms, banana, guava, orange, and chiku are the typical fruit bearing trees. The coastal strips and the creeks abound in semi-aquatic and aquatic plants, and inshore deltaic islands have mangrove forests of Timmar (*Avicennia Marina*) and Chaunir (*Ceriops tagal*) trees. Water lilies grow in abundance in the numerous lakes and ponds, particularly in the Lower Sindh region.

Among the wild animals, the Sareh (Sindh Ibex), Urial or Gadh (wild sheep), and black bear are found in the western rocky range, where the leopard is now rare. The Pirrang (large tiger cat or fishing cat) of the eastern desert plains is also disappearing. Deer lives in the lower rocky plains and in the eastern region, as do the Charakh (striped hyena), jackal, fox porcupine, common gray mongoose, and hedgehog. The Sindh phekari (red lynx or caracal cat) is encountered in some areas. Pharrho (hog deer) and wild boar occur particularly in the central inundation belt. There is a variety of bats, lizards, and reptiles, including the cobra, lundi (viper), and the Peean. Crocodiles are rare and inhabit only the backwaters of Sindh and its eastern Nara Canal. Besides a large variety of marine fish, the plurnbeous dolphin, the beaked dolphin, rorqual or blue whale, and a wide variety of skates frequent the areas along the Sindh coast. The pallo (sable fish), though a marine fish, ascends the Indus annually from February to April to spawn and returns to the sea in September. The bulhan (Indus dolphin) breeds in the Rohri-Sukkur section of the river.

3.9 Socioeconomic Environment

3.9.1 Demography

The total population of Sindh Province is recorded as 47,854,510 in Census-2017 as compared to 30,439,893 in Census-1998. The population has increased by 57.21% since

¹³ National Nutrition Survey (2018); UNICEF Pakistan Emergency Briefs (2023); WHO Flood Emergency Reports

¹⁴ Sindh Forest & Wildlife Department

Census-1998, with an average annual growth rate of 2.41% during the intercensal period of 1998-2017. The rural population of Sindh Province is 23,021,876, which is 48.11% of total population, whereas the urban population is 24,832,634, with a share of 51.89% of total population of Sindh. The average household size in Sindh is 5.58 persons.¹⁵ The district wise population of the SFEHRP districts according to 2017 census is given in the following table.

Table 4.3: District wise population¹⁶								
District	Population 2017	Urban population	Rural population	Male	Female	Trans	Density/ km²	2017-2023 Avg Annual Growth Rate
Badin	1,804,958	390,344	1,414,614	931,177	873,589	192	263.19	1.27
Jacobabad	1,007,009	297,218	709,791	514,786	492,061	162	373.24	2.60
Kashmore	1,090,336	253,659	836,677	564,663	525,558	115	422.61	2.09
Mirpur Khas	1,504,440	434,081	1,070,359	776,146	728,071	223	514.34	1.88
Matiali	770,040	182,669	587,371	396,922	373,041	77	543.43	1.65
Sanghar	2,049,873	571,719	1,478,154	1,059,051	990,578	244	191.08	2.01
Shikarpur	1,233,760	304,441	929,319	635,558	598,130	72	491.15	1.97
Sujawal	779,062	85,496	693,566	404,810	374,142	110	88.68	1.25
Thatta	982,138	176,476	805,662	510,143	471,958	37	114.6	1.65
Tharparkar	1,647,036	132,534	1,514,502	881,018	765,862	156	83.87	1.29
TMK	677,098	142,037	535,061	349,122	327,888	88	475.82	1.08
Larkana	1,521,786	698,998	822,888	775,934	745,530	322	406.95	2.70
Khairpur Mirs'	2,405,190	777,006	1,628,184	1,240,254	1,164,826	110	151.17	1.29
Dadu	1,550,390	383,406	1,166,984	795,700	754,480	210	197.10	102.95
Kamber Shahdadkot	1,338,035	396,803	929,232	680,567	657,290	178	244.39	2.10
Sukkur	1,488,372	720,806	767,566	776,332	711,882	158	288.16	1.63
Umerkot	1,073,469	243,537	829,932	556,470	516,841	158+	191.42	1.30
Jamshoro	993,908	432,621	561,287	523,069	470,702	137	88.71	1.98
Tando Allahyar	838,527	268,099	570,428	432,697	405,709	121	539.59	1.60
Ghotki	1,772,609			920,328	852,234	47	291.40	1.22
Total	24,755,427	6,891,905	17,851,577	12,804,419	11,948,138	2,870	395.25	2.57

The Project districts represent almost 52% of the total population of the province, but around 77% of the rural population of the province resides in these districts. All the SFEHRP districts have 72% or more of their population living in rural areas, with Tharparkar at ~92% rural population topping the chart. Sukkur is the most urban of the Projected districts, where 48% of the population resides in urban areas.

3.9.2 Religious Minorities

The majority of the population of the Sindh province is Muslim. Although, 90.34% of the total

¹⁵ SMF for Sindh Solar Energy Project. World Bank, 2018. Accessed from: https://ewdata.rightsindevelopment.org/files/documents/12/WB-P159712_tFsZ4Ac.pdf

¹⁶https://www.pbs.gov.pk/sites/default/files/population/2023/tables/table_1_sindh_districts.pdf

population declares Islam as their faith, the province has still relatively higher proportion of minorities living in it. The largest community amongst minorities is Hindu, which constitute 6.99% of the total population followed by Scheduled Castes i.e., 1.74% of total population reported in Census-2017.¹⁷ In the SFEHRP districts, Umerkot has the highest proportion of Hindu population. Other SFEHRP districts also have significant populations of Hindus and other minority communities.

Table 4.4: District wise population¹⁸	
SFEHRP Districts	Percentage of Hindus
Tharparkar	43.4%
Mirpur khas	38.74%
Badin	23.61%
Tando Muhammad Khan	22.25%
Sanghar	21.79%
Ghotki	6.19%
Kashmore	3.22%
Thatta	3%
Sujawal	2.91%
Jacobabad	2.16%
Shikarpur	1.4%
Larkana	1.35%
Khairpur Mirs'	2.55%
Dadu	0.51%
Kamber Shahdadkot	0.73%
Sukkur	3.44%
Umerkot	46.5%
Jamshoro	38.6%
Tando Allahyar	33.22%

3.9.3 Economy

Sindh is one of the richest provinces of Pakistan. Its share of the national gross domestic product (GDP) is estimated at around 30% while its share of the population is around 23%. Pakistan's economy has recently grown at approximately 4.7% per year; Sindh enjoys a similar growth rate and contributes to national growth. The GDP per capita for Sindh is PKR 159,678, above average for the country. A rapidly growing population will affect Sindh's ability to expand the labour force and improve economic performance.¹⁹

Various reports including the Sindh Growth Strategy by the World Bank have shown that the per capita income of the province has been declining over time. A recent book titled "The Economy of Modern Sindh: Opportunities Lost and Lessons for the Future" shows that the main reason for weak economic growth and falling per capita income has been declining productivity. It also narrates other factors for the falling productivity such as concentration in low productivity activities such as retail and wholesale trade, therefore depressing the overall

¹⁷ https://www.pbs.gov.pk/sites/default/files//population_census/ncrPCR/PCR%20Sindh.pdf

¹⁸ <https://www.pbs.gov.pk/content/district-wise-census-2017-results>

¹⁹ http://www.healthpolicyplus.com/ns/pubs/7194-8353_SindhPakistanRAPIDBooklet.pdf

productivity, and poor outcome in housing, leading to an adverse impact on the quality of human capital, underemployment and lower-than-minimum wage in informal activities. Further disaggregating Sindh's economy into urban and rural areas gives more clues to the fall in per capita income over time. Rural Sindh has experienced negative growth while urban Sindh has enjoyed positive growth.

The main reason behind the rural-urban divide is its congruence with the ethnic and linguistic divide. Rural Sindh with 38% literacy rate, 62% immunization rate and 58% enrolment rate at the primary level is worse than many countries in sub-Saharan Africa.

3.9.4 Agriculture

Agriculture is the basis of the economy of Sindh Province. Sindh's agricultural productivity increased substantially after 1961 because of advancement in agriculture research and the use of fertilizers. There are about six research institutions in Sindh working on Agriculture. In the SFEHRP districts, Sanghar, Umerkot and Mirpur Khas are suitable for cotton, wheat, sunflower, soyabean, rape, mustard and groundnut. Tando Mohammad Khan, Badin and Thatta districts are suitable for sugarcane and rice crops. Besides the said crops mash and masoor pulses are also suitably grown in these districts. Shikarpur, Larkana, Kamber Shahdadt and Jacobabad are suitable for growing rice as main crops, and rape and mustard and safflower / sunflower as dobari²⁰ crops. The rain fed areas of Thar district are suitable for millet and sorghum crops, whereas Guar, Sesamum and castor crops also flourish very well.²¹ The major crops of district Kashmore are wheat and rice while other crops (gram, barely, rape and mustard) are also grown in significant amount.²² Mirpur Khas and Umerkot contribute significantly in agriculture sector of Sindh because its climate is suitable for production of various food items including the Kharif crops of maize, rice, sugarcane, cotton and bajra and Rabi crops of wheat, barley, Gram and barseen.²³ The major crops in Sukkur district during Rabi season are wheat, mustard, jambho, grams and kharif seasons are cotton paddy, corn, sugarcane, jawar, guar, bajra, sesamum in addition to dates production.²⁴ Matiari and Tando Allahyar contribute significantly in the agriculture sector of Sindh because its climate is suitable for production of various crops, including the Kharif crops of maize, rice, sugarcane, cotton and bajra and Rabi crops of wheat and barley. In addition to these, fruit orchards are abundant in this district. This district is famous, all over Pakistan, for its bananas and mangoes.²⁵ Agriculture is the primary economic activity of districts Khairpur, Date palm, cotton, sugarcane, banana and strawberry are the main crops. Due to high population growth, and resultant housing demand, housing societies are developed around the main cities of District Khairpur. The main crops of district Dadu are cotton, rape mustard and sunflower. The Rabi crops produced in the district are wheat, barley, gram, pulses and oil seeds. The Kharif crops are rice, cotton, sugarcane and maize. District Jamshoro is slightly hotter than surrounding areas in summer and has cool winters. The district is rich in minerals like limestone, gravel and marbles. The Kharif crops produced in the district are rice, cotton, sugarcane, bajra and maize. The Rabi crops are wheat, Barley, gram, pulses and oil seeds.

3.9.5 Access to Safe Drinking Water and Sanitation

According to Census-2017, out of all housing units enumerated in the process, 85.58% have

²⁰ Dobari crops are crops grown on soil moisture left after paddy harvest, mainly gram, Sindhi matar and rapeseed, but due to the growing problem of weed, wheat crop including the variety locally called Thorhi has become common after rice crop.

²¹ https://www.pbs.gov.pk/sites/default/files//population_census/ncrpr/PCR%20Sindh.pdf

²² [https://info.undp.org/docs/pdc/Documents/PAK/DDMP%20for%20District%20Kashmore%20\(New%20Design\).pdf](https://info.undp.org/docs/pdc/Documents/PAK/DDMP%20for%20District%20Kashmore%20(New%20Design).pdf)

²³ <https://reliefweb.int/sites/reliefweb.int/files/resources/PESA-District-Mirpurkhas-Sindh.pdf>

²⁴ https://smeda.org/phocadownload/Sindh/GHOTKI_profile.pdf

²⁵ <https://success.org.pk/wp-content/uploads/2016/05/Matiari-District-profile.pdf>

reported availability of drinking water as inside the premises. The major source of water for housing units in Sindh is tap water as 44.83% of housing units have access to tap water as an inside source and 3.31% have access to tap water as an outside source. Moreover, 29.76% of housing units used electric/hand pumps as an inside source and 3.31% as an outside source. In terms of access to sanitation facilities, 82.01% of housing units in the province have access to latrine facilities. Overall, an improvement in sanitation facilities has been observed in the province as the percentage of housing units with no latrine facility reduced from 34.08% in Census-1998 to 17.99%, in Census-2017.²⁶

Below is the table representing the percentage distribution of households in Sindh, Pakistan, based on their primary sources of drinking water, with a breakdown for urban and rural areas.²⁷

Table 4.5: Percentage distribution of households by source of drinking water by province and district										
Province & Districts	Tap Water	Hand Pump	Motor Pump	Dug Well	Tanker/ Truck/ Water Bearer	Filtration Plant	Other	Total	Rank	Tap Water 2014-15
Sindh	35.41	35.93	9.19	3.8	4.33	1.79	9.56	100		41
Urban	56.94	9.51	10.18	0.39	6.52	2.63	13.83	100		
Rural	8.74	68.68	7.95	8.03	1.6	0.74	4.26	100		

The table above provides the information of the following:

Overall Sindh:

- Tap Water (35.41%) and Hand Pump (35.33%) are the most common sources, together serving more than 70% of households.
- Motor Pumps (9.19%) and Dug Wells (3.80%) are secondary sources.
- A notable proportion of households (9.56%) rely on "Other" sources, which may include rivers, ponds, or unprotected wells.
- Tanker/Truck/Water Bearer (4.33%) and Filtration Plants (1.79%) are less common.
- Sindh ranks 41st in tap water accessibility (though the ranking context is unspecified).

Urban Areas:

- Tap Water (56.94%) is the dominant source, indicating better infrastructure in cities.
- Motor Pumps (10.18%) and Hand Pumps (9.51%) supplement supply.
- A significant 13.83% of urban households depend on "Other" sources, suggesting gaps in formal water distribution.
- Tanker/Truck/Water Bearer (6.52%) usage indicates some reliance on mobile water supply.

Rural Areas:

- Hand Pumps (68.68%) are the primary source, reflecting limited piped water infrastructure.

²⁶ https://www.pbs.gov.pk/sites/default/files//population_census/ncrPCR/PCR%20Sindh.pdf

²⁷ https://www.pbs.gov.pk/sites/default/files/pslm/publications/PSLM_2019_20_District_Level.pdf

- Tap Water (8.74%) is scarce, highlighting a major urban-rural divide.
- Dug Wells (8.03%) and Motor Pumps (7.95%) are alternative sources.
- Very few households use Filtration Plants (0.74%) or Tanker/Truck/Water Bearer (1.61%), indicating minimal access to treated or delivered water.

3.9.6 Waste Management in Project Areas

In Sindh the largest proportion of the population is living in urban areas as compared to the other provinces of the country. Only 19% of the province has solid waste management facilities. A significant level of disparity is found between urban and rural areas regarding waste management conditions, ranging between 47% in urban areas to only 1% in the rural areas of Sindh. According to Sindh local government ordinance 2001, SWM is distributed among a number of agencies and sanitation and solid waste collection and disposal of solid, liquid and industrial and hospital waste to be collected by Taluka municipal administration. The Ordinance directs and empowers the Town municipal administration to collect solid waste and conveyance to transfer the waste to the designated stations, but it does not apply to the Town municipal administration for treatment and disposal of the solid waste, and this responsibility is given to the City District Government Karachi. For the rest of the districts of Sindh, TMA is responsible for collection and disposal of the waste. This is one of the reasons for good SWM practices in Karachi from administration point of view as compared to the other districts of Sindh because in all other districts, TMAs have to cover all civic issues including water supply, sanitation and SWM and have limited resources for all three sectors mentioned earlier.²⁸

The project is being implemented in rural areas of Sindh where such administrative services of solid waste management and disposal are not being implemented. However, the common practice is that the local population collects solid waste at a designated location which is later disposed of through pit burning.

3.9.7 Road Network and Accessibility

There are wide variations in the availability of infrastructure facilities in the urban and rural areas as well as in different regions of the districts. Whereas the availability and condition of roads in the cities is fair, it is quite deplorable in rural areas. As a part of its development agenda, the Government of Sindh is focusing attention on building infrastructure. Construction of roads under various programs has somehow improved access to the most remote locations in these districts.

Table 4.4: Condition of Major Roads in the project districts	
Jacobabad	The only major road passing through this district is N-65, which enters in this district from Shikarpur and exits towards Dera Murad Jamali with a total length of 25 km in this district. There exist provincial and local roads connecting the surrounding cities like Sukkur, Shahdad Kot, Larkana and Shikarpur. ²⁹
Kashmore	The only major road passing through this district is Indus Highway (N-55), which enters in this district from Rajanpur and exits towards Shikarpur having a total length of 73 km in this district. As far as provincial and local roads are concerned, no authenticated data is available, which can provide details of the road lengths and directions. ³⁰
Matari	Matari district covers an area of 1,417 km ² it has only 178 kilometers of good quality roads which are grossly inadequate for the area and its population. A National Highway (N5) connects Matari with Hyderabad and onwards to Karachi. ³¹

²⁸ Rahman, Muhammad Abdul, "Revisiting Solid Waste Management (SWM) a case study of Pakistan". International Journal of Scientific Footprints. ISSN 2310-4090

²⁹ ESMF of Multi-Sectoral Action for Nutrition (MSAN)

³⁰ ESMF of Multi-Sectoral Action for Nutrition (MSAN)

³¹ <https://reliefweb.int/sites/reliefweb.int/files/resources/DP%20Matari%20Sindh.pdf>

Badin	There are 7 main road networks, which connect Badin District to the rest of the country. These routes can be taken into account in case of emergency or disaster situations. According to the National Highway Authority, a total of 105 road schemes are present in Badin district with the longest being Sujawal-Badin Road with a length of 77 km. The main points of the road are Badin, Golarchi, Khorwah Chowk and Sujawal. ³²
Mirpur Khas	Mirpur Khas district covers an area of 2,925 km ² yet it has only 716 km of good quality roads, which are grossly inadequate for the area and its population. A Provincial Highway connects Hyderabad with Mirpur Khas via Sultanabad, Tando Allahyar and Tando Jam. The district headquarters of Mirpur Khas is linked with its taluka Headquarters of Digri and Kot Ghulam Muhammad through metaled roads. ³³
Sanghar	Sanghar district has only 868 km of good quality roads, which are inadequate for the area and its population. Just like most of the Southern districts of Sind, there is no national highway which could connect Sanghar with other major cities of the province, only a metaled road exists, which serves this purpose. The district headquarter of Sanghar is linked with its taluka headquarters of Sinjhor, Shahdampur, Tando Adam and Khipro through metaled roads. ³⁴
Tando Muhammad Khan	The existing road network in Tando Muhammad Khan district is fairly good. Although there is no national highway passing through this district, the provincial highways connect the whole district quite well. The district headquarter of Tando Muhammad Khan is connected with its taluka headquarters of Bulri Shah Karim and Tando Ghulam Hyder through metaled roads. ³⁵
Shikarpur	Indus Highway (N-55) passes through this district, with a total length of 127 km within the district. The existing road network, in Dadu district, is fairly good. The district headquarters, Dadu, is connected with other taluka headquarters of Johi, Mehar and K.N Shah through metaled roads. Two provincial highways, comprising of a total length of 124 km, are mentioned in official statistics, provided by the government of Sindh. Also, there is a comprehensive network of access roads, comprising of 250 km, interconnecting the whole district. ³⁶
Thatta and Sujawal	Thatta city is situated 98 km east of Karachi, on the national highway (N-5). This highway passes through district Thatta for a length of 112 km. Superhighway (M-9), which connects Karachi and Hyderabad, also passes through this district for a length of 40 km. District headquarters of Thatta is connected with other talukas through well-built roads. Although these roads are single but are of good quality. ³⁷
Ghotki	Ghotki district is spread over an area of 6083 square km. The city is situated near the National Highway along with the railway line which crosses from the center of the city. Important means of transport in the district are roads and railways. The district has a total of 300 km of roads, out of which 100 km are un-metaled roads. All Talukas are connected with the district headquarters either by roads or by rail. ³⁸
Tharparkar	Tharparkar district covers an area of 19,638 sq. km yet it has only 743 km of good quality roads, which are inadequate for the area and its population. A Highway connects Tharparkar with other major cities of the province. The district headquarters Mithi is linked with its taluka headquarters of Diplo, Nagarparkar, Chachro through metaled roads. ³⁹
Larkana	Larkana has a network of roads that is very successful, serving to link up Larkana with other neighboring districts. The total length of the roads within the district is 4,179 Kilometers; more than half of it is metal led while the remaining is 'Kachcha'. All these roads were constructed and are maintained by the Works & Services Department. A few important regional road links are: Indus Highway that links Larkana to Jacobabad, Shikarpur and Sukkur in the Northeast and with Dadu and Hyderdabad in the South. Indus Highways meets the junction of Superhighway and National Highway at Jamshoro. Miro Khan road, which is about 28 Km long, connects Larkana to Miro Khan. Moenjodaro road connects Larkana to the oldest civilization site of Moenjodaro and is 24 km long. This road is also used to access the airport located in Moenjodaro Naudero road connects Larkana with Naudero town and is 18 km in length
Jamshoro	Jamshoro district is connected through the main Superhighway that runs from Karachi. The

³² ESMF of Multi-Sectoral Action for Nutrition (MSAN)

³³ <https://reliefweb.int/sites/reliefweb.int/files/resources/PESA-District-Mirpurkhas-Sindh.pdf>

³⁴ ESMF of Multi-Sectoral Action for Nutrition (MSAN)

³⁵ Ibid

³⁶ Ibid

³⁷ Ibid

³⁸ [https://info.undp.org/docs/pdc/Documents/PAK/DDMP%20District%20Ghotki%20\(New%20Design\).pdf](https://info.undp.org/docs/pdc/Documents/PAK/DDMP%20District%20Ghotki%20(New%20Design).pdf)

³⁹ ESMF of Multi-Sectoral Action for Nutrition (MSAN)

	district is well connected with a wide network of road. ⁴⁰
Tando Allahyar	District of Tando Allahyar has a road network of 534 km out of the 22,238 km in Sindh ⁴¹
Khairpur Mirs'	Road network is considered as a vehicle for economic development. The district is well-connected with other districts through good quality roads. The total good quality roads length is 817 kilometres in this district ⁴⁶ . These roads can be used as an evacuation point in flood disaster. Good roads are also helpful in carrying out relief activities. National Highway (N-5) intersects the city of Khairpur with a total length of 60km in the district. District headquarter of Khairpur is connected with its taluka headquarters of Gambat, Kingri, Sobodero, Kot Digi, Nara, Thari Mirwah through metalled roads. Two provincial highways comprising a total length of 200 km also pass through the district.
Dadu	Dadu has both canals irrigated and rainfed agricultural areas. The major parts of the districts are well connected with metalled roads with a total road length of more than 1,000 Kms.
Kamber Shahdadkot	District Kamber-Shahdadkot has a road network of 723 km out of the 22,283 km in Sindh (3.2%).
Sukkur	District Sukkur has a road network of 969 km out of the 22,283 km in Sindh (4.3%)
Umerkot	Most of the areas of district Umerkot are connected with roads except a few areas lying in the desert parts of taluka umerkot. A total of 1,184 km roads available in the district to facilitate the district population to easily access markets and farms.

3.10 Damage Assessment and Validation

The devastating floods of 2022, that displaced millions of people across Sindh, also resulted in damaging more than 2 million houses in Sindh. District wise details of damages are given in Figure 4.1 below. It translates into a recovery cost of approximately USD 2.8 billion. The GOS priority has been housing, and the reconstruction process has been initiated, employing a beneficiary-driven approach. The beneficiaries are receiving direct financial support in their bank accounts to aid in the reconstruction of their homes.

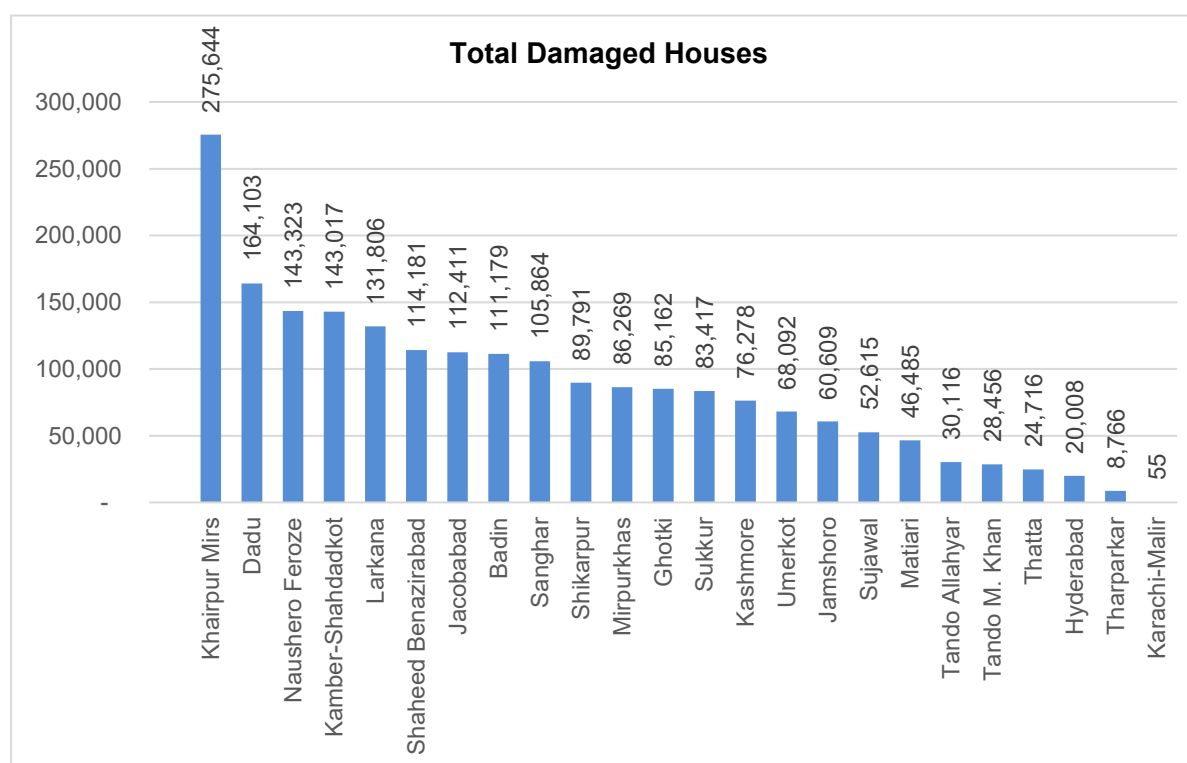


Figure 4.1: Total Damaged Houses

As provided in Chapter 3, more than 70% of the affectees whose houses were completely destroyed were non-titleholders, including informal settlers, landless tenants and others. Many of the affected households are women-headed. As an affirmative action in the overall

40 <https://pakistanalmanac.com/sindh-jamshoro/>

41 <https://pakistanalmanac.com/sindh-tando-allahyar/>

project design, out of verified 1.36 M houses (latest socio-economic data, still in progress), 37% direct beneficiaries are women in whose name the project support grants will be provided, whereas the total number of women beneficiaries are close to 50% of the total. To gather the status of land ownership for all the flood affected houses, SPHF in coordination with the district administration have collected the land ownership status of 1.9 million house as given in Figure 4.2

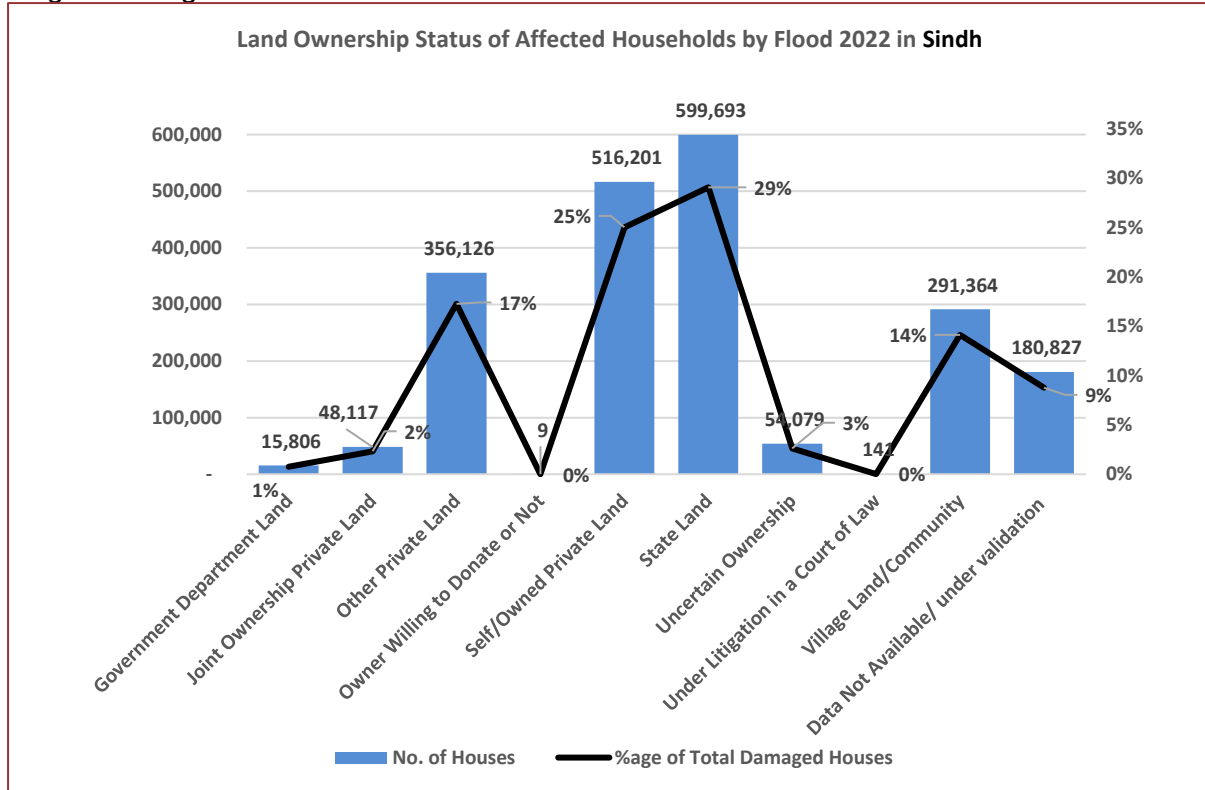


Figure 4.2: Land Ownership Status of Affected Households by Flood 2022 in Sindh

The data in figure 4.2 above reveals that approximately 71% affectees live either on State/village land or on their own private property. Therefore, transferring the land titles to such beneficiaries is not an issue, whereas for the remaining 29%, GoS is working to devise a workable strategy to benefit these people as well.

4 PROJECT-LEVEL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES.

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. Experience from the initial screening of the project indicates that environmental and social impacts are minor, common, and are site-specific.

In addition to the WASH/Settlement Improvement interventions will be implemented through small-scale, site-specific civil works across rural settlements in Sindh, minimizing the likelihood of significant environmental or social impacts. EA Consulting has been engaged to provide resident supervision for 50 prototype WASH and Settlement Improvement interventions, which will serve as reference models for scaling. Upon successful evaluation of these prototypes, the approved designs will be replicated by the Implementation Partners. EA Consulting will also ensure top-level technical oversight in 1,450 settlements to monitor compliance with quality, environmental, and social standards, thereby supporting sustainable, safe, and community-responsive WASH improvements.

A settlement level screening checklist for housing and WASH/Settlement Improvement has been developed for the sub-project to identify the impact and implement mitigation measures prior to any reconstruction efforts, where the checklist has been attached in annex 8 and 9. Based on experiences and lessons learnt to date, common project-level environmental and social issues and mitigation measures and district level ESMF consultation program revealed the following:

4.1 Summary of Environmental & Social Positive Impacts

The positive environmental and social impacts include

- Environmentally friendly resilient housing design with improved indoor air quality
- Introduction of environmentally friendly Compact Stabilized Earth Brick bricks/Korean Good Bricks.
- Improvements in health outcomes, reduction of nuisance, and enhancement of community resilience to climate change impacts;
- Plantation in the settlement where reconstruction is being done to reduce overall Carbon Footprint.
- Use of renewable energy such as solar panel.
- Increased utility of families owning reconstructed houses.
- Reduced exposure to health risks.
- Saving of human lives and housing assets in future disasters.
- Positive effect on local economies and support to the livelihoods of a significant number of people.
- Awareness related to the banking procedures and financial inclusions.
- Awareness related to GBV/SEA/SH for the locals.

Positive Impacts of SPHF WASH and Settlement Improvement Initiatives:

- Reduction in waterborne diseases, child morbidity, mortality, and stunting through improved water, sanitation, and hygiene.
- Enhanced hygiene practices and handwashing reduce the spread of infections.
- Drainage culverts and groundwater recharge systems mitigate flooding and improve

	Environmental & Social Management Framework			
	Sindh Floods Emergency Housing Reconstruction Project			
	Doc. No.: SFEHRP/ESMF-AF/001	Rev.: 01	Impacts	

water availability.

- Gender-sensitive sanitation facilities ensure privacy, dignity, and menstrual hygiene for women and girls.
- The reduced water-fetching burden enables girls' education and women's participation in livelihoods.
- Improved drainage and paved streets reduce stagnant water, dust, and vector-borne disease and risks.
- Lower household maintenance costs and improved living environment through durable village infrastructure.
- Local employment generation and capacity building through community institution led construction activities.
- Increased property value and economic stability due to improved basic services.
- Strengthened community ownership, accountability, and social cohesion through participatory implementation.

4.2 Construction Phase Environmental Risks, Impacts and Mitigation Plan for Housing

The project-level Environmental Impact and Mitigation Measures for the reconstruction of housing units are provided in the table below.

Table 5.1: Environmental Risks, Impacts & Mitigation Measures	
Potential Environmental Risks & Impacts	Mitigation Measures
Generation of Dust	- The material such as cement, sand and gravel will be covered and stored at a designated location. - Water sprinkling will be done on bare soils and on material used for filling on as required basis to minimize the potential for environmental nuisance due to dust. - The frequency of watering will be increased during periods of high risk (e.g., high winds).
Waste generation	- The useable material available with the beneficiary is recorded in plinth level certification form, with percentage of material used. - The waste in the form of rubble and debris will be reused to the maximum extent. - The social technical assistance team (STAT) will guide the beneficiary on the use of such material in terms of its quality along with the usage of same in the structure. - The waste present at construction sites in the form of hazardous material will be disposed of at a designated site identified in each settlement. - Metal scraps and empty cement bags will be collected safely and sold to scrap dealers - While selecting space for storage of debris materials floodways, natural drainage paths, water bodies, and farmlands will be avoided - Spoil generated from the excavation of foundations will be used for filling - Residual construction waste is expected to be generated in different volumes at various stages of construction. Keeping in view the size of the structure, the volume/unit generated is expected to be of small quantity. The residual waste includes empty cement bags and damaged bricks. All the residual waste will be placed in a safer location before its final disposal away from schools, agricultural fields, and children playing areas. Use of signs indicating hazards due to residual waste will be placed and empty cement bags will be handed over to the vendor and the damaged bricks are crushed and used in floor. - No disposal of construction wastewater will be done in drinking water sources, irrigation channels, and natural drainage.

Noise generation from construction activities	- Night time activity will be avoided in order to reduce nuisance to the local people. - No heavy machinery will be used for reconstruction activities. - The construction activities will be carried out between 8:00 am to 6:00 pm - The speed of vehicles carrying materials will be kept low, and horns will not be used while passing through or near the communities.
Risk of water pollution / Ground water contamination due to accidental release or malfunctioning of WASH facilities	- It will be ensured that no solid and liquid waste enters the waterways. All such waste will be collected and disposed of at designated site. - Septic tank (lined to their full depth) for each WASH facility. - Material will not be stored close to waterways
Soil contamination	- Materials will be covered with tarpaulin or locally available material. - Soil/reconstruction material will be stored on designated storage area. - Construction sites including soil piles will be barricaded to avoid material escape, generation of dust.
Soil Erosion and Degradation	- The excavation of foundation will be carefully executed so that a large quantity of spoil will not be generated. The surplus soil, if any, will be disposed at designated location approved by the project. - The filled material will not be obtained from any cultivated fields - Transportation vehicles will not be repaired in the agricultural field located close to the reconstruction site. - Fast track construction so that the excavated soil can be used at roof level for heat proofing. - Burrow Pit will be dug away from the settlement and will be reinstated to original condition after the completion of works to minimize erosion and hazard for people and livestock.
Site Clearance/Impact on Flora and Fauna	- Clearing natural vegetation will be minimized as far as possible during the reconstruction. - Cutting of trees will be strictly prohibited and if it is unavoidable then it will ensure that for each tree cut, 05 new trees will be planted. - Tree plantation plans will be prepared, which will include the number and type of species to be planted and cost of plantation and maintenance. - Only local species will be selected for plantation in the project area. - Leaving as much vegetation onsite as possible for as long as possible to prevent erosion from taking place

	- Leaving a buffer of vegetation around the perimeter of the site to allow for infiltration of water and to allow for any sediment created onsite to remain onsite and to stop sediment from entering into the storm water system - Trees will be protected with tree protection fencing for the duration of the project, ensuring that the fencing is maintained and not removed until final landscaping takes place - The project staff will not be allowed to indulge in any hunting or trapping activities.
Occupational Health and Safety	- The construction sites (especially during excavation of foundation) will have protective fencing to avoid any unauthorized entry. - Appropriate personal protective equipment (PPEs) such as safety helmet, vests, gloves, masks and safety shoes will be provided to construction teams. - First aid boxes will be ensured at the sites. - All the occupational incidents, accidents and diseases will be recorded and reported. - Awareness will be provided to the construction teams to strictly follow health and safety procedures. - The code of conduct prepared for labor will be implemented.

4.3 Construction Phase Social Risks, Impacts and Mitigation Plan for Housing

The project-level social Impact and Mitigation Measures for the reconstruction of housing units are provided in the table below.

Table 5.2: Potential Social Impacts, Risks & Mitigation Measures	
Potential Social Impacts and Risk	Mitigation Measures of Social Impacts and Risks
Labor influx and working conditions	- Local labor will be given preference in hiring. - Undertaking signed with the beneficiaries will be enforced for the protection of local communities, GBV, other social issues, flora and fauna and discouraging tree cutting. - A code of conduct will be signed by the workers (I.e. Masons) - Good house-keeping practices will be maintained at construction sites. - Awareness to the community and labors on proper sanitation and hygiene practices. - Bringing weapons to the workplaces will be prohibited.
Community Health and safety	- Communities will be informed and consulted before commencing reconstruction work - Material will be transported through clear pathways.

	- Material will be stored in the designated location. - Excavated site will properly be barricaded - The speed of the vehicles carrying the construction material will be maintained as 30km/hr.
GBV including Sexual exploitation and abuse (SEA) or sexual harassment (SH) risks	- Enforcement of approved protection Against Harassment of Women at The Workplace Act 2022. (Amended). Field staff and district-level in charges will monitor its implementation. - Awareness sessions will be conducted regularly for communities, and workers by engaging skilled trainers - Project staff will receive training on SEA/SH prevention. Skilled trainers will be engaged to raise awareness among project workers about risks, expected behaviors, and consequences of violations. - Codes of conduct will be communicated through training and publicized. GBV specific measures included in the CoC as a separate section. - Targeted communications and awareness to women regarding potential SEA / GBV risks, especially as literacy rates amongst women are lower. This will include organizing consultations during times when women are not busy with their household chores, holding consultations in areas accessible to women - Awareness-raising campaigns on issues of SEA/SH and VAC - A standalone Gender Action Plan (GAP) has been developed for the project, which also includes SEA/SH action plan applicable to the entire project activities. - GBV service providers will be mapped and engaged to address instances of GBV, particularly related to labor influx issues. - The IPs will take appropriate measures to address and resolve issues of harassment, intimidation, and exploitation, with a particular focus on women. - The World Bank Guidelines on SEA/SH will be adopted. - Whenever possible, routes and places frequented by women will be avoided. If unavoidable, alternative routes will be identified, especially along paths commonly used by women, such as routes to local wells or water sources. - Identifying hotspot in project areas where women, children and men occasionally are prone to GBV/SEA/SH. - Service providers will be identified and mapped to address SEA/SH issues. - Enforcement of approved Gender and SEA/SH action plan

Land ownership	- Landless beneficiaries will be awarded with the land title ship, as per the process and criteria described in Chapter 2. - Enable and support ownership in the name of women beneficiaries. - Large scale resettlement will not be entertained under the project - No involuntary resettlement under the project - Provisions of ESS5 will be applied in cases where small scale resettlement on a voluntary basis is involved. In case of voluntary resettlement; Resettlement Policy & Assessment Checklists attached as Annex-12 will be followed.
Child and Forced Labor	- Awareness program on child labor and provincial labor laws - Adherence to the prohibition of child labor and any form of forced labor - Training and capacity building: Provide training and capacity-building programs for project staff, IPs, Social mobilisers and members of VRCs on child protection, and ethical labor practices. This will enhance their understanding of the issue and equip them with the knowledge and skills to identify and prevent child labor within the project. - Grievance mechanism: include in the existing grievance mechanism that allows community members to report any concerns or cases of child labor confidentially. This mechanism should ensure that complaints are properly investigated, and appropriate actions are taken in response. - Beneficiaries and primary suppliers will be made aware of the provincial labour laws and World Bank regulations regarding child/forced labor.
Exclusion Risks to women, marginalized and disadvantaged group	- A robust selection and re-verification process has been adopted having multiple layers to ensure that no eligible beneficiary is missed - A comprehensive GRM has been developed and will be implemented to ensure timely and effective resolution of any complaints pertaining to exclusion, specially by marginalized people - Proper representation of all groups will be ensured in the CRVs and other relevant project forums - The project SEP identifies marginalized and disadvantaged groups as important stakeholders and establishes the mechanism for meaningful and continued engagement with them. - Support joint ownership, if not complete female ownership, of houses supported through housing grants

Elite Capture	- All project support will be provided through personal bank accounts of the identified eligible beneficiaries, thereby ensuring their own control over the amount provided. - The payment will be made in 04 tranches which are tied with actual physical progress of construction, so that the cash grants could not be misappropriated. - The damage assessment and re-verification survey has been designed in a manner so as to ensure that only the genuine beneficiaries are enlisted for the project support. - For landless people residing on private lands, the project will strive to get the land parcels from the landowners through VLD, and transfer the same to the landless beneficiaries, besides providing them with reconstruction support. - The GRM has multiple community representatives at all tiers.
Resettlement Issues	- The project will mostly adopt in-situ reconstruction, thereby minimizing resettlement requirements - No involuntary resettlement will be carried out under the project. - The use of private land follows VLD or OA - For the proposed locations to resettle those landless people who are eligible beneficiaries and are to be provided land titles, only previously marked land parcels “declared villages” will be utilized with consent from the resettling community as well as the existing dwellers of the destination locality. - A robust and effective GRM has been developed and implemented.

4.4 ESMMP for WASH

4.4.1 Pre-Construction Phase

Table 5.3: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
Availability and/or Loss of land / and other physical assets	Post-screening if any squatters are identified, detailing of availability/loss of land and any physical asset. Consultations must be held with all potentially affected households Confirmation of voluntary land acquisition through VLD as per the processes defined for the same. Requisite actions to minimize impact on loss of land/other physical asset for vulnerable and disadvantaged	PIU / IPs / Engineering Consultants	Proposed facility sites WASH	100% VLD/land documentation completed before works; 0 cases of coercion; 100% consultation records available; vulnerable households identified and mitigation recorded.	Review of screening forms, VLD records, consultation minutes, grievance records, and third-party verification where required.	Before mobilization / once per site	Land availability confirmed; signed VLD/consent records; no unresolved land complaints.	IP E&S Team / PIU / Engineering Consultant
Loss of temporary access	Project to ensure temporary alternative access to be provided	PIU / IPs / Engineering Consultants	Access routes around construction sites	0 prolonged access blockage; access restored within 48 hours; safe temporary passage provided where required.	Site inspection and community feedback through VRC/GRM.	Weekly during enabling works	No household or public facility remains inaccessible due to works.	IP E&S Team / PIU / Engineering Consultant
Site Selection & implementing interventions: environmentally sensitive areas	Project area does not include any environmentally sensitive/conservation site.	PIU / IPs / Engineering Consultants	All proposed sites	100% sites screened; 0 WASH facilities located in critical habitats or legally protected areas; vegetation disturbance minimized and documented.	Environmental screening checklist, GIS/map review, site walkover and photographic evidence.	Once during site selection and before construction	Site selection was cleared through environmental screening.	IP E&S Team / PIU / Engineering Consultant
Site Preparation: Soil Erosion; Alteration of natural drainage	Construction facilities should be situated away from water bodies and natural flow paths. Tube-well installation must maintain a safe distance from latrines' soak wells. Site preparation should not interfere with the activities of local residents. Cut and fill operations must be limited, and site clearing and grubbing should be confined to designated areas. Socially sensitive areas, including cultural sites and human habitation, must not be disturbed.	PIU / IPs / Engineering Consultants	Construction footprints, excavation areas, storage areas	Site preparation areas demarcated; no drainage blockage; safe distance between water sources and sanitation systems verified; 0 complaints on interference with local activities.	Site inspection, photographic evidence, design/layout verification and community feedback.	Weekly during site preparation	Site cleared without drainage disturbance or avoidable soil erosion.	IP E&S Team / PIU / Engineering Consultant

Table 5.3: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
Design inclusivity	While designing the facilities the following will be considered: Differently abled Gender inclusivity Vulnerability	Design PIU / IPs / Engineering Consultants/ PIU / IPs	Design stage and community consultation locations	Inclusive design features included in 100% applicable designs; women and vulnerable groups consulted; at least 30% women participation targeted in consultations where culturally feasible.	Design review, SEP/consultation monitoring, review of drawings and beneficiary feedback.	Once at design stage, then verification before construction	Gender, disability and vulnerability considerations reflected in approved designs.	IP E&S Team / PIU / Engineering Consultant

4.4.2 Construction Phase

Table 5.4: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
Noise from construction works	To minimize disturbances to surrounding areas, construction activities should primarily take place during the daytime. Personal protective equipment (PPE), including helmets, earplugs, dust masks, and high visibility jackets must be provided to workers in high-risk areas as needed.	IPs / SPVO / Engineering Consultant	Work sites and nearby receptors	Works limited to daytime; noise generally within NEQS or locally acceptable levels; 0 community complaints; PPE available for exposed workers.	Visual inspection, spot noise readings where required, worker PPE checks and GRM review.	Weekly	Noise controlled and no unresolved complaints.	IP E&S Specialist / SPHF E&S Team /
Dust Generation	Dust generated from site grading, leveling, and clearing should be controlled using water sprinkling.	IPs / SPVO / Engineering Consultant	Excavation areas, stockpiles, haul routes	No visible dust crossing site boundary; stockpiles covered; water sprinkling conducted where dust is visible; complaints resolved within 48 hours.	Site inspection, photographic evidence and complaint tracking.	Weekly or more often during dry/windy periods	Dust emissions minimized and community exposure avoided.	IP E&S Specialist / SPHF Environmental Specialist
Safety Issues	Barricades must be placed around excavated sites. Health and safety training should be provided for all laborers. Displaying construction-related signs in the local language is essential for better comprehension. The employment of child or forced labor in any activity is strictly prohibited. Raising awareness about preventing child abuse, child marriage, gender-based violence,	IPs / SPVO / Engineering Consultant	Construction sites and surrounding community areas	100% excavations barricaded; local language signage installed; 100% workers trained; 0 child/forced labor cases; 100% workers sign Code of Conduct.	Daily safety inspection, training attendance sheets, labor verification and GRM/SEA-SH referral monitoring.	Daily for barricading; monthly for labor/CoC review	Zero fatality; no child or forced labor; community hazards controlled.	IP HSE Officer / SPHF E&S Team

Table 5.4: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
	and sexual harassment is crucial.							
Labor influx and working conditions	Local labor will be given preference in hiring. Undertaking signed with the beneficiaries will be enforced for the protection of local communities, GBV, other social issues, flora and fauna and discouraging tree cutting. A code of conduct will be signed by the workers (i.e. Masons) Good housekeeping practices will be maintained at construction sites. Awareness to the community and labor on proper sanitation and hygiene practices. Bringing weapons to the workplaces will be prohibited.	IPs / SPVO / Engineering Consultant	Workforce areas, work sites, nearby communities	Local hiring prioritized; 100% workers covered by CoC; 0 weapons at workplace; housekeeping satisfactory; grievances unresolved beyond 30 days not more than 10%.	Labor records, site inspections, worker interviews, GRM review.	Monthly, with weekly site checks	Safe and disciplined workforce with limited labor influx impacts.	IP E&S Specialist / SPHF Social Specialist
Waste Management: Improper management and handling of waste during construction.	The residual waste generated from the erection of structures and related construction activities will be collected and stored separately. Designated waste bins or areas must be used for immediate disposal. Waste bins should remain closed to prevent water accumulation during rainfall. Efforts should be made to minimize domestic waste production on-site and promote reuse whenever possible complying with adaptive management.	IPs / SPVO / Engineering Consultant	Construction sites, storage areas, disposal locations	100% waste stored in designated areas; waste bins covered; 0 illegal dumping; reusable material segregated; no waste entering drains or waterways.	Waste audit, disposal record review, visual inspection and photographs.	Weekly	No illegal dumping and site remains clean.	IP E&S Specialist / SPHF Environmental Specialist
Health & Safety Risks: There is a potential risk of safety incidents, including tripping and hazards associated with working at heights. Additionally, construction activities may expose workers to health issues such as	All construction equipment used for the project must be suitable for its intended purpose. Proper signage should indicate slippery areas, and personnel working in such zones must wear PPEs. Construction sites with open trenches, ditches, pits, or other hazards must implement safety	IPs / SPVO / Engineering Consultant	All active work sites	0 fatalities; 100% critical PPE compliance; first aid kit available at each active site; drinking water available; trenches/pits barricaded; safety training records maintained.	Daily toolbox talks, safety inspection, PPE checks, incident logs and first aid kit checks.	Daily	Safe work conditions are maintained and incidents prevented.	IP HSE Officer / SPHF E&S Specialist

Table 5.4: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
musculoskeletal disorders from manual handling, hand-arm vibration, heat stress, and dermatitis.	protocols both day and night, considering the presence of children, the elderly, and women. A fully equipped first aid kit must be available on-site, including bandages, antiseptic wipes, gloves, scissors, and a thermometer. Equipment should be appropriate for tasks, considering factors such as safety, efficiency, ergonomics, cost, and user acceptability, with the use of low-vibration tools when possible. Tools and equipment must be regularly serviced and maintained. Awareness training sessions must be held to educate workers about heat-related illnesses, including heat cramps, exhaustion, stroke, and dehydration. Sufficient drinking water must be available at multiple locations across the site. Workers exposed to potential risks must be fully informed of hazards, trained in protective measures, and equipped with effective safety knowledge.							
Soil Erosion and Degradation	The excavation will be carefully executed so that a large quantity of spoil will not be generated. The surplus soil, if any, will be disposed at designated location approved by the project. The filled material will not be obtained from any cultivated fields Transportation vehicles will not be repaired in the agricultural field located close to the reconstruction site. Borrow Pit will be dug away from the settlement and will be reinstated to original condition after the completion of works to minimize erosion and hazard for people and livestock.	IPs / SPVO / Engineering Consultant	Excavation areas, borrow areas, disposal sites	Borrow areas approved; 100% borrow pits reinstated; 0 cultivated field sourcing; spoil disposed/reused properly; no vehicle repair in agricultural fields.	Site inspection, borrow/disposal records and photographic evidence.	Monthly, and at borrow pit closure	Borrow areas restored and soil erosion controlled.	IP E&S Specialist / SPHF Environmental Specialist

Table 5.4: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
Improper stockpiling and storage of construction materials can lead to dust generation and water runoff issues. Water runoff may cause damage to existing utilities, buildings, and drainage systems. Poor material storage can result in drainage blockages and related hazards.	Stockpiles should be placed within designated on-site areas or campsites to ensure easy access to equipment and personnel while minimizing disruption to movement. Excess spoils and materials should be reused whenever possible. Stockpiles must be covered with impermeable materials, such as plastic, to protect them from wind and rain. Excavation byproducts, including excess rocks and sand, must be disposed off or reused properly rather than being dumped near surface waters or abandoned before departure. Drainage systems should be designed with proper outlets to prevent wastewater from contaminating water sources.	IPs / SPVO / Engineering Consultant	Stockpile areas and drainage points	100% stockpiles in designated areas; dusty material covered; no drainage blockage; runoff controlled; no material dumped near surface water.	Weekly site inspection, photographic evidence and drainage checks.	Weekly	Stockpiles managed without runoff, dust or blockage.	IP E&S Specialist / SPHF Environmental Specialist
Local Employment Generation	Recruitment of skilled and unskilled workers from the community.	IPs / SPVO	Project settlements	Local labor preference documented; hiring records maintained; no discrimination complaints.	Labor records review and community feedback.	Monthly	Local employment benefits realized.	IP Social Officer / SPHF Social Specialist

4.4.3 Operation, Maintenance and Site Clearing Phase

Table 5.5: Potential Social Impacts, Risks & Mitigation Measures								
Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
Risk of water pollution / Ground water contamination due to accidental release or malfunctioning of WASH facilities	It will be ensured that no solid and liquid waste enters the waterways. All such waste will be collected and disposed of at designated site. Septic tank (lined to their full depth) for each WASH facility. Material will not be stored close to waterways	Operator / IPs / Community O&M Committee	WASH facilities, water sources, waterways	E. coli 0/100 ml for drinking water; no visible waste entering waterway; septic tanks lined and intact; material stored away from waterways.	Water quality testing, O&M inspection, photographic evidence and community feedback.	Monthly for water quality / quarterly O&M review	Drinking water remains safe and facilities do not contaminate groundwater.	SPHF / Operator / IP E&S Specialist
Grievance Redressal	A comprehensive GRM has been developed and has been implemented to ensure a timely and effective resolution of any complaints.	PIU / IPs	Project-wide and settlement level	At least 90% grievances resolved within 30 days; 100% grievances recorded in GRM/GMIS; SEA/SH cases handled through survivor-centered	GRM/GMIS review, grievance register audit and complainant feedback.	Monthly	Functional GRM and timely complaint closure.	SPHF GRM Officer / Social Specialist

Table 5.5: Potential Social Impacts, Risks & Mitigation Measures

Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
				protocol.				
Odours and pollution caused by leaking latrines and faecal sludge impacting surrounding water bodies, flora and fauna	Ensure preventative maintenance schedule is followed Regular inspections of potential leaking points will be undertaken Households and communities will be trained for O&M of latrines	Operator / Community O&M Committee / IPs	Latrines, septic tanks, soakage systems and drains	0 visible leakage; odour complaints addressed within 7 days; O&M training delivered to households/community caretakers; maintenance schedule followed.	O&M inspection, household feedback, maintenance logs and GRM review.	Monthly during initial operation, then quarterly	Latrines functional without leakage or odour nuisance.	Operator / IP E&S Specialist / SPHF
Withdrawal of groundwater	Monitoring of extraction rates Coordination with other development agencies Schedule for water supply based on permissible extraction rates as per groundwater stock status	SPVO / IP	Tube wells, pumping systems, source areas	Abstraction within approved/safe yield; extraction log maintained; groundwater decline not exceeding agreed threshold; no conflict with local users.	Pump log review, groundwater level monitoring, hydrogeological follow-up and community feedback.	Quarterly, or monthly in stress areas	Groundwater abstraction remains sustainable.	SPHF / Operator / Hydrogeologist where required
The impacts are similar to those listed in construction Phase: Pollution from waste materials Health & Safety risks to workers and the local community.	The main mitigation and monitoring measures to minimize or reduce the environmental and social impacts during decommissioning are anticipated to be similar to those identified for the construction phase.	IPs / SPVO / Operator / Engineering Consultants	Sites undergoing decommissioning or clearing	100% temporary structures, waste, and excess material removed; no open pits; no community safety hazards left behind.	Final site inspection, photographic evidence and community sign-off where appropriate.	At completion of works / decommissioning	Site restored and safe for community use.	IP E&S Specialist / SPHF E&S Team
Unattended construction materials left on site may pose health and safety hazards to the community	All temporary structures, materials, waste, and facilities used for construction activities will be removed upon completion of the project. Excess rocks and sand as a result of excavation activities are not to be dumped next to surface waters and left before departure.	IPs / SPVO / Engineering Consultants	Completed sites and adjacent areas	0 unattended hazardous materials; excess materials removed/reused; no dumping near surface water.	Completion inspection and photographic evidence.	At completion and final handover	No leftover construction hazards.	IP E&S Specialist / SPHF E&S Team
Damage to WASH infrastructure due to frequent floods (e.g., latrines, water supply)	Design climate-resilient WASH infrastructure (elevated platforms, flood-proof materials) Implement proper drainage around facilities.	Design Consultants / Operator	Flood-prone settlements and WASH structures	Flood resilience features installed where required; drainage around facilities is functional; no prolonged post-flood service disruption beyond the emergency response period.	Post-rain/flood inspection, O&M records and community reports.	Pre-monsoon and post-flood / post-rain event	Facilities remain functional or are restored quickly after floods.	SPHF / Operator / IPs
Contamination of drinking water sources post-flood	Regular water quality meeting. Promote point of use water treatment (chlorination, filtration).	Operator / Community O&M Committee	Drinking water sources and households	E. coli 0/100 ml; turbidity within acceptable limit; residual chlorine 0.2-0.5 mg/L where chlorination is used;	Water testing, sanitary inspection and household awareness checks.	Monthly and after flood events	Unsafe water identified and controlled promptly.	SPHF / Operator / IP E&S Specialist

Table 5.5: Potential Social Impacts, Risks & Mitigation Measures

Potential Impacts	Proposed Mitigation Measures	Implemented by	Monitoring Location	Monitoring Parameters / Performance Indicator	Monitoring Mechanism	Frequency	Performance Indicators	Monitored by
				emergency advisory issued if unsafe.				
Disruption in community access to safe water during extreme events	Establish community-level water reserves/emergency water supply systems. Develop community-based emergency preparedness and response plans	Operator / Community O&M Committee	Settlements and water supply points	Emergency response plan available; alternative water access identified; vulnerable households included in response planning.	Review of emergency plan, community drills/awareness records and post-event feedback.	Annual pre-monsoon and after major events	Continuity of safe water access during emergencies.	SPHF / Operator / IPs
Increased vulnerability of marginalized groups (e.g., women, children)	Ensure inclusive design of WASH facilities with focus on gender and disability-friendly features. Conduct awareness sessions on climate resilience and water conservation.	SPVOs / Operator / IPs	Communities and WASH facilities	Inclusive features maintained; vulnerable groups included in awareness sessions; grievances from vulnerable groups tracked and resolved.	SEP monitoring, facility inspections, community consultations and GRM review.	Quarterly	Equitable access and participation maintained.	SPHF Social Specialist / IP Social Officer
Reduced groundwater recharge or water availability due to prolonged drought	Promote water storage system. Identify and develop alternative water storage mechanism	SPVO / Operator / Community O&M Committee	Water supply schemes and settlements	Water storage option identified/functional where required; demand management measures introduced; source stress monitored.	O&M logs, groundwater/source monitoring, community feedback and drought preparedness review.	Quarterly, with increased monitoring during drought	Water availability managed during low-recharge periods.	SPHF / Operator / Hydrogeologist where required

5 CONSULTATIONS, INFORMATION DISCLOSURE AND GRIEVANCE REDRESS MECHANISM

5.1 Stakeholder Engagement Plan

The project has prepared a Stakeholder Engagement Plan (SEP) to describe objectives, process and outcome of the stakeholder engagement already carried out during the project preparation and to be carried out during the project implementation – in accordance with the WB ESS 10. The key aspects of the SEP are summarized below.

ESS10 requires that borrowers engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement have to be proportionate to the nature and scale of the project and its potential risks and impacts.

The SEP recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive, and responsive relationships that are important for successful management of a project's environmental and social risks.

The overall objective of this SEP is to define a plan of action for stakeholder engagement, including technically and culturally appropriate approach to public consultation and information disclosure, throughout the entire project cycle. The SEP outlines ways in which the project team will communicate with stakeholders and includes a mechanism by which people can raise concerns, provide feedback, or make complaints about project activities. The involvement of different stakeholders, including the local population is essential to the success of the project in order to ensure smooth collaboration between project staff and local communities.

This SEP will be reassessed and updated throughout the project life as a living document, where it will:

- Establish a systematic approach to stakeholder engagement that helps the Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties.
- Assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.
- Promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.
- Ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable,

accessible, and appropriate manner and format.

Provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow Borrowers to respond to and manage such grievances.

5.2 Stakeholder Identification and Analysis

For meaningful and substantive engagement, it is necessary to determine who the stakeholders are and understand their needs and expectations for engagement, as well as their priorities and objectives in relation to the Project. This information will then be used to tailor engagement to each type of stakeholder. As part of this process, it is particularly important to understand how each stakeholder may be affected – or perceives they may be affected – so that engagement can be modified accordingly.

Project stakeholders are defined as individuals, groups or other entities who:

- are impacted or likely to be impacted directly or indirectly, positively or adversely, by the Project (also known as ‘affected parties’); and
- may have an interest in the Project (‘interested parties’). They include individuals or groups whose interests may be affected by the Project and who have the potential to influence the Project outcomes in any way.

Cooperation and negotiation with the stakeholders throughout the Project development often also require the identification of persons within the groups who act as legitimate representatives of their respective stakeholder group, i.e., the individuals who have been entrusted by their fellow group members with advocating the groups’ interests in the process of engagement with the Project. Community representatives may provide helpful insight into the local settings and act as main conduits for dissemination of the Project-related information and as a primary communication/liaison link between the Project and targeted communities and their established networks. Verification of stakeholder representatives (i.e., the process of confirming that they are legitimate and genuine advocates of the community they represent) remains an important task in establishing contact with the community stakeholders. The legitimacy of the community representatives can be verified by talking informally to a random sample of community members and heeding their views on who can be representing their interests in the most effective way.

Table 6.1 below outlines the major categories of the Project’s stakeholders and their relationship to the Project based on the classification system described above. The detailed list of stakeholders identified, as provided in the standalone SEP, remains dynamic and may change during the Project as more information becomes available. The right to modify this list remains with SPHF or any other entity to which SPHF may delegate this right.

Table 6.1: Project Stakeholders by Category, Class and Type				
SH-CD	Stakeholder Types	Category	Class	Type
S0100	Beneficiaries for housing reconstruction support and affected/non-	AFP ⁴²	Direct	External

⁴² AFP – Affected Parties

Table 6.1: Project Stakeholders by Category, Class and Type

SH-CD	Stakeholder Types	Category	Class	Type
	affected communities of 2022 floods			
S0200	Respective line departments, agencies, ministries of the Government of Sindh (GoS) and at federal levels	AFP	Direct	External
S1500	Organisations, agencies and other entities that are funding the Project	OIP ⁴³	Direct	Internal
S0300	Other Donor Agencies and International Financial Institutions (IFIs)	OIP	Direct	External
S0400	Development agencies/partners, including the UN, INGOs, and NGOs	OIP	Direct	External
S0500	Individual donors, philanthropists and charities	OIP	Indirect	External
S0600	SPHF core apex, management and professional staff/Specialist;	AFP	Direct	Internal
S0700	Project staff/experts of Implementing partner's (IP)	AFP	Direct	Internal
S0800	Contractors, suppliers and other respective market actors	AFP	Direct	External
S1000	Rights-based organisations;	OIP	Indirect	External
S1100	Political and social activists, including local/political leadership	OIP	Indirect	External
S1200	Mainstream and social media	OIP	Indirect	External
S1300	Grievance redress formations, including committees, designated personnel and services providers	AFP	Direct	Internal
S1400	Any other stakeholder within the purview of Project	OIP	Indirect	External

5.3 Summary of Stakeholder Consultations Conducted

Stakeholder consultations were carried out from 13th May 2023 to 26th May 2023 with various stakeholders including donors, line departments, and implementing partners, and the potential beneficiary and non-beneficiary community in flood affected areas. This engagement aimed to ascertain institutional needs, inform stakeholders about planned activities, improve project design, create synergies, and enhance the socio-environmental sustainability of the project activities across different components. In addition to that SPHF organized a coordination meeting in April 2023 to share objectives of SPHF and the project with partner organization for their clear understanding of the project.

Furthermore, extensive stakeholder consultations were carried out with Project Affected Persons (PAPs) across the targeted settlements during the planning and design of WASH interventions. These consultations were conducted in line with the principles outlined in the World Bank Environmental and Social Framework, particularly ESS10 on stakeholder engagement. Separate focus group discussions (FGDs) were organized for men, women, and vulnerable groups to ensure inclusive participation and to capture diverse community perspectives.

During these sessions, PAPs highlighted key issues, including limited access to safe drinking water, inadequate sanitation facilities, poor drainage, and associated health risks. Communities also expressed concerns regarding construction-related disturbances, temporary access restrictions, and the need for equitable distribution of WASH services. Women, in particular, emphasized the importance of privacy, safety, and proximity of sanitation facilities, while

⁴³ OIP – Other Interested Parties

vulnerable groups stressed affordability and accessibility considerations.

The feedback obtained from PAPs has been systematically incorporated into the project design to enhance social acceptability and sustainability. Design modifications include appropriate siting of water points and sanitation infrastructure, inclusion of communal systems where feasible, and adoption of culturally appropriate and gender-sensitive solutions. Additionally, communities were informed about project scope, potential impacts, grievance redress mechanisms, and their roles in operation and maintenance, thereby fostering ownership and long-term sustainability of WASH facilities.

5.4 Summary of Learnings from Consultations

Table 6.2: Consultation Summary	
Observations	Recommendations
Banking procedures to open beneficiary accounts are problematic or too detailed/ long for most beneficiaries. Vast differences in how most banks involved handle the opening of bank accounts and disbursements. The issue of banks not opening accounts for the beneficiaries is also one that TRDP faces, where these banks have policies limiting the no. of accounts that can be opened in one day (usually 12). The issue, however, has been greatly resolved with the intervention of the District Commissioner at the request of TRDP. Members highlighted that the banks are currently creating issues in creating bank accounts for people, where lists from the IPs and SPHF have already been shared with the banks. Banks request unnecessary issuance of the letters for each individual by the IPs. The opening of accounts, where various issues are encountered, such as biometrics, CNIC issues, etc. When asked about the account opening. The people of the community told us that we face many difficulties while opening the account, such as biometrics, time delay tactics, etc. Banks only open 5-10 accounts every day. Bank opening issues, where banks have imposed age limits on who may open accounts, along with a lengthy list of documents. There were also cases uncovered, such as a widowed woman left behind with her young children who were facing issues with her bank account opening that the president of the VRC was not aware of. When asked about the account opening. The people of the community told us that we face many difficulties while opening the account, such as biometrics, time delay tactics, etc. So far, 30 people have had their accounts open%. However, none have received their cheque books thus	It is important to establish direct communication between IPs and bank managers to make opening a bank account for beneficiaries smoother and more efficient. This will help ensure that the account opening and funds disbursement process is timely and tailored to the beneficiary's unique circumstances, such as limited income and documentation challenges. Furthermore, banks should transparently communicate their account opening quotas to IPs, who can inform their beneficiaries and prepare them for any possible delays. To facilitate efficient coordination between IPs and banks, SPHF should provide capacity-building and training sessions. Ideally, each IP should hold a coordination workshop or meeting with their partnered bank to clarify each entity's responsibilities. Comprehensive standard operating procedures (SOPs) should also be in place to guide both IPs and banks in facilitating beneficiaries.

Table 6.2: Consultation Summary

Observations	Recommendations
far	
For people where bank accounts are not opened or are very difficult due to NIC or other issues, special cases are sent to SPHF for consideration. Issues with the bank account opening and timing of disbursements.	The beneficiaries for this Project not only come from low-income backgrounds but have the unique misfortune of losing most of what they own to the floods. Such individuals/families cannot be expected to furnish proper documentation universally. Therefore, IPs should coordinate their efforts with NADRA and the relevant telecom companies to verify identity and facilitate the opening of bank accounts. The IP should make the appropriate preparations considering the context of such matters in each district (relative level of development).
The validation for most houses had been conducted by the IP, where 109 bank accounts had been opened in the village for the beneficiaries, and 41 had received the 1st instalment for reconstruction. Only a few houses were remaining for validation. People in the area did not face issues with opening bank accounts, as the TRDP team had already spoken to the banks and District Commissioners to avoid this issue. The people in the area were aware of the process for disbursement and reconstruction, where all beneficiaries have opened their bank accounts.	SPHF should document the success of SAFCO and TRDP in actively engaging bank managers and district commissioners for inclusion in the SOPs, thus enabling other IPs in similar situations in the future.
Considerable coordination problems among various stakeholders, such as the government, donors, communities and NGOs; When money is sent to beneficiaries, the IPs in charge are not informed, increasing the risk of people misusing the money; The response time from SPHF on numerous issues is too long; The IP mentioned that they have good coordination with other IPs and Government Departments through WhatsApp.	Effective coordination between different entities is essential for the successful execution of the project. This coordination relies on timely sharing of information and support between the involved agencies. For instance, IPs should share verified beneficiary information with all bank branches operating in the village. Additionally, the application's performance should be closely monitored as it can greatly assist each stakeholder involved in this process. On the other hand, one IP (SAFCO) commented that they coordinate well with other stakeholders through WhatsApp, which is a good sign of initiative even though such measures should be commonplace. Especially given the prevalence of WhatsApp in the Pakistani communication landscape.
Beneficiaries not fully aware of access to funds and other project requirements; SRSO stated that all activities that are started in an area are first described to the community in the form of an open dialogue, after which training is provided	In cases where beneficiaries are unsure about how to access funds or meet project requirements, it is important for implementing partners (IPs) to provide them with clear information. IPs should communicate project activities and equip beneficiaries with the necessary knowledge about funding and other requirements. For instance, IPs should explain the process of opening an account and review essential documents during their sessions. This is a good example for other IPs to follow. they should do and what to do when they don't know what to do.
People from the village belonged to 04 different ethnicities and castes, hence, had their own smaller separate portions in the village.	Implement activities that promote social cohesion and bridge divides among caste groups. Encourage joint community events, cultural celebrations, or development initiatives that involve all beneficiaries, irrespective of their caste. This will help foster a sense of collective identity and promote unity within the community.

Table 6.2: Consultation Summary	
Observations	Recommendations
Community participation and ownership may be hindered by top-down approaches or a lack of trust and transparency; The villagers mentioned that their village has flooded 03 times since 2010, where their trust and belief in the government and its help has vanished; The IP advised how the districts of Shaheed Benazirabad and Naushero Feroze had historically been devoid of community mobilization efforts and campaigns, leading to the villagers being relatively less welcoming of the IP and slow to warm up to their efforts. This was observed when women were not allowed to be part of the Focus Group Discussions by the villagers; The people in the area also advised their wariness in trusting NGOs as 1-2 had come in the past and done superfluous work on cleaning up the area and then left.	A bottom-up approach may prove more effective in mitigating trust issues and promoting community participation and ownership. These consultations are a good first step in ensuring their voice is heard and their concerns are addressed. Address villagers' wariness in trusting NGOs by demonstrating a long-term commitment to the project and the community. The Project should have a clear sustainability plan that transmits the Project's intention to go beyond immediate relief efforts. This includes In order to address trust concerns that beneficiaries may have towards IPs and NGOs, these organizations should provide written documentation that encourages accountability to the beneficiaries. Additionally, it is important for IPs and NGOs to be transparent and maintain regular communication with beneficiaries to ensure that they are fully informed of all relevant activities.

Table 6.3: Consultation Summary for WASH	
Observations	Recommendations
Latest data not available – Issues, quality, availability, durable & sustainable/suitable solutions in Sindh	Baseline in 7,665 Villages in 23 Districts.
Tariff payment model not available	O&M Provision through Life Cycle Cost Analysis (LCCA)
Differential technically sound models not tested at scale	Context specific designs and implementation strategies based on: • Topography, • Social Customs, • Cultural Norms, • Drainage Behavior, and • Drinking Water Sources, et c.
Implementation in Silos	100% Household Coverage in a Village
Users per Toilet > 20 or even more	Users per Toilet ~ 8
Sanitation Component - Inside house infrastructure support not available	• Ensure that every house constructs inside house infrastructure • Sub-structure as the part of Project, • Superstructure support for vulnerable households
Safe disposal lacking - In-situ and treated off-site	• Safe disposal sanitation systems - In-situ and treated off-site • Sindh Outfall Drains (LBOD/RBOD) locations synced with WASH planned villages

Table 6.3: Consultation Summary for WASH	
Observations	Recommendations
	Reuse of treated sewage for non-edible crops
SDG Sanitation Ladder	Unimproved/Limited/Basic → Safely Managed
Social Behavior Change (SBC) not integrated with infrastructure development	SBC integrated with infrastructure development
Groundwater is the major source of drinking in rural areas	- Major focus - Groundwater for drinking provided that WQ parameters are with WHO/NEQS standards - Groundwater recharge – Sub-surface storage - Surface water sources also used – Purification methods are costly and required through-out a year
Access to a sufficient quantity of water is lacking in general	- Availability of sufficient quantity of water: - Drinking & cooking – 20 liter per capita per day (lpcd) - Bathing, washing, cleaning – 25 lpcd
The quality of water is poor	- Simpler (Less Complex) water purification methods integrated where required - Water Quality Assessment & Monitoring Mechanism
Mechanized and complex project sustainability issue	Simpler and less mechanized systems provision
SDG Drinking Water Ladder	Unimproved/Limited → Safely Managed

In addition, recent stakeholder consultations have been undertaken under the STARS WASH Project in early April 2026, including community-level engagements and discussions with project-affected persons, providing valuable and up-to-date insights into WASH-related challenges and stakeholder priorities across rural Sindh. Given the strong similarity in project design, geographic context, and nature of interventions between STARS WASH and the SPHF WASH component, the findings from these consultations have been referenced and incorporated in this ESMF. This approach ensures that the stakeholder engagement process is informed by recent field evidence, avoids duplication of efforts, and strengthens the relevance and inclusiveness of project planning and implementation. In continuation of the above table, a summary of the recent consultations is given below

Table 6.2 Summary of Stakeholders' Consultation Contd.		
Thematic Area	Key Observations from Consultations	Project Response / Integration Measures
Water Supply & Quality	Limited access to safe drinking water; groundwater contamination (bacteriological and salinity issues); unreliable surface water sources; need for regular water quality monitoring.	Selection of safe and sustainable water sources; incorporation of water quality testing and monitoring protocols; design of context-specific water supply systems
Sanitation & Wastewater	Inadequate sanitation facilities; presence of open defecation; absence of fecal sludge management systems; unsafe disposal of wastewater and sludge.	Provision of safely managed sanitation systems including septic tanks/ABRs; development of wastewater management and safe disposal mechanisms; promotion of reuse where feasible.
Gender & Participation	High female participation in consultations but limited role in decision-making; socio-cultural barriers restricting meaningful engagement.	Ensuring inclusive stakeholder engagement, targeted participation strategies for women, and integration of gender-sensitive planning approaches.
Community Health & Safety (CHS)	Risks from construction activities, including excavation hazards, dust, noise, and unsafe sites affecting children and the elderly; poor drainage leading to health risks.	Implementation of site-specific OHS and CHS measures under EHSMPs; safe site management, barricading, and community awareness during construction.
GBV / SEA-SH Risks	Concerns regarding safety of women due to presence of external labor; risk of harassment and restricted mobility.	Adoption of worker Codes of Conduct; GBV-sensitive GRM; preference for local labor where feasible; awareness and training on SEA/SH prevention.
Vulnerable Groups	Limited access to services for PWDs, elderly, and low-income households; accessibility challenges in WASH facility design.	Application of universal access design principles; targeted outreach and inclusion strategies; prioritization of vulnerable households in service delivery.
Institutional & O&M Issues	Non-functional schemes; weak operation and maintenance systems; limited community ownership; coordination gaps among institutions.	Strengthening of community institutions (CIs/VOs) for O&M; clear institutional roles; capacity building of IPs and communities; integration with MIS for monitoring.
Climate & Flood Risks	High vulnerability to flooding; damage to infrastructure; contamination of water sources during flood events; lack of resilient design.	Incorporation of climate-resilient and flood-adaptive design measures; elevation and protection of infrastructure where required; integration of risk-informed planning.

5.5 Stakeholder Engagement Methods and Plan

SPHF's approach to stakeholder engagement is based on the principle of inclusive and meaningful participation of all relevant parties. This involves identifying and categorizing stakeholders accurately, understanding their interests and concerns, and tailoring engagement methods to ensure effective communication and collaboration. Following is a summary of engagement methods and tools to be adopted during the project – the detailed stakeholder engagement plan is provided as a standalone document separately.

5.5.1 Participatory Rural Appraisal (PRA)

Information sharing and dissemination occurs in multiple rounds to address the Project's social and infrastructural impacts, benefits, and stakeholder participation. Stakeholder feedback is incorporated into the project design as appropriate. The SPHF thoroughly documents all meetings and discussions.

5.5.2 Focus Group Discussion (FGDs)

This tool helps gather information on specific topics, such as infrastructure access, project activities' impact, community participation, and stakeholder opinions. Separate sessions are held for vulnerable groups, PAPs, women in different project areas, and landlords. Gender consultations are also conducted to record the views of females and issues related to project implementation. Gender specialists will organise consultation sessions with local women in the project area to inform them about project activities and gather their views.

5.5.3 Key Informant Interviews (KIs)

To gather information from different parts of the community, SPHF selects locals who represent various segments. SPHF ensures that consent is obtained from the villagers and the people, these representatives speak on behalf of SPHF.

5.5.4 Consultative Sessions

The Social and Environmental team conducts Stakeholder Consultations with relevant departments, organizations, NGO representatives, policymakers, and local representatives. These departments include (but are not limited to) Environmental Protection Agency (Sindh), Forest Department, Wildlife Department, Agriculture Department, Revenue Department, Sindh Irrigation Department, etc.

5.6 Information Disclosure

Initial Stakeholder's Engagement Plan, Environment and Social Commitment Plan and Environment and Social Screening Checklist that have been prepared for this project, have been disclosed on the following website www.sphf.gos.pk. This present document, Assessment Reports for volunteer relocations, Gender Action Plan and Grievance Redressal Mechanism will be uploaded after the necessary approvals.

6 Contractual Provisions, Institutional Responsibilities, Reporting, And Capacity Building

6.1 Environmental and Social Provisions for IP's Contracts for Housing

SPHF has contracted five implementing partners (HANDS, SAFCO, SRSO, NRSP and TRDP) to execute the project in different districts of Sindh Province. These implementing partners are responsible for carrying out the following tasks.

- Conducting E&S Screening before starting construction activities
- Hiring and deployment of E&S Staff in the field
- Supervision of construction activities
- Implementation of the environmental and social code of practices during construction activities.
- Training of the beneficiaries related to Environmental, Social & OHS aspects

6.2 Environmental and Social Provisions for IP's and Engineering Consultants' Contracts for WASH

SPHF has engaged an engineering consultant (EA) to undertake design and resident supervision of 50 prototype settlements. For the design and implementation of 1,450 settlements, SPHF has contacted four implementing partners, namely SAFCO, SRSO, NRSP and HANDS. For these 1,450 settlements, the EA will provide top supervision. The Engineering Consultants and implementing partners are responsible for ensuring effective planning, execution, and compliance with environmental and social safeguards throughout the project lifecycle.

Engineering Consultants are responsible for, but not limited to, the following:

- Deployment of qualified environmental and social (E&S) staff in the field.
- Conducting E&S screening prior to commencement of construction activities.
- Preparation of Project Design Documents (PDDs) along with ESMPs
- Provide hands on training for construction and supervise SPVO during the construction of WASH interventions in 50 prototype settlements
- Top Supervision of the remaining 1,450 settlements.
- Ensuring implementation of ESMPs during design, construction, and operation by the SPVO.
- Capacity building and training of IPs and SPVOs on Environmental, Social, and Occupational Health and Safety (OHS) aspects. to take over the construction and supervision of the remaining 1,450 settlements
- Providing resident supervision for prototype settlements and top-level supervision for the larger rollout of settlements.

Implementing Partners are responsible for, but not limited to, the following:

- Deployment of E&S staff at the field level

- b. Conducting E&S screening of 1,450 settlements prior to the development of PDD
- c. Preparation of 1,450 PDDs in accordance with project guidelines
- d. Execution and implementation of WASH interventions across 1,450 settlements
- e. Day-to-day supervision of construction activities
- f. Implementation of ESMPs to ensure environmental and social compliance
- g. Conducting awareness and training sessions for SPVO on Environmental, Social, and OHS practices

6.3 Institutional Arrangements

The institutional arrangement and their assigned duties for the implementation of environmental, social and health and safety (E&S/HSE) procedures under the project are designed to ensure effective planning, execution, monitoring and compliance which are outlined below:

6.3.1 Housing Component

The **SPHF**, being the implementation agency, is responsible for managing the overall implementation of the project, including this ESMF. The Environmental Specialist, Environmental Officer, Social Specialists, Social Officer, Gender Specialist, and GRM Officer (with strong knowledge and understanding of GBV and SEA/SH) ensure plans and procedures mentioned in ESMF are being followed and implemented during the project life cycle.

Implementing Partners (IPs): IPs will hire their own environmental and social officers (ESOs) who will implement the ESMF, conduct screening of sub-project locations, comply with the ESMF, LMP, and GRM, and provide necessary support to the SPHF E&S team. Furthermore, HSE officers will be hired by the IPs for WASH/Settlement Improvement who will be responsible but not limited to ensure PPEs, conducting TBT, ensuring the availability of first aid boxes, monitoring site safety, maintaining incident records and conduct community awareness sessions. IPs' Environmental Social Safety Officers carry out weekly site inspections (at least one per district), verifying that safeguards are applied at worksites. In cases of noncompliance, they provide on-site guidance and training to beneficiaries.

VRC (Village Reconstruction Committee): Community structures such as Village Reconstruction Committees (VRCs) will support supervision of daily activities, facilitate communication between IPs and households, and promote awareness regarding hygiene, sanitation, and safety practices. They will also assist in identifying and reporting environmental and social issues, including health and safety concerns, through the GRM.

Beneficiaries: Beneficiaries construct their houses as per the resilient housing design and minimum construction guideline provided by the SPHF with the help of village reconstruction committees (VRCs). Beneficiaries will be encouraged to actively participate in maintaining safe working conditions, minimizing environmental impacts, and ensuring that construction activities are carried out in a socially responsible and inclusive manner.

6.3.1.1 Reporting

	Environmental & Social Management Framework			
	Sindh Floods Emergency Housing Reconstruction Project			
	Doc. No.: SFEHRP/ESMF-AF/001	Rev.: 01	Consultations	

The following reports are prepared on the implementation of ESMF

- Daily reporting by the STAT team to the Environmental and Social Officer of implementing partners.
- Monthly environmental & social monitoring reports by the implementing partners ESOs on the status of implementation of environmental, social, health and safety aspects. The monthly reports are to be submitted to SPHF for approval.
- Quarterly environmental and social monitoring reports by the SPHF on the implementation of environmental, social, health and safety aspects. These quarterly reports are to be submitted to the World Bank by SPHF for approval.
- These project reports also cover the details of incidents, accidents and injuries that occurred during the construction activities. The incident reporting form is provided in annexure 11.

6.3.2 Water Sanitation and Hygiene (WASH) Component

SPHF (Project Implementation Unit):

SPHF, as the implementing agency, will be responsible for overall coordination and supervision of ESMF implementation under the WASH component. The Environmental Specialist, Environmental Officer, Social Specialists, Social Officer, Gender Specialist, and GRM Officer (with adequate understanding of GBV and SEA/SH risks) will ensure that all ESMF provisions, mitigation measures, and procedures are effectively implemented throughout the project lifecycle.

Construction Phase: SPHF's environmental and social team will undertake regular monitoring to ensure effective implementation of mitigation measures and compliance with ESMF requirements. Field monitoring visits will be conducted on a monthly basis, and compliance will be verified through standardized monitoring checklists provided in Annexure 9 and 10 for housing and WASH components, respectively.

Operation and Maintenance Phase: During the O&M phase, SPHF will maintain a supervisory as well as an active oversight role to ensure the sustainability of WASH infrastructure and continued compliance with environmental and social standards. This will include periodic monitoring, grievance redress oversight, and ensuring that operational practices adhere to prescribed environmental, health, and safety protocols.

Implementing Partners (IPs)

Construction Phase: Implementing Partners will receive training from Engineering Consultants during the design, implementation, and supervision of 50 prototype settlements. Based on this, IPs will replicate the approach for PDD development, implementation, and supervision across approximately 1,450 settlements under the WASH/Settlement Improvement component.

IPs will recruit dedicated Environmental and Social Officers (ESOs) responsible for implementing the ESMF, conducting environmental and social screening of subprojects, ensuring compliance with ESMF, Labor Management Procedures (LMP), and GRM requirements, and coordinating closely with the SPHF E&S team. In addition, Health, Safety and Environment (HSE) Officers will be engaged to oversee site-level safety, including ensuring use of PPE, conducting toolbox talks (TBTs), maintaining first aid facilities, monitoring occupational health and safety risks, recording incidents, and conducting community awareness sessions.

Operation and Maintenance Phase: During this phase, WASH facilities will be handed over to the SPVOs/community structures. The Implementing Partners will provide

	Environmental & Social Management Framework			
	Sindh Floods Emergency Housing Reconstruction Project			
	Doc. No.: SFEHRP/ESMF-AF/001	Rev.: 01	Consultations	

continued handholding support and supervision to ensure proper operation and maintenance of the infrastructure, with overall guidance from Engineering Consultants.

Environmental and social compliance will remain integral during the O&M phase, with IPs ensuring that community manages systems and adhere to safe wastewater handling practices, proper sludge management, hygiene promotion, and occupational and community health and safety measures. Regular monitoring, community awareness, and grievance redress mechanisms will be maintained to ensure that environmental risks are minimized and social safeguards continue to be upheld.

SPVO (Sindh Peoples Village Organization)

Construction Phase: During construction, SPVOs will act as the field-level construction implementers/contractors for WASH facilities under the supervision of IPs and top supervision of Engineering Consultants. They will be responsible for implementing site-specific environmental, social, occupational health and safety, and community health and safety measures. This will include safe excavation practices, proper barricading, controlled material storage, dust and noise control, safe disposal of construction waste, protection of water sources, prevention of wastewater stagnation, avoidance of damage to community assets, and maintenance of safe access for households.

SPVOs will also ensure that labor engaged at site follows E&S and OHS requirements, including use of PPE, prohibition of child labor, respectful community behavior, and adherence to safety instructions. They will immediately report incidents, accidents, community complaints, environmental issues, or social risks to the concerned IP and support corrective actions. SPVOs will also facilitate community communication and grievance reporting through the project GRM.

Operation and Maintenance Phase: After completion, the WASH facilities will be handed over to SPVOs for operation and maintenance. During the O&M phase, SPVOs will be responsible for ensuring that facilities remain functional, safe, hygienic, inclusive, and environmentally sustainable. Their responsibilities will include routine cleaning, minor repairs, monitoring of water supply and sanitation systems, prevention of wastewater stagnation, proper sludge and solid waste management, protection of water sources from contamination, and maintenance of safe access to facilities.

SPVOs will also maintain basic O&M records, manage local O&M arrangements, address community concerns, promote hygiene behavior, and ensure equitable access for women, vulnerable groups, persons with disabilities, and marginalized households. For major repairs, technical faults, or unresolved environmental and social issues, SPVOs will coordinate with IPs, SPHF, Engineering Consultants, local government departments, or relevant service providers as required.

Engineering, Design and Supervision Consultants:

Preconstruction Phase: The scope of work entails the development of a detailed feasibility report that explores various scenarios and technological options for climate-resilient WASH interventions, including cost estimates, recommended materials, and design prototypes. These designs will be implemented in at least 50 villages/settlements and serve as standardized models for replication across similar settlements in 24 flood-affected districts of Sindh. Additionally, the scope includes conducting environmental and social safeguard assessments such as preparing and execution of ESMP, voluntary land donation processes, resettlement plans, health and safety management plans, and gender action plans while also supporting the preparation and review of Project Design Documents (PDDs) in alignment with environmental, health, and social standards.

Construction Phase: The assignment further encompasses resident supervision in the

	Environmental & Social Management Framework			
	Sindh Floods Emergency Housing Reconstruction Project			
	Doc. No.: SFEHRP/ESMF-AF/001	Rev.: 01	Consultations	

initial 50 villages and top-level supervision for the broader rollout in the remaining 1,450 settlements. The engineering design and supervision consultants shall establish an Environmental, social and Health and Safety team to ensure the implementation of environmental, social and health and safety (E&S/HSE) procedures in the design, develop HSE plans, monitor construction safety, and conduct training.

Operation and Maintenance Phase: During the O&M phase, the consultants will provide technical guidance and handholding support, where required, to ensure that the WASH facilities handed over to SPVOs remain functional, safe, and sustainable. They will support IPs and SPHF in reviewing O&M arrangements, identifying technical defects, recommending corrective measures, and advising on preventive maintenance practices.

The consultants may also support post-completion monitoring, review of facility performance, assessment of recurring operational issues, and capacity building of SPVOs on safe operation, maintenance, environmental management, sludge/wastewater handling, and community health and safety. Their role during this phase will be advisory and supervisory, aimed at ensuring sustainability and continued compliance with environmental, social, health and safety standards.

6.3.3 Reporting

- **Daily site reporting by SPVOs:** As field-level construction implementers/contractors, SPVOs shall maintain daily site-level records on construction progress, labor presence, PPE use, toolbox talks, site safety arrangements, waste management, excavation safety, community access, incidents, complaints, and any environmental or social issues observed at site. These records shall be shared with the concerned IP field team.
- **Weekly site inspection reporting by IPs:** IP Environmental and Social Specialists and HSE Officers shall conduct regular site inspections and prepare weekly inspection reports covering E&S compliance, OHS and community health and safety, waste disposal, material storage, barricading of excavations, traffic/access management, labor conduct, child labor prohibition, GRM issues, and corrective actions required. These reports shall also include observations on the performance of SPVOs and compliance with site-specific mitigation measures.
- **Monthly E&S monitoring reports by IPs:** IPs shall prepare monthly environmental and social monitoring reports for the WASH component and submit them to SPHF. These reports shall consolidate field observations, screening status, implementation of mitigation measures, OHS performance, community consultations, grievances received and resolved, incident/accident records, non-compliances, corrective actions, and status of SPVO compliance at village level.
- **Engineering Consultant supervision reports:** Engineering, Design and Supervision Consultants shall prepare supervision reports based on resident supervision of prototype settlements and top supervision of replicated settlements. These reports shall include technical quality, design compliance, construction supervision findings, E&S/HSE compliance, site-specific risks, corrective actions, training conducted, and recommendations for improvement.
- **SPHF quarterly E&S monitoring reports:** SPHF shall prepare quarterly environmental and social monitoring reports covering the WASH component and submit them to the World Bank as part of project reporting. These reports shall include progress on ESMF implementation, compliance status, monitoring findings, major E&S risks, OHS performance, GRM status, incident reporting, corrective actions, and

key issues requiring management attention.

- **Incident and accident reporting:** Any incident, accident, injury, fatality, environmental spill, damage to community assets, serious OHS non-compliance, SEA/SH-related complaint, child labor case, or significant community health and safety issue shall be reported immediately by SPVOs to IPs, and by IPs to SPHF, in accordance with the project's incident reporting procedure. The incident reporting form provided in the ESMF annexures shall be used, as applicable.
- **O&M phase reporting by SPVOs:** SPVOs shall maintain basic O&M records covering facility functionality, cleaning, minor repairs, water supply interruptions, wastewater or sludge management issues, user complaints, community contributions where applicable, and any environmental or social concerns. These records shall be periodically shared with IPs/SPHF during handholding, supervision, or follow-up monitoring

6.3.4 Third Party Validation Firm:

A third-party firm is hired to monitor compliance including compliance of Environmental and Social Management Framework and other social and environmental management instruments. This would be done on an annual basis throughout the Project duration. The monitoring system is also linked to the payment mechanism to ensure effective resolution of issues prior to payments to the beneficiaries. For WASH/Settlement improvement the TPM shall also include an independent HSE Specialist to conduct audits, verify compliance, review incidents, and recommend corrective actions, etc.

Besides regular monitoring by implementing partners, the SPHF engages entities for third party monitoring/validation to ensure that the required outcomes as per acceptable standards have been achieved. The firm also reviews and comments on the continuing adequacy of the monitoring system, and any actions that IPs need to take. In addition, innovative supervision strategies such as geo-referenced photographs and videoconferencing are expected to be utilized since the geographic scope of the project is widely spread.

Table 7.2: Potential Social Impacts, Risks & Mitigation Measures (Housing)							
S.No.	Measures/Activities to be monitored	Monitoring					
		SPHF Level	Freq.	IP Level	Freq.	Beneficiary Level	Freq.
1	Dust Emissions Water Sprinkling Covering of spoil piles and soil	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
2	Waste Generation Reuse useable waste from the debris. Hazardous waste is being disposed of on designated waste site.	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
3	Water pollution Material will not be stored close to water ways	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
4	Soil Contamination, Erosion & Degradation Covering construction material with tarpaulin or locally available material. Material storage at designated storage site. Barricading of construction sites and soil piles. Burrow pit location away from the settlement Reinstating burrow pit after completion of work Not obtaining filling material from cultivated fields Designing of drainage system with proper outlets to prevent wastewater from contaminating water sources.	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
5	Site Clearance/Impact on Flora Prohibit Tree Cutting Tree plantation of local species Protection of vegetation	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
6	Labor Influx & working conditions Hiring local labor Good Housekeeping Checking the undertaking signed and its compliance	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily

5	Occupational Health and Safety Provision of appropriately stocked first-aid equipment and personal protective equipment (PPE); Availability of first aid boxes at sites Check Training records Check Accidents records.	E&S Staff	Monthly	E&S Staff & STAT	Weekly	Beneficiary /Labor	Daily
6	Use of Child Labor and Forced Labor No hiring of workers less than 18 years of age Awareness sessions of the community	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
7	Community Health and Safety Barricading excavated sites Storage of material in designated locations Clear Pathways	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Daily
8	Elite Capture and Inclusivity Inclusiveness of all stakeholders Compliance with selection criteria	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly
9	Exposure of labor to hazardous construction material Use of PPEs for disposal of hazardous material Safe working conditions	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly
10	Sexual Exploitation and abuse or Sexual harassment Awareness sessions Enforcement of Gender Action Plan Checking signed Undertaking and ToP	E&S Staff	Quarterly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly
11	Impacts on Women, Children, and Vulnerable Groups Women's participation during project preparation and execution Participation of vulnerable groups Impact on women and girls' privacy due to the presence of construction labor	E&S Staff	Monthly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly
12.	Availability and/or Loss of land / and other physical assets Detailing of availability/loss of land and any physical asset. Consultations with all potentially affected households Confirmation of voluntary land acquisition through VLD Actions to minimize impact on loss of land/other physical asset for vulnerable and disadvantaged	E&S Staff	Monthly	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly

13.	Site Preparation: Soil Erosion; Alteration of natural drainage Construction facilities away from water bodies and natural flow paths. Tube-well installation maintaining a safe distance from latrines' soak wells. Site preparation's interference with the activities of local residents. No disturbance to Socially sensitive areas, including cultural sites and human habitat.	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly	Beneficiary /Labor	Monthly
14.	Improper management and handling of waste during construction.	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly	Beneficiary /Labor	Monthly
15.	Odours and pollution caused by leaking latrines and faecal sludge impacting surrounding water bodies, flora and fauna. Preventive maintenance schedule is being followed Regular inspections of potential leaking points are being undertaken Training of Households and communities for O&M of latrines	E&S Staff & STAT	Monthly	Beneficiary /Labor	Monthly	Beneficiary /Labor	Monthly

6.4 Training and Capacity Building

CAPACITY BUILDING PLAN

Table 7.3: Capacity Building Plan						
Sr.	Training	Training Description	Target Audience	Frequency	Responsibility	Status
1.	Environmental and Social Framework	The ten Environmental and Social Standards establish the standards that the Borrower and the project will meet through the project life cycle.	SPHF staff IPs project staff	At inception / Design level	Environmental, Social & Gender Specialists SPHF	Done - Ongoing
2.	Stakeholder engagement and mapping	- Understand the critical value of stakeholder analysis. - Be able to identify and analyze key stakeholders. - Have practiced roles as both participants and stakeholder mapping "leads". - Understand the importance of and specifically identify ethnic and religious minorities, migrants, individuals with disabilities, transgender individuals, or isolated individuals such as widows, widowers, the elderly, and orphans.	IPs project staff	At inception/ Design level and refresher trainings will continue throughout the implementation	Environmental, Social & Gender Specialists SPHF	Done - Ongoing
3.	Community and occupational health and safety aspects	- Types of Safety Hazards and Risk level. - Covers risks arising through construction. - Prevent General Site Hazards, injuries, and disease arising from associated with or occurring during the course of work. - Understanding accidental hazards - where project structural elements could exacerbate them. - Understanding communicable diseases & vector borne diseases, risks & prevention.	IPs project staff / Masons	Design/ Implementation level and refresher trainings will continue throughout implementation	Environmental Specialist SPHF	Done - Ongoing

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4	Disaster Risk Reduction, Response and Management and Pollution Prevention and control	- Emergency Prevention, preparedness and response planning for communities. - Understanding of Emergency response procedures · Emergency resources - Understanding pollution, sources, risks and mitigation and prevention measures.	IPs project staff & Beneficiary	Design/ implementation level and refresher trainings will continue throughout the implementation	Environmental Specialist SPHF	Done - Ongoing
5	Monitoring and Reporting	- Understanding of the reporting & monitoring procedures - Understanding reporting & monitoring formats	IPs Project Staff	Design/ implementation level and refresher trainings will continue throughout the implementation	Environmental, Social & Gender Specialists SPHF	Done - Ongoing
6	Waste Management	- Understanding the type of waste and segregation of waste - Impact on human health and environment - Sources - Disposal of waste	IPs Project Staff	Design/ implementation level and refresher training will continue throughout the implementation	Environmental Specialist SPHF	Done - Ongoing
7	Environmentally Friendly Construction techniques and material	- Understanding of green building technology. - Material & Equipment used for green building	Masons/ IPs staff	Design/ implementation level	Project Engineer / Environmental Specialist SPHF	Done
8	E&S Screening Checklist (Housing)	- Understanding the application of screening on settlement level. - Determining the risks and mitigation measures	IPs staff	Design/ implementation level and refresher training will continue throughout the implementation	Environmental Specialist SPHF	Done - Ongoing
9	E&S Screening Checklist (WASH)	- Understanding the application of screening on settlement level. - Determining the risks and mitigation measures	IPs staff	Design/ implementation level and refresher trainings will continue throughout the implementation	Environmental Specialist SPHF	To be conducted
10	Kobotool Box	- Application of Kobotool Box - Setting up user-names - Configuring ODK Collect - Filling the questionnaire online	IPs staff	Design/ implementation level	Environmental Specialist SPHF	Done
11	Sensitize SPHF and IPs staff on Gender - inclusive and sensitive working environment	Orientation sessions on SPHF Gender Policy, Harassment, and grievance redressal committees	SPHF staff IPs project staff	At inception / design level and refresher trainings will continue throughout the implementation	Gender Specialist SPHF	Done

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12	Sensitization and capacity building of project staff on gender and social related safeguards	• Training on Gender Action Planning (GAP) • Gender concepts, Gender mainstreaming • Gender Based Violence (GBV) • Sexual Harassment and Grievance Redressal Mechanism (GRM) • Training of IPs staff on social mobilization	IPs project staff	At inception/ design level and refresher trainings will continue throughout the implementation	Gender Specialist SPHF Social Development Specialist SPHF	Done - Ongoing
13	Sensitize and aware project women beneficiaries on financial assistance for cash grants and the construction of multi hazard resilient houses	• Awareness sessions on opening of bank accounts, payment procedures and financial management for receiving and managing cash grants • Trainings of women beneficiaries on reconstruction guidelines and supervision • Training of women beneficiaries on craft persons (Masons) focusing on installation and maintenance of emerging household technologies (water harvesting and solar solutions)	IPs project staff Project women beneficiaries	At implementation level and refresher trainings will continue throughout the implementation	Gender Specialist SPHF IPs Gender focal person	Done - Ongoing
14	Sensitization and awareness of women beneficiaries for potential disasters	• Sessions on floods awareness and other disasters for women beneficiaries Organize public awareness campaigns and •	Project women beneficiaries	At implementation level and refresher trainings will continue throughout the implementation	Gender Specialist SPHF IPs Gender focal person	Done - Ongoing
15	Sensitization and awareness of women beneficiaries on Grievance Redress Mechanism (GRM)	• Training of IPs staff on Grievance Redressal Mechanism • Awareness raising sessions for women beneficiaries on Grievance Redressal Mechanism (GRM)	Project women beneficiaries	At implementation level and refresher trainings will continue throughout the implementation	Gender Specialist SPHF IPs Gender focal person	Done - Ongoing
16	Sensitization and awareness of women beneficiaries on Gender Based Violence (GBV), Child marriages and importance of girls Education	• Training IPs on Gender Based Violence (GBV) • Awareness raising sessions for women beneficiaries on Gender Based Violence (GBV), Child Marriages and importance of girl's education	IPs project staff Project women beneficiaries	At implementation level and refresher trainings will continue throughout the implementation	Gender Specialist SPHF IPs Gender focal person	Done - Ongoing
17	Social Mobilization for (WASH)	• Build capacity of community mobilizers, local leaders, and implementing partners to lead inclusive WASH-	IPs project staff	Design/ implementation level and refresher trainings will continue throughout the	Social development Specialist & Gender Specialist SPHF	To be conducted

		related social mobilization activities.		implementation	IPs Social & Gender focal person	
18	Implementation Strategy (WASH)	Equip stakeholders with knowledge and tools to plan, implement, monitor, and sustain effective WASH interventions aligned with community needs and environmental standards.	IPs project staff	Design/ implementation level and refresher training will continue throughout the implementation	Social development Environmental & Gender Specialist SPHF IPs E&S focal person	To be conducted
19	Behavioral Change Communication	Build the capacity of field staff, mobilizers, and local partners to design and implement effective Behavioural Change Communication (BCC) strategies for improving WASH practices at the community level.	IPs project staff	Design/ implementation level and refresher trainings will continue throughout the implementation	Social development Specialist & Gender Specialist SPHF IPs Social & Gender focal person	To be conducted
20	Construction Environmental Management Plan (CEMP) for WASH Works	Understanding the purpose, scope, and structure of CEMP for WASH interventions. Preparation and implementation of site-specific CEMPs for water supply, sanitation, drainage, ABR, septic tanks, soakage pits, pumping stations, and related civil works. Identification of construction-stage environmental, social, OHS, and community health and safety risks. Integration of waste management, traffic management, pollution prevention, emergency response, labor management, and GRM requirements in CEMP.	IPs project staff, SPVOs, Engineering Consultants, Site Supervisors, HSE Officers	Design / pre-construction and implementation level. Refresher trainings will continue throughout implementation.	Environmental Specialist SPHF, Social Development Specialist SPHF, Engineering Consultant E&S/HSE Team	To be conducted
21	WASH Construction OHS and Community Health and Safety	- Identification and control of safety risks during excavation, pipe laying, construction of toilets, septic tanks, ABRs, soakage pits, drains, pumping stations, and water supply schemes. - Safe excavation practices, barricading, PPE use, first aid, housekeeping, electrical safety, safe material storage, and prevention of child labor at sites. - Community safety measures including access control, warning signage, safe movement	SPVOs, masons, IPs field staff, HSE Officers, Site Supervisors	Prior to construction and refresher trainings throughout implementation	Environmental Specialist SPHF, IPs HSE Officers, Engineering Consultant HSE Team	To be conducted

		of women, children, elderly persons, and persons with disabilities near construction sites.				
22	WASH Operation and Maintenance, Environmental and Safety Protocols	- Capacity building on routine operation and maintenance of WASH facilities. - Safe operation of water supply schemes, pumps, storage tanks, sanitation systems, ABRs, septic tanks, drains, and sludge handling arrangements. - Preventive maintenance, record keeping, emergency response, odor control, vector control, and safe cleaning practices. - Community-level roles and responsibilities for long-term sustainability of WASH facilities.	IPs project staff, community committees, operators, caretakers, SPVOs, relevant local stakeholders	Implementation and O&M stage. Refresher trainings will continue throughout implementation.	Environmental Specialist SPHF, Social Development Specialist SPHF, IPs E&S focal persons, Engineering Consultants	To be conducted
23	Water Quality Monitoring, Testing and Reporting	- Understanding water quality testing requirements for drinking water sources and schemes. - Sampling protocols, field testing, laboratory testing, interpretation of results, and comparison with applicable SEQs/WHO standards. - Corrective actions for bacteriological and chemical contamination. - Uploading water quality results and reports on SPHF WASH MIS.	IPs project staff, Engineering Consultants, field teams, water quality focal persons	Design, implementation, and post-construction monitoring stage. Refresher trainings as required.	Environmental Specialist SPHF, Engineering Consultant, IPs E&S focal persons	To be conducted
24	Fecal Sludge Management and Safe Disposal Protocols	- Understanding fecal sludge generation, containment, emptying, transportation, treatment, reuse, and disposal requirements. - Safe handling of sludge from septic tanks, ABRs, communal sanitation systems, and related WASH facilities. - Use of PPE, infection prevention, odor control, vector control, spill prevention, and emergency response. - Compliance with applicable environmental laws, SEQs, and approved disposal arrangements.	IPs project staff, SPVOs, operators, sanitation workers, HSE Officers, Engineering Consultants	Implementation and O&M stage with periodic refresher trainings	Environmental Specialist SPHF, IPs HSE Officers, Engineering Consultant E&S/HSE Team	To be conducted

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25	Voluntary Land Donation and Land-Related Screening for WASH Facilities	• Understanding land requirements for WASH infrastructure and procedures for avoiding land acquisition. • Application of Voluntary Land Donation procedures, documentation, verification, and consent requirements. • Screening for ownership, encumbrances, livelihood impacts, access restrictions, and vulnerable households. • Record keeping and integration of VLD documents with PDDs and E&S screening.	IPs social staff, SPVOs, Engineering Consultants, community mobilizers	Design / pre-construction stage and refresher trainings during implementation	Social Development Specialist SPHF, Environmental Specialist SPHF, IPs Social focal persons	To be conducted
26	WASH MIS, Kobo/ODK-Based E&S Monitoring and Evidence-Based Reporting	• Training on digital data collection for WASH E&S screening and monitoring checklists. • Use of Kobo/ODK and SPHF WASH MIS for uploading checklists, pictorial evidence, water quality results, land documents, and monitoring reports. • Ensuring data quality, completeness, validation, geo-tagging, and timely monthly reporting.	IPs E&S staff, MIS focal persons, field monitors, Engineering Consultants	Design / implementation level and refresher trainings throughout implementation	Environmental Specialist SPHF, MIS Team SPHF, IPs E&S focal persons	To be conducted

7 GRIEVANCE REDRESS MECHANISM

7.1 SFEHRP GRM

The grievance redress mechanism (GRM) developed as part of this ESMF follows the same mechanism developed for the overall project. The mechanism includes: (i) a recording and reporting system, including grievances registered/recorded in writing; (ii) designated staff with responsibility at various levels of government; and (iii) a specific protocol for handling grievances including the minimum time frame within which different types of grievances should be addressed.

7.2 Responsible Parties and GRM Composition

SPHF has created a dedicated Grievance Redress (GR) cell/desk/officer **at each level** of the operational hierarchy to effectively manage and coordinate efforts for the GRM. Each node has assigned responsibilities for investigating and resolving complaints received based on the broad categories described in the section below. However, a specialized service provider known as the **Grievance Redress Firm (GRF)** is responsible for centrally (Karachi) processing each Complaint, the relevant data and the GRM's overall automation.

Overall responsibility for oversight lies with the **SPHF Management**, which delegates primary responsibility for overseeing the GRM for the SFEHRP to the **Grievance Redress Committee (GRC)** at SPHF. As per the notification dated 16th March 2023 (SPHF – HHRA/02-2023), this Committee comprises

the Chief Operating Officer (COO),

- Gender Specialist,
- Social Development Specialist,
- Environmental Specialist and
- Manager HR & Admin at SPHF,

with a total sanctioned strength of five (05). The GRC's duties involve

- establishing and refining the GRM,
- guiding stakeholders,
- managing grievance reception and registration, - developing response and
- record-keeping protocols and ensuring compliance of each entity within the GRM structure

Modelled on the SPHF GRC, each IP must maintain a GRC at the Headquarters (HQ) level that carries the mandated responsibility of handling the GRM from the SPHF GRC.

This **IP HQ GRC** composition shall reflect that of the SPHF GRC. The only exception will be if an individual holds multiple responsibilities under the abovementioned designations.

District Grievance Redress Department (DGRD)

Furthermore, each IP will establish a **District Grievance Redress Department (DGRD)** for addressing and resolving complaints in coordination and collaboration with the IP HQ GRC. Depending on the district's size and the number of beneficiaries, the IP may assign a DGRD

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to one or more districts.

Field Grievance Redress Officer (FGRO)

Moreover, each IP must appoint a **Field Grievance Redress Officer (FGRO)** at the field office/taluka level responsible for logging, addressing and investigating complaints in coordination with the IP DGRO and in collaboration with the **Village Reconstruction Committee (VRC)** at the community level. This VRC may comprise village elders and members of existing Local Service Organizations (LSOs) operating within the jurisdiction of the VRC, including at least two (02) women representatives. The IP may assign an FGRO one or more field office(s)/taluka(s) depending on the scope of that office (area and the number of beneficiaries).

7.3 GRM Management Information System (GMIS)

A grievance redress automation system is a software-based system that helps organizations manage and resolve customer or employee complaints and grievances. It is important to note that GMIS is a parallel system to the manual grievance registers. This duality is necessary in case of a breakdown in digital communications. Nonetheless, the components of such a system may vary depending on the specific needs of the organization, but some common elements are:

- **User Interface:** This is the system's front end that users interact with. It provides a platform for users to register their complaints, track their complaints, and interact with the system;
- **Complaint Management System:** This system's core component manages user complaints. It includes complaint registration, tracking, assignment, and resolution features.
- **Workflow Automation:** This component automates the complaint-handling process by defining workflows and assigning complaints to the right person or team. This ensures that complaints are handled efficiently and promptly.
- **Escalation Management:** This component manages the escalation of complaints that are not resolved within a specified time frame or are of high priority. It ensures that the right people are notified when a complaint is escalated and handled promptly.
- **Analytics and Reporting:** This component provides insights into the system's performance by generating reports on various aspects of complaint management. It helps the organization identify improvement areas and track its progress over time.
- **Integration:** The system may need to be integrated with other methods, such as Customer relationship management or Enterprise resource planning to fetch relevant information about the users or employees, their interactions, or the appropriate policies and procedures.
- **Security:** This component ensures the system is secure and compliant with applicable data protection regulations. It includes user authentication, access control, data encryption, and user activity logging.

Overall, a grievance redress automation system is designed to streamline the complaint-handling process and resolve complaints efficiently and effectively. Furthermore, to cater to the needs of the illiterate population, a significant part of the flood affectees, special attention will be given by the Project. Towards this end, the design of the complaint registration interface will focus on simplicity and ease of use. The following considerations apply:

- **Voice-based User Interface:** Instead of a visual interface, the system could use voice prompts and commands to guide the user through the complaint registration process. The system could also use text-to-speech technology to provide feedback and updates

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to the user;

- **Simplified Complaint Registration:** The complaint registration process must be simplified and streamlined. The user would only need to provide essential information such as their name, contact information, and the nature of their complaint. The system could use natural language processing to understand the user's complaint and categorize it appropriately.

7.4 GMIS Data Structure

The complete data structure of the GRDB contains 32 unique fields with their respective data types, sizes (in characters), descriptions, and validation checks. The fields in the table cover everything from the GTN, date and time of filing, source of the grievance reporter, type of stakeholder and category of grievance reported, the pathway of the grievance report, and details of the affected property.

Other fields include the detailed description of grievance, complainant name, contact information, e-mail, and current status of the grievance process. Additionally, there are fields for the resolution and follow-up action required, priority level, property owner name and contact, construction contractor, reconstruction phase, supporting documents, investigating and reviewing officer, and notes on investigation and reviewing.

Furthermore, data structures are also essential for effectively managing and resolving grievances and ensuring that the GRM operates efficiently and transparently. It provides a standardized format for collecting, organizing, and analyzing grievance data. This facilitates better decision-making, helps identify trends and patterns, and promotes accountability and responsiveness in addressing the concerns of stakeholders.

7.5 Monitoring through the GRM dashboard

A dashboard is necessary for the high-level vigilance of a GRM system because it provides real-time monitoring, displays key performance indicators, visualizes data, can be customized, and promotes collaboration. The dashboard helps the Project management and Donors to assess the performance of the GRM and make timely informed decisions to improve the effectiveness and efficiency of the GRM system. The salient features of the dashboard are:

- **Real-time monitoring:** A dashboard provides real-time monitoring of the performance of the grievance redress system. This allows the management to detect any issues or bottlenecks in the design and take corrective actions as needed;
- **Key Performance Indicators (KPIs):** The dashboard can display key performance indicators (KPIs) such as the number of complaints received, the average time to resolve a complaint, the number of complaints escalated, and the percentage of complaints resolved. These KPIs help the Project management assess the performance of the system and identify areas for improvement;
- **Visualization:** The dashboard provides visual representations of data, such as charts, graphs, and tables, making it easier to understand data and identify trends and patterns;
- **Customization:** The dashboard can display the most relevant data to the management. This allows the Project management to focus on the most important metrics and make data-driven, informed decisions;
- **Collaboration:** The dashboard can be shared with multiple stakeholders, such as the Project management, IPs, contractors and all other stakeholders mentioned. This approach promotes collaboration and ensures that everyone works towards the same goals.

7.6 Scope and Definition of Grievances

As per the Grievance Redressal Mechanism the following general category of grievances will be within the scope of the project's GRM system:

Table 8.1 Type of Grievances	
GT-CD	Grievance Types
G0100	Project Beneficiary and Eligibility (policy, selection, technical)
G0101	Affecteds are not included in the selection process due to ethnic bias or external influence.
G0102	Loss of identity and property and other relevant documents
G0103	Selection is gender-biased or exhibits a preference for a specific gender.
G0104	Unable to attain identity/property/other relevant documents
G0105	Unfair or biased eligibility criteria
G0106	FA was unfairly dismissed due to disability, gender or poverty.
G0107	Not assessed under initial Joint Survey and Verification (JS&V)
G0108	Not assessed under detailed Damage Assessment & Validation (DA&V)
G0109	The occupant disagrees with the technical assessment of the DA&V team (fully/partially/intact)
G0110	Owner-tenant disputes that interfere with the Project's service delivery
G0200	Project Implementation & Inspection Regime
G0201	Non-availability of construction material
G0204	Poor communication between beneficiaries and Project staff
G0205	Poorly designed or inappropriate reconstruction efforts
G0206	Poor-quality reconstruction material
G0207	Problems with accessing essential services, such as water and electricity, during the reconstruction process
G0208	Unqualified/inexperienced reconstruction workers
G0300	Gender equality and equity
G0301	Gender-based discrimination in housing allocation
G0302	Lack of gender-sensitive housing designs and facilities
G0303	Limited access to information for women regarding the housing project
G0400	Vulnerable persons and ethnic groups
G0401	Discrimination against ethnic minorities in housing allocation and service delivery
G0402	Inadequate access to information and services for widows, orphans, and other vulnerable groups
G0403	Inadequate provisions for persons with disabilities and elderly individuals in the housing design
G0500	Land ownership and property rights
G0501	Dispute of HH/Property ownership
G0600	Environmental and Social Concerns
G0601	Reconstruction causes environmental damage / may cause ecological harm.
G0700	Health and safety concerns
G0701	A contractor using toxic building materials
G0702	Failure to meet construction quality standards
G0800	Disbursement and financial transaction issues
G0801	Delayed funds disbursement to IP
G0802	Delayed funds disbursement to Payment Partners
G0803	Funds delayed or not available with IPs
G0804	Payment for construction materials not received.
G0805	Promised payment not received or delayed
G0806	Labour charges not paid or received.
G0807	The process of obtaining compensation is overly complicated.
G0808	Compensation is inadequate

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Table 8.1 Type of Grievances	
GT-CD	Grievance Types
G0900	Communication and media issues
G0901	Inadequate public awareness campaigns about the project, including its goals, objectives, and expected outcomes
G0902	Limited availability of information about the project through local media and communication channels
G0903	Poor communication with affected communities regarding the housing project, including a lack of community consultations and participation
G1000	Local/contextual/political issues
G1001	Insufficient participation of local communities in project planning and decision-making, leading to a lack of community ownership
G1002	Lack of transparency in housing allocation and selection processes
G1003	Political interference in housing project decisions and resource allocation
G1004	Required labour unavailable or is too expensive
G1100	Any other grievance/complaints not listed above.

As part of the GRM, stakeholders or their representatives (grievance reporters) may communicate their grievances verbally or in writing using the appropriate communication channels of GRM document. However, given this Project's scale and potential impact on the affected communities, grievances may come from several official and unofficial channels. Whatever the case, all persons responsible for implementing the GRM (must record grievances expressed through appropriate channels, either officially or unofficially, into the GMIS grievance redress web portal upon receiving them. The system will disallow the entry of complaints that do not carry adequate contact information (i.e., complete phone number, e-mail address, and mailing address) unless the reporter wishes to remain anonymous. However, in such cases, the grievance reporter must provide locational information to enable authentication and follow-up for further details on required data fields. The VRC may maintain a physical register, called a Grievance Log until they can either make the entry themselves or contact the relevant FGRO. Once entered, the system will auto-generate a unique Grievance Token Number (GTN) for each grievance record received. The system will automatically transmit this GTN and an acknowledgement to the grievance reporter on the communication medium stated at entry.

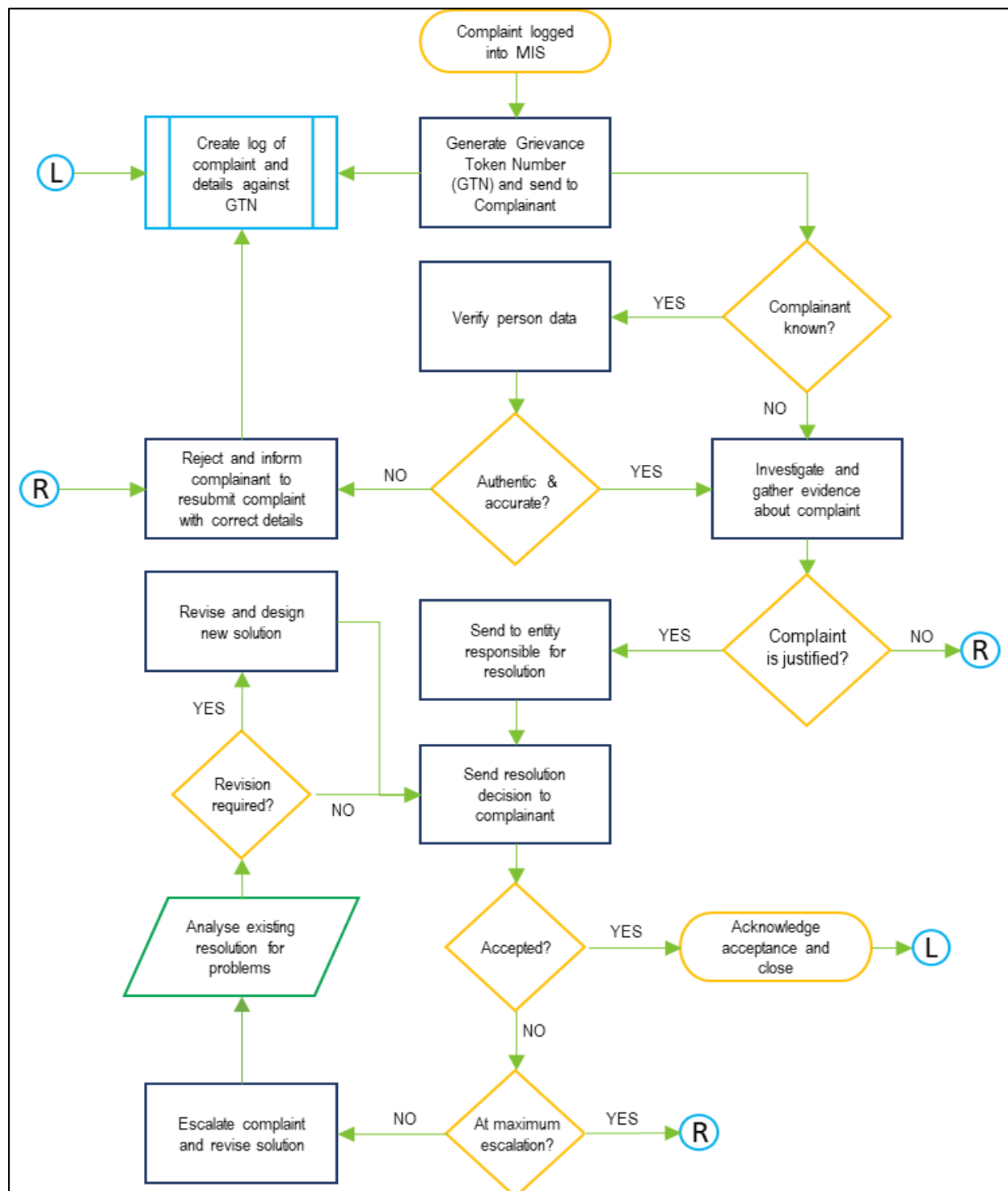


Figure 8.1: GRM Process Flow Diagram

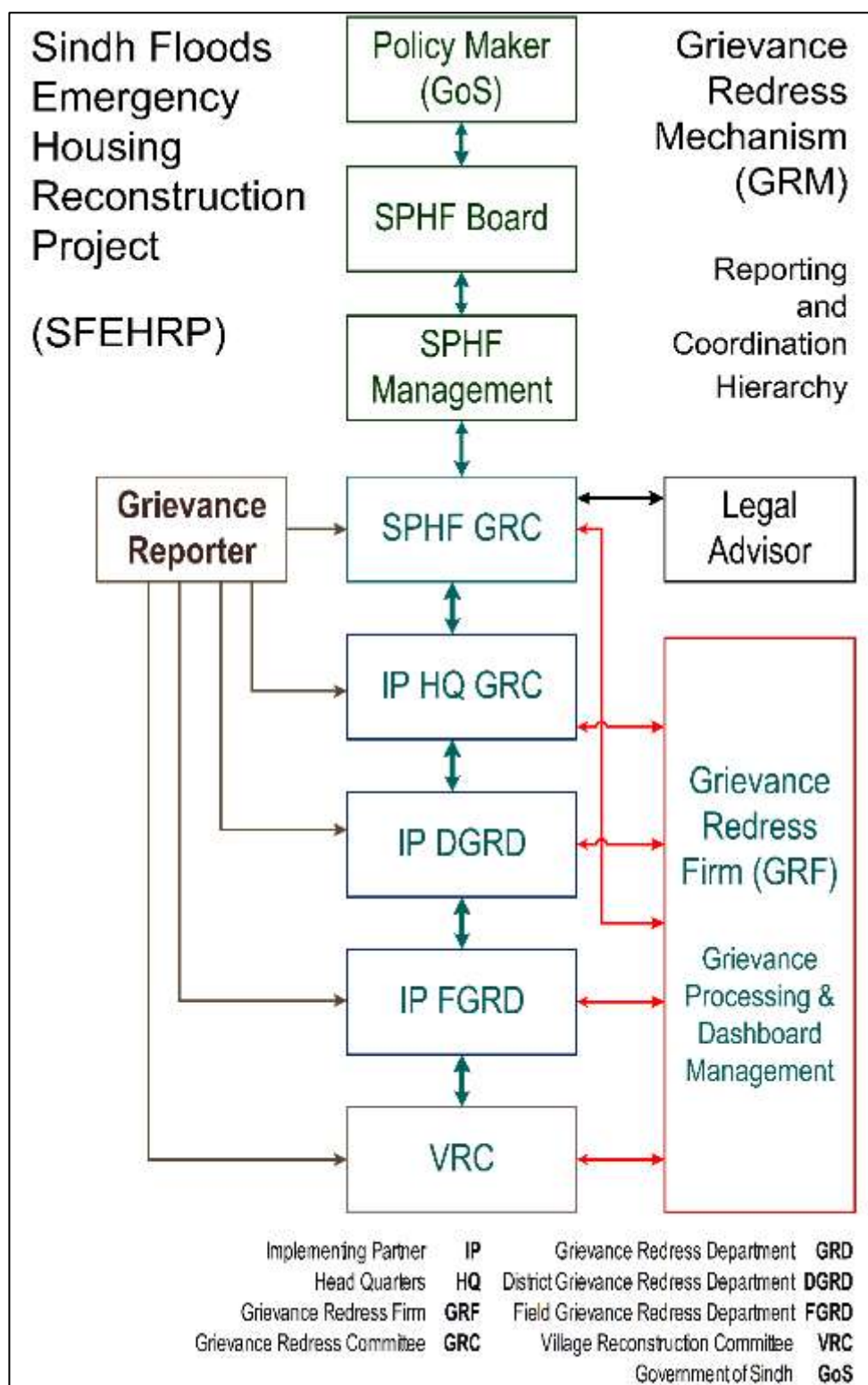


Figure 8.2: Grievance Reporting and Coordination Hierarchy

7.7 Handling SEA/SH and VAC Issues

The project will be particularly sensitive to GBV and SEA/SH issues given that its key

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stakeholders include marginalized communities, whose women and children are particularly vulnerable to abuse. The SPHF and IP staff responsible for receiving complaints will be provided with training on handling complaints regarding GBV, VAC and SEA/SH from a certified and reputable organization/firm focusing on issues of GBV, SEA/SH and VAC. The project will also draw up a list of established service providers who can provide support to GBV, SEA/SH and VAC survivors and all relevant cases will be referred accordingly.

For SEA/SH and GBV-related matters, the SPHF will also sensitize and provide awareness to beneficiaries and share the mapping along with the name and contact details of GBV and SEA/SH service providers to women beneficiaries and the designated focal persons of IPs will share the lists with them

8 ESTIMATED BUDGET

This chapter presents the cost of ESMF implementation for the ESMF, which has been included in the overall project budget:

Table 2: Estimated Budget			
Activity / Cost Item	Quantity	Unit cost (PKR)	Total (PKR)
Training cost for IPs staff	15	150,000	2,000,000
**Provisions of PPEs to beneficiaries (helmet, vest, gloves, shoes)	92,105	2,000	184,210,000
** The construction will be in phases as well as not all beneficiaries will start reconstruction activity in a single settlement at one time. Therefore, 5 sets of PPEs/settlement will be provided which will be used by other beneficiaries as well. No. of beneficiaries (WB Funded) = 350,000 No of districts = 19 No of settlements = $350,000/19 = 18,421$ 5 sets of PPEs/ settlement = $18,421 \times 5 = 92,105$ Cost of 1 set of PPEs (PKR) = 2000/- Total cost of PPEs (PKR) = 184,210,000/-			
a) TOTAL (PKR)			186,210,000
Consultancy charges for: to identify the potential risks and practices in the communities about sexual exploitation and abuse including child abuse in the project areas (development of tools and field visits)	01	Lump Sum	1,500,000
Development of training module on SEAH/SH	01	Lump Sum	500,000
Training of project staff (SPHF and IPs) on SEA/SH	04 workshops	Lump Sum	2,000,000
Development & and printing of awareness-raising material	-	Lump Sum	1,000,000
Coordination meetings with other relevant service providers for referral pathways	8	20,000	160,000

	Environmental & Social Management Framework			
	Sindh Floods Emergency Housing Reconstruction Project			
	Doc. No.: SFEHRP/ESMF-AF/001	Rev.: 01	GRM	

b) Total Cost of SEA/SH action plan	5,160,000
Total cost of ESMF (a + b)	191,370,000

Annex 1: Environment and Social Codes of Practice for Reconstruction of Resilient Housing

Environment and Social Codes of Practice for Reconstruction of Resilient Housing



Sindh Peoples Housing for Flood Affectees

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ABBREVIATIONS

ES	Environmental and Social
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standard
GRM	Grievance Redressal Mechanism
IPF	Investment Project Financing
PDNA	Post-Disaster Needs Assessment
SFEHRP	Sindh Flood Emergency Housing Reconstruction Project
SOPs	Standard Operating Procedures
SPHFA	Sindh Peoples Housing for Flood Affectees

1.0 Background

Pakistan experienced heavy monsoon rains between June and September 2022, which have severely affected millions of households, mainly in Sindh and Baluchistan. Around 33 million people have been displaced and more than 13,000 kilometers 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. Preliminary estimates suggest that as a direct consequence of the floods, the national poverty rate may increase by up to 4.0 percentage points, potentially pushing around 9 million people into poverty. The recently completed Post-Disaster Needs Assessment (PDNA) estimates total damages to be US\$14.9 billion, while total economic losses reached about US\$15.2 billion. Estimated needs for rehabilitation and reconstruction is at US\$16.3 billion, not including new investments beyond the affected areas to strengthen Pakistan's resilience to future shocks.⁴⁴

2.0 The Project

With the support of The World Bank, Government of Sindh through SPHF (a public sector section 42 company) is implementing 'Sindh Flood Emergency Housing Reconstruction Project (SFEHRP). Under the project around 2.1 million fully destroyed and partially damaged houses are planned to be reconstructed or retrofitted in 24 flood affected Districts of Sindh.

The project is fully operationalized with fast-track process by the World Bank due to the emergency nature for provision of housing to the affected population of 2022 floods. The project is being prepared and implemented according to Paragraph 12 of Section III of the Bank Policy on Investment Project Financing (IPF), which allows for certain exceptions to the IPF policy requirements, including deferral of ESF requirements, if the Bank deems the recipient to be in urgent need of assistance because of a disaster or experiences capacity constraints because of fragility or specific vulnerabilities.

The reconstruction of houses and WASH/Settlement Improvement is anticipated to generate moderate environmental and social (ES) consequences. To mitigate potential ES impacts, the World Bank Environment and Social Framework (ESF) along with federal and provincial governments' environmental and social legislative framework is applied to assess and manage E&S risks and impacts. As the specific project locations in flood-prone areas have not yet been determined, an Environmental and Social Management Framework (ESMF) will be required. The ESMF encompasses a comprehensive approach to managing ES risks and impacts, incorporating relevant national and provincial policies and legislations, as well as World Bank standards. This framework includes a mitigation plan incorporating detailed construction guidelines, Standard Operating Procedures (SOPs) for construction, Labor Management Procedures, a Resettlement Framework, a Stakeholder Engagement Plan, and Grievance Redressal Mechanisms. The implementation of the ESMF is legal and contractual binding for the client throughout the project to ensure appropriate management of environmental, social, health, and safety (ESHS) risks and impacts.

These ES Codes of Practices (ESCOPs) for the reconstruction of resilient houses have been prepared as a risk management instrument. These ESCOPs serves as minimum standards during the reconstruction phase of the project, addressing potential environmental and social impacts and are made part of the ESMF.

The project has developed a comprehensive monitoring and evaluation system (MIS Based) to monitor all the project activities along with assurance of compliances including safeguards. Furthermore, the project is in the process of recruiting the services of Independent Validators and 3rd Party Monitoring and Evaluation Consultants to assure maximum transparency and mind course correction where required.

⁴⁴ Government of Pakistan. 2022. "Pakistan Floods 2022: Post-Disaster Needs Assessment. Main Report" Ministry of Planning Development & Special Initiatives.

3.0 Environmental and Social Codes of Practices for Reconstruction of Resilient Houses

Environmental and social codes of practices for the reconstruction of resilient houses under SFEHRP should prioritize sustainability, community engagement, social equity, labor and human rights, health and safety, cultural heritage, and access to services. These codes of practices should be integrated into the planning, design, and implementation of reconstruction to ensure that they are environmentally responsible, socially inclusive, and contribute to the long-term resilience of affected communities.

The SFEHP involves neighborhood-wide infrastructure, even though, the scale of development is not likely to lead to high environmental risks. Adverse risks and impacts are likely to be short term and primarily related to the reconstruction phase of beneficiary driven individual houses. These risks will be managed by adopting mitigation measures and standard operating procedures. By using E&S Screening checklist or negative lists, project teams can avoid areas not suitable for housing, such as floodplains or slopes prone to landslides.

In addition, A transparent and robust MIS has been designed with the consultation of World Bank (“WB”) by Tally Marks Consulting (TMC). TMC will help with the development of a web-based portal, mobile application and executive dashboards that will assist in the disbursement, management, and monitoring of financial grants for the restoration and rebuilding of the affected homes. The MIS system will accomplish the following objectives including but not limited to the following:

- Through a robust MIS system, the linkage between the donor and the beneficiaries shall be direct, transparent, and efficient
- The MIS will ensure the direct transfer of funds to the beneficiary without any human intervention and the step-up construction of the house shall be transmitted to the donor directly.
- MIS system will enable a uniquely transparent process for donors, that delivers granular visibility right down to the individual beneficiary
- The MIS system also ensures that multiple donor streams can be created, and local and international donors shall be working through this MIS concurrently.

Furthermore, the drone surveys will be carried out in pre-defined areas where the housing reconstruction is being undertaken. Furthermore, to housing units and land cover, the drone survey will collect topographic information to identify the elevation of the terrain and any changes that are natural or may have occurred as a result of natural disaster such as flooding and such drone imagery will be utilized for settlement development plans. The drone-based aerial survey will play a crucial role in monitoring, evaluation and reporting the housing reconstruction in 24 districts of Sindh.

The following environmental and social codes of practices (Social Code of Practice attached as Annex-II) should be adopted and practiced at this stage of the project implementation and later these will be made part of the ESMF:

3.1 Stakeholder Engagement and Information Disclosure

In accordance with the requirement of ESS10: **Stakeholder Engagement and Information Disclosure**, it is important to conduct thorough stakeholder consultations throughout the project life cycle, including the preparation phase, implementation, and monitoring stages. Effective stakeholder engagement and facilitation must be prioritized to ensure transparency and collaboration.

The following key aspects should be part of the stakeholder consultation process:

- Identify and engage affected communities throughout the life of the project.
- Facilitate stakeholder’s access to project information, including on the various forms of financial and technical support for reconstruction and educate individuals on their entitlements, rights, and responsibilities, and the ways that they can participate and fully benefit from project activities.
- Supporting house owners to build better houses in compliance with proposed designs by the project.

- Engage stakeholders to define and identify house owners/residents from vulnerable and disadvantage affected groups such as women, children who lost their parents during flood, elderly, marginalized ethnic communities, transgenders, and widows without support of a male figure, disabled and poor with no land title. Establish one-window arrangement to facilitate vulnerable and disadvantage groups.
- Address grievances of affectees through establishment of a robust Grievance Redressal Mechanism (GRM) for the project.

3.2 Beneficiaries Eligibility Criteria

The project contributes to the rehabilitation and resilience building of flood-affected communities in Sindh. While the housing subsidy grants are targeted to a subset of the affected population, the project, through its technical assistance component, benefits the entire province by supporting the design of the overall housing reconstruction program of the GoS for 2022 floods rehabilitation and reconstruction. Any additional funding channeled for housing reconstruction in Sindh will be aligned with the housing reconstruction policy, standards, and principles established under this project through the housing reconstruction program.

The Project have specific benefits for people living in the geographical locations served through the housing subsidy grants for reconstruction/restoration of damaged houses. Through an owner-driver approach, approximately 350,000 multi-hazard resilient core housing units will be supported with an estimated 1.4 million beneficiaries. Roughly half of these beneficiaries are estimated to be female, based on demographic information available for these areas.

The following procedure is laid down for the disbursement of 1st instalment i.e. cash grants to those individuals whose houses have been completely destroyed (PKR. 300,000) in 2022 Floods.

- STA Teams constituted for the purpose of determining whether a house is completely destroyed or partially damaged (retrofit-able) shall fill in the damage assessment forms and geo-tagging by conducting house to house survey in the flood affected area.
- The form shall be filled in by STA TEAMS in front of the beneficiaries shall show; besides other particulars, name of the bank, branch and account number or post office/branch and account number of the eligible people.
- The filled-out forms shall be delivered to the designated office/unit on the daily basis both in hard and soft forms. The Project Coordinator/Senior Engineer of IP shall verify the data and the eligibility.
- Post verification of the forms by IPs supervisory structures, the forms will be submitted to SPHF for review/verification. Under the project SPHF plans to hire an independent validator, who will validate 5 % of randomly selected submitted assessment through MIS.
- The compensation to the beneficiary will only be triggered once the verification is received from the Independent Validator. In addition, the SPHF team including Engineers & Disbursement Officer will also review of the submitted form for verification.
- As per the approval for payment, after confirmations by SPHF team (Engineers & disbursement officers) the note for disbursement will be placed to CFO after necessary approval by the CEO through COO.

IPs will submit the Forms to SPHF on a regular basis. The SPHF shall prepare various types of reports including separate lists for the destroyed and retrofit-able houses. These lists shall be prepared bank/branch-wise with bank account numbers of the eligible individuals with the amount payable to each beneficiary. These lists will also be accompanied by a statement summary showing the particulars of various bank branches along with the total amount payable at each branch for a given number of persons maintaining their account with that particular branch of bank. The SPHF shall issue instructions to its bank for the transfer of money into the beneficiary's accounts.

The following procedure is laid down for the disbursement of 2nd instalment;

- Upon receiving request from the beneficiaries or as a result of follow-up visits, the STA Teams shall inspect construction carried out up to the 'Plinth Level' and geotag the structure.
- For inspection purposes, the relevant engineer shall fill-in the checklist as prescribed by SPHF. One copy of the checklist may be handed over to the beneficiary and original shall be retained by the STA teams.
- The plinth shall be digitally photographed and geotagged. With regards to verification, transfer of money, disbursement procedures as laid down above (for 1st instalment) shall be followed

The following procedure is laid down for the disbursement of 3rd Instalment

- Upon receiving request from the affectees or as a result of follow-up visits, the STA TEAMS shall inspect construction carried out up to the 'Lintel Level'.
- For inspection purposes, the relevant engineer shall fill-in the checklist as prescribed by SPHF. One copy of the checklist may be handed over to the beneficiary and original shall be retained by the STA Teams.
- The structure shall be digitally photographed and geo-tagged. With regards to verifications, transfer of money, disbursement procedures as laid down above (for 1st instalment) shall be followed

The following procedure is laid down for the disbursement of 4th Instalment

- Upon receiving request from the affectees or as a result of follow-up visits, the STA TEAMS shall inspect construction carried out at 'Roof Level'.
- For inspection purposes, the relevant engineer shall fill-in the checklist as prescribed by SPHF. One copy of the checklist shall be handed over to the beneficiary and original shall be retained by the STA Teams.
- The structure shall be digitally photographed and geo-tagged. With regards to verification, transfer of money, disbursement procedures as laid down above (for 1st instalment) shall be followed

3.3 Addressing the Needs of the Vulnerable People

In order to identify and document support to the vulnerable Socio Technical and Assessment Teams are required to categorize individuals according to their vulnerability. During damage assessment, a vulnerability census will also be carried out and each identified vulnerable will be checked on whether she/ he had capacity to rebuild her/ his own house or not. The capacity to rebuild should be considered to have existed if a vulnerable individual had family members or relatives or community members available and willing to help in reconstructing her/his (vulnerable) house. During reconstruction phase STAT(s) will carry a re-check on vulnerable whether they need any help in reconstructing their houses or not.

Vulnerability is defined as "the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard. It involves a combination of factors that determines the degree to which someone's life, livelihood, property and other assets are put at risk by a discrete and identifiable event in nature and society".

The vulnerable segments include:

1. Widows/Widowers
2. Women with disabled husbands
3. Women headed households
4. Divorced / abandoned women / unmarried older women dependent on others
5. People with disability (physically or mentally)

6. Unaccompanied minors i.e., orphans
7. Unaccompanied elders, over the age of 60

Form – III: Settlement level Vulnerability Identification Form

S.No	Form Number	Name	Parentage	CNIC No	Vulnerability on or after Floods	Type of Vulnerability

3.4 Labor and Working Conditions

The houses will be constructed or reconstructed by the beneficiaries themselves, thereby reducing the potential for in-situ labor management issues.

Procurement of construction material under the project design is the discretion of the beneficiary-whose house to be reconstructed. The Sindh Peoples Housing for Flood Affectees (SPHFA) will not be involved in the acquisition of construction materials. However, with regards to the broader impact on labor practices within the supply chain, it is desirable for SPHFA to advocate for adherence to the principles outlined in "ESS2: Labor and Working Conditions". These conditions will be mandatory for all SPHFA personnel involved in the project. The Grievance Redressal Mechanism (GRM) will be in place to resolve labor related issues of project workers. The following labor management procedures will be implemented within the project:

- Development of labor management plan for employees of the project.
- Development and deployment of project GRM in a timely manner.
- Promotion of good labor management practices among the supply chain enterprises for the construction sector in the province.
- Protections against the use of child labor and forced labor
- Issues related to occupational health and safety issues for masons
- Occupational health and safety issues where the beneficiary themselves construct their house.
- Issues related to workplace conditions.
- OHS issues related to weather conditions (heat wave)

3.5 House Design, Resource Efficiency, Pollution Prevention, and Community Health and Safety

The baseline environmental conditions in flood-affected areas and settlements are likely to be impacted. A wide range of human settlement waste, construction debris, depleted and contaminated water sources, and inadequate sanitation are anticipated. Additionally, the procurement of construction materials may contribute to air pollution from brick kilns, cement factories, and concrete and sand extraction. In light of these circumstances, it is essential to consider the principles of "ESS3: Resource Efficiency and Pollution Prevention and Management" and "ESS4: Community Health and Safety" in the implementation of the project. The design of new housing should take into account the following considerations:

- Avoid the usage of hazardous construction material such as: asbestos, lead-based paints, formaldehyde-based material, synthetic mineral fiber, etc.
- Avoid stock piling of construction material.
- Use of local water resource may be an issue in some cases.
- Safe water supply, sanitation and liquid and solid waste management as part of the house design and community infrastructure.

- Energy efficiency through better insulation.
- Opportunities for rain water harvesting.
- Raised plinth levels to avoid low level of floods impacts.
- Use of wind and flood water resistant materials etc.
- Need for procedures for control, management and disposal of construction waste.
- Managing domestic waste.
- Use of safe construction practices.
- Protect the children from entering the construction area.

3.6 Debris Management and Site Clearance

There is a possibility that substantial quantities of waste material will be present at flood affected areas. These waste products could encompass vegetative waste, construction and demolition debris, putrescible waste including fruits, vegetables, meats, dairy products, and animal remains that undergo rapid decay, and infectious waste. These waste products will need to be disposed and site to be cleared up prior to start of the reconstruction activities by adopting the following practices:

- Remove the waste material from the site and dispose at a designated disposal area.
- Promote recycling of reusable materials in the waste products such as bricks, wood, metal sheets etc.

3.7 Designing of Multi-hazards Resilient Houses

Multi-hazard resilient houses will be designed and constructed so that these houses can withstand climate change hazards such as floods and heat waves in future. The following major features of resilient housing will be considered in the design and construction stages:

- Placing houses with their longer axes to the prevailing wind direction and facing house openings towards the dominant wind directions to take advantage of natural ventilation.
- Orienting houses on the land in such way to optimize the use of sun and wind.
- Planning for the east and west façades of houses in hot climates to be shaded in order to minimize solar heating, especially during morning and afternoon hours, and heat gain of external walls, thus minimizing indoor temperatures and improving users' comfort.
- Dispersing the houses to allow cool winds to circulate.
- Allowing house design to use the natural airflow to lower internal temperatures and reduce the impacts of heat and humidity on the building and its users.
- Ensuring that the house's shape is of "open" character, allowing airflow through many openings, such as windows, louvres and doors. Openings will be placed on opposite sides of the house to improve cross-ventilation.
- Considering using large overhanging roofs, which provide good shading and protection against heavy rains.
- Installing heavy and thick walls to decrease heat penetration during daytime and cold penetration at night-time.
- Considering installation of solar photovoltaic system at each home to get electricity from renewable energy sources.

3.8 Land Acquisition

The most of the houses will be reconstructed at existing locations. Houses that were previously

situated in flood-prone areas such as riverbanks and natural drainage beds will not receive financing for reconstruction at their current locations. Instead, these houses will be relocated to a safer location available within or in the periphery of existing human settlements. Connectivity of the relocated houses with the basic services is an essential locational requirement. The following guidelines outlined in "**ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**" will be taken into consideration during the process of relocating these homes to ensure compliance with regulations and minimize any negative impact on the community.

- Prepare resettlement framework at the project level and resettlement plans at the human settlement level (inclusive of settlement development approach).
- Relocate houses either on lands owned by household to be relocated or new location where land is owned by the government without encumbrances. .
- The resettlement plan will also include livelihood restoration, protection, and enhancement such as; youth skill development training, linking microfinance institutes with the resettled households to explore financial access, and business development in the new area
- Essentially consider to maintain existing social relationships within the community when relocating houses.

3.9 Biodiversity Conservation and Sustainable Management of Living Natural Resources

It has been observed that a significant number of trees within residential areas and communities have been eradicated. This is a matter of concern as trees play a crucial role in providing shade and regulating the temperature, thereby enhancing air quality. In light of this situation, it is important that new trees be planted to serve as a replacement, ensuring that the environmental benefits they offer are sustained

SPHFA should focus on following aspects as per the requirements of "**ESS6-Biodiversity Conservation and Sustainable Management of Living Natural Resources**":

- Protection of the existing trees, bushes etc. while reconstruction of the houses.
- Planting of new trees to serve as storm, flood, and tidal waves protection barriers.
- Planting tree species of local habitat, useful in fruit/food and for firewood supplies.
- Planting of trees that have good health properties for human and moderating climate
- Enhancing the aesthetic and recreational value of the area.
- Conservation and protection of important biodiversity and natural assets.
- Potential impact on biodiversity and habitats
- Negative lists or/and prohibitions where the project will be implemented (for e.g. no implementation in the protected areas)

3.10 Indigenous People and Communities, and Cultural Heritage

No indigenous communities meeting the ESS7 criteria are present in Sindh. So, "**ESS7: Indigenous/Sub Saharan African Historically Underserved Traditional Communities**" is not applicable to the project.

Sindh province has large number of cultural heritage sites and buildings. It is possible that floods might have revealed previously hidden cultural heritage assets and construction activities may lead to the chance discovery of such assets. In such scenarios, it is important for the project to implement the chance find procedures outlined in "**ESS8: Cultural Heritage**" and these should be made part of the ESMF.

3.11 Grievance Redressal Mechanism and Capacity Development

The implementation of a comprehensive Grievance Redressal Mechanism (GRM) is necessary for

the successful support of the project. At the outset of the project, the following actions should be taken:

- Prepare project specific GRM system and disclose the same to the stakeholders. GRM should be aligned and linked with Sindh Chief Minister Complaint Cell and Provincial Ombudsman (Mohtasib) Sindh when incorporated in ESMF to increase the outreach of the project GRM.
- Development of special GRM system by SPHF for the SPHFA such as online complaint/grievance registration portal and dashboard of registered grievance redressal status.
- Develop the capacity of Sindh Peoples Housing for Flood Affectees (SPHFA), Government of Sindh and its local level implementation partner institutions for the effective implementation of stakeholder engagement plan, development of beneficiaries' selection criteria, and operationalization of GRM.

Reconstruction of house specific ES Codes of Practices Screening . These will be used to ensure that the beneficiary applies ES codes of practices during reconstruction of their houses under the project.

⋮

Annex 2: List of Project Districts

List of Project Districts

Project Districts		
S.No.	District Name	
1	Umerkot	World Bank Funded
2	Mirpurkhas	
3	Thatta	
4	Badin	
5	Sujawal	
6	Mitiari	
7	Jamshoro	
8	Dadu	
9	Tando Allayar	
10	Tando Muhammad Khan	
11	Tharparker	
12	Sangarh	
13	Larkana	
14	Sukkur	
15	Khairpur Mirs	
16	Jacobabad	
17	Kashmore	
18	Qamber Shadadkot	
19	Shikarpur	
20	Karachi	GoS Funded
21	Hyderabad	
22	Nausharo Feroze	
23	Shaheed Benazirabad	
24	Ghotki	

Annex 3: NOC – Sindh Environmental Protection Agency (Housing)

NOC – Sindh Environmental Protection Agency



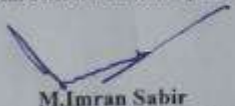
No: SEPA/Tech/Misc/28/04/769/2023
ENVIRONMENTAL PROTECTION AGENCY
GOVERNMENT OF SINDH
Plot # ST - 2/I, Sector 23, Korangi Industrial Area, Karachi - 74900
Ph: 021 - 35065950, 35065621, 35065946
epasindh@gcyber.net.pk
Fax No: 021 - 35065940
Dated: 28th April, 2023

To, ✓
The Chief Executive Officer,
Sindh People's House for Flood Affecteds,
Government of Sindh.

SUBJECT: NOC-ENVIRONMENTAL & SOCIAL SCREENING CHECKLIST.

Please refer to your letter regarding Sindh Flood Housing Emergency Reconstruction Project. In this context, it is to state that the reconstruction of proposed small houses in the said project are not categorized in the schedules of Environmental Assessment Regulations 2021. Sindh Environmental Protection Agency, therefore extends its approval for environment and social screening checklist prepared by World Bank during implementation phase of project. However, after having examined Environmental and Social Screening Checklist following observation may be considered:

- A component of water filtration may be included to provide safe drinking water to the communities.
- Effective Sewage system need to be established through construction of septic tanks wherever required in view of non-availability of sewage system. wastewater disposed in septic tanks may be reused/recycled for plantation to increase green belts.
- Construction material/debris or any other solid waste generated during construction activities need to be disposed off in consultation with concerned municipal authority.


M. Imran Sabir
Director (Tech/Natural Resources)

CC to:
1. Director General EPA, Sindh
2. Office file

Annex 4: NOC – Sindh Environmental Protection Agency (WASH)



No: SEPA/Tech/Misc/27/08/2025/939
ENVIRONMENTAL PROTECTION AGENCY
GOVERNMENT OF SINDH
Plot # ST - 2/1, Sector 23, Korangi Industrial Area, Karachi - 74900
Ph: 021 - 35065950, 35065621, 35065946
epasindh@cyber.net.pk
Fax No: 021 - 35065940
Date: 27th August, 2025

To, ✓

The Chief Executive Officer,
Sindh People's Housing for Flood Affectees (SPHF),
Government of Sindh.

SUBJECT: NOC-ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST.

I am directed to refer your letter No. COO/SPHF/2025 dated 4th August, 2025 regarding subject noted above for reconstruction of core housing units post-2022 floods along with the provision of WASH to support improved access to safe drinking water, adequate sanitation facilities and promoting hygiene practices.

In this regard, it is submitted that the said project has low environmental impact project and not categorized in any of the schedule of Environmental Assessment Regulations 2021, under Sindh Environmental Protection Act, 2014. In view of the above, this office has no objection for development of WASH to improve the access to safe drinking water and sanitation subject to consideration:

1. that component of safe drinking water complies with Sindh Environmental Quality Standards 2015.
2. that sewage water disposed in septic tanks may be recycled/reused for plantation to increase green cover and other suitable use.


Mubark Ali
Deputy Director (Technical)

CC:

1. P.A to Director General, Sindh EPA, Karachi.
2. Office copy

Annex 5: Protected Areas in Sindh

S. No.	Protected Areas	District	S. No.	Protected Areas	District
1	Kirthur National Park	Dadu and Malir Districts	23	Munarki	Thatta
2	Takkar	Khairpur	24	Hilaya	Thatta
3	Hudero Lake	Thatta	25	Khadi	Thatta
4	Keenjhar (Kalri) Lake	Thatta	26	Keti Bander North	Thatta
5	Haleji Lake	Thatta	27	Keti Bander South	Thatta
6	Lung Lake	Larkana	28	Khat Dhero	Larkana
7	Drigh Lake	Qamber Shadadkot	29	Runn of Kutch	Badin & Tharparkar
8	Mahal Kohistan	Dadu	30	Nara Desert	Sukkur, Khairpur & Sanghar
9	Hab Dam	Karachi	31	Deh Akro - II	Shaheed Benazirabad (formerly Nawabshah)
10	Ghondhak Dhero	Jacobabad	32	Deh Jangisar	Thatta
11	Miani Dhand	Hyderabad	33	Deh Khalifa	Thatta
12	Samno Dhand	Hyderabad	34	Dosu Forest	Larkana
13	Gulsher Dhand	Tando Adam	35	Hala Forest	Hyderabad
14	Dhounk Block	Shikarpur	36	Indus River (Dolphin Reserve) From Sukkur to Guddu Barrage	Jacobabad/Ghotki/Shikarpur & Sukkur
15	Lakhat	Shaheed Benazirabad	37	Khipro Forest	Sanghar
16	Kot Dinghano	Shaheed Benazirabad	38	Mando Dero Forest	Sukkur
17	Mohabat Dero	Nausharo Feroze	39	Mirpur Sakro Forest	Thatta
18	Bijoro Chhach	Thatta	40	Nara	Khairpur
19	Shah Lanko	Thatta	41	Pai Forest	Shaheed Benazirabad (formerly Nawabshah)
20	Majiran	Thatta	42	Sahib Samo Forest	Hyderabad
21	Gullet Kohri	Thatta	43	Surjan, Sumbak, Eri & Hothiano Mountains	Dadu
22	Marho Kotri	Thatta	44	Tando Mitho Khan Forest	Sanghar

Annex 6: Negative and Positive List for Environmental and Social Management Framework

World Bank Safeguards	Negative List
Environmental Assessment	- Areas of known/suspected contamination due to hazardous substances - Activities having “significant adverse cumulative/transboundary impacts”
Land-use pattern	- Construction in areas cause a significant change in existing land use pattern.
Natural habitats	- Involves any works in protected areas or in or around sensitive/critical natural habitats - Significant conversion or degradation of natural habitat or where the conservation and/or environmental gains do not clearly outweigh any potential losses. - Disrupt wildlife and vegetation/Greenland/Flora - Selection of sites where threatened and endangered species, migratory pathways have been reported
Physical Cultural Resources	- Loss or damage to cultural property, including sites having archeological (prehistoric), paleontological, historical, religious, cultural and unique natural values, livelihoods including cultural resources.
Indigenous Groups	- Likely to create adverse impacts on ethnic groups/villages/and or neighboring villages or unacceptable to ethnic groups living in a village of mixed ethnic composition.
Forests	- Clearance of ecologically sensitive/protected forests
Land Acquisition	- Areas under Anti Encroachment Drive - Cause any displacement or severe loss of livelihood

Positive List
- Optimizing the use of available natural resources by utilization of existing material/debris of the damaged houses. - Stakeholder involvement and commitment during construction.
- Use of renewable energy (solar) and environmentally friendly techniques for construction
- Usage of water conservation techniques as part of the design.
- Appropriate design considerations to minimize adverse impacts on environment (flora, fauna, natural resources, cultural resources) and human and community health.
- Construction, rehabilitation and design improvement of existing settlement improvement/protective infrastructure.
- Activities designed specifically to avoid disturbance or nuisance to the local community in terms of high noise, usage of scarce/valuable natural resource.

Annex 7: Environmental and Social Screening Checklist

Environmental and Social Screening Checklist for Housing

A	General Information:	Name of Surveyor				Date:	
	<i>Project Location (District):</i>						
	<i>Site Location (Taluka, UC, Deh, Settlement):</i>						
	<i>Project Activities:</i>	Reconstruction/Construction of House	No. of Units:	No. of kaccha houses (as per DA):	No. of pakka houses (as per DA):		
	<i>Implementing Partner:</i>						
	<i>Sensitive Receptors (within 200m): Schools, Mosques/Temple/Church res. community, streams/canals/lakes, agricultural land</i>						
	<i>Important Biological Features (If Any/Non-Quantitative)</i>						
	<i>Is this project located in an area with wastewater network</i>						
	<i>Is the drinking water available in the settlement</i>						
	<i>Existing solid waste management practices</i>	Government	Public	Pit Burning	None	Any Other:	
	<i>Specify local GRM System if Any.</i>						
B	Sub Project E&S Issues:						

S. No.	Issues	No/Yes	Risk Level				Remarks/ Mitigation Measures
			Low	Moderate	Substantial	High	
a.	Environmental Parameters						
1.	Is there any waste ⁴⁵ 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	Is there signs of existing soil/water contamination OR Will the sub-project result in potential soil/water contamination as a result of runoff/construction activities?						

⁴⁵ Primary: In the form of rubble and debris from damaged building, hazardous material (e.g. asbestos) and sludge.
Secondary: waste from relief activities i.e plastic, cardboard, paper, rubber, tins and cans, packaging material.

S. No.	Issues	No/Yes	Risk Level				Remarks/ Mitigation Measures
			Low	Moderate	Substantial	High	
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?						
13.	Will the sub project have an impact on archaeological and historical sites?						
14.	Will the sub-project pose occupational health and safety risks?						
b.	Social Parameters						

S. No.	Issues	No/Yes	Risk Level				Remarks/ Mitigation Measures
			Low	Moderate	Substantial	High	
1.	Will the reconstruction process entail the possibility of displacing individuals or communities?						
2.	Will the project activities have any negative impact on basics services, such as water, sanitation, and healthcare?						
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 require compliance 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?						

S. No.	Issues	No/Yes	Risk Level				Remarks/ Mitigation Measures
			Low	Moderate	Substantial	High	
8.	Will the process of reconstruction have a detrimental effect on the health and safety of the labor involved?						
9.	Will the project activities involve a significant inflow of labor?						
10.	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?						
11.	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?						
12.	Will the sub project pose community health and safety risks?						

Annex 8: Environmental and Social Screening Checklist for WASH

A. Project Siting	
Date	
Name of Surveyor	
District	
Taluka	
UC	
Deh	
Settlement	
Coordinates	
Existing waste management system (options) Toilets, Open Defecation	
Is the Sub-Project area adjacent to or within any of the following:	
Legally protected Area	
Presence of indigenous species	
Any surface water body (river, canal, stream, lake, wetland) within 250 meters of the proposed sub project	
Is there any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Temple, Fort, archeological/historical site) within 200 m of the proposed subproject.	
Sensitive receptors (Schools, colleges, hospitals, graveyard and clinics) within 200 meters of the proposed sub project	
Is there any existing waste water network in the area	
Any other sub-project E&S Issues	

Screening Questions	Yes/No/NA	Risk Level				Remarks/Mitigation Measures
		Low	Medium	Substantial	High	
B. Potential Environmental Impacts						

Screening Questions	Yes/No/ NA	Risk Level				Remarks/Mitigation Measures
		Low	Medium	Substantial	High	
Are water sources near toilets or septic tanks?						
Is the area affected by waterborne diseases?						
Is the area at risk from floods or drought?						
Are any families or groups excluded from WASH access?						
Are drinking water sources <30 meters from sanitation infrastructure or open defecation sites? Is there any stagnant water that serves as breeding nest for mosquitoes or flies?						
Are there any risks to critical habitats, wetlands, or protected ecosystems within 1 km of the intervention site?						
Depending on the soil permeability (low, medium, high permeability), are there any risks for waste water to seep in?						
Will there be any risk of overflow or leakage from existing or planned sanitation systems during heavy rainfall?						
Are there any existing incidence of waterborne diseases						
Could the abstraction lead to depletion of aquifer or conflict with other users?						
Is a sludge management/disposal mechanism in place?						
C: Potential Social Impacts						
Will any families need to move or lose access to land?						
Is the land voluntarily donated? (With documentation and consent)						
Will the project cause impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?						

Screening Questions	Yes/No/ NA	Risk Level				Remarks/Mitigation Measures
		Low	Medium	Substantial	High	
Negatively impacts on the poor, women and children, and/or other vulnerable groups?						
Temporary impediments in the movements of people/transport and animals?						
Large labor influx during sub-project construction?						
What is the number of laborers required for the sub- project						
Risks of child labor and SEA/SH in the sub-project areas?						
Risks and vulnerabilities related to occupational health and safety due to physical hazards during project construction?						
Risks to community health and safety due to the transport, storage, and use and/or disposal of materials during construction?						
Has the community been consulted about the project design and risks?						
Are there potential health and safety risks during construction?						
Are there potential health and safety risks during operation?						
Will the project activities involve a significant inflow of labor?						
Are women, children, and vulnerable groups excluded from consultations and project activities						

Annex 9: Environmental and Social Monitoring Checklist

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 wastewater to the nearby water course/water body					
5.	Any spillage of fuel/oil observed					
6.	Dumping of solid waste at the designated Site					
7.	Dumping of construction waste/spoil at the designated Site					
8.	Protection of Flora/Fauna					
9.	Availability of Drinking Water					
10.	Site housekeeping					
11.	Warning signs are displayed near the construction zone.					
12.	Use of PPEs by the beneficiaries and workers					
13.	Any incident/accident (use a 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:		Extra Note if needed:				
 Signature Name: Position:						

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

Annex 10: Environmental and Social Monitoring Checklist - WASH

S. N/o.	Parameters	Yes/No/NA	Mitigation / Corrective Action / Remarks
1	Is the drinking water source properly protected from contamination?		▪ Fence or demarcate the source; ▪ Restrict livestock access; ▪ Construct raised platform and drainage apron; ▪ Install protection signage; ▪ Conduct community awareness on water safety.
2	Is a minimum distance of 30 meters maintained between water sources and contamination points?		▪ Verify 30m separation from latrines and waste pits; ▪ Relocate septic tank or water source if necessary; ▪ Conduct site risk assessment in shallow groundwater areas.
3	Is there any wastewater discharge near the drinking water source?		▪ Immediately block discharge and divert to septic tank/ABR; ▪ Construct diversion channel; ▪ Clean contaminated area and test water quality.
4	Has water quality testing been conducted?		▪ Test for E.Coli, turbidity, ph and TDS; ▪ Maintain testing records; ▪ If contamination is detected, provide filtration and remove the pollution source.
5	Has water availability and sustainability been assessed?		▪ Conduct yield testing; ▪ Assess seasonal variation; ▪ Estimate household demand; ▪ Consider alternate sources or storage if the yield is low.
6	Are all toilets connected to septic tanks or ABR systems?		▪ Ensure all outlets connect to the containment system; ▪ Check for bypass connections; ▪ Verify at the household level.
7	Are septic tanks watertight and properly sealed?		▪ Seal cracks and joints; ▪ Ensure proper plastering/RCC lining; ▪ Provide impermeable base; ▪ Conduct a water-tightness test.
8	Is there any direct discharge of wastewater into drains or canals?		▪ Close outlet and redirect wastewater to treatment system such as septic tank, ABR or soak pit.
9	Is there any leakage or overflow from sanitation systems?		▪ Repair the damaged system immediately; ▪ Desludge tank; increase capacity if needed; ▪ Conduct routine inspection.
10	Is greywater properly managed without stagnation?		▪ Provide soak pits or drainage channels; ▪ Avoid standing water; ▪ Promote safe reuse for irrigation.
11	Is there any visible untreated wastewater outside the system?		▪ Stop discharge immediately; ▪ Repair containment system; ▪ Clean the affected area and educate the community.
12	Are there any pipes discharging wastewater into drains or nullahs?		▪ Remove illegal connections; ▪ Connect wastewater to a proper treatment or containment system.

S. N/o.	Parameters	Yes/No/NA	Mitigation / Corrective Action / Remarks
13	Is wastewater treated before disposal?		▪ Install ABR, Septic tank, soak pit ▪ Ensure adequate retention time.
14	Is there any overflow from septic tanks?		▪ Conduct desludging immediately; ▪ Increase tank capacity if needed; ▪ Maintain desludging schedule.
15	Is the construction site properly barricaded?		▪ Install barriers around excavation areas; ▪ Restrict access to authorized personnel;
16	Are safety signboards installed?		▪ Install safety signage in local language with pictorial warnings for low literacy communities.
17	Are dust control measures in place?		▪ Sprinkle water regularly; ▪ Cover construction materials; ▪ Limit work during high wind conditions.
18	Are materials properly stored?		▪ Stack materials in designated area; ▪ Cover sand and cement; ▪ Avoid storage near water sources.
19	Is waste properly managed?		▪ Segregate and dispose waste at designated site; ▪ Prevent dumping in fields or water bodies.
20	Are workers using PPE?		▪ Provide gloves, masks, boots and helmets; ▪ Enforce mandatory use through supervision.
21	Is a first aid kit available?		▪ Provide stocked first aid kit at site; ▪ Train workers in basic first aid; display emergency contacts.
22	Are toolbox talks conducted?		▪ Conduct regular safety briefings; ▪ Record attendance; ▪ Discuss hazards and PPE requirements.
23	Are safe excavation practices followed?		▪ Provide shoring for deep pits; ensure safe entry and exit; ▪ Avoid excavation during rainfall.
24	Is there any child labor?		▪ Stop work immediately ▪ Remove underage workers immediately; ▪ Verify worker age documentation.
25	Have community consultations been conducted?		▪ Conduct regular community meetings; ▪ Document concerns and feedback.
26	Have women been consulted separately?		▪ Arrange separate FGDs for women to ensure inclusive participation.
27	Is land donation voluntary and documented?		▪ Ensure voluntary consent; maintain written documentation and community verification.
28	Is a grievance mechanism functional?		▪ Establish a complaint registration system; ▪ Provide multiple channels for grievance submission and ensure timely resolution.
29	Is a desludging schedule in place?		▪ Develop and maintain desludging schedule; ▪ Assign responsibility and maintain records.

Annex 11 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 ☐ Lost Time Injury ☐ Displacement Without Due Process ☐ Child Labor ☐ Acts of Violence/Protest ☐ Disease Outbreaks ☐ Forced Labor ☐ Unexpected impacts on heritage resources ☐ Unexpected impacts on biodiversity resources ☐ Environmental pollution incident ☐ Dam failure ☐ Other ☐

See Annex for definitions

B3: Description/Narrative of Incident

Please replace text in italics with brief description, noting for example:

- I. What is the incident?*
- II. What were the conditions or circumstances under which the incident occurred (if known)?*
- III. Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?*
- IV. Is the incident still ongoing or is it contained?*
- V. Have any relevant authorities been informed?*

B4: Actions taken to contain the incident

Short Description of Action	Responsible Party	Expected Date	Status

For incidents involving a contractor:

Have the works been suspended (*for example, under Contract GCC7.6 or GCC8.9 of Works*)? Yes ☐; No ☐; **Please attach a copy of the instruction suspending the works.**

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**For incidents involving a contractor:**

Have the works been suspended in part or whole (for example, while corrective actions are put in place under Contract GCC7.6 or 8.9 of Works)? Yes ☐; No ☐;

Please attach a copy of the instruction suspending the works.

Annex 12: Resettlement Policy & Assessment Checklist

Resettlement Policy & Assessment Checklists Sindh Flood Emergency Housing Reconstruction Project (SFEHRP)

The SFEHRP aims to support beneficiary-driven reconstruction of houses damaged because of 2022 floods. The project design is guided by the following set of principles based on the Bank's experience in post-disaster housing reconstruction programs, i.e. i) Beneficiary-driven rebuilding with financial assistance through cash grants as a housing subsidy for constructing a core unit, ii) Technical assistance and training for rebuilding to multi-hazard resilient standards, iii) Housing cash grants to replace/restore damaged houses, iv) Rebuild in situ, and v) Voluntarily Relocation, if required.

Based upon the aforementioned principles, any kind of involuntary resettlement along with forced land acquisition is neither part of the project nor envisioned to be practiced during the project life. However, the project may consider relocation of few beneficiaries purely based on voluntary resettlement to be assessed on case-to-case basis under information to the World Bank.

The voluntary relocation is as per the choice of beneficiaries who want to relocate to another place keeping in view the availability of residential land with title ownership and as per practice/SOPs. All such cases need to be approved by PIU post analysis of the same with reference to residential land availability, geographical proximity from the previous location and the reason(s) for relocation.

Reference to World Bank's Environmental and Social Standard (ESS-5), land acquisition and resettlement is only applicable in case of potential adverse impacts that could arise from Bank-financed projects. Therefore, while keeping in view the fact that there are no potential and adverse impacts through financing under SFEHRP based on the above defined principles and the procedures of the project both land acquisition and resettlement stands not applicable.

Further to the above, for any voluntary resettlement cases, the assessment checklists appended below will be filled. All cases involving any level of relocation will be sent to the PIU by the IP for approval prior to commencement of work. The PIU will provide approval only with the consent of the WB.

For the cases involving Voluntary Land Donations (where the affectee parties are located on private lands owned by people other than the affectees themselves), the assessment checklist # 2 appended below will be filled along with the assessment checklist # 1.

Though involuntary settlement is not envisaged under the project, nevertheless, and involuntary resettlement assessment checklist (assessment checklist # 3) has also been developed and appended in the last.

Assessment Checklist # 1

Resettlement / Voluntary Relocation Assessment Checklist

Name of District:

Name of Tehsil:

Name of Village:

Date of Assessment:

Assessment Questions	Yes	No	Remarks
A. Project Siting Is the relocation area adjacent to or within any of the following:			
Legally protected Area			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gurdwara</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject ⁴⁶			
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 m of the proposed sub project ⁴⁷			
Any graveyard of local community (Muslims / Hindus / Christians / others)			
Any demographic or socio-economic aspects that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ⁴⁸ of the society and women or children)?			
Already existing infrastructure ⁴⁹ (including public amenities) which may be required to dismantle or may be affected temporarily by any means?			
1. If land is required on Voluntary basis (If "Yes", please also fill Voluntary Land Donation Checklist) (Assessment Checklist # 2), indicate if Occupancy Agreement is an option			

⁴⁶ According to Environmental Assessment Guidelines adopted by Sindh EPA

⁴⁷ Ibid.

⁴⁸ due to caste, creed, religion or gender e.g. transgender

⁴⁹ Sewerage / Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

Assessment Questions	Yes	No	Remarks
2. Displacement or involuntary resettlement of people? (Physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Checklist) (Assessment Checklist # 3)			
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁵⁰ (mentioned above)?			
4. Temporary impediments in movements of people/transport and animals?			

Prepared By:

Name:

Signature:

Date:

Endorsed By:

Name:

Signature:

Date:

⁵⁰ Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

Assessment Checklist # 2

Format for Voluntary Donation of Land

(Voluntary Donation of Land on Rs. -----/- Stamp Paper)

1. This deed of voluntary donation is made and executed on day of between Mr.S/o W/ Mr. ----- AND the Government of Sindh through Sindh Flood Housing Reconstruction Company.
2. Whereas, the details of the Location of the land are given below:

Location Details Land Record No	Location /Village
Tehsil/UC	District
Title Holder/ Details	
Name and Father/ Husband's Name CNIC No,	Status: Title Holder
Age:	Gender:
occupation:	
Residence:	
Schedule –Land Details/structure	
Land in Question	
Area	Location
North Boundary	East Boundary
West Boundary	South Boundary

Note: Detailed Map to the scale is appended.

1. Whereas the Title Holder is presently using/ holds the transferable right of the above-mentioned piece of land in the village mentioned above. Whereas the current occupant does not hold any transferable rights of the above-mentioned piece of land in the village mentioned above but has been a long-standing occupant, dependent on its usufruct hereditarily.
2. Whereas the Title Holder testifies that the land is not subject to other claims/ claimants and does not obstruct access to other people's land or livelihoods.
3. Whereas the Title Holder hereby voluntarily surrenders the land/structure without any type of pressure, influence, coercion or payment whatsoever directly or indirectly and hereby surrender all his/her subsisting rights in the said land with free will and intention.
4. Whereas the Recipient shall construct and develop residential infrastructure facilities under the project and take all possible precautions to avoid damage to adjacent land/structure/other assets
5. The land donated does not constitute more than 10% of the entire landholding of the donor/donors.

Signatories

Title holder		Tehsildar	
Name		Name	
NIC No.		Official Seal	
Transfer registration No.			
Witnesses			
1. UC Nazim	Name	Signature	
CNIC			
2. Village Numberdar	Name	Signature	
CNIC			
3. IP Representative	Name	Signature	
4. SFEHRP Representative	Name	Signature	

Assessment Checklist # 3

Involuntary Resettlement Checklist

Name of City/MC/LG:

Date of Assessment:

Assessment Questions	Yes	No	Expected	Remarks
Has any AED been conducted at the proposed location by the government ⁵¹ ? Yes/No				
Describe the type of land being acquired from the categories below:				
Land (Quantify and describe types of land being acquired in "remarks column".				
Government and LG owned land free of occupation (agriculture or settlement)				
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)				
Private land				
Residential				
Commercial				
Agricultural				
Communal				
Others (specify in "remarks").				
Name of owner/owners and type of ownership document if available.				
If land is being acquired, describe any structures constructed on it				
Residential structures				
Commercial structures (specify in "remarks")				
Community structures (specify in "remarks")				
Agriculture structures (specify in "remarks")				
Public utilities (specify in "remarks")				
Others (specify in "remarks")				
If agricultural land is being acquired, specify the following:				
Crops and vegetables (specify types and cropping area in "remarks").				
Trees (specify number and types in "remarks").				
Others (specify in "remarks").				
Affected Persons (APs)				
Will any people be displaced from the land when acquired? Yes/No				
Number of APs				
Males				
Females				
Titled landowners				
Tenants and sharecroppers				
Leaseholders				

⁵¹ No relocation allowed to any sites where any government led AED has been conducted during last 03 years.

Agriculture wage laborers				
Informal Settlers (specify in remarks column)				
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in "remarks".				
Others (specify in "remarks")				

Prepared By:

Name:

Signature:

Date:

Endorsed By:

Name:

Signature:

Date:

Assessment Checklist # 4

Voluntary Land Donation (VLD) Process

Checklist of Voluntary Land Donation (VLD) Process			
Sr. No.	Description	Checklist Yes=Y; No=N	Remarks
A	Requirement for Voluntary Land Donation		
1.	Area of land to be donated		Land donation plan
2.	Terms of land donation		Land donation agreement***
3.	Parties intending to donate land		List of donor parties in the village
4.	Any details that are relevant to why donation may be appropriate		Record of reasons for land donation appropriateness
B	Determine the appropriateness of VLD		
5.	Has the viability of all other alternative locations/ sites been considered?		Must be Yes
6.	Verify land is free of settlers, encroachers, or other claims or encumbrances		Must be Yes
7.	Ensure the landowner is not vulnerable*		Must be Yes
8.	VLD must not negatively impact households below the provincial poverty line.		Must be negligible
9.	Is the land obtained through VLD owned by a woman who is the family's sole earner?		VLD is not to be taken from the women-headed family.
10.	Does the VLD involve impacts on minority/ handicapped persons?		Must be negligible.
11.	If yes, what are the impacts on livelihood due to VLD in terms of percentage?		The percentage of impact on the livelihood must not exceed 5%.
C	VLD Process Requirements		
12.	The Titleholder should be holding more than the minimum prescribed land;		Minimum 5 kanals.
13.	Verify voluntary donation is not more than 10% of the area of the titleholder's holding		Must be Yes

14.	Verify impacts are minor and not requiring physical relocation of the titleholder		Must be Yes
15.	Have the project authorities confirmed that the land is appropriate for sub-project purposes?		Must be Yes
16.	Ensure land is appropriate for sub-project purposes and will not invite adverse social, health, environment, or safety impacts**		Must be Yes
17.	Verification of the voluntary nature of land donations must be obtained from each of the persons donating land.		Must be Yes
D	Verify requirements of donation and formalization of donation in the village assembly		
18.	Verify donation is voluntary and obtain notarized, witness statements in a village assembly		Must be Yes
19.	Ensure titleholder understands they will surrender the land title of donated land and will not have unauthorized access to the houses built on donated land and cannot claim priority treatment		Must be Yes
E	Due diligence on land ownership and use		
20.	Type of land rights in the project area		Land rights assessment
21.	Users of land or any occupying parties (Tenants or leaseholders etc.)		Users identification
22.	Competing claims of ownership or use		Claims identification
23.	Structures and assets on the land		Assets on the proposed land (loss of agriculture, livelihood, assets, loss of economic trees etc.)
24.	Encumbrances on the land		Encumbrances assessment (Legal/ financial, Loans etc.)
F	Consultation and Disclosure in a Village Assembly		
25.	Consult with land donors and ensure they understand the terms and conditions of the donation		Must be Yes
26.	Disclose information about the donation process		Must be Yes
27.	Disclose any potential negative impacts on the owner		Must be Yes
28.	Informed consent of person donating land		Consent Agreement
29.	Indicate the concerns raised, if any.		Document the concerns
G	Monitoring and documentation		
30.	Verify any land conflicts or conflicting land titling		Must be mentioned and avoided

31.	Establish informed consent of person donating land		Must be Yes and Documented
32.	Inform them they will be deprived of the title as well as any other right to use the land		Must be Yes and Documented
33.	They have the right to refuse to donate the land		Must be Yes and Documented
34.	Information about any other costs involved in the process which the owner has to pay.		Must be Yes and Documented
35.	They will be informed that neither they nor their family members will be able to get the land back after the mutation.		Must be Yes and Documented
36.	The intergenerational effect of the donation on their family, what they can do if they (or their family or heirs) want the land back.		Must be Yes and Documented
37.	The terms and conditions of the land donation must be mutually agreed upon and detailed in a written agreement.		Must be Yes and Documented
38.	Verify donors provide their informed consent		Must be Yes and Documented
39.	Monitor and document the donation process in monitoring reports		Must be Yes and Documented

Footnote:

* Vulnerable persons:

Households (with valid proof), as per provincial poverty line for rural areas;

Households without proof of the same and belonging to the following social categories:

Women headed households with women as sole earners;

Minority/ handicapped persons.

** adverse social, health, environmental, and safety impacts including but not limited to the potential social conflicts, community health, dust or air quality, occupational and community health, and safety respectively.

*** Land donation agreement will be signed between the donor and the beneficiary. President of the VRC and authorized representatives of the IP and SPHF will sign as witnesses.

Prepared By:

Name:

Signature:

Date:

Endorsed By:

Name:

Signature:

Date:

Annex 13: Occupancy Agreement

OCCUPANCY AGREEMENT

THIS OCCUPANCY AGREEMENT (“Agreement”) is made at _____ on this _____ day of _____, 2025.

BETWEEN

[Name] _____ son/daughter of _____ [Name] _____, adult, resident of District _____ [Name], Taluka _____ [Name], Union Council _____ [Name] _____ Address: [Complete Address as per CNIC], holding CNIC No. _____, (hereinafter referred to as the “LANDOWNER”) which mean and include their heirs, successors, administrators, legal representatives and/or assigns of the FIRST PART.

AND

[Name] _____ son/daughter of _____ [Name] _____, adult, resident of District _____ [Name], Taluka _____ [Name], Union Council _____ [Name] _____ Address: [Complete Address as per CNIC], holding CNIC No. _____, (hereinafter referred to as the “Occupant /SPHF beneficiary”) which mean and include their heirs, successors, administrators, legal representatives and/or assigns of the SECOND PART.

(The First Party and the Second Party individually referred to as “Party” and together as “Parties”).

RECITALS:

1. WHEREAS the LANDOWNER named above, as of the date of these presents, has sole ownership, and is otherwise fully entitled to, all rights related to the land located at _____, (hereinafter referred to as the “said LAND”).
2. AND WHEREAS the Landowner intends to grant the Occupant a ten-year occupancy right for the above said land of area measuring _____ square feet. (The 10 years period may further be extended if agreed by the parties after the expiry of this term) AND the Occupant is willing to accept this right, subject to the terms and conditions outlined below.
3. AND WHEREAS, the Occupant is permitted to use the land solely for the reconstruction of a residential house supported by Sindh Peoples Housing for Flood Affectees (SPHF) for their personal occupancy and that of their family and/or for facilities (Handpump, Wash room etc.) for their personal and/or common use, for the subject period.

NOW THIS AGREEMENT WITNESSETH AS UNDER: -

1. The Occupant/SPHF beneficiary does not possess any legal ownership or transferable rights to the aforementioned land in the specified village, however, has been a long-standing occupant, with hereditary entitlements to use the land and its resources.
2. The Occupant/SPHF beneficiary will rebuild a house and/or facilities (Handpump, Washroom etc.) on the said land, using the support for housing reconstruction extended by Govt. of Sindh through SPHF.
3. The Landowner assures that the land is unencumbered and free from any claims or interests and warrants that its use will not restrict access to adjacent lands or negatively impact the livelihoods of neighboring individuals or communities.
4. The Landowner freely and voluntarily gives the land, without any pressure, coercion, or financial gain, and in good faith for a period as mentioned in this agreement. The Landowner assures that they will not dislodge or vacate the Occupant for the currency of this agreement, guaranteeing uninterrupted and peaceful use of the land for residential purpose.
5. The Occupant shall not assign and/or transfer the house being constructed through the support of Govt. of Sindh, or any portion thereof, to any other individual or entity.
6. The Landowner and Occupant agree to comply with all terms of this agreement. In the event of a breach, the Government of Sindh may take legal action against the defaulting party. By signing below, both parties acknowledge their agreement to these terms.
7. Both the Parties hereby agree, promise and undertake to indemnify and keep each other as well as the Land, clear and harmless from and against all sorts of claims, demands, expenses, costs, taxes, litigation and legal proceedings, which may arise out of any act, omission, negligence due to default of his obligations, and to keep the Land free from all such legal and distress proceedings of whatsoever nature.
8. This Agreement is the only agreement between the Parties regarding the Land. Both the Parties have read and understood the contents of this Agreement and hereby agree to abide by the same and prevent the other Party from and against non-compliance.
9. This Agreement between the Parties pertaining, to the Land hereby cancels and supersedes all prior, contemporaneous, oral or written agreement or understanding between the Parties.

IN WITNESS WHEREOF the parties have set and subscribed their respective hands unto this Agreement in presence of witnesses on the day, month and the year first above mentioned.

LANDOWNER/LANDOWNERS	
Full Name	
CNIC	
Signature	

OCCUPANT	
Full Name	
CNIC	
Signature	

WITNESS – ONE	
Full Name	
CNIC	
Signature	

WITNESS – TWO	
Full Name	
CNIC	
Signature	

We verify the details furnished in the Occupancy agreement and the details/information given are correct and best to our knowledge.

Designated officer of {Implementing Partner}

Signature & Stamp

Annex 14: JSA – HIRA – Construction of a toilet

Job Safety Analysis, Hazard Identification, and Risk Assessment Form – Construction of a Toilet										
Site/Village Name:						No. of Labor Involved:				
What is to be done?	Construction of a toilet									
Why is to be done?	-									
Where is to be done?	Within the settlement (Pictures attached)									
Pictures	Picture 1		Picture 2		Picture 3			Picture 4		
How it will be done? (Write steps)	Step 1	Mobilize team and tools: Workers, tools, and PPE brought to site and checked.								
	Step 2	Site clearance: Remove vegetation, debris, and obstructions to prepare a clean work area.								
	Step 3	Excavation (foundation & pit): Excavate foundation and pit to required depth and dimensions.								
	Step 4	PCC (lean concrete): Lay lean concrete to provide a firm and level base for construction.								
	Step 5	RCC works (if applicable): Construct RCC elements as per design with proper mixing, placing, and curing.								
	Step 6	Formwork installation: Install formwork to required shape, alignment, and support for concrete works.								
	Step 7	Brick masonry: Lay bricks in proper bonding with mortar to achieve required wall structure.								
	Step 8	Plastering works: Apply plaster to walls for smooth finish and surface protection.								
	Step 9	Flooring (PCC/RCC): Lay and finish floor concrete with proper level and slope.								
	Step 10	DPC installation: Provide damp proof course to prevent moisture ingress into walls.								
	Step 11	WC installation & pipe connection: Install WC pan and connect pipes with proper alignment and slope.								
	Step 12	Backfilling: Refill excavated areas in layers and compact to ensure stability.								
	Step 13	Door installation: Fix door frame and shutter with proper alignment and secure fittings.								
	Step 14	Finishing & quality control: Check all works for quality, alignment, and compliance with specifications.								
	Step 15	Site cleaning & handover: Remove debris and ensure site is clean and ready for use.								
Steps	Steps		Hazards		Risk	Mitigation				
Step 1	Mobilization of team & tools		Injuries during handling, lack of PPE		Medium	Ensure PPE (helmet, gloves, shoes); safe lifting; toolbox talk				
Step 2	Site clearance		Cuts, debris injury, insect/snake bites		Medium	Remove vegetation/debris; use PPE; maintain clean work area				
Step 3	Excavation (foundation & pit)		Collapse, falls into pit		Low	Excavate in controlled manner; provide stable sides; restrict access				
Step 4	PCC (lean concrete)		Skin contact with cement, improper base		Medium	Use gloves; ensure correct mix and leveling; avoid direct contact				
Step 5	RCC works (if applicable)		Injury during mixing/pouring, formwork failure		Medium	Ensure proper formwork; safe handling; use PPE; supervised concreting				
Step 6	Formwork installation		Collapse of formwork, falling materials		Medium	Proper bracing/support; check alignment; trained workers only				
Step 7	Brick masonry		Falling bricks, improper bonding		Medium	Use proper mortar mix; ensure stable stacking; use gloves				
Step 8	Plastering works		Dust inhalation, falls from height		Low	Use masks; stable platform; proper curing practices				
Step 9	Flooring (PCC/RCC)		Slips on wet surface, uneven finish		Low	Ensure proper leveling; restrict movement during setting				
Step 10	DPC installation		Improper sealing, moisture ingress		Low	Ensure continuous DPC layer; proper overlap and sealing				
Step 11	WC installation & pipe connection		Leakage, improper slope, exposure to waste		Medium	Maintain correct slope; secure joints; ensure hygiene and PPE				
Step 12	Backfilling		Settlement, damage to structure/pipes		Medium	Backfill in layers; compact gently; avoid damage to pipe				
Step 13	Door installation		Injury during fixing, improper alignment		Low	Use proper tools; ensure alignment and secure fixing				
Step 14	Finishing & quality control		Poor workmanship, residual hazards		Medium	Inspect all works; ensure proper curing, slope, and drainage				
Step 15	Site cleaning & handover		Debris causing injury		Low	Remove waste; clean site; ensure safe and usable condition				
Required tools	Shovel	Wheel Barrow	Grape hoe	Excavator	Tamper	Pickaxe				
Required PPEs	Helmet	Safety Shoe	Safety Gloves	High Vis Vest	Dust Mask					
Site Engineer	Day 1					Site Supervisor	Day 1			
	Day 2						Day 2			
	Day 3						Day 3			
	Day 4						Day 4			
	Day 5						Day 5			
	Day 6						Day 6			
	Signature		Date		Signature		Date			
Note: This JSA is to be made for the activity that will be done and signed by the site engineer and site supervisor on daily basis. For activity taking place in a near area within the settlement a new JSA is to be developed.										

Annex 15: JSA – HIRA – Excavation of an ABR

Job Safety Analysis, Hazard Identification, and Risk Assessment Form – Excavation for ABRs										
Site/Village Name:					No. of Labor Involved:					
What is to be done?	Excavation									
Why is to be done?	For the installation of ABRs									
Where is to be done?	Within the settlement (Pictures attached)									
Pictures	Picture 1		Picture 2		Picture 3		Picture 4			
How it will be done? (Write steps)	Step 1	Mobilize team and tools: Workers, tools, and PPE brought to site and checked.								
	Step 2	Marking of ABR footprint (10×8 ft): Mark excavation layout using lime/pegs as per approved dimensions and levels.								
	Step 3	Site clearance: Remove vegetation, debris, and obstructions to prepare a clean working area.								
	Step 4	Deep excavation (up to 10 ft): Excavate pit in layers to required depth while maintaining alignment and control.								
	Step 5	Excavated soil handling: Place excavated soil at safe distance (≥1 m) from pit edge to avoid collapse.								
	Step 6	Pit support/shoring: Provide shoring/benching or sloping to maintain stability of excavation sides.								
	Step 7	Access & egress in deep pit: Provide safe ladder or ramp for entry and exit of workers.								
	Step 8	Stability of excavation: Maintain safe slopes/shoring and inspect sides regularly to prevent collapse.								
	Step 9	Safe Spaces (Working Area & Access): Provide barricading, safe access (ladder), and clear working space around excavation.								
	Step 10	Bottom preparation (foundation level): Level and compact base; remove loose material to achieve firm foundation.								
	Step 11	Inspection before construction: Verify depth, dimensions, stability, and safety before starting next activity.								
Steps	Steps		Hazards		Risk	Mitigation				
Step 1	Marking of ABR footprint (10×8 ft)		Incorrect layout, trips/slips during marking		Low	Use proper lime/pegs; verify dimensions and levels with drawings before excavation				
Step 2	Barricading work area		Public entry, fall into pit, child accidents		High	Install strong barricades, warning signs, and restrict access; assign watchman if required				
Step 3	Checking for underground utilities		Damage to pipelines/cables, electric shock		High	Identify utilities through survey/community input; use manual digging near sensitive areas				
Step 4	Site clearance		Cuts, insect/snake bites, trips over debris		Medium	Clear vegetation/debris; use PPE; maintain clean and accessible work area				
Step 5	Deep excavation (up to 10 ft)		Pit collapse, worker fall, burial risk		High	Excavate in layers; avoid vertical cuts; ensure trained supervision and safe practices				
Step 6	Excavated soil handling		Soil falling back, edge instability		High	Place soil ≥1 m away from edge; avoid overloading sides; maintain access paths				
Step 7	Pit support/shoring		Collapse of excavation sides		High	Provide shoring/benching/sloping based on soil; inspect regularly; stop work if unstable				
Step 8	Access & egress in deep pit		Falls, difficulty in rescue		High	Provide ladder/ramp; ensure safe entry/exit; keep standby person at top				
Step 9	Groundwater/seepage control		Water accumulation, weakening of pit walls		High	Use pumps/sump pits; maintain dry base; ensure proper discharge away from excavation				
Step 10	Bottom preparation (foundation level)		Slips, uneven base, poor foundation		Medium	Level and compact base; remove loose material; ensure stable working surface				
Step 11	Inspection before construction		Undetected hazards, unsafe conditions		High	Supervisor/engineer to verify depth, dimensions, stability, and safety before next activity				
Required tools	Shovel	Wheel Barrow	Grape hoe	Excavator	Tamper	Pickaxe				
Required PPEs	Helmet	Safety Shoe	Safety Gloves	High Vis Vest	Dust Mask					
Site Engineer	Day 1				Site Supervisor	Day 1				
	Day 2					Day 2				
	Day 3					Day 3				
	Day 4					Day 4				
	Day 5					Day 5				
	Day 6					Day 6				
	Signature		Date		Signature		Date			
Note: This JSA is to be made for the activity that will be done and signed by the site engineer and site supervisor on daily basis. For activity taking place in a near area within the settlement a new JSA is to be developed.										

Annex 16: JSA – HIRA – Work at Height

Job Safety Analysis, Hazard Identification and Risk Assessment Form – Work at height									
Site/Village Name:						No. of Labor Involved:			
What is to be done?	Construction of an overhead water tank								
Why is to be done?	-								
Where is to be done?	Within the settlement (Pictures attached)								
Pictures	Picture 1		Picture 2		Picture 3		Picture 4		
How it will be done? (Write steps)	Step 1	Mobilization and site preparation: Workers, tools, and safety equipment mobilized; site cleared, leveled, and access routes established.							
	Step 2	Inspection of ladders/scaffolding: All ladders and scaffolding inspected for defects, stability, and proper certification before use.							
	Step 3	Erection of scaffolding: Scaffolding assembled by trained personnel with proper bracing, anchoring, and platform leveling.							
	Step 4	Installation of safety nets: Certified safety nets installed below work areas with proper anchorage and full coverage to arrest falls and prevent falling objects.							
	Step 5	Access to height (ladder/scaffold): Safe access ensured using secured ladders/scaffolds with proper angle, positioning, and footing.							
	Step 6	Working on elevated platforms: Work carried out on fully planked platforms with guardrails, toe boards, and stable footing.							
	Step 7	Handling materials at height: Materials and tool lifted, secured, and handled carefully to prevent falling or imbalance.							
	Step 8	Use of PPE: Workers equipped with full body harnesses, helmets, gloves, and non-slip footwear at all times.							
	Step 9	Weather conditions: Weather monitored continuously and work suspended during high winds, rain, or unsafe conditions.							
	Step 10	Supervision and monitoring: Site engineer/supervisor oversees activities, ensuring compliance with safety procedures and controls.							
	Step 11	Emergency preparedness: Emergency response plan in place with first aid, rescue equipment, and trained personnel available.							
	Step 12	Dismantling of scaffolding: Scaffolding dismantled systematically by trained workers while restricting access to the area below.							
Steps	Steps		Hazards		Risk	Mitigation			
Step 1	Mobilization and site preparation		Unstable ground, improper access setup		Low	Ensure stable ground, clear access routes, and install barricades and signage			
Step 2	Inspection of ladders/scaffolding		Defective or damaged equipment		High	Inspect before use, tag, and remove defective equipment			
Step 3	Erection of scaffolding		Improper assembly, lack of bracing		High	Use trained personnel, ensure proper anchoring, bracing, and leveling			
	Installation of safety nets		Improper installation, weak anchoring		High	Install certified safety nets with proper anchorage, inspect before use, ensure adequate coverage below work area			
Step 4	Access to height (ladder/scaffold)		Improper climbing, overreaching		High	Maintain three-point contact, secure ladders, and ensure proper angle			
Step 5	Working on elevated platforms		Lack of guardrails, unstable working surface		High	Install guardrails, toe boards, and ensure full planking			
Step 6	Handling materials at height		Dropping tools or materials		Medium	Use tool lanyards, secure materials, and restrict access below			
Step 7	Use of PPE		Non-use or improper use of PPE		High	Isolate power, maintain clearance, use insulated tools			
Step 8	Weather conditions		Strong winds, rain, extreme heat		High	Ensure use of harness, helmet, non-slip shoes			
Step 9	Supervision and monitoring		Lack of oversight		Medium	Stop work in adverse weather, monitor conditions			
Step 10	Emergency preparedness		No rescue plan		Medium	Assign competent supervisor, conduct toolbox talks			
Step 11	Dismantling of scaffolding		Improper removal sequence		High	Develop rescue plan, ensure trained staff and first aid			
Required tools						High	Follow proper sequence, restrict area below		
Required PPEs	Helmet	Safety Shoe	Safety Gloves	High Vis Vest	Dust Mask	Harness			
Site Engineer	Day 1				Site Supervisor	Day 1			
	Day 2					Day 2			
	Day 3					Day 3			
	Day 4					Day 4			
	Day 5					Day 5			
	Day 6					Day 6			
	Signature		Date			Signature		Date	
Note: This JSA is to be made for the activity that will be done and signed by the site engineer and site supervisor on daily basis. For activity taking place in a near area within the settlement a new JSA is to be developed.									

Annex 17: JSA – HIRA – Excavation and Piping

Job Safety Analysis, Hazard Identification, and Risk Assessment Form										
Site/Village Name:					No. of Labor Involved:		Date:			
What is to be done?	Excavation and piping									
Why is to be done?	For laying piping network									
Where is to be done?	Within the settlement (Pictures attached)									
How it will be done? (Write steps)	Step 1	Mobilize team and tools: Workers, tools, and PPE brought to site and checked.								
	Step 2	Mark the excavation area: Pipeline route marked using lime/rope as per drawings.								
	Step 3	Barricade work zone: Area secured with tape/barriers and warning signs installed.								
	Step 4	Check for underground/nearby utilities: Ensure no damage to hand pumps, sewer lines, or cables.								
	Step 5	Clear surface area: Remove vegetation, debris, and obstacles from trench line.								
	Step 6	Start trench excavation: Dig trench manually or mechanically to required depth and width.								
	Step 7	Dewatering: Remove groundwater/seepage using pumps to keep excavation dry and stable.								
	Step 8	Stability of excavation: Maintain safe slopes/shoring and inspect sides regularly to prevent collapse.								
	Step 9	Safe Spaces (Working Area & Access): Provide barricading, safe access (ladder), and clear working space around excavation.								
	Step 10	Place excavated soil safely: Soil stacked at safe distance (0.5–1 m) from trench edge.								
	Step 11	Provide trench safety measures: Ensure stable sides; provide shoring/support if soil is loose.								
	Step 12	Prepare trench base: Level bottom, remove stones, and add sand bedding if required.								
	Step 13	Inspect before pipe laying: Supervisor checks depth, alignment, and safety before proceeding.								
Steps	Activity	Hazards			Risk	Mitigation/Control Measure				
Step 1	Mobilization of team & tools	Injuries during handling, lack of PPE			Medium	Ensure PPE (helmet, gloves, shoes); safe lifting; toolbox talk				
Step 2	Marking of trench alignment	Trips/slips, wrong marking			Low	Use clear lime/rope marking; keep area clean; verify alignment				
Step 3	Barricading work area	Public entry, child accidents			High	Install barricades/tape; warning signs; assign watchman				
Step 4	Checking for utilities	Damage to hand pumps/sewer, electric shock			High	Identify utilities; consult community; manual digging near sensitive areas				
Step 5	Site clearance	Cuts, insect/snake bites			Medium	Use gloves; careful clearing; first aid available				
Step 6	Excavation of trench	Collapse, falls, tool injuries			High	Maintain slope; avoid vertical cuts; trained workers only				
Step 7	Soil placement	Soil falling back, blocked access			Medium	Keep soil 0.5–1 m away; maintain pathways				
Step 8	Trench support/shoring	Wall collapse, burial risk			High	Provide shoring; avoid excavation during rain; daily inspection				
Step 9	Trench bottom preparation	Slips, uneven base			Low	Level/compact base; remove stones				
Step 10	Dewatering	Water accumulation leading to pit wall collapse, worker slipping, drowning risk, weakening of foundation base			High	- Provide continuous dewatering using pumps/sump pits; - Maintain dry working base; discharge water away from excavation; - monitor groundwater/seepage continuously				
Step 11	Stability of Excavation	Side wall collapse, soil sliding, burial of workers, edge failure due to surcharge load			High	Provide shoring/benching/sloping as per soil condition; avoid vertical cuts (especially for 10 ft depth); keep spoil ≥1 m away; daily inspection of trench/pit stability				
Step 12	Safe Spaces (Working Area & Access)	Falls into excavation, restricted movement, unsafe entry/exit, poor ventilation in deep pits			High	Provide safe access (ladders); maintain clear working space; restrict unauthorized entry; ensure barricading and signage; assign standby person; ensure adequate ventilation and lighting if required				
Step 13	Inspection before pipe laying	Missed hazards, unsafe conditions			Medium	Supervisor check for depth, alignment, safety				
Required tools	Shovel	Wheel Barrow	Grape hoe	Excavator	Tamper	Pickaxe				
Required PPEs	Helmet	Safety Shoe	Safety Gloves	High Vis Vest	Dust Mask					
Site Engineer	Day 1				Site Supervisor	Day 1				
	Day 2					Day 2				
	Day 3					Day 3				
	Day 4					Day 4				
	Day 5					Day 5				
	Day 6					Day 6				
	Signature				Signature					
<i>Note: This JSA is to be made for the activity that will be done and signed by the site engineer and site supervisor on daily basis. For activity taking place in a near area within the settlement a new JSA is to be developed.</i>										

Annex 18: Photo Log

Photo log

Implementing Partner's Training Session on E&S Checklist



Gender Sensitization Sessions with Communities



Discussion of WB Team with Communities



Stakeholder Consultations by the Project



Training on GRM and Gender Based Violence



Tree Plantation in Project Area



Annex 19: Minutes of Meeting – Stakeholders Consultation Meeting on ESMF

The stakeholder consultation on 28th Aug 2025 under the Sindh Flood Emergency Housing Reconstruction Project (SFEHRP) was convened with the participation of representatives from SPHF, SHRRP, UNOPS, UNICEF, IOM, CRS, SRSO, HANDS, SAFCO, and NRSP. The meeting brought together technical advisors, engineers, project managers, environmental and social specialists, and gender experts, ensuring a multi-disciplinary exchange of perspectives across all dimensions of the project.

During the discussion on water supply systems, stakeholders emphasized the need for long-term viability of proposed solutions and the sustainability of safely managed water. The WASH Specialist explained and added that fifty prototype settlements will be subjected to detailed hydrogeological assessments, including pump tests, to confirm that water sources can sustain at least 1.2 times the projected demand. In addition, a 30-meter protective buffer zone will be established around water sources to safeguard against contamination. In addition, water quality testing will include key parameters such as E. coli, arsenic, fluoride, nitrates, and turbidity, and in cases where standards are not met, treatment facilities will be installed to ensure compliance with both national and international safety guidelines.

On the matter of sanitation and environmental requirements, participants highlighted the importance of climate-resilient systems that minimize environmental risks, particularly the contamination of groundwater. The Environmental Specialist responded that a mix of solutions, including but not limited to reinforced concrete anaerobic baffled reactors (ABRs) are proposed to be deployed. All systems will be fully lined up to prevent leakage and connected to fecal sludge treatment routes where available. To reinforce sustainability, extensive Information, Education, and Communication (IEC) campaigns will be conducted at the community level to encourage hygiene practices and discourage open defecation.

Gender and social inclusion were also key points of discussion. Gender focal persons from implementing partners stressed the need for culturally sensitive and inclusive facilities, particularly for women and girls. In response, the SPHF Gender Specialist confirmed that women's toilets will be designed with Menstrual Hygiene Management (MHM) provisions, including safe disposal facilities and water access. The design will further incorporate lockable doors to ensure privacy, while separate awareness sessions will be organized for women to maintain cultural appropriateness and inclusiveness.

When addressing land use and resettlement matters and local regulations, participants sought clarity on requirements against displacement. The Social Development Specialist (SDS) assured stakeholders that no involuntary resettlement will take place. Land will either be allocated through government channels or secured through voluntary land donations (VLDs), which will be verified through signed donation forms and occupancy agreements. The project explicitly prohibits both physical and economic displacement.

The consultation also focused on inclusivity and equitable access, particularly for vulnerable groups. SDS clarified that women's participation will be ensured in all consultations, while Focus Group Discussions (FGDs) will be conducted specifically with vulnerable populations to ensure their needs are addressed. Furthermore, infrastructure will be designed to meet universal accessibility standards, incorporating wheelchair ramps and gender-sensitive layouts.

Sustainability and community ownership were raised by implementing partners as critical factors for long-term functionality. The technical specialists explained that Village Organizations (VOs) and dedicated Operation and Maintenance (O&M) Committees will be established to manage upkeep. To formalize responsibilities, Terms of Partnership (ToP) will be signed between the VOs, Implementing Partners, and SPHF, clearly defining roles, tariff structures, and cost-sharing mechanisms to secure continuity of service delivery.

Finally, the Environmental and Social Mitigation Plan (ESMP), covering pre-construction, construction, and operational phases, was presented in detail. No objections were raised by

stakeholders. Implementing Partners requested additional clarification on the modalities of Environmental and Social Screening, which was provided by the Environmental Specialist and the Social Development Specialist.

The consultation concluded with consensus on the proposed technical, environmental, and social measures, and participants expressed alignment with the outlined safeguards and sustainability strategies.

Participants List

S. No.	Name of Participant	Designation	Name of Organization
1	Khalid Mehmood Sheikh	Chief Executive Officer	SPHF
2	Malik Najaf Khan	Chief Operating Officer	SPHF
3	Muhammad Naveed	Project engineer	SPHF
4	Shama Shaikh	Gender Specialist	SPHF
5	Jhaman Lalchandani	Social Development Specialist	SPHF
6	Versha Qazi	Gender Specialist	SPHF
7	Minar Thapa	National Coordinator	SHRRP
8	Adeel Javaid	Technical Advisor	SHRRP
9	Deeba Parvez	Project Coordinator	SHRRP
10	Noorul Amin	Project Coordinator	SHRRP/UNOPS
11	Mirza Aamir Rafique	Project Manager	UNOPS
12	Anis Habib	National Officer-WASH	IOM
13	Ihsan Ullah Khan	WASH and BCC Officer	UNICEF
14	Waseem Khan	Program Manager	CRS
15	Sikander Ali Sanam	Team Leader	SRSO
16	Suhail Shaikh	Senior Engineer	SRSO
17	Mohammad Usman	Team Leader	HANDS
18	Ghulam Akbar Khoso	Senior Engineer	SAFCO
19	Zulfiqar Ali Muttaqui	E&S Specialist	SAFCO
20	Abdul Samad	District Manager	SAFCO
21	Rameez Memon	Team Leader	SAFCO
22	Ghulam Mustafa Jamro	Team Leader	NRSP
23	Nazeer Ahmed Laghari	E&S Specialist	NRSP
24	Muhammad Usman	Team Lead	HANDS
25	Azra Bano	E&S Specialist	HANDS