



FOR OFFICIAL USE ONLY

Report No: PAD5196

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 389.7 MILLION
(US\$500 MILLION EQUIVALENT)

TO THE

ISLAMIC REPUBLIC OF PAKISTAN

FOR A

SINDH FLOOD EMERGENCY REHABILITATION PROJECT

December 5, 2022

Urban, Resilience And Land Global Practice
South Asia Region

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

CURRENCY EQUIVALENTS

(Exchange Rate Effective Oct 31, 2022)

Currency Unit = Pakistan Rupee (PKR)

PKR 220.7500 = US\$1

US\$1 = SDR 0.77924709

FISCAL YEAR

July 1 – June 30

Regional Vice President: Martin Raiser

Country Director: Najy Benhassine

Regional Director: John A. Roome

Practice Manager: Abhas Kumar Jha

Task Team Leader(s): Ahsan Tehsin, Elif Ayhan, Babar Naseem Khan

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AED	Anti-encroachment Drive
AM	Accountability Mechanism
BISP	Benazir Income Support Programme
CCDR	Country Climate and Development Report
CE	Citizen Engagement
CERC	Contingent Emergency Response Component
CfW	Cash for Work
CHS	Community Health and Safety
CPS	Country Partnership Strategy
DA	Designated Account
DRM	Disaster Risk Management
E&S	Environmental and Social
ESCP	Environment and Social Commitment Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
FAO	Food and Agriculture Organization
FM	Financial Management
FMS	Financial Management Specialist
FY	Fiscal Year
GBV	Gender-based Violence
GDP	Gross Domestic Product
GoP	Government of Pakistan
GoS	Government of Sindh
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IPF	Investment Project Financing
ISP	Implementation Support Plan
IUFR	Interim Unaudited Financial Report
LGD	Local Government Department
MIS	Management Information System
NAM	New Accounting Model
NDMA	National Disaster Management Authority
NSER	National Socio-Economic Registry
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OHS	Occupational Health and Safety
P&DD	Planning and Development Department
PDMA	Provincial Disaster Management Authority
PDNA	Post-Disaster Needs Assessment
PDO	Project Development Objective
PHED	Public Health Engineering Department

PIU	Project Implementation Unit
POM	Project Operations Manual
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
RAMS	Road Asset Management System
RPF	Resettlement Policy Framework
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SFERP	Sindh Flood Emergency Rehabilitation Project
SFEHRP	Sindh Flood Emergency Housing Reconstruction Project
SEP	Stakeholder Engagement Plan
SIA	Social Impact Assessment
SID	Sindh Irrigation Department
SMP	Social Mobilization Partner
SRP	Sindh Resilience Project
SWAT	Sindh Water and Agriculture Transformation Project
UC	Union Council
UN	United Nations
USAID	United States Agency for International Development
VSI	Value of Statistical Injury
VSL	Value of Statistical Life
WB	World Bank
WBG	World Bank Group
W&SD	Works and Services Department



TABLE OF CONTENTS

DATASHEET	i
I. STRATEGIC CONTEXT	1
A. Country Context.....	1
B. Situation of Urgent Need of Assistance or Capacity Constraints	3
C. Sectoral and Institutional Context	5
D. Relevance to Higher Level Objectives	8
II. PROJECT DESCRIPTION.....	9
A. Project Development Objective	9
B. Project Components	10
C. Project Beneficiaries	16
D. Results Chain	17
E. Rationale for Bank Involvement and Role of Partners	17
F. Lessons Learned and Reflected in the Project Design	19
III. IMPLEMENTATION ARRANGEMENTS	21
A. Institutional and Implementation Arrangements	21
B. Results Monitoring and Evaluation Arrangements.....	22
C. Sustainability.....	23
IV. PROJECT APPRAISAL SUMMARY	24
A. Technical, Economic, and Financial Analysis	24
B. Fiduciary.....	27
C. Legal Operational Policies.....	30
D. Environmental and Social.....	30
V. GRIEVANCE REDRESS SERVICES	33
VI. KEY RISKS	34
VII. RESULTS FRAMEWORK AND MONITORING	37
ANNEX 1: Implementation Arrangements and Support Plan	47



DATASHEET

BASIC INFORMATION

Country(ies)	Project Name		
Pakistan	Sindh Flood Emergency Rehabilitation Project		
Project ID	Financing Instrument	Environmental and Social Risk Classification	Process
P179981	Investment Project Financing	Substantial	Urgent Need or Capacity Constraints (FCC)

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input checked="" type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input checked="" type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
19-Dec-2022	31-Dec-2027

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The project development objectives are to: (a) rehabilitate damaged infrastructure and provide short-term livelihood opportunities in selected areas of Sindh province affected by the 2022 floods; and (b) strengthen the Government of Sindh's capacity to respond to the impacts of climate change and natural hazards.



Components

Component Name	Cost (US\$, millions)
Infrastructure Rehabilitation	350.00
Livelihoods Support	75.00
Institutional Strengthening for Resilience and Technical Assistance	65.00
Project Management and Operational Costs	10.00
Contingent Emergency Response	0.00

Organizations

Borrower:	Islamic Republic of Pakistan
Implementing Agency:	Province of Sindh, Irrigation Department Province of Sindh, Planning and Development Department

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	510.00
Total Financing	510.00
of which IBRD/IDA	500.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	500.00
IDA Credit	500.00

Non-World Bank Group Financing

Counterpart Funding	10.00
Borrower/Recipient	10.00



IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Pakistan	500.00	0.00	0.00	0.00	500.00
National Performance-Based Allocations (PBA)	500.00	0.00	0.00	0.00	500.00
Total	500.00	0.00	0.00	0.00	500.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028
Annual	75.00	100.00	125.00	120.00	60.84	19.16
Cumulative	75.00	175.00	300.00	420.00	480.84	500.00

INSTITUTIONAL DATA

Practice Area (Lead)

Urban, Resilience and Land

Contributing Practice Areas

Environment, Natural Resources & the Blue Economy, Social Sustainability and Inclusion, Transport, Water

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● High
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial



7. Environment and Social	● Substantial
8. Stakeholders	● Substantial
9. Other	● Substantial
10. Overall	● Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No



Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Section I.B of the Schedule to the PA: The Project Implementing Entity shall prepare and adopt, by one (1) month after Effective Date, and thereafter implement the Project in accordance with, a Project Operations Manual, in form and substance satisfactory to the Association.

Sections and Description

Section I.A.5 of the Schedule to the PA: The Project Implementing Entity shall establish, by not later than three (3) months after the Effective Date, and thereafter maintain at all times during the implementation of the Project: (a) a system for the handling of procurement complaints, acceptable to the Association; and (b) a procurement documentation and record keeping system, acceptable to the Association.

Sections and Description

Section I.A.6 of the Schedule to the PA: The Project Implementing Entity shall establish, by not later than three (3)



months after the Effective Date, and thereafter maintain at all times during the implementation of the Project, a grievance redress system, acceptable to the Association.

Conditions

Type	Financing source	Description
Disbursement	IBRD/IDA	The Recipient has determined that an Eligible Crisis or Emergency has occurred, and has furnished to the Association a request to withdraw Financing amounts under Category (3); and the Association has agreed with such determination, accepted said request and notified the Recipient thereof. The Recipient has adopted the CERC Manual and Emergency Action Plan, in form and substance acceptable to the Association.
Disbursement	IBRD/IDA	The Recipient has conducted an environmental and social audit and implemented any necessary corrective actions, in form and substance satisfactory to the Association, for any activities subject to such payments.



I. STRATEGIC CONTEXT

A. Country Context

1. **Over the past two decades, Pakistan has achieved significant poverty reduction, but human development outcomes have lagged, and economic growth has remained volatile and slow.** Expansion of off-farm economic opportunities and the increase in migration and associated remittances allowed over 47 million Pakistanis to escape poverty between 2001 and 2018. Despite rapid poverty reduction, human capital outcomes have remained poor and stagnant, with high levels of stunting at 38 percent and learning poverty at 75 percent.¹ Pakistan has also experienced frequent macroeconomic crises due to a growth model based on private and government consumption, with productivity-enhancing investment and exports contributing relatively little to growth. Growth of per capita gross domestic product (GDP) has been low and volatile, averaging under 2 percent in the last two decades.² Recent unprecedented floods are likely to have serious impacts on poverty, human development outcomes, and economic growth.

2. **In early fiscal year (FY) 2023, Pakistan's economy was undergoing an overdue adjustment as it recovered from the impacts of COVID-19.** Supported by accommodative macroeconomic policies, the economy expanded by 6.0 percent in FY22. Strong domestic demand, low productivity growth, high world commodity prices, and the global economic slowdown contributed to severe external imbalances. Since Spring 2022, the Government of Pakistan (GoP) took measures to constrain aggregate demand, including implementation of a contractionary budget and increases in administered energy prices.

3. **The recent floods have had enormous human and economic impacts.** Pakistan experienced heavy monsoon rains between June and September 2022, which has severely affected millions of households, mainly in Sindh and Balochistan. 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. Limited access to input and output markets and temporary disruptions to supply chains have driven up food prices and added to existing price pressures resulting from reduced agricultural yields and the global rise of food prices. Food shortages are expected to intensify in the fall and winter due to significant crop and livestock losses. 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. Around 70 percent of the total damages and losses happened in the Sindh province. 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.³

¹ World Bank (2019): EduAnalytics – Pakistan: Leaning Poverty Brief.

<https://thedocs.worldbank.org/en/doc/214101571223451727-0090022019/original/SASSACPKPAKLPBRIEF.pdf>

² World Bank Group. 2022. "From Swimming in Sand to High and Sustainable Growth: A Roadmap to Reduce Distortions in the Allocation of Resources and Talent in the Pakistani Economy." Pakistan Economic Memorandum, World Bank, Washington, DC, p. 1. <https://openknowledge.worldbank.org/handle/10986/38133>.

³ Government of Pakistan. 2022. "Pakistan Floods 2022: Post-Disaster Needs Assessment. Main Report." Ministry of Planning



4. **The economic impacts of flooding and associated reconstruction needs will make it much harder for the government to implement much-needed economic adjustment required to address structural imbalances.** Growth is expected to reach only around 2 percent in FY23. Due to higher energy prices, a weaker Rupee, and flood-related disruptions to agricultural production, inflation is projected to rise to around 23 percent in FY23.⁴ With disruptions to exports and higher import needs, the current account deficit is expected to narrow only slightly to around 4.3 percent of GDP in FY23 (from 4.6 percent in FY22). The fiscal deficit is projected to narrow only modestly from FY22 levels to around 6.9 percent of GDP in FY23 (against a budgeted deficit of 4.7 percent), reflecting both negative revenue impacts from flooding and increased expenditure needs.

5. **The GoP thus faces a difficult policy challenge in supporting relief and recovery while maintaining progress towards macroeconomic stabilization.** Significant downside risks include: (i) additional natural disasters that could further harm output and worsen fiscal and external imbalances; (ii) a slowdown in policy response in the months prior to elections; (iii) worsening external conditions; and (iv) risks associated with large domestic and external financing needs. To manage these risks, it will be critical to adhere to sound overall economic management and buttress market sentiment, including through: (a) articulating and effectively implementing a clear strategy for economic recovery; (b) maintaining overall fiscal constraint, sustaining the roll-back of energy subsidies, and targeting fiscal expenditures towards the most vulnerable, including through enhanced social protection measures; (c) maintaining a tight monetary stance and flexible exchange rate; and (d) progressing critical structural reforms, including reducing collection losses in the energy sector, improving the efficiency of revenue mobilization, and closing tax exemptions. Even with such efforts, post-flood reconstruction needs exceed available fiscal space. Significant private investment will be required, including through efforts to improve the business environment and access to finance, alongside additional international assistance.

6. **As the recently published Climate Change Development Report (CCDR) shows, Pakistan’s high vulnerability to climate change is a risk multiplier, compounding its human and economic development challenges.** Pakistan consistently ranks among the top 10 countries worldwide most affected by climate change⁵ despite being a relatively minor contributor to climate change at under 1 percent of global greenhouse gas emissions in 2018.⁶ More frequent and extreme weather events are adversely impacting ecosystems, people, and their settlements and infrastructure. Heatwaves, heavy precipitation events, droughts, and cyclones are prevalent risks. The country experiences some of the highest temperatures in the world, with several areas recording temperatures of over 38 degrees Celsius annually. In 2015, a heatwave resulted in over 65,000 people hospitalized and 1,200 deaths, mostly in the Sindh province. Projected temperature increases in Pakistan are higher than the global average—as high as 5.3 degrees Celsius by 2081–2100 under the highest emissions Representative Concentration Pathway (RCP8.5),

Development & Special Initiatives.

⁴ World Bank. 2022. “Pakistan Development Update October 2022: Inflation and the Poor.”

<https://thedocs.worldbank.org/en/doc/51427702c05371f59848a74a2d66ba87-0310062022/pakistan-development-update-october-2022-inflation-and-the-poor>.

⁵ Eckstein, David, Vera Künzel, and Laura Schäfer. 2021. “Global Climate Risk Index 2021.” Germanwatch Briefing Paper.

<https://www.germanwatch.org/en/19777>.

⁶ World Bank Group. 2022. “Pakistan Country Climate and Development Report.” CCDR Series. World Bank, Washington, DC. p.

6. <https://openknowledge.worldbank.org/handle/10986/38277>.



compared to a global average increase of 3.7 degrees Celsius in the same scenario.⁷ There is also significant uncertainty surrounding future precipitation rates in Pakistan, underscoring the need for better preparedness for unforeseen extreme precipitation events. Research highlights the risk of increased frequency and intensity of flood and drought events, brought on by changes in the seasonality, regularity, and extremes of precipitation.⁸ The probability of meteorological drought, usually brought on by below-normal precipitation, is set to sharply increase under all emission pathways—from the current probability of 3 percent to a 25–65 percent probability, which can cause significant damage to crops and livelihoods. Climate change and extreme events disproportionately affect the most disadvantaged groups, including low-income businesses, those engaged in manual labor jobs, poorer farmers, women, and children.

7. **Pakistan is especially vulnerable to flooding—including riverine, flash, glacial lake outbursts, and coastal flooding—and the country regularly experiences large-scale flooding, most notably in 2010 and more recently in June 2022.** Pakistan faces some of the highest disaster risk levels in the world, ranking 18 out of 191 countries according to the 2020 Inform Risk Index, and eighth at risk of flooding. Despite a history of other disasters such as earthquakes, heatwaves, and droughts, floods remain the dominant hazard. The majority of the country’s population lives along the Indus River, which is prone to severe flooding during the monsoon season. The catastrophic 2010 rains flooded one-fifth of the country, affecting 20 million people and claiming 2,000 lives. It is estimated that Pakistan’s average annual losses to flooding are above US\$1 billion.⁹ These figures are set to rise due to climate change, and the unprecedented losses experienced during the 2022 floods, which have exceeded the scale of the 2010 monsoon flooding (previously the worst flooding in the country’s history). Pakistan’s climate vulnerability, coupled with the uncertainty surrounding annual glacial melt, average precipitation, and extreme temperature changes, highlights the need for ex-ante disaster preparedness and resilience building.

B. Situation of Urgent Need of Assistance or Capacity Constraints

8. **The 2022 monsoon rains triggered the most devastating flooding in Pakistan’s history, affecting all four provinces and impacting 15 percent of the population.**¹⁰ Millions of people remain in need of assistance, hundreds of thousands of homes have been destroyed, critical infrastructure such as road networks, bridges, and water systems has been damaged, and livelihoods lost. Significant damages to houses, transport, agriculture, irrigation, and communication infrastructure have also been reported in Sindh province. Given the scale of the current disaster, the government requires support related to immediate relief, recovery, reconstruction, and increasing resilience in the aftermath of the floods.

9. **Since the onset of the flooding, the GoP has been engaged in emergency response and relief.** Of the PKR 70 billion (US\$319 million) earmarked to assist flood-affected people, the Benazir Income Support Programme (BISP) has disbursed approximately PKR 65 billion (US\$296 million) to over 2.6 million flood-affected households as of October 15, 2022. Beyond financial support, the National Disaster Management

⁷ World Bank and Asian Development Bank. 2021. “Climate Risk Country Profile: Pakistan.” Economic and Sector Work (ESW) Studies Report.

⁸ World Bank and Asian Development Bank. 2021. “Climate Risk Country Profile: Pakistan.” Economic and Sector Work (ESW) Studies Report.

⁹ World Bank Climate Change Knowledge Portal (dataset). “Pakistan.”

¹⁰ United Nations Office for the Coordination of Humanitarian Affairs (OCHA). 2022. “Pakistan: 2022 Monsoon Floods, Situation Report No. 9, As of 14 October 2022.”



Authority (NDMA) and the Provincial Disaster Management Authority (PDMA) have been providing in-kind support such as tents, rations, mosquito nets, dewatering pumps, medicines, and drinking water; they have also established evacuation camps for displaced persons. Damage assessment teams have been deployed on the ground; and the country's armed forces have been supporting rescue and relief efforts. The government has established a National Flood Response and Coordination Centre, which includes representatives from the federal and provincial governments as well as the armed forces, to coordinate flood response, relief, and rehabilitation across the country. In collaboration with the United Nations (UN), the government issued a flash appeal (based on the 2022 Pakistan Floods Response Plan) which seeks US\$816 million to respond to the needs of the people. Pledges from donors have reached US\$180 million, with only US\$90 million (11 percent) currently committed.¹¹ National and international organizations, as well as bilateral development partners, are assisting affected populations through distribution of food and non-food items as well as provision of water and sanitation, hygiene, and health services.

10. Research has linked the rainfall and flooding to climate change, making this a major climate-induced calamity. According to a report compiled by the World Weather Attribution group,¹² extreme rainfall in the region has increased by 50–75 percent, with climate models suggesting that this is entirely due to human-induced climate change. The exact extent of the climate-induced nature of the floods has not been fully quantified at present as the region experiences considerably variable weather from year to year, making it difficult to identify long-term changes. However, historical records show that heavy rainfall and greenhouse gas emissions had both dramatically increased in the region, hence climate projections had long predicted such a disaster. The evidence therefore suggests that climate change played a critical role in the floods.

11. The PDNA undertaken by the GoP, the World Bank (WB), the Asian Development Bank (ADB), the UN, and the European Union suggests that the housing, agriculture, transport, water supply and sanitation, and irrigation sectors bear the brunt of the damage. For Sindh, the overall needs assessment for post-flood recovery and reconstruction stands at US\$7.9 billion, which is highest of all the provinces. In particular, damage to housing or settlements (US\$4.3 billion), water resources and irrigation infrastructure (US\$442 million), transport and communications (US\$311 million), and water supply, municipal services, and community infrastructure (US\$421 million) is substantial.

12. Due to the magnitude and impact of the flooding as well as the urgent need of funds and technical assistance as described above, the project is being processed under Condensed Procedures as per the Bank Procedure on Preparation of Investment Project Financing for Projects in Situations of Urgent Need of Assistance or Capacity Constraints. The project is being prepared and implemented according to OP/BP 10.00 Paragraph 12, IPF Policy, which allows for certain exceptions to the IPF policy requirements, including deferral of safeguards 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.

¹¹ OCHA. 2022. "Pakistan Floods Response Plan 2022." <https://fts.unocha.org/appeals/1108/summary>.

¹² American Red Cross. September 16, 2022. "New Report Links Pakistan Flooding to Climate Change." <https://www.redcross.org/about-us/news-and-events/news/2022/red-cross-and-red-crescent-respond-to-flooding-in-pakistan.html>.



C. Sectoral and Institutional Context

13. **Sindh has a population of 50.4 million people (23 percent of the country's population) and generates 27 percent of Pakistan's GDP.** Nearly half (48 percent) of Sindh's population lives in rural areas and about 37 percent of the rural population lives below the poverty line—higher than the Pakistan average. Poverty rates are much higher in some flood-impacted districts, reaching 53.4 percent in Badin district. Satellite and survey data suggest that even within tehsils, poorer areas were more likely to be affected by the floods. Beyond monetary and non-monetary poverty, areas in Sindh affected by the floods showed some of the highest stunting rates in the country, reflecting limited access to sanitation facilities and clean water. Agriculture accounts for about 24 percent and 70 percent of provincial GDP and employment in Sindh, respectively, and poor households derive 56 percent of their income from agriculture.¹³ Poverty levels in rural Sindh are closely correlated with farm size or tenure relationships as small farmers tend to have less access to technologies, credit, water, and support programs.¹⁴

14. **The province is particularly vulnerable to natural disaster events due to its geographical location, socioeconomic vulnerability, and climatic conditions.** Sindh is estimated to have received rainfall in excess of 400 percent over the 30-year average. Agricultural land in the low-lying areas of the province, downstream of the Indus, is highly exposed to flooding, threatening food security in the province and across the country. The floods in 2010, which were primarily riverine, caused damages of US\$4.3 billion in the province, with almost 900,000 houses completely or partially destroyed along with major impacts on agriculture and infrastructure.¹⁵ Rain-induced floods in 2011 had a major impact on agriculture, livestock, and fisheries, as well as housing. Sindh possesses around 300 kilometers of the country's coastline, which is threatened by a projected 40 centimeters rise in sea levels by the end of the 21st century.¹⁶ The high prevalence of poverty, as much as 40–60 percent in certain districts, further exacerbates vulnerability.¹⁷ These areas also face inadequate health services, water and sanitation, schooling, and limited access to electricity.

15. **Sindh has been disproportionately affected by the 2022 floods.** The province is estimated to have received rainfall in excess of six times of its average monthly total. According to the NDMA, as of November 3, 2022, 799 of the 1,739 nationwide casualties were in Sindh, including 338 children, with 8,422 people injured. Almost 1.9 million houses in Sindh were damaged or destroyed, nearly 83 percent of the nationwide total.¹⁸ Reports estimate that more than 4.4 million acres of agricultural land has been damaged and 0.8 million livestock perished in the country, with the damages and losses in Sindh

¹³ Government of Pakistan. 2017. "Household Income and Expenditure Survey 2015–16." Pakistan Bureau of Statistics, Islamabad.

¹⁴ Approximately 83 percent of farms are smaller than 5 hectares but account for only 37 percent of all farmland; and approximately 20 percent of farmland, mainly on the larger farms, is cultivated based on sharecropping or leases. See: Abdul Wajid Rana and Heman Lohano. (forthcoming). "Sindh Water and Agriculture Sector Public Expenditure Review." World Bank, Washington, DC.

¹⁵ Asian Development Bank, Government of Pakistan, and World Bank. November 2010. "Pakistan Floods 2010: Preliminary Damage and Needs Assessment."

¹⁶ World Bank and Asian Development Bank. 2021. "Climate Risk Country Profile: Pakistan."

¹⁷ World Bank Group. 2022. "Pakistan Country Climate and Development Report." World Bank, Washington, DC.

¹⁸ NDMA. 2022. "NDMA Floods (2022) SITREP – 2022 (Daily SITREP No 143 Dated 3rd November, 2022)." <http://cms.ndma.gov.pk/storage/app/public/situation-reports/November2022/EeLWSh0im27IsX7us81x.pdf>.



contributing to 72 percent of the total value of the damage and losses registered in the sector, which could contribute to food shortages in the near future.¹⁹ Vast areas in Sindh witnessed prolonged inundation lasting several weeks with floodwater accumulating from other parts of the country following glacial melt in the mountainous north and record monsoon rains nationwide. Stagnant water in several districts gave rise to skin, gastric, and mosquito-borne diseases. Emergency rehabilitation is essential to facilitate those impacted by the floods.

16. **Irrigated agriculture—the backbone of Sindh's rural economy—has been severely impacted by the floods, either through damage to irrigation canal networks or to flood control infrastructure that protects irrigated farmlands.** Irrigation is critical to the agricultural sector, as 77 percent of the net area sown is irrigated.²⁰ The province has a total irrigation network of 21,000 kilometers of main, branch, distributary, and minor canals supplying 40,000 watercourses and serving over half a million farmers on 5.1 million hectares. The flood protection and irrigation systems have incurred massive damage caused by heavy rains, standing water, and flash flows. More than 538 irrigation and 234 drainage systems representing an estimated total of 7,300 kilometers have been destroyed. Approximately 90 flood protection structures including bunds and weirs have been washed away, exposing agricultural land and millions of households to the next rainy season. The Government of Sindh's (GoS) priority is to restore the irrigation service for the ongoing Rabi crop season (October to March) and to restore the flood protection infrastructure before the next rainy season (Kharif, April to September).

17. **The province has a total road network of approximately 87,000 kilometers; the Works and Services Department (W&SD) is responsible for about 42,000 kilometers of this network, with an estimated value of PKR 1.5 trillion (US\$6.45 billion).** A large part of the remaining road network is the responsibility of the Local Government Department (LGD) and Rural Development Department. The rural and district road network is critical for intra-provincial trade and commerce, access to health, education, and other public services. The annual monsoon season worsens the road conditions, as frequent urban flooding submerges and washes away paved surfaces, disrupting connectivity and livelihoods. Based on road condition data collected, only 40 percent of the network is in fair or better condition, while 60 percent is either in poor or failed condition. Road safety is poor, with a high number of annual traffic accidents, weak enforcement, and badly maintained vehicles.

18. **Transport infrastructure has been severely affected, with almost 8,000 kilometers of the road network either impacted or completely washed away.** In addition, the North–South Rail Link (Main Line-1), which serves almost 80 percent of the country's total rail traffic, remained disrupted for several days. In cities like Karachi, urban mobility remains severely limited due to flooding of streets and lack of public transport. This has significantly impacted connectivity and accessibility to services within the affected areas. Temporary arrangements have been made by respective agencies to support logistics for the ongoing relief efforts.

¹⁹ Government of Pakistan. 2022. "Pakistan Floods 2022: Post-Disaster Needs Assessment. Main Report." Ministry of Planning Development & Special Initiatives.

²⁰ Abdul Wajid Rana and Heman Lohano. (forthcoming). "Sindh Water and Agriculture Sector Public Expenditure Review." World Bank.



19. **Livestock is of paramount socioeconomic importance in Sindh as the sector contributes to 61.9 percent of national agricultural GDP and 14.04 percent of the country's total GDP.** In Sindh, 1.86 million households (22 percent of total) depend on livestock for their livelihoods, and the sale of livestock products represent 21 percent of these households' incomes.²¹ The impact of the floods includes, in the short term, a loss of animals by drowning, destruction of animal sheds, destruction of crops including fodder crops, and destruction or damages to infrastructures delivering services or inputs (veterinary posts, marketing infrastructure, hatcheries). Longer-term impacts include the likely emergence of climate sensitive diseases (mosquito-borne diseases, internal parasites such as fluke) as well as shortage of fodder and feed due to the destruction of crops.

20. **The total number of animals lost in Sindh amounts to 249,000 tropical livestock units.** As per latest estimates, 61,079 large ruminants, 252,430 small ruminants, and 18,624,000 poultry (11.24 percent of total) were lost. The most affected category is backyard poultry—which is of particular importance for nutrition and women's livelihoods in poor rural households—at 17.7 percent of losses. The total value of livestock lost amounts to PKR 26.64 billion (US\$117.3 million). Also destroyed or heavily damaged were 26,481 cowsheds and 1,156 poultry farms, for a total value of PKR 9.17 billion (US\$40.4 million).

21. **A Social Impact Assessment (SIA) conducted in eight flood-affected districts finds that women home-based workers and female on- and off-farm workers have been disproportionately impacted by the floods, especially those working in the agriculture, livestock, and manufacturing sectors.**²² Damage to infrastructure, communication, and transport links has further reduced casual income-generating opportunities for women and other vulnerable groups, pushing them further into poverty.²³ Women's overall security has also been affected, as personal assets (jewelry and gold) are being sold to cover basic household expenditures and service household debts. Women, children, and older people have also dramatically reduced their food consumption due to trauma. The burden of unpaid household care and domestic work on women and girls has increased, especially among those who have been forced to take up shelter in the homes of extended family members. This has negatively impacted women's participation in recovery and rehabilitation efforts, leading to reduced access to life-saving information and aid. The timings and locations of aid distribution activities do not adequately consider the needs of women and other vulnerable groups, often resulting in exclusion. Girls face increasing risks of early marriage and school drop-out. Gender-based violence (GBV), other forms of violence, and coercion of women and girls are also increasing in flood-affected areas. Despite these heightened risks, information about and access to GBV support services, including critical psycho-social and mental health support, is extremely limited. According to the SIA, indicators of post-traumatic stress were noticeable in communities, impairing their ability to function and plan recovery. Stronger manifestations of trauma were seen among women, children, and the elderly population.

²¹ Government of Pakistan. 2022. "Pakistan Economic Survey, 2021–22." Finance Division, Islamabad.

²² The SIA was led by the World Bank and UN Women. The assessment noted that women have also suffered notable losses in other forms of livelihoods, such as manufacturing work, which is largely home-based and consists of handicrafts, garment and textile stitching, and embroidery work, due to disruptions in demand and supply chains.

²³ United Nations Development Programme. March 12, 2021. "Womenomics: Women Empowering the Economy." Special Edition Report, Development Advocate Pakistan. <https://www.undp.org/pakistan/publications/womenomics-women-powering-economy-pakistan>; UN Women and National Commission on the Status of Women. 2020. "Young Women in Pakistan – Status Report 2020." Report supported by the Royal Norwegian Embassy in Pakistan and the Center of gender and Policy Studies, Islamabad.



D. Relevance to Higher Level Objectives

22. **The project is consistent with the World Bank Group’s (WBG) Country Partnership Strategy (CPS) FY15–19 for the Islamic Republic of Pakistan (Report No. 84645-PK) discussed by the Board of Executive Directors on May 1, 2014.** The CPS was extended to FY20 under the corresponding May 2017 Performance and Learning Review (Report No. 113574). The preparation of the new CPF was deferred in FY21 due to the COVID-19 crisis and paused due to the recent unprecedented and catastrophic monsoon floods. A new CPF is expected to be delivered for the consideration of the Board of Executive Directors in the second half of FY24. The focus areas and objectives of the CPS remain relevant and are reflected in the ongoing engagement in the country.

23. **To respond to the unprecedented flooding disaster, the Bank is mobilizing over US\$2 billion in financing under three pillars: (I) Respond immediately; (II) Reconstruction and rehabilitation; and (III) Resilience.** Under Pillar I, at least US\$350 million has been repurposed and allocated through the existing portfolio to support the country’s emergency response. For Sindh, under Pillars I and II, US\$82 million is available through the ongoing Sindh Resilience Project (P155350), Competitive and Livable City of Karachi Project (P161402), Karachi Water and Sewerage Services Improvement Project (P164704), and the Sindh Irrigated Agricultural Productivity Enhancement Project (P145813). Sindh is also benefitting from cash transfers to poor households in the affected districts through the BISP, which has been allocated US\$150 million through the portfolio repurposing. Under Pillar II, an estimated US\$1.5 billion has been identified primarily for new operations to support reconstruction, all subject to the Board’s consideration and approval, including this project – the Sindh Flood Emergency Rehabilitation Project (SFERP, P179981) – and the Sindh Flood Emergency Housing Reconstruction Project (SFEHRP, P180008). The SFERP will help rehabilitate critical infrastructure and support livelihoods, while also supporting improved capacity to respond to disasters. The SFEHRP will support the GoS in the reconstruction of multi-hazard resilient housing. The Sindh Water and Agriculture Transformation Project (SWAT, P167596) will also support Pillar II by helping restore agriculture production by small farmers affected by the floods. Two projects, the Sindh Integrated Health and Population Project (P178530) and the Strengthening Social Protection Delivery System in Sindh Project (P178532) that were under preparation in the existing pipeline were revisited to help address the needs emerging from the public health emergencies in the flood-stricken districts in Sindh while maintaining a balance with sector development objectives. Pillar III anticipates further financing of US\$500 million to support rehabilitation and longer-term resilience to potentially support Balochistan, the second most flood-affected province. This includes the proposed Balochistan Water Security and Productivity Improvement Project (P179227) and the Integrated Flood Resilience and Adaptation Program (P180323).

24. **The project will contribute to CPS results area 3 on “inclusion,”** particularly CPS Outcome 3.2— “reduced vulnerability for groups at risk”—and Outcome 3.3— “increased resilience to disasters in targeted regions”—by supporting recovery, improving livelihoods, rehabilitating selected infrastructure, and strengthening institutional disaster management capacity, with an aim to improve the climate change and disaster resilience of communities and build back better. The SFERP is also aligned with the Systematic Country Diagnostic’s priorities of improving productivity in the agriculture sector, making cities work for the poor, and improving management of water resources.



25. **The project is aligned with the recently published Pakistan CCDR as it contributes to the policy area of strengthening human capital through the improvement of livelihoods and improving shock-responsiveness.** Strengthening disaster resilience and rehabilitating affected populations will help achieve sustainable and equitable growth by ensuring that Pakistan can withstand climate-related risks under different projected climate scenarios. The SFERP is aligned with the National Climate Change Policy, which aims to improve institutional capacity, coordination, resilient infrastructure, and early warning and response mechanisms with respect to disaster risk management (DRM). It is also relevant to Pakistan's Nationally Determined Contribution, which details the strengthening of climate change adaptation, including building resilience through nature-based solutions, improving preparedness, strengthening capacities, and adopting solutions to reduce the loss of life, infrastructure, and livelihoods from disasters.

26. **The project is consistent with the WBG Global Crisis Response Framework, specifically Pillar 2: Protecting People and Preserving Jobs; Pillar 3: Strengthening Resilience; and Pillar 4: Strengthening Policies, Institutions, and Investments for Rebuilding Better.** Under Pillar 2, Component 2 (US\$75 million) will (i) carry out of a 'cash for work' program for communities across flood-affected villages and (ii) restore animal capital and production assets to smallholder livestock farmers, targeting the most vulnerable groups. Under Pillar 3, Component 1 (US\$350 million) will (i) rehabilitate irrigation and flood control infrastructure; (ii) restore roads and allied infrastructure; and (iii) restore water supply schemes. The component activities aim to strengthen resilience through improved designs and methods such as nature-based solutions, which consider long-term climate change impacts. Under Pillar 4, Component 3 (US\$65 million) will strengthen institutions for rebuilding better and (i) expand the Sindh Emergency Rescue Service to nine additional districts; (ii) support preparedness capacity of relevant line departments for disaster risk management, including the mainstreaming of resilience in the transport network; and (iii) conduct strategic studies for integrated irrigation, drainage, and flood protection systems.

27. **The project is aligned with Pakistan's policy frameworks and plans on DRM and climate resilience.** These include the National Disaster Management Act (2010), National Disaster Risk Reduction Policy (2013), Climate Change Policy (2012), Climate Change Act (2017), and National Water Policy (2018). It also aligns with the lessons learned of the 10-year National Flood Protection Plan IV (2017) prepared by the Federal Flood Commission, which highlights the need for structural and non-structural measures as well as technical studies, monitoring, and supervision. In response to growing national and international attention to climate risks and vulnerabilities, the Planning Commission has developed a draft Handbook on Climate Risk Screening for Policy Planning, which includes revised templates of key planning documents with co-benefits methodology/guidelines to mainstream climate change in development planning processes. Although several policies and plans were developed following the 2010 floods, operationalization remains a significant challenge due to limited institutional capacity and governance challenges. The project therefore aims to accelerate flood risk management through both physical infrastructure reconstruction and institutional strengthening.

II. PROJECT DESCRIPTION

A. Project Development Objective



PDO Statement

28. **The project development objectives (PDOs) are to:** (a) rehabilitate damaged infrastructure and provide short-term livelihood opportunities in selected areas of Sindh province affected by the 2022 floods; and (b) strengthen the Government of Sindh's capacity to respond to the impacts of climate change and natural hazards.

PDO Level Indicators

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

- Beneficiary households receiving short-term livelihoods support (of which female-headed households and households with vulnerable women) (number)
- People benefiting from rehabilitated infrastructure (of which are women) (number)
- Households protected through rehabilitated flood protection infrastructure (number)
- Operationalization of Government's integrated emergency service to manage disaster risks and climate impacts (text)
- Households reporting satisfaction with project interventions (percentage)

B. Project Components

Component 1: Infrastructure Rehabilitation (US\$350 million)

30. **Component 1 aims to enhance physical resilience through the restoration, rehabilitation, and improvement of critical irrigation and flood protection infrastructure, water supply schemes, roads, and allied infrastructure in flood-affected areas.** A framework approach will be utilized for the selection and appraisal of infrastructure investments, including criteria such as the need to facilitate livelihood recovery of the flood-affected areas with focused consideration to poverty levels; adherence to the PDO and enhancing climate resilience; and coordination with development partner interventions (see Annex 1 for detailed framework).

31. **Subcomponent 1.1: Rehabilitation of Irrigation and Flood Control Infrastructure (US\$200 million).** This subcomponent will finance the emergency rehabilitation of irrigation, drainage, and flood protection infrastructure to restore agricultural production in irrigated farmlands for the ongoing Rabi (October to March) and upcoming Kharif (April to September) seasons. The floods have caused significant damage to the irrigation and flood protection infrastructure in Sindh, which are interlinked as flood protection infrastructure often protects irrigation areas. The rehabilitation will restore the damaged infrastructure with added climate resilience through improved engineering designs and the integration of nature-based solutions (such as wetland restoration, vegetative riverbank protection, and other watershed protection measures) to reduce flood peaks and increase infiltration.

32. **Subcomponent 1.2: Restoration of Roads and Allied Infrastructure (US\$100 million).** This subcomponent will support the rehabilitation and reconstruction of the affected road network to improve accessibility to the public facilities and to facilitate socioeconomic revival of the worst affected areas of the province. The roads to be rehabilitated under the project are managed by multiple departments,



including the W&SD, LGD and Rural Development Department. A significant portion of the financing for this subcomponent will be allocated to climate-resilient road upgrading and rehabilitation in affected districts, in response to the damage caused by the climate-exacerbated flooding in Sindh. Approximately 10 percent of the cost will be utilized to improve road safety.

33. **This subcomponent will include road upgrading and rehabilitation in affected districts, including climate resilient designs, rehabilitation, maintenance and supervision of works in selected districts.** A comprehensive list of roads is to be shared by the GoS, after which target roads and districts will be selected for upgrading and rehabilitation based on criticality in the network (i.e., stretches that carry the most traffic) and access for the poorest areas. Improvement of road infrastructure would also include the raising of embankments, provision of side drains, improvement of culverts, ditches, vegetation, bridges, enhanced slope protection, adoption of design standards for pavements, and climate investments to mitigate effects of rainfall and high temperatures. In addition, the subcomponent will include green techniques, including the use of vegetation, geomesh, gabions, and pavement seals to mitigate effects of rainfall and high temperatures. The designs of drainage will take into consideration the effects of more frequent and intense precipitation in Sindh. Adaptation measures through resilience planning at the network level will ensure continuous access to schools, health facilities, and markets.

34. **This subcomponent will also support improvement of road safety infrastructure and equipment in the vicinity of public facilities and marketplaces, including the provision of sidewalks, bike lanes, road markings, and signage.** These improvements will also include the provision of traffic calming measures, such as rumble strips, marking of reduced speed zones, delineators, traffic lights, and guard rails. The measures will also promote the use of non-motorized transport. In addition, it will also ensure a gender-inclusive approach and universal access features and measures in the design and construction/rehabilitation of roads and allied infrastructure. For selected roads, this subcomponent will consider the provision of basic fiberoptic infrastructure, such as ducts and manholes, to facilitate the expansion of internet connectivity in the future. This measure will also facilitate the continuity of digital services and connectivity for climate vulnerable communities in the event of future flooding. This subcomponent will be implemented as per the telecom and digital plan of the GoS.

35. **Subcomponent 1.3: Restoration of Water Supply Schemes (US\$50 million).** This subcomponent will fund the rehabilitation of selected and prioritized water supply infrastructure that has been destroyed or damaged by the floods. Early estimates of the disaster needs assessment for Sindh province identify needs of PKR 58.1 billion (US\$265 million) for the multi-hazard resilient restoration of the damaged water supply and sanitation infrastructure. The project interventions will primarily focus on five districts—Kashmore, Dadu, Naushero Feroz, Khairpur, and Badin—as damages in these districts were above 60 percent. However, priority investments will be targeted in all 24 districts, especially where larger populations can benefit, as project funds allow. The damaged infrastructure neither provided safe water nor hygienic fecal sludge management prior to the floods; it instead provided untreated water for limited hours and comprised open drains transferring untreated fecal sludge to open areas or outfalls. The project will upgrade the damaged infrastructure to include the provision of treated water and street drainage to cater for stormwater, and fecal sludge management will be catered for through other sources of financing. The climate adaptation capacity of households and resilience to flooding events will also be improved through these measures by: (i) ensuring that the rehabilitated water supply schemes are resilient so that they continue delivering services during floods, or can be secured from the physical impacts and do not



require replacement or rehabilitation in the aftermath of floods; (ii) creating safe passage for rain and flood waters, so that retention of water in human settlements is reduced; and (iii) ensuring that there is no mixing of fecal or solid waste with flood water, so that water resources and public health are protected. Flood resilience aspects will be included to avoid future losses due to calamities and prevent the spread of contaminants through floodwater.

36. **Thus, the infrastructure will not only be restored but improved to a more climate-resilient level.** Ensuring that the rehabilitated water supply infrastructure continues to deliver services during floods will also improve the adaptation capacity of flood-affected districts to cope with future climate-exacerbated events. Improved water supply infrastructure will increase resilience to periods of drought, which are a significant hazard in Sindh and are projected to increase due to climate change, and will also help in adapting to gradually increasing water demand due to population and demographic changes and exacerbated by climate warming. This subcomponent will support the engagement and training of existing women community organization members identified by social mobilizers to enable women and vulnerable groups' participation in identifying priority water supply and irrigation schemes for rehabilitation. This will ensure equitable distribution of water to informal women workers and their households and to vulnerable groups.

Component 2: Livelihoods Support (US\$75 million)

37. **This component will support livelihoods by carrying out of a 'cash for work' program for communities across affected villages with the assistance a of a Social Mobilization Partner (SMP).** Cash for work (CfW) programs are usually designed to assist the most affected and vulnerable communities so that they can quickly earn cash under "decent work" conditions. Such support enables them to respond to their immediate livelihood needs (food, shelter) in return for participating in disaster clean up and restoration activities. CfW interventions provide employment to unskilled and semi-skilled workers in labor-intensive, locally planned and executed projects, including rehabilitation of community infrastructure and watercourse improvement, ecosystems and landscape restoration, soil conservation, and road construction and maintenance in consultation with local community groups. Such measures will act as a buffer against future flooding in these areas, improving the climate resilience of the communities. The community infrastructure will be restored to higher standards than existed prior to the flood, incorporating climate-resilient design and materials. The objectives of the CfW program will be to:

- Provide income support to poor, vulnerable households through short-term, intensive, semi-skilled, and unskilled labor so they can meet their essential needs.
- Build or rehabilitate local-level public/community assets and physical and natural infrastructure to sustain urgent basic services such as clean water supply, sanitation, local roads, watershed interventions, and other climate-resilient assets that strengthen the resilience of households and communities to climate risks.

38. **This component will also include provision of emergency support for the most affected smallholder livestock farmers to restore their animal capital and production assets and to avoid further losses due to animal diseases or underfeeding.** This support will consist of:



- Livestock restocking of animal losses, prioritizing those who lost 50 percent or more of their stock. The support will include calf female buffaloes (1 per household), small ruminants (5 per household), and improved backyard poultry (10 chicks per household).
- Organization of vaccination and control of parasites campaigns to prevent emergence of climate-related diseases.
- Provision of feed for both ruminants (straw and concentrate) and backyard poultry.
- Provision of construction material (iron sheets, cement) for self-reconstruction of destroyed or damaged animal sheds.

39. **Under this component, beneficiaries will be prioritized and identified following a three-pronged approach:**

- Severely impacted districts, talukas, and union councils (UCs):** Based on the GoS damage assessment, a list of districts (including at the talukas and UC level) will be prioritized to receive livelihoods restoration assistance in the first phase (six months). Once these areas have been served completely, the project will move into the remaining areas of Sindh.
- National Socio-Economic Registry (NSER) Database for identification of poorest/vulnerable beneficiaries:** Within the prioritized areas, NSER data will be used to identify the poorest beneficiaries at the village/neighborhood level. Where required, eligibility will be cross referenced to the existing village/neighborhood level registry (prepared by the GoS) or under the registry to be prepared under the CfW component. Data privacy policies, which have been customized for Pakistan, will be further tailored for this project.
- Village-level household registries to confirm the identification of the poorest beneficiaries:** Most districts of Sindh have benefited from the GoS's UC-based Poverty Reduction Project, which conducted wellbeing and wealth rankings across every village, consolidated into a UC-level database. This database includes households identified as the poorest and as vulnerable by their own communities. The project, with the help of an SMP, will seek communities' feedback to identify and confirm the most deserving households (confirming the NSER and the wealth and wellbeing rankings) at the village/neighborhood levels. Where such information is not available, the SMP will generate the ranking in collaboration with the communities and maintain a separate registry.

40. **Inclusive eligibility criteria will be developed and endorsed by the beneficiary community, which will prioritize vulnerable groups.** Attention will be given to women, the elderly, and differently abled persons, who will be given the chance to participate or nominate someone on their behalf to participate in the works and/or to receive inputs. At least 30 percent women's participation will be guaranteed in suitable works (e.g., general cleanup of the village, meal preparation for labor, making mosquito nets, quilts). Communications outreach and behavior change campaigns will also be part of this component to encourage education and health interventions.

41. **The project will support women's access to livelihood restoration activities.** First, the project will adopt inclusive eligibility criteria to prioritize inclusion of vulnerable groups, including households with high dependency ratios, women informal workers, vulnerable female-headed households, and people with disabilities (or wives of people with disabilities). Women who have nominated someone else to participate on their behalf will also be supported to open mobile money or bank accounts, thus



ensuring they have full control of the payments received through the program. Pregnant women and new mothers who are unable to nominate a family member to participate in the CfW program on their behalf will be covered under a work exemption, thereby enabling them to access payments under the program regardless of their ability to find a suitable stand-in. Women's participation in the public works program will also be supported by providing flexible schedules, appropriate venues, training in basic skills/tasks and/or transport subsidies. Moreover, women will be prioritized for livestock restocking support, especially of smaller ruminants which, in Sindh, are managed almost entirely by women. Both mobile and stationary legal aid and registration services will also be provided to women and other vulnerable individuals who lack the required documentation to be included on the NSER, thus ensuring they are not excluded from program benefits. All possible options for digital payments will be explored to facilitate the beneficiaries with a view to avoid high overhead costs and mitigate the risk of leakages.

Component 3: Institutional Strengthening for Resilience and Technical Assistance (US\$65 million)

42. **Subcomponent 3.1: Expansion of Sindh Emergency Rescue Service (US\$53 million).** The Sindh Emergency Rescue Service will be expanded to nine additional districts and as an integrated and independent service of first responders covering the entire spectrum of emergency response from floods, fires, earthquakes, windstorms, and health emergencies. The Sindh Emergency Rescue Service (Rescue 1122) was operationalized in May 2022 with support of the Sindh Resilience Project (SRP) and consists of market-recruited professionals. The service provides critical life-saving, emergency response, and rescue services in seven districts of Sindh—Karachi, Sujawal, Thatta, Hyderabad, Larkana, Dadu, and Qambar Shahdaskot. The expansion of the service will provide climate adaptation co-benefits in these districts as climate change-induced large-scale floods and heatwaves dominate in the disasters that Sindh is vulnerable to, giving rise to emergencies every year. Specific teams will also be trained for urban and rural flooding and heatwaves and provided with specialized equipment, such as dewatering pumps, to respond to these climate events. Climate change mitigation aspects will also be incorporated as rescue stations and offices will be powered by solar power—an added advantage in rural areas as electricity access tends to be sporadic.²⁴ The districts to be covered under the SFERP are Ghotki, Shikarpur, Jacobabad, Badin, and Jamshoro, which have been badly affected by the floods.

43. **Subcomponent 3.2: Enhancing Preparedness Capacity for Disasters (US\$5 million).** This subcomponent will enhance the preparedness capacity of relevant line departments for disasters, including in responding, planning, and coordination of disaster management, such as (i) the preparation of an emergency response plan at the operational level, and a disaster recovery plan for Sindh; (ii) expansion of the decision support system to include flash floods, in addition to riverine floods; (iii) design and implementation of mock drills engaging district level governments to test the effectiveness of plans and standard operating procedures along with early warning dissemination and first responder system in evacuation and early action; (iv) strengthening community resilience by targeting and ensuring access to differently abled groups in the aforementioned activities; (v) use of global diagnostics and tools; and (vi) building capacity, including at the local government level, for land use planning, river basin management, and innovative solutions for disaster risk management. This subcomponent will also support mainstreaming resilience in planning and implementation functions of various line departments.

²⁴ The provision of solar power is not a necessary element for results achievement.



44. **To mainstream resilience in the transport network, this subcomponent will also support the W&SD to:**

- Institutionalize climate resilience by adopting climate change and disaster resilient design standards, as well as incorporating green techniques into the design and implementation of infrastructure projects.
- Prioritize disaster management investments, regular maintenance, and more frequent rehabilitation of road assets to minimize damage and aging caused by climate change on the road network.
- Use applications and software in making road infrastructure resilient to natural hazards. This includes the use of Road Asset Management System (RAMS) in the prioritization and better management of expenditures and assets, as well as the use of geographic information systems in identifying high-risk and vulnerable areas of the road network in need of repair/replacement, and helping authorities provide swifter emergency response during floods and other natural hazards.

45. **Under subcomponents 3.1 and 3.2, the project will support measures to enhance the responsiveness of emergency preparedness and rescue services to women’s needs, including their post-disaster health and wellbeing risks.** This will include: (i) preparation of emergency response plans, including dedicated protocols on GBV prevention and response; (ii) outreach and behavior change campaigns to prevent GBV, early marriage, and reduced food consumption on the part of women and girls, including training of responders on connecting women and girls to GBV support services (women’s shelters, psycho-social support services, and legal aid) in a safe and confidential manner; (iii) strengthening capacity and referral pathways of selected GBV response services (psycho-social support, social welfare offices and/or women’s shelters, legal aid providers) in project areas; (iv) engagement of girls’ schools and colleges to increase awareness on basic disaster preparedness, the role of early warning and first responder systems, the necessity of water, sanitation, and hygiene, GBV prevention, and basic survival skills; (v) recruitment and retention of female staff and managers within the Sindh Emergency Rescue Service; (vi) inclusion of women and complete family units in mock drills to test the effectiveness of emergency response plans and services; and (vii) design and testing of gender-differentiated messaging and dissemination strategies, as well as informational materials for women with limited or no literacy.

46. **Subcomponent 3.3: Strategic Studies for Integrated Irrigation, Drainage, and Flood Protection Systems (US\$7 million).** This subcomponent will support long-term strategic studies (feasibility studies, consulting services for surveys, hazard and risk modeling, river basin management studies, environmental and social assessments) for interventions related to increasing flood mitigation capacity in Sindh. In particular, the studies will focus on flood modeling for hill torrents—a currently understudied but significant contributing factor to the 2022 floods—and improving water storage capacity for flood management. In addition, given the limitations of traditional engineering solutions to extreme flood events, this subcomponent will support a study on the feasibility of nature-based solutions to complement conventional engineering solutions. All these studies will feed into the Sindh Strategic Water Plan, which the GoS will prepare with technical support under the SWAT project.

Component 4: Project Management and Operational Costs (US\$10 million)



47. **This component will provide support for the Project Implementing Units and the operations of the Sindh Irrigation Department (SID) and Planning and Development Department (P&DD),²⁵** including, inter alia, Project management, procurement, contract management, public outreach and dissemination, financial management, technical audits, compliance monitoring of construction activities, oversight of compliance with social and environmental standards, oversight of compliance with social inclusion targets, monitoring and evaluation activities, and grievance redress mechanism. Monitoring and evaluation (M&E) entails, inter alia, preparation of project reports, including for mid-term and completion review, baseline studies and audits (financial and technical, environmental, social). The component will also finance equipment such as vehicles, information, and communication equipment (including laptops and printers), office furniture and materials, renting of premises, upgrade/refurbishment works.

Component 5: Contingent Emergency Response (US\$0 million)

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

C. Project Beneficiaries

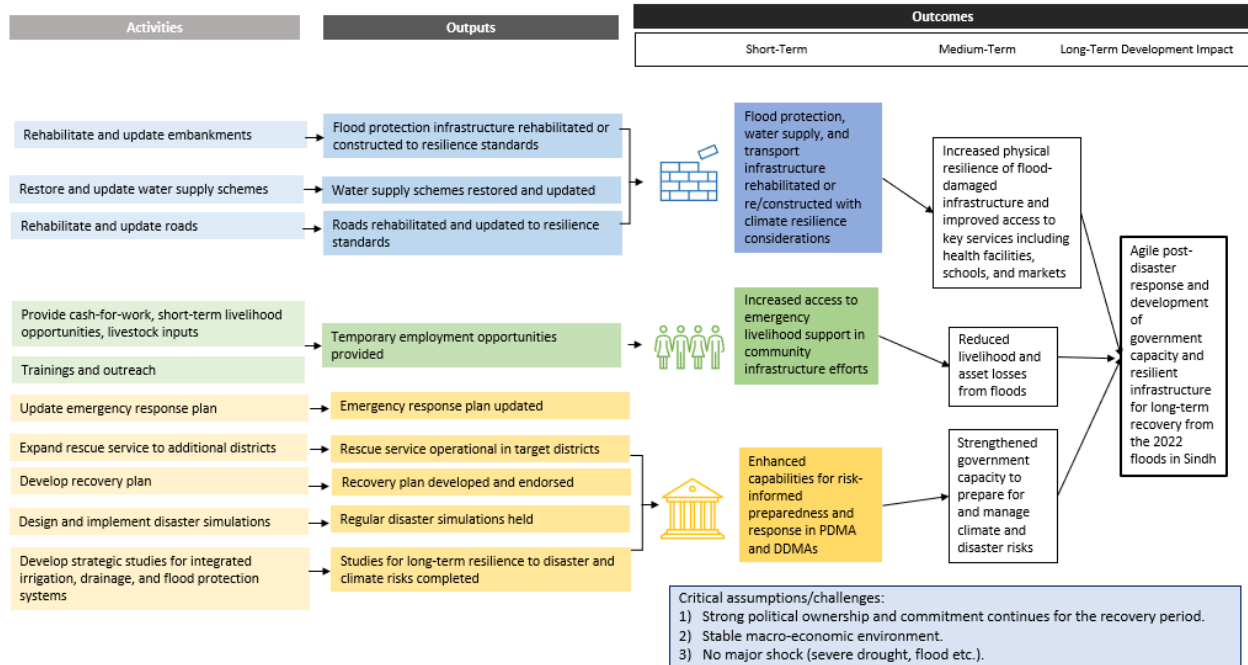
49. **The project will target selected communities affected by the 2022 floods in Sindh province.** Direct beneficiaries include the population of the communities in the most affected districts, who will benefit from the restoration and the resilient reconstruction of critical infrastructure (water supply, roads, and irrigation)—estimated to be at least 2 million inhabitants, of whom approximately 50 percent are women. Component 2 will benefit at least 100,000 flood-affected households that are categorized as the poorest 20 percent according to NSER data. The province will also benefit indirectly from the increased capacity of the GoS to build back better infrastructure and respond more efficiently to disasters. Government officials from line departments, and local authorities will benefit from enhanced capacity for disaster recovery planning and implementation.

50. **Geographic scope.** Where possible, the project will consider an area-based approach and focus on the most severely affected districts, which would be identified during implementation. This area-based approach would be adopted for a majority of interventions, where efforts would be made to align project interventions with other components as well as Bank-funded projects to ensure maximum development impact and cumulative benefits to the flood-affected population. However, some flexibility would be required in the site selection of some interventions considering the vast geographic spread of the disaster.

²⁵ Formerly Sindh Resilience Project-Provincial Disaster Management Authority PIU.

D. Results Chain

Figure 1. SFERP Results Chain



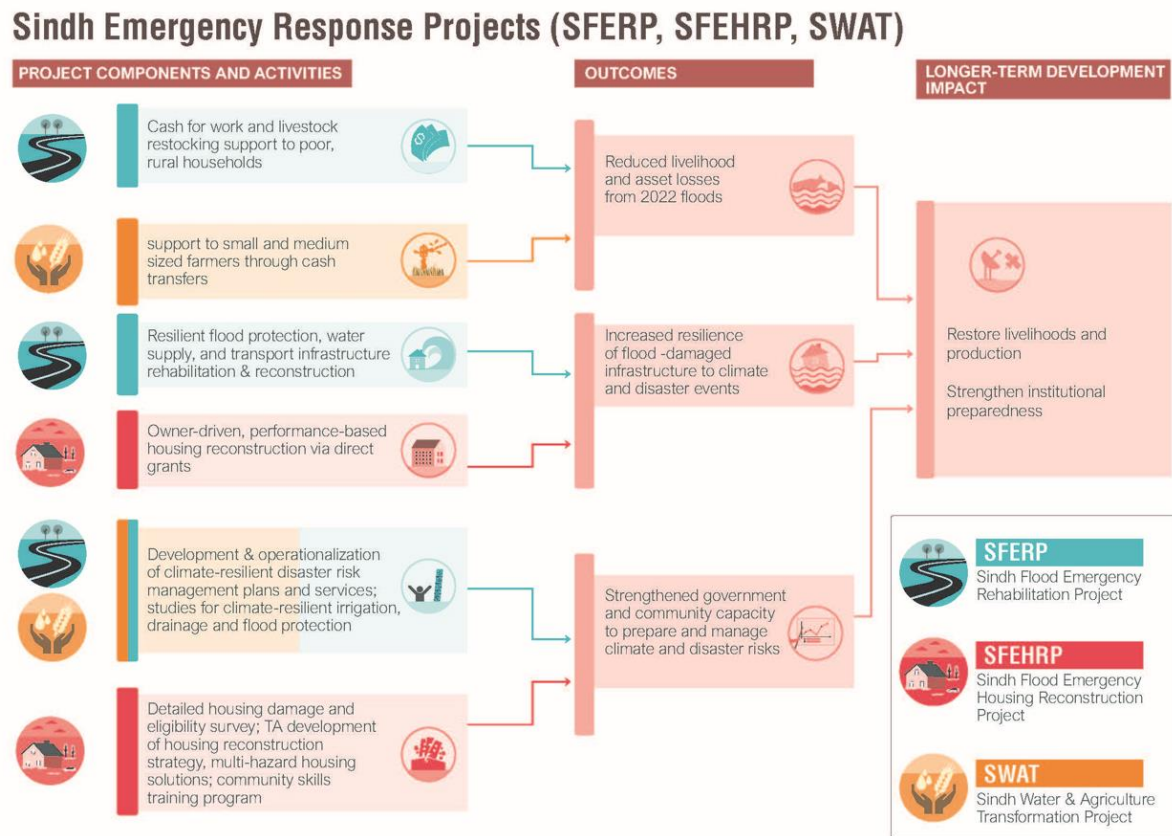
E. Rationale for Bank Involvement and Role of Partners

51. **The Bank has accumulated substantial regional and global experience in supporting post-disaster recovery, making it well placed to support this emergency.** Specifically for Pakistan, the Bank has experience from the Disaster and Climate Resilience Improvement Project (P154036), which supported post-floods recovery after the 2014 floods. The SFERP also builds on the SRP (P155350)²⁶ and its ongoing Additional Financing (P173087). The objective of the project is to mitigate flood and drought risks in selected areas and strengthen Sindh’s capacity to manage natural disasters and public health emergencies.

52. **The three emergency operations are a part of the overall Bank flood response effort in FY23.** The FY23 program focuses across provinces and sectors through repurposing existing operations, activation of CERCs, through new emergency operations or through pre-flood, planned operations that have been rebalanced to support both the flood response and medium-term development objectives.

²⁶ The SRP (US\$ 300 million) became effective in October 2016. It has three components aimed at: (a) strengthening disaster and public health emergency management, focusing on strengthening operational systems and capacities at the provincial and district levels through the Sindh Provincial Disaster Management Authority; (b) improving infrastructure and systems for resilience, supporting restoration and improvement of embankments at high-risk sites along the Indus river for protection against riverine floods as well as construction of small rainwater-fed recharge dams in drought prone regions in Sindh; and (c) contingent emergency response.

Figure 2. The Three Sindh Emergency Response Projects



53. **The SFERP is part of a package of three emergency response operations including the SFEHRP and SWAT.** The SFERP and SFEHRP complement each other in terms of a coherent Bank approach and by incentivizing necessary policy reforms on the government’s side, which are critical for the projects’ preparedness in the short term and for addressing underlying issues on land, water, and agriculture in the longer term. The SFEHRP will be critical to support housing needs in a resilient manner. As most poor farmers are landless and often rely on a few heads of livestock as their store of wealth, the Flood Emergency Rehabilitation Component of SWAT will help small and medium-sized farmers reestablish their crop production through cash transfers. In addition, the SFERP will finance the emergency repairs to critical irrigation and flood protection infrastructure needed to restore production in irrigated farmlands. At the same time, SWAT will contribute to building Sindh’s longer-term resilience through enhanced management of its water resources and increased agricultural water productivity through synergetic investments in agriculture and improved performance of the irrigation canal network in selected areas. The Bank has a separate dialogue on addressing the livestock sector’s medium to long-term needs.

54. **The project also complements several ongoing WBG-supported activities aimed at improving service delivery and climate adaptation in Sindh.** Current operations include the Solid Waste Emergency and Efficiency Project (P173021), the Sindh Irrigated Agriculture Productivity Enhancement Project (P145813), and the Karachi Water and Sewerage Services Improvement Project (P164704) designed to



improve water services, solid waste management, and irrigation water management. The Sindh Barrages Improvement Project (SBIP, P131324) is renovating the barrages that divert water into the canal network and have an important role in flood management. These ongoing operations place the Bank in a position to leverage this implementation experience in the design of the operations to promote resilience and respond to emergencies.

55. **The project also complements efforts by development partners to support the country's flood response.** The European Union is providing emergency support in agriculture, livestock, and food security in Sindh. The ADB is helping provide emergency food supplies and preparing operations for the rehabilitation and reconstruction of provincial and district roads, as well as sections of a national highway in Sindh. The ADB is also preparing interventions for livelihood restoration in Balochistan, and irrigation investments in Khyber Pakhtunkhwa and Balochistan. The Japan International Cooperation Agency (JICA) is supporting livelihood improvement activities for farmers affected by the floods in Balochistan. The ADB and JICA are also updating the National Flood Protection Plan IV and the National Disaster Management Plan, respectively. The Food and Agriculture Organization (FAO) is working on agriculture recovery through fertilizer distribution. The International Fund for Agricultural Development is conducting rural development and livelihood support activities in Khyber Pakhtunkhwa. The FAO and ADB may also work on livestock protection through vaccines and animal feed.

F. Lessons Learned and Reflected in the Project Design

56. **The design of emergency recovery operations should be flexible, while also reflecting the priorities of the affected area and communities, including the specific needs of women, the elderly, and other vulnerable groups.** The project builds on the experience of the Madagascar Emergency Support to Critical Education, Health and Nutrition Services Project (P131945), which highlighted the importance of avoiding over-ambitious development objectives and targets.

57. **The design of emergency operations may benefit from a disaster needs assessment.** For this project, the PDNA provided a sound technical basis for priorities that focused on livelihood support and the medium and longer-term recovery needs. In addition, the project has reflected on lessons learned from the Malawi Flood Emergency Recovery Project (P154803), which is for the incorporation of time-bound aspects in implementing the livelihood support activities, in the project design.

58. **The project also considers lessons learned from the BiH Floods Emergency Recovery Project (P151157) which found that adopting a "build back better" strategy for emergency response operations improves the resilience of rehabilitated infrastructure.** The project will utilize this approach to design the rehabilitated infrastructure to cater for potential future risks. The project will also utilize both structural and non-structural measures for building back better. Structural measures will include nature-based solutions, revision in design and engineering standards, and good engineering practices for management of flood waters to reduce the probability of occurrence of flooding and ensuring provision of climate-resilient infrastructure. Non-structural measures will include improved land use and floodplain mapping, and control of floodplain development to reduce the consequences of flooding.

59. **The operation responds to insights and recommendations from the Pakistan Water Security Diagnostic Report "Pakistan: Getting More from Water (2019)."** The report identified deficiencies in



existing flood response operations, including lack of flood response plans and limited access to early warning information for marginalized groups, including women. The project addresses these deficiencies through subcomponents 3.2 and 3.3. In addition, the beneficiary targeting approach under Component 2 directly increases inclusion of vulnerable groups as beneficiaries. The report also identified weak public response to early warnings, which is partly due to lack of citizen involvement. The development of flood response plans under subcomponent 3.2 will increase citizen participation by increasing community ownership, citizen–state relations, and, ultimately, community responsiveness to early warnings and dissemination of flood response directives.

60. Using existing agencies with a proven track record could be an effective approach for implementing emergency response. Given the urgency for expedient and effective implementation inherent in emergency recovery loans, to the extent possible, emergency recovery projects can capitalize on the comparative advantage of using counterpart institutions that have proven implementation capacities and ability to work well with other institutions. For the SFERP, the existing implementing agencies of the SRP, with a strong record of implementation, have been nominated to implement the emergency project.

61. Lessons on CERC activation show that it is important to define the details of the CERC as much as possible in advance so that rapid activation can be achieved. To prepare for a future disaster, the WB will support the GoS in the strategic determination of the best value proposition for utilizing the CERC, as opposed to other available resource streams. The project will assess the capacity of the GoS and implementing partners to prepare the components and implement potential response and early recovery projects. Capacity-building activities will focus on aspects such as: (i) the mechanism for activating the CERC; (ii) development of the main instruments under the CERC (e.g., Emergency Action Plan); (iii) coordination and implementation arrangements; (iv) procurement, financial management (FM), and disbursement aspects; (v) compliance with safeguard policies; and (vi) M&E.

62. Frontloading disbursements, including retroactive financing, can enable the support of immediate response needs as well as a resilient recovery. Project activities have been prioritized to include those with higher potential for frontloading, including CfW, community infrastructure reconstruction, resilient asset creation, and water drainage. The project will also utilize WB technical assistance for activities such as infrastructure standard reviews and land use planning in the near term, together with project activities to ensure reconstructed assets contribute to building longer-term resilience beyond the immediate flood response.

63. The project focuses on strengthening institutional and systemic capacities to prepare for and manage disaster and climate risks, with an emphasis on gaps exposed during the 2010 and 2022 floods. According to the 2022 PDNA, the 2010 floods catalyzed the development of long-term disaster management and flood protection plans, but implementation was constrained due to lack of financing and limited capacity to utilize risk information in infrastructure and land use planning. The assessment further points to poor water resource management, lack of infrastructure maintenance systems, and limited disaster risk reduction capacity as factors that amplified the damages from the 2022 floods. Technical assistance activities, such as river basin management studies, climate-resilient road maintenance and repair, and flood modeling for hill torrents, are intended to address and enhance institutional capacities in the aforementioned areas.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

64. **The SID will be responsible for implementation of subcomponents 1.1 and 3.3 and Component 4.** The SRP Project Implementing Unit (PIU) under the SID has been designated as the responsible PIU for the SFERP. The PIU is well capacitated and is familiar with the Bank’s fiduciary, safeguards, and M&E requirements. The SID PIU will also utilize some funds under Component 4 for feasibility and technical studies.

65. **Given the multisector nature of other components of the project, the Sindh P&DD will be the implementing agency responsible for implementation of subcomponents 1.2, 1.3, 3.1, and 3.2, and Components 2 and 4.** The SRP PIU for the PDMA has been re-mapped to the P&DD with sectoral focal points from the PDMA Sindh, Public Health Engineering Department (PHED), W&SD, and LGD. Other line departments can also be included as required.

66. **The W&SD will play a leading technical role for implementation of subcomponent 1.2.** The W&SD will setup a dedicated Project Management Team, the head of which will represent the W&SD in the P&DD PIU, including being part of the Project Steering Committee (PSC). The W&SD will select roads based on criteria agreed with the WB, and bids received for the selected roads will be evaluated by the design and supervision consultant and will be cleared by the Project Procurement Committee (see Annex 1 for further details). As required, the contracts for roads or bridges rehabilitation and reconstruction can be co-signed by the W&SD. The W&SD will also have responsibility for implementation along with the PIU, including coordinating and interacting with contractors and the design and supervision consultant.

67. **The two implementing agencies—the SID and the P&DD—will have responsibility for project implementation including, but not limited to, reporting, M&E, social and environmental management, procurement, FM, audit, and disbursements, as well as coordination with the line agencies and the Bank.** The P&DD would be responsible for providing consolidated project and FM reporting. The implementing agencies may augment designated staff with additional short-term resources from the market on a needs basis to cater for specific specializations and skill sets not readily available within the two institutions. A PSC, chaired by the Chairman of the Sindh Planning and Development Board, will be responsible for overall coordination and oversight of implementation, including recommendation/approval of schemes to be financed by the project under the framework approach. The institutional mapping of project components is provided in Table 1.

Table 1. Institutional Mapping of Project Components

Component	Implementing Agency	
Component 1: Infrastructure Rehabilitation		
Subcomponent 1.1: Rehabilitation of Irrigation and Flood Control Infrastructure	SID	-
Subcomponent 1.2: Restoration of Roads and Allied Infrastructure	-	P&DD

Subcomponent 1.3: Restoration of Water Supply Schemes	-	P&DD
Component 2: Livelihoods Support		
Component 2: Livelihoods Support	-	P&DD
Component 3: Institutional Strengthening for Resilience and Technical Assistance		
Subcomponent 3.1: Expansion of Sindh Emergency Rescue Service	-	P&DD
Subcomponent 3.2: Enhancing Preparedness Capacity for Disasters	-	P&DD
Subcomponent 3.3: Strategic Studies for Integrated Irrigation, Drainage, and Flood Protection Systems	SID	-
Component 4: Project Management and Operational Costs		
Project Management and Operational Costs	SID (50 percent)	P&DD (50 percent)

68. **Management Information System (MIS):** Given the cross-sectoral implementation arrangement and including last mile delivery at the community level, a comprehensive geo-enabled MIS will be established to serve as the backbone of project implementation. All assets created will be mandatorily geo-tagged. The MIS will include a data management system that will process all information related to beneficiaries, disbursements, verification, and monitoring. Under a cascade information flow approach, the field staff from the SMP and supervision consultants as well as beneficiaries will be able to directly upload information to the MIS through their smartphones, which will then be consolidated and verified centrally by relevant staff at the PIUs. This will be done in coordination with the proposed SFEHRP. The project will explore the use of machine learning and satellite image for cross-quality checks.

69. **Project Operations Manual (POM):** The project will be implemented according to the guidelines and procedures outlined in the POM, which should be adopted within 30 days of project effectiveness and reviewed periodically. The POM will lay out the roles and responsibilities of different stakeholders and provide details of project processes and the project cycle.

B. Results Monitoring and Evaluation Arrangements

70. **The implementing agencies, through the PIUs, will be responsible for the overall project M&E and regular reporting to the WB.** Accordingly, the PIUs will: (i) collect and report on project performance data (including physical and financial progress); and (ii) provide periodic information on intermediate project results and progress toward higher level outcomes. Relevant line departments will assist the PIUs by providing relevant information. Throughout project implementation, the implementing agencies will prepare bi-annual progress reports. The project will finance gathering of baseline data to assess social, environmental, and economic impacts of key activities. The project outcomes and impacts will be evaluated through outcomes and intermediate level indicators as defined in the project's results framework.

71. **A combined impact assessment for all three emergency operations—SFERP, SFEHRP, and SWAT emergency flood response components—will also be undertaken to analyze the effect of proposed interventions on female beneficiaries, including female-headed households, over the course of the project's lifetime.** Using both quantitative and qualitative methods, the study will assess how lives of



female beneficiaries have changed post-2022 floods and track their recovery. It will pay particular attention to improvements in: (i) women’s socioeconomic conditions such as increase in their household income, disaster-related debt, and improvement in housing quality; (ii) changes in social relations such as participation in village activities and level of influence (access to decision-making); and (iii) the extent to which women were able to make a resilient recovery (which also includes increase in knowledge of GBV services in their areas). The findings will help evaluate if the project was successful in considering the gendered impacts of floods and post-disaster needs of women when achieving its medium and longer-term objectives. The results from the assessment can also be useful for the design of future Bank operations as well as potential government policies around DRM, gender, and social protection.

C. Sustainability

72. **Infrastructure sustainability.** The project will adopt a “build back better” approach informed by the lessons of the 2010 floods for the rehabilitation and reconstruction of damaged infrastructure. Infrastructure investments will incorporate: (i) improved engineering standards, including resilience to a higher climate event return period, in accordance with building codes, engineering standards, and construction regulations, or improving them where needed; (ii) appropriate energy efficiency measures where relevant; and (iii) good practices to improve the long-term sustainability of public infrastructure. Expert engineering, technical assistance, technical audits, and on-site construction monitoring support will help enhance building quality and extend the durability of infrastructure.

73. **Improving recovery planning and rehabilitation capacities.** While the investments of the project have been selected to support critical infrastructure needs, the GoS will also benefit from a more systemic approach for rehabilitation and recovery. The project will also provide support for the preparation and implementation of a Sindh recovery plan.

74. **Political commitment is needed for successful implementation of the project.** The SFERP has strong institutional buy-in from the GoS given the scale and impact of this disaster. Experience from previous Bank projects reinforces the recognized principle that integration with existing government institutions and processes can increase political commitment and help leverage the project’s influence. The implementation arrangements for the SFERP follow government mandates and institutional responsibilities. Each component is implemented by the institution that would be responsible for its ongoing management to ensure the sustainability of these activities.

75. **Infrastructure investments can be leveraged to deepen institutional reforms.** The project will complement a set of policy and institutional actions that are part of the GoS’s Reform Commitment Plan agreed with the Bank. At the forefront, a key reform relates to improvement in water charges collection by implementing a digital water charges collection system for irrigation schemes. The lack of a cost recovery mechanism contributes to low water productivity and poor maintenance, decreasing the resilience of the irrigation system. Further reforms relate to institutionalizing disaster preparedness systems by establishing the Sindh Emergency Service and to improving irrigation service delivery and building long-term resilience in water and agriculture sectors through approval of the Sindh Water Policy and a new Water Law. The latter is being directly supported through SWAT.



IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic, and Financial Analysis

76. **Framework approach.** The project design uses a framework approach based on several years of international recovery and rehabilitation experience. For successful recovery and reconstruction, it is crucial that the province can start the planning and implementation process as soon as possible. The project aims to provide the necessary resources and technical assistance to the GoS to prepare and implement an efficient recovery and rehabilitation plan. Project preparation has been expedited to allow for immediate response, with significant flexibility, and with several details deferred to the POM.

77. **Reconstruction versus replacement.** The technical approach will consider rehabilitation of structures whenever technically and financially feasible. Where the existing infrastructure quality does not allow for structural strengthening, the project will consider demolition and reconstruction. Demolition and new construction will be undertaken when the cost of strengthening approaches the replacement cost of the infrastructure. The evaluation of the replacement value will include all costs associated with reconstructing as per current standards and codes, including demolition of the existing infrastructure and other costs associated with the construction process.

78. **Readiness of implementing agencies.** The project builds upon existing implementation arrangements of Bank-funded projects. The PIUs are fully staffed and are particularly well suited to undertake implementation of the project as they have experience implementing Bank projects through the SRP, which became effective in October 2016 with the objective to mitigate flood and drought risks in selected areas and strengthen Sindh's capacity to manage natural disasters and public health emergencies. The PIUs are therefore familiar with similar infrastructure operations and have firsthand knowledge of Bank requirements for procurement, FM, and M&E functions. In addition, the select design and supervision consultants have been mobilized and are supporting the procurement of emergency works, including the fulfillment of the Bank's fiduciary and safeguards requirements, some of which are potentially subject to retroactive financing. The SMP is selected based on three key criteria: institutional presence and mobilized field staff across the flood-affected areas of Sindh; possession of household level data for at least the nine worst affected districts in Sindh; and proven past and current partnerships with the GoS on service delivery. Technical consultants for each of the project components will be hired before effectiveness to ensure effective and timely implementation.

79. **Retroactive financing.** The project may support retroactive financing of up to 40 percent of the loan amount. The retroactive financing would be allowed under the following conditions: (i) the activities financed are included in the project description; (ii) the payments are for items procured in a manner consistent with Sections I, II, and III of the WB Regulations for Borrowers, applicable under streamlined procurement processes; and (iii) the payments were made by the Borrower not more than 12 months before the expected date of the signing of the project legal agreement for the Bank loan. Efforts will be made to review the procurement process to determine whether previous contracts are consistent with the Bank's Core Procurement Principles and the Bank's Anti-Corruption Guidelines. At minimum, the authorization consistent with the GoS's own documented procedures shall be reviewed. It will be ensured that the supplier/contractor had a legally registered business prior to award of contracts. As additional due diligence, beneficial ownership details may be obtained. For each contract, the Bank's technical team



members will confirm the relevance of the activity to flood response. E&S risks will further be accounted through E&S audits. Relevant and appropriate E&S documentation (e.g., E&S checklists, Environmental and Social Management Plan [ESMP]) will be prepared by the SID for each of these retroactively financed activities, commensurate to the risk magnitude. An E&S audit will be conducted, and corrective actions will be suggested if required. Regarding capacity, the SID has adequate knowledge and capacity on E&S, and the P&DD will closely work with the SID PIU to leverage expertise and augment existing capacity. For FM, a strong audit system is already in place, including an internal audit firm, Director General Audit, and Accountant General's transactions audit (see Financial Management Technical Note). Additional due diligence will be exercised while making payments of retroactive financing and the Bank will review these cases in detail. The Bank may engage an internal audit firm for retroactive expenditures verification and check for the eligibility of these expenditures before making payments. Expenditures that do not qualify for retroactive financing will not be reimbursed.

80. **Climate resilience measures to be applied include:** (i) climate-resilient design, which augments the typical practice of using historical climate information as a basis for determining engineering specifications with forecast data and probabilistic methods for a more robust design based on climate change considerations and the relevant climate change scenario; (ii) drainage structures such as open channels, culverts, and subsurface pipes to prevent road deterioration, increase capacity, and improve flow conveyance, particularly in flood-prone areas; (iii) adjusting the level of flood protection based on the risk assessment (raising the embankment elevation for the most vulnerable areas only), undertaking minor realignment, or constructing concrete pavement in low-lying areas or flooding hotspots; and (iv) rehabilitation and/or reconstruction of flood-damaged road segments, drainage structures, bridges, and other major structures to adapt to the changing hydrology and projected flooding intensity in project areas. To ensure sustainability, future maintenance costs will be estimated and included in the GoS's subproject completion report. Standards for climate-resilient design will be adopted to withstand the increased rainfall intensity or frequency per the relevant climate change scenario. In addition, selection and design of flood protection structures shall be consistent with the recommendations of the 2013 regional flood management master plan for the Left Bank of the Indus, delta, and coastal areas resilience.

81. **Global knowledge.** The project will seek to leverage established global knowledge of the WB, considering best practice on water resources engineering, recovery, and reconstruction in historical and urban environments, resilient critical infrastructure, flood protection and irrigation infrastructure, transport asset management, and community-level livelihoods recovery.

82. **Given Sindh's heightened vulnerability to natural disasters, the project aims at restoring livelihoods, rebuilding, rehabilitation, enhancing disaster and climate resilience, and improving technical skills of personnel at concerned departments.** Most of the flood-affected population is poor, and a significant proportion of those most affected are women and children. The project will address the issue of poverty and will create beneficial distributional effects as benefits of the project will accrue, disproportionately, to the poor.

83. **The project is expected to have multiplier effects with multidimensional benefits.** The project will result in restoration of livelihoods, provision of shelter, improved infrastructure, reduced income inequality, resilient infrastructure, skilled human resources to better manage disasters, better road connectivity, reduced risk of deaths and injuries in the future, and restoration of economic activity along



with fiscal resilience. The project aims at rehabilitation of irrigation infrastructure, restoration and upgradation of roads network, improvement of road safety infrastructure, and restoration of water supply schemes. These interventions will restore social and economic activities, the benefits of which can be estimated for years to come. More specifically, the benefits of infrastructure rehabilitation and reconstruction will result in less damages to crops, livestock, houses, and public buildings, and in reduced land erosion. Investment in water supply schemes will make safe water available for different uses. Road reconstruction will generate an immediate effect on economic activity through work opportunities and boosting the local economy. Estimates of the present value of these future benefits for the next 10 years are US\$1.29 billion (Table 2).²⁷

84. **The CfW program will restore livelihoods through creating decent work opportunities and managing much-needed cash flows, especially for vulnerable segments of society.** The benefits of this intervention are estimated through multiplier effects of incomes received by people and utility generated through rehabilitation of local-level public or community assets. The benefits of this intervention are expected to be US\$27 million.

85. **The project aims at institutional strengthening of and expanding services delivered by the Sindh Emergency Rescue Service and enhancing the prepared capacity of line departments for floods.** This is estimated using reduced damages/losses due to more skilled human resources available to deal with natural disasters such as floods and based on the multiplier effect of expenditure. The estimated benefits of these interventions are US\$60 million.

86. **Project interventions are expected to enhance disaster resilience, which will save lives and injuries in the future.** The benefits of the saved lives and injuries are estimated using Value of Statistical Life (VSL) and Value of Statistical Injury (VSI). The estimated savings in lives and injuries are valued at US\$37 million.

87. **The cumulative present value of all these benefits is estimated at between US\$1.38–US\$1.43 billion, with an average value of US\$1.4 billion.** As the cost of the project is US\$500 million, the expected benefit–cost ratio ranges between 2.77 to 2.85, with an average value of 2.81. The range of the benefit–cost ratio indicates good value for money.

Table 2. Benefit–Cost Ratio of SFERP (US\$ Million)

Benefit Description	Lower Limit	Upper Limit	Average
VSL Saving	15.40	54.91	35.15
VSI Saving	0.59	2.35	1.47
Crops Saved	34.99	34.99	34.99
Livestock Saved	204.36	204.36	204.36
Houses Saved	732.48	732.48	732.48
Public Infrastructure Saved	82.81	82.81	82.81
Value of Land Erosion Saved	1.35	1.35	1.35

²⁷ The multiplier effects associated with reconstruction works are not accounted for; therefore, the estimated benefits presented in this analysis are considered conservative.



Benefits of Road	86.47	86.47	86.47
Institutional Strengthening	34.71	34.71	34.71
Project Management	25.00	25.00	25.00
Water Supply Scheme Rehabilitation	138.74	153.46	146.10
Livelihood Restoration	27.27	27.27	27.27
Projected Value of Benefits	1,384.17	1,425.45	1,404.81
Cost of the Project	500.00	500.00	500.00
Benefit–Cost Ratio	2.77	2.85	2.81

B. Fiduciary

(i) Financial Management

88. **The project will be implemented by existing PIUs under the SRP.** The SID has an established PIU with sufficient FM capacity to manage project activities, while the second PIU under the P&DD will hire additional resources and work closely with the SID PIU to augment existing capacity. The P&DD PIU will manage the activities of various entities including the Agriculture Department; Livestock Department; Environment, Climate Change and Coastal Development Department; PDMA Sindh; LGD; and PHED. Other line departments can also be included as required. The SID PIU will only be dedicated for SID activities of the project.

89. **The FM arrangements should be adequate as per the requirements of Bank Policy for IPF, revised in October 2018.** The project will be a part of the GoS’s annual development budget. The New Accounting Model (NAM), which includes the Chart of Accounts prescribed by the Auditor General of Pakistan, will be used for the project. External audit for the project will be conducted by the Directorate General Audit Sindh, which is a subordinate office of the Office of the Auditor General of Pakistan. The annual audit report and management letter will be required to be submitted to the Bank within six months of the close of fiscal year. Financial MIS will be linked with the geo-enabled monitoring system to support standard FM procedures and protocols.

90. **The project will open two Designated Accounts (DAs) for each of the implementing agencies as per the Revolving Fund Assignment Account (RFAA) Revised Procedure 2022.** The implementing entities will be individually responsible for their payments as per the Financing Agreement. Disbursements will be based on a bi-annual cash forecast provided in the bi-annual interim unaudited financial reports (IUFs), which will be prepared and submitted at the individual DA level by the P&DD and SID component within 45 days of the end of each six months. As a standard practice, each implementing agency is required to prepare separate IUFs; however, statements will be consolidated at the P&DD level.

(ii) Procurement

91. **Procurement activities will be carried out following the WB’s Procurement Regulations for IPF Borrowers (Procurement in Investment Project Financing, Goods, Works, Non-Consulting and Consulting Services – Fourth Edition, November 2020).** Some of the procurement activities may follow the provincial procurement procedures (national market approach) subject to conditions specified in the



procurement plan approved by the Bank. The project will be subject to the WB's Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants (revised as of July 1, 2016, Anti-Corruption Guidelines).

92. **A Simplified Framework Project Procurement Strategy for Development (PPSD) will be developed collaboratively by both PIUs with the Bank's support.** However, its finalization has been deferred as per flexibilities allowed under streamlined procurement approaches for emergency operations. The PPSD would be centered on outlining the fit-for-purpose procurement arrangements that suit the situation and that most efficiently achieve the PDO. Specifically, procurement under the SFERP, initially for one year, will use streamlined procurement methods and arrangements, including unlimited threshold for request for quotations for goods, works, and non-consulting services; using "Selection Based on Consultant's Qualifications" for consulting services; reduced bid preparation period; suspension of standstill period; use of Bid Securing Declaration rather than bid security; up to 40 percent advance payment against unconditional bank guarantee; using UN agencies (such as the United Nations High Commissioner for Refugees, the United Nations Children's Fund, the World Food Programme, the United Nations Office for Project Services); and waivers for performance security in the case of small contracts for works or supply of goods. Based on these streamlined procurement methods and arrangements, the most appropriate procurement arrangement will be designed for each of the contracts, when available, and included into the procurement plan for the approval by the Bank. A brief explanation on the agreed procurement method and market approach shall be recorded. Some damaged flood protection schemes, construction of small dams, rural roads, municipal and farm-to-market roads, damaged water supply and sanitation infrastructure have already been identified and will be included in the initial procurement plan. These streamlined procedures will be available for the first year of the project implementation, after which the procurements will revert to the prevailing country thresholds of the Bank. Exceptions may be allowed on a case-by-case basis where justified.

93. **A design and supervision consultancy will be procured for each implementing agency to provide overarching technical support.** For Component 1, a design and supervision consultancy, which will cater to all civil works requirements of the component, will be procured through an international market approach using a quality and cost-based selection method. The consultancy will follow a framework contract approach commensurate with the identification of works. Component 3 will consist of several consultancy packages to support technical assistance activities to expand the Sindh Emergency Rescue Service, enhance preparedness for natural disasters, and conduct strategic studies for integrated irrigation, drainage, and flood protection systems.

94. **The procurement arrangements at implementing agencies are already in place and have been determined as effective.** The Bank team finds that: (i) the project agencies have experience with implementing procurement under WB-financed projects in the past, through implementing the SRP; and (ii) the project team, including the procurement specialist, is in place.

95. **The key procurement related risks include:** (i) frequent turnover of procurement staff; (ii) prospective consultants/suppliers/contractor/service providers lack skill in managing environmental, social, and health and safety risks; (iii) inadequate capacity of various audit entities to understand the procurement requirements and identify deviations and violations that are not referenced to correct legal requirement; (iv) complex procurements; and (v) risk of fraud and corruption in public procurement as



duly documented by the National Accountability Bureau and Transparency International. To mitigate these risks, the following measures have been agreed with the project implementing agencies: (i) notice period of resignation of project staff can be increased to three months; (ii) inclusion of qualification requirements for necessary experience with environment, social, and health and safety management into procurement documents, and familiarization of prospective consultants and bidders in pre-proposal conference and pre-bid meetings about environmental, social, and health and safety risks; (iii) all key procurement documents will clearly refer to procurement arrangements stated in legal agreements and there will be Joint Procurement Clinics with the decision-making staff of the project implementing entities to contextualize the legal application of procurement regulations and the procurement staff of project implementation agencies leads discussions in audit process related to procurement aspects; and (iv) for the fraud and corruption risks, the following measures will be instituted:

- Procurement Clinics will be held with a focus on detecting red flags.
- Mandatory training of relevant fiduciary staff on the Bank's Procurement Regulations and Contract management practices.
- Selection of Procurement Specialist, Financial Management Specialist (FMS), and Contract Management Specialist (if required) will be subject to prior review.
- Market outreach will be undertaken for large value and complex procurements. Event information will be disseminated through electronic and print media on various forums to ensure that all interested parties are given the opportunity to exchange ideas with the procuring agency. An Overview Document for the market outreach event shall be prepared, which will broadly explain the technical requirements, bidding process, and expectation of qualifications, and shall be made accessible to all concerned and interested parties/firms.
- Every procurement publication will have a link to the applicable complaint/grievance redress portal.
- For enhanced transparency, the pre-bid/pre-proposal conferences, technical proposal submission meeting, financial proposals, and bid opening meetings shall be video recorded and proceedings uploaded on the project's website within 60 minutes of the conclusion of such meetings.
- Minutes of bid opening, technical proposal submission, and financial proposal opening shall be uploaded on the project's website on a real time basis.
- Detailed guidance will be provided in the POM regarding conflict of interest and transparency measures. In terms of code of ethics, measures will be provided in the POM which will take into account willful deviations from procurement processes.
- Monitoring of critical civil works stages by Project Supervision and Implementation Assistance Consultants through drone cameras, the images of which will be uploaded on the project's website.
- Assessment of Indicators of Fraud and Corruption and Integrity Vice Presidency's Red Flags during implementation support missions.
- Information on beneficial ownership shall be solicited.
- Conflict of interest undertaking by all staff of the PIUs.
- Internal audit will be independent of the PIUs.

96. **Oversight and Monitoring.** The Bank team will conduct annual (or ad hoc as needed) procurement post review in addition to prior review as required in the procurement plan and regular implementation support missions. External oversight is performed by the Auditor General of Pakistan, Competition



Commission, Federal Investigation Agency, National Accountability Bureau, Public Accounts Committee, and the Public Procurement and Regulatory Authority. These entities have national and subnational mandates and are directly and indirectly associated with various stages of procurement and contract management. Internally, the entity is required to follow delegation of financial powers whereby procurement transaction from planning, bidding, award, and payments follow a defined hierarchy culminating at principal accounting officer (head of the implementing agency). These mechanisms ensure an adequate internal and external oversight of procurement that provides timely and regular feedback, for example through procurement audits and reviews.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

97. **Environment:** The project interventions will have overall positive impacts through post-disaster recovery and rehabilitation activities and will strengthen the capacities and resilience of the GoS and communities to climate-related disasters. However, the contextual risks and potential environmental risks anticipated from the project investments are deemed substantial due to nature of the project design prepared in emergency, limited knowledge about the exact scale, design, and locations of project investments, institutional capacities of implementing agencies, and general implementation challenges. Component 1 will support multisector rehabilitation and construction of infrastructure (medium to large scale) for which moderate to large-scale construction/civil works-related environmental risks and impacts are anticipated, such as pollution and nuisance (dust, noise, visual degradation of landscapes, debris, and other solid waste generation, potential ground/surface water contamination, community nuisance and safety concerns due to traffic increase), worker occupational health and safety (OHS), and concerns related to the spread of waterborne diseases. Component 2 will involve minor civil works-related environmental risks as the interventions can have OHS and community health and safety (CHS) risks for communities, community workers, and those will be engaged in labor-intensive community rehabilitation/cleaning works. Component 3 will support the construction of rescue and response centers in a few districts; however, the anticipated civil works-related environmental risks anticipated are temporary and moderate to low-scale.

98. **Projects on International Waterways OP 7.50:** Under Component 1, civil works of US\$250 million will be carried out to rehabilitate existing irrigation and flood control infrastructure and water supply schemes in rural areas. Rehabilitation of irrigation and flood control infrastructure will mostly be in the districts on the right bank of the Indus River, in proximity of Manchar Lake. OP 7.50 Projects on International Waterways policy has therefore been triggered. An exception to the notification requirements under paragraph 7 (a) of the policy has been applied as the works are limited to rehabilitation and do not cause any appreciable harm. The exception to the notification requirement was approved by the South Asia Regional Vice President on November 3, 2022.



99. **Social:** Key social risks of the project are associated with the exclusion of potential beneficiaries due to limitations in targeting mechanisms and elite capture; potential displacement; land use; livelihood impacts, given that specific information on exact locations and scale of project investments are not fully known at this stage; labor and labor related OHS risks; and CHS risks. Beneficiaries' selection for the livelihood component and CfW program proposed under Component 2 is critical to avoid potential GBV and sexual exploitation and abuse/sexual harassment (SEA/SH) risks, exclusion, and elite capture. The primary risk will arise from incomplete or otherwise compromised identification of potential beneficiaries. Incomplete or poorly designed surveying and poor records management can result in the most vulnerable segments of communities being overlooked during the targeting phase, excluding them from receiving project benefits and leading to disturbances in community dynamics, increased inequality, and additional marginalization of already marginalized groups. The SEA/SH risk has been assessed as substantial in the case of CfW programs under Component 2. Such activities may result in the exploitation of economically disadvantaged or otherwise vulnerable individuals by project staff involved in the implementation of the programs or by other project beneficiaries. Other social risks of the project are associated with construction activities under Component 1, including OHS risks to community workers and project labor, traffic safety issues, temporary displacement of people, and impacts on cultural heritage. For risks associated with land, land use, and potential economic and/or physical displacement, mitigation measures will be put in place per Environmental and Social Standards (ESS) 5 requirements that will be outlined in the Resettlement Policy Framework (RPF). The project will ensure that the areas that are affected by Anti-encroachment Drive (AED) and that fall under project districts (which is highly unlikely) shall be excluded from the project. The project will send a letter to the Bank confirming that the area is not affected by the AED. Any exception to this will be considered on a GoS request, based on the Resettlement & Rehabilitation Framework being separately prepared by the GoS. Based on the above, the social risk is rated Substantial.

100. **Environment and Social Management Instruments:** ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10 are relevant to the project. All the E&S instruments will be prepared and adopted in accordance with the timelines set out in the Environmental and Social Commitment Plan (ESCP).²⁸

101. **Since the project will be implemented across Sindh and the exact location of the activities supported by the project are not precisely known, a framework approach will be adopted and the Environmental and Social Management Framework (ESMF) and RPF will be prepared within 60 days of project effectiveness.** The relevant requirements on OHS, CHS, GBV/SEA/SH mitigation, waste management and pollution prevention plans will be included in the ESMF. The Borrower will also prepare Labor Management Procedures under ESS2 within 60 days of project effectiveness. In addition, since the SEA/SH rating is substantial, a standalone SEA/SH (GBV) Action Plan will be prepared within the same timeframe, containing details for Codes of Conduct for workers, behavioral standards for project actors, sensitization and trainings for implementing agencies, awareness raising for community members on SEA/SH, recruiting of a GBV service provider, and a grievance redress mechanism (GRM) responsive to SEA/SH complaints. The respective implementing agency will prepare and implement site specific instruments (ESMP/checklists) prior to commencement of any civil works and/or procurement. The ESCP has been prepared and agreed with implementing agencies detailing commitments with timeframes of E&S instrument preparation, adequate organizational structure, and capacity-building measures.

²⁸ ESCP and SEP were disclosed by Government of Sindh on the following websites: <https://srppdma.com.pk/reports.php> and <http://srp irrigation.gos.pk/docs/>



102. **Citizen Engagement (CE):** CE mechanisms will form an integral part of the project to enable effective two-way interactions with citizens, including community and beneficiary consultations at all stages of the project, from design to implementation. The project Stakeholder Engagement Plan (SEP) will guide all such interactions as it identifies major affected parties and vulnerable groups, along with the needs and issues for communication and the methods to be used for engagement with each type of group type. The CE mechanisms will help adaptive management in the project, and design and provide services based on the needs of beneficiaries, especially under Component 2. Moreover, a beneficiary feedback indicator focusing on the project’s outreach and effectiveness will be added to the Results Framework, which will be measured periodically.

103. **Gender:** Women in Pakistan, including Sindh, are labor, asset, and skill-constrained in comparison to men, which reduces their ability to cope with and adapt to natural disasters. Most are employed in agriculture, which is among the most impacted sectors during flood events. Women also spend up to 14 hours a day working on family farms or enterprises without pay, as well as harvesting water and fuel.²⁹ Yet, despite their importance to the rural economy, women in Sindh have limited ownership and control of productive resources, as well as constrained access to credit and other financial services. Coupled with their lack of basic literacy, skills, mobility, and social capital, women are hindered from accessing post-disaster relief goods and other forms of assistance or adapting their livelihoods in line with rapidly changing circumstances in post-disaster contexts.³⁰ Because they are primarily responsible for subsistence production and domestic caregiving—activities that become increasingly time-intensive during shocks—women experience even greater levels of time poverty in the aftermath of natural disasters, which reduces their ability to engage in productive activities or learn new skills to adapt to flood-induced income losses and other shocks. Older people, differently abled persons, and informal women workers are at particular risk of being excluded from rescue operations and preparedness programs due to increased constraints on their time and mobility compared to other households.³¹ This issue is compounded by the low capacity of disaster management agencies to collect disaggregated data and align their operations with the post-disaster needs and constraints of vulnerable groups.³²

²⁹ Food and Agriculture Organization. 2015. “Women in Agriculture in Pakistan.” <https://www.fao.org/3/i4330e/i4330e.pdf>; Government of Pakistan. 2022. “Key Findings of Labour Force Survey 2020–21.” Pakistan Bureau of Statistics, Islamabad. https://www.pbs.gov.pk/sites/default/files/labour_force/publications/lfs2020_21/Key_Findings_of_Labour_Force_Survey_2020-21.pdf.

³⁰ Government of Pakistan. 2022b. “National Gender Policy Framework.” Ministry of Planning and Development, Islamabad. <https://www.pc.gov.pk/uploads/report/NGPF.pdf>; UN Women. 2018. “Rural Women in Pakistan: Status Report 2018.” <https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEA/Docs/Publications/2018/08/Status-of-the-Rural-Women-in-Pakistan-Report.pdf>; Stimson Center. 2022. “Pakistan Floods: Women Should Be at the Forefront of Relief Efforts and Future Climate Policies.” <https://www.stimson.org/2022/pakistan-floods-women-should-be-at-the-forefront-of-relief-efforts-and-future-climate-policies/>; Government of Pakistan. 2022. “Labour Force Survey 2021–21.” Pakistan Bureau of Statistics, Islamabad. https://www.pbs.gov.pk/sites/default/files/labour_force/publications/lfs2020_21/LFS_2020-21_Report.pdf; Global Facility for Disaster Reduction and Recovery. 2021. “Gender Dimensions of Disaster Risk and Resilience: Existing Evidence.” <https://openknowledge.worldbank.org/bitstream/handle/10986/35202/Gender-Dimensions-of-Disaster-Risk-and-Resilience-Existing-Evidence.pdf?sequence=1&isAllowed=y>.

³¹ Ibid.

³² Global Facility for Disaster Reduction and Recovery. 2019. “Gender Equality and Women’s Empowerment in Disaster Recovery.” <https://www.gfdrr.org/sites/default/files/publication/gender-equality-disaster-recovery.pdf>; Global Facility for Disaster Reduction and Recovery. 2021. “Gender Dimensions of Disaster Risk and Resilience: Existing Evidence.”



104. **Due to the constraints on women’s mobility, time, and public participation, their needs and aspirations are often neglected in post-disaster recovery operations, including road, water supply, and irrigation reconstruction activities.** For example, women’s caregiving responsibilities may leave them with little time to participate in the development of reconstruction and rehabilitation plans.³³ As a result, dimly lit roads and poorly designed water and sanitation facilities may be ill-suited to their needs.³⁴

105. **Climate Change:** The SFERP will enhance the climate resilience of populations affected by the 2022 floods. The project will build climate resilience and mitigate flood risk by carrying out post-disaster resilient reconstruction of affected infrastructure, reviving livelihoods of affected communities, and strengthening the disaster response capacity of the GoS. Component 1 directly finances the resilient reconstruction of critical irrigation and flood protection infrastructure, water supply schemes, roads, and allied infrastructure. Component 2 will support community livelihoods through a CfW program as well as supporting smallholder livestock farmers. Component 3 will strengthen the disaster preparedness and response capacity of the GoS by establishing an emergency response service.

106. **The project is eligible for adaptation co-benefits** as it directly addresses the climate vulnerability of the flood-affected population through post-disaster resilient reconstruction of damaged infrastructure, livelihoods support, and improved climate-resilient capacities. In response to the vulnerability of Sindh to climate-induced disasters such as heatwaves and floods—a significantly greater risk in the province compared to other natural hazards such as earthquakes—the flood protection, irrigation, and road infrastructure will be built back better and climate resilient. Since climate change is the major driving force behind the investment, the project itself is an adaptation measure and therefore lends itself well to a proportional approach to attributing adaptation finance. Mitigation co-benefits will be incorporated by adopting renewable energy and energy efficiency measures in the rescue stations and offices of the Sindh Emergency Rescue Service.

V. GRIEVANCE REDRESS SERVICES

107. **Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB’s Grievance Redress Service (GRS).** The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB’s independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank’s attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank’s corporate Grievance Redress Service (GRS), please visit

³³ United Nations Development Programme. 2022. “Handbook on Owner-Driven Housing Reconstruction.”; World Meteorological Organization. 2019. “Gender Impacts of Weather and Climate: Evidence from Asia, Pacific and Africa.”

³⁴ Water collection areas are often not well lit and are lacking in security and safety measures, thus increasing the risks of violence faced by women. Also, the physical characteristics of the surrounding terrain for water sources may increase the difficulty of collecting water, or access to washing ghats/platforms are located far from the villages or in isolated areas. Carrying water over long distances can also have lasting adverse health effects.



www.worldbank.org/grs. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

108. **The overall risk of the project is rated Substantial.** The main risks and mitigation measures are described below.

109. **Political and Governance risk is Substantial.** The GoS demonstrates strong interest in the project, particularly in the context of the flood emergency in many parts of the country. While the interventions supported by this project are expected to remain a priority, the impetus for broader and deeper policy reforms and decision making may slow down particularly in the run up to the next general elections. Effectiveness of some project activities would benefit from stronger collaboration between the P&DD and SID. To address these institutional risks and ensure collaboration between the two institutions, the PSC will promote inter-department collaboration, ensure continuity of implementation, and support broader policy reforms. Regular meetings to support delivery and implementation are chaired by the Chief Minister, Sindh, with representation by relevant departments, the task team, and WB management. Furthermore, the risk of political capture, especially for Component 1 (infrastructure rehabilitation), will be mitigated by a defined framework for the selection and appraisal of infrastructure investments, which clearly articulates the criteria to select infrastructure investments (see Annex 1).

110. **Macroeconomic risk is High.** The recent floods have adversely impacted Pakistan's economic outlook and may delay implementation of overdue policy adjustment. Significant risks include potential worsening of external conditions, further natural disasters, and a slowdown or reversals in policy adjustment in the run-up to elections. Realization of these risks may lead to macroeconomic instability, with major impacts on economic activities, prices, and household incomes, thereby impeding achievement of project results. Risks are partly mitigated by the World Bank support to structural policy reforms in the fiscal and power sector areas, as well as the ongoing International Monetary Fund Extended Fund Facility program which supports sound economic management practices and continued progress on critical structural reforms. At the project level, it is expected that the GoS will prioritize the SFERP in allocating government financing given its potential to generate more labor-intensive employment and livelihood opportunities.

111. **Sector Strategies and Policies risk is Substantial.** This multisectoral project will require strong coordination among sectoral actors, which can be challenging. To mitigate this risk, project activities will be in line with sectoral policies, and integrated and cross-sectoral guidance for the P&DD PIU shall be ensured. Sector focal points from key line ministries will be designated to the P&DD PIU. The strategic importance of investing in resilient infrastructure and DRM needs will be highlighted to government counterparts through routine engagement and has also been underscored in the PDNA.

112. **Technical Design risk is Substantial.** Limited institutional understanding and experience of managing hazard and climate change risks is a challenge. The database on hydro-meteorological conditions in the project areas is also unreliable and the project design is complex due to the involvement of multiple subsectors and agencies. The project will seek to proactively address institutional constraints to effectively plan, mitigate, and respond to flood risks, particularly through strategic studies and



analytical work. Support will be provided for improved information and data to facilitate a fuller understanding of flood risks by the agencies involved. In addition, sustainability of infrastructure managed by the public sector may be impacted by limited availability of funds for operations and maintenance. This risk would be addressed by facilitating the GoS to adopt more effective policies for operations and maintenance of infrastructure, thereby improving the quality and enforcement of construction standards. The project will further mitigate risk by integrating climate resilience into selected infrastructure in consultation with the GoS, as well as the technical assistance activities of subcomponents 3.2 and 3.3.

113. **Institutional Capacity for Implementation and Sustainability risk is Substantial.** The SID has adequate capacity and experience of implementing several WB-supported projects. However, the P&DD PIU will need support to coordinate with different focal points/departments for successful multisectoral implementation. While the use of regular staff at the implementing agencies is envisaged to ensure a sustainable improvement of institutional capacities, the project will support the engagement of particular skillsets and specialized resources to augment existing staff to address gaps in implementation capacity. The project will support strengthening institutional, technical, operational, and financial capacities of the entities involved, social mobilization, and active participation of the communities. For infrastructure developed through the operation, interventions aimed at improving operation and management practices of involved departments will ensure adequate budgeting and allocation of government funds for the upkeep and continued operation of physical investments or assets throughout their design life.

114. **Fiduciary risk is Substantial.** The project will be implemented across various departments with FM arrangements managed by established PIUs. There are some small capacity issues in the P&DD PIU which will be addressed under the project. Capacity issues exist at the government and department level, resulting in substantial risks. To mitigate the FM risks, the project will have dedicated FM staff hired to support the proposed mitigation measures detailed in the Financial Management Technical Note.

115. **Environmental and Social risk is Substantial.** This is due to the potential environmental, social, and health and safety implications inherent to the scale, variety, number, and remote and disparate geographies of the emergency recovery works planned under the project. The risk also considers the post-disaster context of Sindh, including the implementing agencies' strained capacity and challenges to ensure efficient institutional coordination to effectively manage risks. The risks will be mitigated through the development, consultation, and application of a range of aforementioned E&S safeguard instruments. Additionally, throughout its implementation period, the project will be required to keep an active GRM whereby affected parties can submit complaints and concerns on how the project has/will affect them; the GoS is expected to address complaints submitted through the GRM. The Bank will regularly monitor the functionality of the project's GRM.

116. **Stakeholder risk is Substantial.** Given the project's multidisciplinary nature and the involvement of multiple stakeholders, many of whom are facing social and environmental vulnerability, inter-institutional coordination and cooperation between involved actors is necessary for achieving the PDO. At the institutional level, departments and sector agencies have not traditionally coordinated efforts efficiently—a risk that is augmented by emergency contexts. The P&DD has been given an implementation role to facilitate institutional coordination. Similarly, strong community engagement strategy and CE mechanisms will be used to facilitate participation, primarily for infrastructure investments and



livelihoods components. The project will also support a communications strategy to increase community awareness and improve transparency in project activities.

117. **Other risks (disaster risks) are Substantial.** Sindh is highly exposed to a range of natural hazards, including floods, cyclones, droughts, earthquakes, landslides, and tsunamis. The location of project areas and the unprecedented nature of the 2022 floods suggest a substantial risk from natural hazards. Occurrence of new natural disasters can undermine recovery progress and have direct effects on sustainability of certain activities. To mitigate these risks, the GoS, with support from the Bank and other development partners, will continue undertaking efforts to strengthen DRM related agencies. It is also expected that beneficiaries will receive training to prepare and respond better to future adverse natural events. Further, risk-sensitive technical design and implementation will mitigate disaster and climate risks.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Pakistan

Sindh Flood Emergency Rehabilitation Project

Project Development Objectives(s)

The project development objectives are to: (a) rehabilitate damaged infrastructure and provide short-term livelihood opportunities in selected areas of Sindh province affected by the 2022 floods; and (b) strengthen the Government of Sindh's capacity to respond to the impacts of climate change and natural hazards.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Infrastructure Rehabilitation			
People benefiting from rehabilitated infrastructure (Number)		0.00	2,000,000.00
Of which are women (Number)		0.00	1,000,000.00
Households protected through rehabilitated flood protection infrastructure (Number)		0.00	200,000.00
Livelihoods Support			
Beneficiary households receiving short-term livelihoods support (Number)		0.00	100,000.00
Of which female-headed households and households with vulnerable women (Number)		0.00	30,000.00
Institutional Strengthening for Resilience and Technical Assistance			
Operationalization of Government's integrated emergency		Integrated emergency response service existing in 7	Integrated emergency response services expanded to 16



Indicator Name	PBC	Baseline	End Target
service to manage disaster risks and climate impacts (Text)		districts	districts
Citizen Engagement			
Households reporting satisfaction with project interventions (Percentage)		0.00	80.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Infrastructure Rehabilitation			
Length of embankments rehabilitated or reconstructed as per improved design (Kilometers)		0.00	100.00
Households benefiting from restored water supply facilities (Number)		0.00	10,000.00
Length of roads rehabilitated or reconstructed (Kilometers)		0.00	150.00
Rehabilitated water supply and irrigation schemes per tehsil/taluka recommended by members of existing women's groups and community organizations (Percentage)		0.00	40.00
Land area benefitting from restored irrigation systems (Hectare(Ha))		0.00	150,000.00
Livelihoods Support			
Working days created (Number)		0.00	3,000,000.00
Rural activities completed (Number)		0.00	2,000.00
Funds from cash-for-work programs disbursed directly to vulnerable female-headed households, female home-based workers, female on- and off-farm workers and persons with		0.00	40.00



Indicator Name	PBC	Baseline	End Target
disabilities (Percentage)			
Institutional Strengthening for Resilience and Technical Assistance			
Districts where rescue services are operational (Number)		7.00	16.00
Recovery framework/plan developed (Yes/No)		No	Yes
Emergency management drills completed during project life (Number)		0.00	5.00
Strategic and feasibility studies completed for long-term resilience to disaster and climate risks (Number)		0.00	2.00
Women rescuers and management staff hired under Sindh Emergency Service (Percentage)		0.00	30.00
Vulnerable groups in target areas who report using psycho-social support services (Percentage)		0.00	50.00
New standards for design of resilient infrastructure (roads) adopted (Text)		No designs for resilience infrastructure (roads) prepared.	Designs for resilient infrastructure (roads) prepared and adopted by Works and Services Dept
Road Asset Management System fully functional (Text)		RAMS Unit formed.	RAMS fully functional and annual development plan prepared.

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
People benefiting from rehabilitated infrastructure	This indicator will measure the number of people benefiting from rehabilitated infrastructure	Annual	Design, Feasibility, and Completion	Primary and secondary data collection.	Planning and Development Department (P&DD) Sindh and Sindh



	financed by this Project. Beneficiaries are people or groups who directly derive benefits from the rehabilitated infrastructure.		Reports; and Project Monitoring Reports.		Irrigation Department (SID)
Of which are women	This indicator will measure the number of women benefiting from rehabilitated infrastructure financed by this Project.	Annual	Design, Feasibility, and Completion Reports; and Project Monitoring Reports	Primary and secondary data collection	P&DD Sindh and SID.
Households protected through rehabilitated flood protection infrastructure	This indicator will measure the number of households benefiting from restored flood protection infrastructure financed by the Project.	Annual	Design, Feasibility, and Completion Reports; and Project Monitoring Reports	Primary and secondary data collection	SID
Beneficiary households receiving short-term livelihoods support	This indicator will measure the number of households benefiting from short-term livelihoods opportunities through activities financed by this Project. To the extent possible, beneficiaries will be from the same target areas as the	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh



	Sindh Flood Housing Reconstruction Project.				
Of which female-headed households and households with vulnerable women	This indicator will measure the number female-headed households and households with vulnerable women (including women home-based workers, female on- and off-farm workers, female spouses of people with disabilities etc.) benefiting from short-term livelihood opportunities through activities financed by this Project. To the extent possible, beneficiaries will be from the same target areas as the Sindh Flood Housing Reconstruction Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Operationalization of Government's integrated emergency service to manage disaster risks and climate impacts	This indicator will measure the expansion of the integrated provincial emergency response service to additional districts financed under this Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Households reporting satisfaction with project interventions	The indicator measures the extent of beneficiaries expressing satisfaction with interventions financed by this Project.	Year 3 and End of Project	Beneficiary Surveys	Primary data collection	P&DD Sindh and SID



Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Length of embankments rehabilitated or reconstructed as per improved design	This indicator measures the aggregated length with rehabilitated and improved physical defenses to mitigate the risks of flooding in the adjoining areas financed by this Project.	Annual	Design, Feasibility, and Completion Reports; and Project Monitoring Reports	Primary data collection	SID
Households benefiting from restored water supply facilities	This indicator will measure the number of households benefiting from restored water supply facilities financed by this Project.	Annual	Design, Feasibility, and Completion Reports; and Project Monitoring Reports	Primary and secondary data collection	P&DD Sindh
Length of roads rehabilitated or reconstructed	This indicator will measure the aggregated length of roads restored or rehabilitated to resilient standards through the Project.	Annual	Design, Feasibility, and Completion Reports; and Project Monitoring Reports	Primary data collection	Works and Services Dept, P&DD Sindh



Rehabilitated water supply and irrigation schemes per tehsil/taluka recommended by members of existing women's groups and community organizations	This indicator will measure the percentage of rehabilitated water supply and irrigation schemes in each district financed by the Project that were selected through consultation with women.	Annual	Project Progress Reports	Primary data collection	P&DD Sindh
Land area benefitting from restored irrigation systems	This indicator will assess the land area that benefits from irrigation systems restored to resilient standards using Project financing.	Annual	Design, Feasibility, and Completion Reports; and Project Monitoring Reports	Primary data collection	SID
Working days created	This indicator will measure the number of workdays generated through the labor-intensive work programs under the Project.	Annual	Primary data collection	Project Monitoring Reports	P&DD Sindh
Rural activities completed	This indicator will measure the number of rural activities that are completed under this Project, disaggregated by activity type (clean water, sanitation, agroforestry, etc.).	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh



Funds from cash-for-work programs disbursed directly to vulnerable female-headed households, female home-based workers, female on- and off-farm workers and persons with disabilities	This indicator will measure the proportion of cash-for-work programs financed under this Project which cater to vulnerable communities including vulnerable female-headed households, female home-based workers, female on- and off-farm workers and persons with disabilities.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Districts where rescue services are operational	This indicator will measure the number of districts where rescue services having been operationalized through this Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Recovery framework/plan developed	This indicator will measure if a recovery framework/plan has been developed under this Project to enable effective recovery for disaster-impacted regions.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Emergency management drills completed during project life	This indicator will measure the number of emergency management drills that were completed to develop capacity related to emergency preparedness and response under this Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh



Strategic and feasibility studies completed for long-term resilience to disaster and climate risks	This indicator will measure the number of analytical outputs such as strategic and feasibility studies financed by this Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Women rescuers and management staff hired under Sindh Emergency Service	This indicator will measure the proportion of women rescuers and management staff hired for the Sindh Emergency Service under this Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
Vulnerable groups in target areas who report using psycho-social support services	This indicator will measure the proportion of vulnerable groups (including women, children, older people, persons with disabilities etc.) reported to have used psycho-social support services under this Project.	Annual	Project Monitoring Reports	Primary data collection	P&DD Sindh
New standards for design of resilient infrastructure (roads) adopted	The indicator will measure the extent to which the Works and Services Department have prepared and adopted new designs for resilient infrastructure development	Annual	Completion report, public ation of design standards	Primary data collection	Works and Services Dept, P&DD Sindh
Road Asset Management System fully functional	The indicator will measure the extent to the the Roads Asset Management System (RAMS) is made functional. Annual Development Plan are to be prepared which	Annual	Project progress reports.	Primary data collection	Works and Services Dept, P&DD Sindh



	should include an Annual Maintenance Plan coming from RAMS.				
--	---	--	--	--	--



ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Pakistan

Sindh Flood Emergency Rehabilitation Project

Implementation Arrangements

- 1. The GoS has designated the SID (for subcomponent 1.1, 3.3, and Component 4) and the P&DD (for subcomponents 1.2, 1.3, 3.1, 3.2; and Components 2 and 4) for implementation through dedicated PIUs, which will be responsible for implementation, planning, and monitoring.** All project implementation arrangements will be detailed in the POM, which will be prepared and adopted within 30 days after project effectiveness. A PSC will be responsible for overall coordination and oversight of project implementation.
- 2. An internal review (2020) of 26 WB emergency response and recovery projects concluded that they take longer to implement than regular investment lending and the time required to complete them is consistently underestimated at the design stage.**³⁵ The main challenges identified by the review were: (i) low government capacity due to an emergency situation; (ii) lack of base data for planning; and (iii) compressed project preparation period. These three challenges also apply to the project. The proposed implementation support strategy seeks to mitigate these risks by building on existing implementation arrangements, mobilizing at the earliest opportunity a surge in planning and implementation capacity, and early collecting of data that could inform the identification of activities under the framework approach of Components 1 and 2.
- 3. SID:** The SID has significant experience with implementation of Bank-funded projects, including the recent Sindh Water Sector Improvement Project (P084302), the SBIP, and the SRP. Based on the SRP PIU's strong performance in implementation of the project, the GoS has designated the SRP PIU as the SFERP PIU. The PIU has strong technical, fiduciary, and safeguards capacity and has completed complex infrastructure works under the ongoing project.
- 4. P&DD:** The P&DD is the primary department responsible for planning and evaluation of development schemes under multiple sectors in Sindh. The P&DD formulates development policies, reflecting the provincial government's priorities, regularly providing the government with critical development feedback. It also acts as a coordinating agency for development schemes (above PKR 200 million and up to PKR 10 billion). Schemes proposed by each line department require the P&DD's evaluation and approval. Through its role as a coordination agent between the departments and its liaison with the federal government, the P&DD is responsible for providing an enabling environment to optimize development in the province.
- 5. Currently, the Chief Minister of Sindh holds the planning and development portfolio in Sindh, further strengthening the P&DD's role for leading development initiatives and streamlining activities under all existing and upcoming projects.** Under the direct supervision of the Chief Minister, the P&DD

³⁵ Li, Jie, Edouard Ereño Blanchet, Qiyang Xu, Fen Wei, and Yaprak Servi. 2020. "Recovery Speed for Emergency Response and Disaster Management, a Review on Selected IDA/IBRD Projects."



has remained at the forefront of flood relief work, ranging from needs assessment to redirecting resources from current annual development programs to flood relief and rehabilitation work.

6. **The GoS's rules of business³⁶ empower the P&DD as the coordinating agency for all foreign funded projects.** Hence, foreign aid and technical assistance as well as maintaining liaison with national planning agencies for development purposes falls squarely within the P&DD's domain. The department has worked closely with leading international development organizations such as the WB, ADB, the United Nations Development Programme, the United States Agency for International Development (USAID), and the Japan International Cooperation Agency, and it holds significant experience in reviewing costs, supervision of development work, procurement, and design inputs of donor-funded projects. As the P&DD is responsible for overseeing implementation of WB-financed operations in Sindh, the department is familiar with the Bank's processes, including procurement, FM, and safeguards, which is useful for streamlining the envisaged PIU's activities. Examples of projects managed under the P&DD include the Karachi Neighborhood Improvement Project (WB-funded), Sindh Cities Improvement Project (ADB-funded), and Municipal Services Delivery Program (USAID-funded). In short, the P&DD's mandate and familiarity with the development landscape has given it technical expertise and institutional experience that are likely to result in the requisite capacity for its PIU to undertake the multisectoral activities under the SFERP.

7. **Under subcomponent 1.2, the P&DD will be responsible for rehabilitation of the road network and allied infrastructure.** There are several departments that are responsible for planning, constructing, and maintaining roads in Sindh, including the LGD, Tehsil Municipal Administration, Rural Development Department, and the W&SD. Due to the involvement of several departments, the urgent and multi-faceted nature of SFERP's components requires a PIU to not only be efficient but also garner departmental support. A centralized pooling of resources under P&DD's PIU is therefore likely to result in immediate mobilization and efficient utilization of resources, enabling timely completion of SFERP activities. The various departments have nominated their officials to be part of the PIU and will be members of the technical committee and the procurement committee. In particular the W&SD will play a leading technical role in identification and implementation of transport sector rehabilitation, along with the LGD. Rehabilitation of roads falling under the domain of other departments (LGD or Rural Development Department) will also be managed by the W&SD on a work charge basis through an inter-departmental Memorandum of Understanding.

8. **The W&SD will play a leading technical role for implementation of subcomponent 1.2.** The W&SD will set up a dedicated Project Management Team comprised of technical professionals from within the department, augmented by consultants if required. The head of the Project Management Team will de-facto represent the W&SD in the P&DD PIU, including being part of the PSC. The Project Procurement Committee will also have a W&SD representative as its member. The W&SD will select roads based on criteria agreed with the WB. The bids received for the selected roads will be evaluated by the design/supervision consultant and will be cleared by the Project Procurement Committee. As required, the contracts for the rehabilitation or reconstruction of roads and bridges can be co-signed by the W&SD. The W&SD will also have responsibility for implementation along with the PIU, including coordinating and interacting with contractors and the design/supervision consultant.

³⁶ Schedule II- Part 27.



9. **As with transport, there are also a number of entities involved in the water supply sector, in which subcomponent 1.3 must engage.** The two main departments include the PHED and LGD. Most of the selected damaged infrastructure was financed by the PHED. Considering the multiplicity of institutions involved in the sector, a centralized PIU under the P&DD with representation from departments will be better equipped to coordinate the immediate rehabilitation activities.

10. **Subcomponent 3.1 activities will also be implemented by the P&DD PIU and will be carried out with close coordination with the Rehabilitation Department.** To ensure sustainability of this service, the GoS is reviewing draft legislation (Sindh Emergency Rescue Services Act, 2022, and Sindh Emergency Rescue Services Regulation, 2022). Once approved, an autonomous authority for rescue services in the province will be established. Activities under this subcomponent will provide the foundational systems critical to establish a fully empowered and independent provincial rescue authority to increase resilience to emergencies in the long term.

Strategy and Approach for Implementation Support

11. **The Implementation Support Plan (ISP) for the SFERP has been developed based on the specific nature of project activities, the planned implementation schedule, lessons learned from similar emergency operations, the risk profile as identified in the Systematic Operations Risk-Rating Tool, and the fact that the project was prepared based on emergency procedures.** The ISP envisages frequent implementation support missions by the Bank's Task Team. The Task Team will monitor implementation progress through: (i) reporting against key performance indicators as outlined in the results framework; (ii) implementing agency level project reports and MIS; (iii) independent verification of progress through field visits; (iv) fiduciary oversight of implementing agencies' activities; and (v) regular communication with the departments and the implementing agencies.

Implementation Support Plan

12. **The following ISP reflects preliminary estimates of the skill, timing, and resource requirements over the implementation period of the project.** The ISP will be reviewed from time to time to ensure that it continues to meet the implementation support needs of the project.

13. **Technical:** In addition to regular implementation support missions, the Bank will mobilize technical specialists to support implementation, particularly in terms of adding value through knowledge sharing and cross-fertilizing experience from similar projects in other countries. The task team has included international experts during preparation that will continue to assist during supervision. The Bank's institutional expertise on risk identification, engineering, and strengthening of fiduciary and operational systems will also contribute to adequate implementation of interventions and achievement of development objectives.

14. **Procurement, FM, and E&S Safeguards:** The Bank's procurement, FM, and E&S safeguards specialists will provide regular implementation support and technical assistance to the counterpart teams during project implementation. These team members will also identify capacity-building needs to strengthen procurement, FM, and safeguard capacity of the implementing agencies.



15. **Tables A1.1 and A1.2 indicate the level of inputs and staffing that will be needed from the WB and the PIUs to provide implementation support for the project.** This will be reviewed and adjusted on a regular basis based on project needs.

Table A1.1. Implementation Support Plan

Time	Focus	Partner Role
First 6 months	Provide support for: <ul style="list-style-type: none"> • Successful start of project across all components. • Identification and prioritization of activities under Components 1 and 2. • Technical designs and specifications of resilient infrastructure. • FM systems functioning. • Procurement (PPSD and Plan early in place). • Environmental and Social Framework (ESF) instruments early in place as per ESCP. • Establishment of M&E system. 	<ul style="list-style-type: none"> • Task team to support smooth start-up. • Ensure safeguards, procurement, and FM on track. • Support PIUs.
6–60 months	<ul style="list-style-type: none"> • Ensure adequate implementation support of all aspects of project. • Monitor implementation of project activities, including site visits. • Support final evaluation and Implementation Completion and Results Report. 	<ul style="list-style-type: none"> • Ensure safeguards are kept on track. • Support PIUs. • Provide technical assistance.

Table A1.2. Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	60	15	
Technical Specialist (DRM)	20	10	International or field-based staff
Technical Specialist (Transport)	40	15	International or field-based staff
Technical Specialist (Water Supply)	40	15	International or field-based staff
Environmental Specialist	30	10	Field-based staff
Social Specialist	30	10	Field-based staff
FMS	30	10	International or field-based staff
Procurement Specialist	40	Local travel as needed	Field-based staff
Country Office Operational Support	60	Local travel as needed	Field-based staff
Consultants for Infrastructure Rehabilitation	75	Local travel as needed	Short-term consultant
Consultants for Livelihoods and CfW	75	Local travel as needed	Short-term consultant
Consultant for Safeguards and Inclusion	75	Local travel as needed	Short-term consultant
Consultant for Communications	10	Local travel as needed	Short-term consultant



Framework for Selection and Appraisal of Infrastructure Investments

16. **The criteria for the selection and appraisal of infrastructure investments to be financed under Component 1 is listed below.** A framework has been developed because the exact scope of the investments cannot be finalized before project appraisal as it requires participatory planning and prioritization with the GoS and communities in flood-affected areas. The framework provides a criterion for selection and prioritization of infrastructure investments according to relevance to the PDO, readiness, E&S constraints and risks, implementation capacity, cost, and sustainability.

17. **Criteria for Selection of Investments:** the following criteria shall be used for selection of enabling infrastructure investments to be considered for financing under the project:

- a. Selected infrastructure investments must be within the flood-affected areas targeted under the project and benefit the same areas and beyond.
- b. Selected investments must improve accessibility to key facilities such as water supply, district roads, markets, and health and education facilities.
- c. Selected investments must facilitate livelihood recovery of the flood-affected areas with focused consideration to poverty levels.
- d. Selected investments must be identified by the GoS based on prioritization and needs by beneficiary communities and local authorities.
- e. Selected investments shall complement, as applicable, other WB programs and coordinate with development partner interventions to maximize the livelihood benefits and enhance the resilience of the residents.
- f. Selected investments shall be cost-effective and cost-efficient. Where additional interventions are required to realize the full benefits of the investments chosen, financing for those must be confirmed before the package financed under this project goes to tender.
- g. Selected investments must be in line with the PDO and shall be based on build-back-better principles, enhancing resilience to climate-related hazards, and lessons learned from the 2010 floods.
- h. Selected investments must follow the social, environmental, procurement, and FM requirements of the WB and the GoS and obtain all required environmental and regulatory clearances ahead of any construction.
- i. Avoid any investment rated “High” as per the Environmental and Social Risk Classification under the WB ESF.

18. **Appraisal Criteria and Standards of Preparation:** the following appraisal criteria and standards of preparation shall apply:

- a. Following E&S screening, the necessary safeguard instruments will be prepared (e.g., Environmental and Social Impact Assessments, ESMP) and suitable mitigation measures for any significant impacts together with any residual project impacts should be detailed.
- b. Preparation should be based on an appropriate design horizon for each kind of asset, based on known hazard profile and vulnerability, forecasts of population, water use requirements, and project E&S impacts. These assumptions must be suitably validated by implementing comprehensive E&S monitoring.



- c. Selected investments should avoid areas of disputed land tenure and all areas that have recently been subject to AED/forced evictions (cut off 2020).
- d. A detailed Project Implementation Plan must be prepared for each selected investment with realistic timelines for each stage of preparation and implementation.
- e. Adequate budget provisions must be confirmed based on engineering designs and market rates, including price and physical contingencies as appropriate.
- f. Adequate consideration is to be given to the management arrangements, and operations and maintenance costs to ensure investments are sustainable from a financial and institutional point of view.
- g. Selected investments shall promote and adhere to international best practice and the requirements of the WBG Environmental, Health, and Safety Guidelines.
- h. Ensure the investment is not rated “High” as per the Environmental and Social Risk Classification under the WB ESF.