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Report No: PAD1297

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF

SDR88.9 MILLION
USD125 MILLION EQUIVALEN

TO THE

ISLAMIC REPUBLIC OF PAKISTAN

FOR A

DISASTER AND CLIMATE RESILIENCE IMPROVEMENT PROJECT

MAY 20, 2015

Social, Urban, Rural and Resilience (SURR) Global Practice
Pakistan Country Management Unit
South Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2015)

Currency Unit = PKR
PKR 101.69 = USD1
USD 1.40462 = SDR 1

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AGP	Auditor General of Pakistan
AWS	Automatic Weather Stations
Cat DDO	Catastrophe Deferred Drawdown Option
CPS	Country Partnership Strategy
DDMAs	District Disaster Management Authorities
DRM	Disaster Risk Management
EAD	Economic Affairs Division
EOCs	Emergency Operations Centers
FDRA	Fiscal Disaster Risk Assessment
FEWS	Flood Early Warning Systems
FFD	Flood Forecasting Division
GoP	Government of Pakistan
GoPb	Government of Punjab
IDA	International Development Association
JICA	Japan International Cooperation Agency
MoF	Ministry of Finance
NDMA	National Disaster Management Authority
P&D	Planning & Development
PDMA	Provincial Disaster Management Authority
PIDs	Provincial Irrigation Departments
PIUs	Project Implementation Units
SECP	Securities and Exchange Commission of Pakistan
SEMU	Social and Environmental Management Unit
SORT	Systematic Operations Risk- Rating Tool

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PAKISTAN
Disaster and Climate Resilience Improvement Project

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PAD DATA SHEET

Pakistan

Disaster and Climate Resilience Improvement Project (P154036)

PROJECT APPRAISAL DOCUMENT

SOUTH ASIA

0000009081

Report No.: PAD1297

Basic Information			
Project ID P154036	EA Category B - Partial Assessment	Team Leader(s) Haris Khan	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [X] - Natural or man-made disaster		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 02 June, 2015	Project Implementation End Date 01-June-2019		
Expected Effectiveness Date 31-Aug-2015	Expected Closing Date 01-Dec-2019		
Joint IFC No			
Practice Manager/Manager Bernice K. Van Bronkhorst	Senior Global Practice Director Ede Jorge Ijjasz-Vasquez	Country Director Rachid Benmessaoud	Regional Vice President Annette Dixon
Borrower: Islamic Republic of Pakistan			
Responsible Agency: Economic Affairs Division, Government of Pakistan			
Contact: Telephone No.:	Mr. Saleem Sethi +92 51 9212769	Title: Email:	Secretary
Responsible Agency: Government of Punjab			
Contact: Telephone No.:	Mr. Muhammad Irfan Elahi +92 042 99210002	Title: Contact:	Chairman, Planning and Development Board

Telephone No.:										
Safeguards Deferral (from Decision Review Decision Note)										
Will the review of Safeguards be deferred? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Project Financing Data(in USD Million)										
<input type="checkbox"/> Loan		<input type="checkbox"/> IDA Grant		<input type="checkbox"/> Guarantee						
<input checked="" type="checkbox"/> Credit		<input type="checkbox"/> Grant		<input type="checkbox"/> Other						
Total Project Cost:		125.00			Total Bank Financing:		125.00			
Financing Gap:		0.00								
Financing Source						Amount				
BORROWER/RECIPIENT						0.00				
International Development Association (IDA)						125.00				
Total						125.00				
Expected Disbursements (in USD Million)										
Fiscal Year	2016	2017	2018	2019	0000	0000	0000	0000	0000	0000
Annual	25.00	40.00	45.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative	25.00	65.00	110.00	125.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional Data										
Practice Area (Lead)										
Social, Urban, Rural and Resilience Global Practice										
Contributing Practice Areas										
Cross Cutting Topics										
<input checked="" type="checkbox"/> Climate Change										
<input type="checkbox"/> Fragile, Conflict & Violence										
<input type="checkbox"/> Gender										
<input type="checkbox"/> Jobs										
<input type="checkbox"/> Public Private Partnership										
Sectors / Climate Change										
Sector (Maximum 5 and total % must equal 100)										
Major Sector			Sector		%	Adaptation Co-benefits %		Mitigation Co-benefits %		
Water, sanitation and flood protection			Flood protection		67	57				

Public Administration, Law, and Justice	Public administration- Water, sanitation and flood protection	33	14	
Total		100		
[X] I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.				
Themes				
Theme (Maximum 5 and total % must equal 100)				
Major theme	Theme	%		
Social protection and risk management	Natural disaster management	100		
Total		100		
Proposed Development Objective(s)				
The project aims to support restoration of flood protection infrastructure and strengthen government capacity to manage disasters and climate variability.				
Components				
Component Name		Cost (USD Millions)		
Component 1: Restoring Flood Protection Infrastructure and Upgrading Flood Management Systems		100.00		
Component 2: Managing Disasters and Climate Variability		17.00		
Component 3: Project Management		8.00		
Component 4: Contingent Emergency Response		0.00		
Systematic Operations Risk- Rating Tool (SORT)				
Risk Category			Rating	
1. Political and Governance			Substantial	
2. Macroeconomic			Moderate	
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			Moderate	
8. Stakeholders			Moderate	
9. Security			Substantial	
OVERALL			Substantial	

Compliance

Policy		
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Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]
---	---------	----------

Does the project require any waivers of Bank policies?	Yes []	No [X]
--	---------	----------

Have these been approved by Bank management?	Yes []	No []
--	---------	--------

Is approval for any policy waiver sought from the Board?	Yes []	No []
--	---------	--------

Explanation:

Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []
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Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50	X	

Legal Covenants

Name	Recurrent	Due Date	Frequency
		one (1) month after the Effective Date	

Description of Covenant
Establishment and staffing (as needed) of all Project Implementation Units

Name	Recurrent	Due Date	Frequency
		one (1) month after the Effective Date	

Description of Covenant
Adoption of the Project Operation Manual by Recipient and each Project Implementing Entity

Name	Recurrent	Due Date	Frequency

	No later than November 30 each year	one (1) month after the Effective Date the first year	
--	-------------------------------------	---	--

Description of Covenant

Submission of draft annual work plan and budget to the Association for review and comments

Name	Recurrent	Due Date	Frequency
		12 and 30 months after the Effective Date	

Description of Covenant

In-depth and mid-term reviews

Conditions

Source Of Fund	Name	Type
	Disbursement Condition under Category (3)	

Description of Condition

Subsidiary Agreement, in form and substance acceptable to the Association, duly signed by the Recipient and the State Project Implementing Entity; and legal opinion.

Source Of Fund	Name	Type
	Disbursement Condition under Category (4)	

Description of Condition

An Eligible Crisis or Emergency has occurred, which has been agreed by the Association; Designation of a Coordinating Authority with adequate staff and resources; Adoption of the CER Operations Manual; and Preparation and disclosure of the Safeguard Documents required for the activities, in accordance with the Association Policies.

Team Composition

Bank Staff

Name	Role	Title	Unit
Haris Khan	Team Leader (ADM Responsible)	Senior Disaster Risk Management Specialist	GSURR
Khalid Bin Anjum	Procurement Specialist	Senior Procurement Specialist	GGODR
Furqan Ahmad Saleem	Financial Management Specialist	Senior Financial Specialist	GGODR
Ahsan Tehsin	Team Member	Consultant	GSURR

Helene Bertaud	Country Lawyer	Senior Counsel	LEGES
Chau-Ching Shen	Finance Officer	Senior Finance Officer	WFALN
Jaafar Sadok Friaa	Team Member	Program Leader	SACPK
Huma Ali Waheed	Team Member	Senior Operations Officer	GEDDR
Javaid Afzal	Environmental Specialist	Senior Environmental Specialist	GENDR
Masroor Ahmad	Urban Drainage	Senior Water Specialist	GWASS
Malik Najaf Khan	Team Member	Consultant	GENDR
Masood Ahmad	Water Resources and Flood Management	Lead Hydropower Specialist	GEEDR
Muhammad Waheed	Economic Analysis	Senior Economist	GMFDR
Navid Rahimi	Team Member	E T Consultant	GSURR
Raja Rehan Arshad	Disaster Recovery Planning	Lead Disaster Risk Management Specialist	GCCDR
Salma Omar	Safeguards Specialist	Senior Social Development Specialist	GSURR
Shahnaz Meraj	Team Member	Program Assistant	SACPK
Shiraz Ali Shah	Team Member	E T Consultant	GSURR
Suhaib Rasheed	Urban Specialist	Consultant	GSURR
Tayyeb Masud	Team Member	Senior Health Specialist	GHNDR
Muhammad Abid	Flood Engineer	Consultant	GSURR
Anwar Ali Bhatti	Disbursement	Financial Analyst	SACPK
Benedikt Lukas Signer	Disaster Risk Financing	Financial Sector Specialist	GFMDR
Gabi George Afram	Team Member	Program Leader	SACPK
Sarmad Shaikh	Private Sector & Markets	E T Consultant	GFMDR
Samina Mussarat Islam	Social and Gender	Consultant	GSURR
Quanita Ali Khan	Social Protection and Safety Nets	ET Consultant	GSPDR
Thomas Adams	Hydro-met Expert	Consultant	GSURR
Fouad Khan	Environment	Consultant	GENDR
Extended Team			
Name	Title	Office Phone	Location

Locations					
Country	First Administrative Division	Location	Planned	Actual	Comments
Pakistan					
Consultants (Will be disclosed in the Monthly Operational Summary)					

I. STRATEGIC CONTEXT

A. Country Context

1. **Pakistan is vulnerable to a number of adverse natural events and has experienced a wide range of disasters over the past 40 years, including floods, earthquakes, droughts, cyclones and tsunamis.** These hazards are due to an active floodplain fed by snow and glacial melt from three mountain ranges – Himalayas, Karakoram and Hindu Kush, its location on a seismically active geological plate, a predominantly semi-arid landmass and a coastline frequented by cyclonic events. Exposure and vulnerability to hazards is further exacerbated by a rapid population growth, growing urbanization, environmental degradation and shifting climatic patterns that can result in the occurrence of increasingly severe natural disasters. Over the past decade, damages and losses resulting from natural disasters in Pakistan have exceeded USD 18 billion; as the population and asset base of Pakistan increases, so does its economic exposure to natural disasters.

2. **Pakistan faces a major financing challenge arising from natural catastrophes, with flooding causing an estimated annual economic impact of between 3 and 4 percent of the Federal Budget¹.** On average, approximately 3 million people are affected by natural catastrophes each year in Pakistan, which equates to approximately 1.6 percent of the total population. According to an analysis of historical natural disaster data, since 1973 approximately 77 percent of all the people affected by natural disasters were impacted by flooding events. The annual economic impact of flooding is estimated between USD 1.2 billion and USD 1.8 billion, equivalent to between 0.5 percent and 0.8 percent of national GDP; however simulations show that a major flood event (occurring, on average, once every 100 years) could cause losses in excess of USD 15.5 billion, which equates to around 7 percent of national GDP, equivalent to almost 40 percent of the Federal Budget².

3. **Punjab's population, geographic location and climatic conditions make it one of the most exposed provinces to natural disasters.** Over the past 30 years, 66.6% of all people affected by natural disasters in Pakistan were resident in Punjab³. Floods remain the dominant hazard in Punjab, despite a history of other disasters such as earthquakes, tornadoes, and droughts in the province. Floods in 1992, 1994, 1997, 2010, 2012, 2013 and 2014 have led to the loss of precious human lives and caused significant damages to public and private property. Floods in 2014 resulted in 286 deaths, with approximately 100,000 houses damaged and 2.47 million people directly affected due to inundation and / or displacement. Similarly, floods in 2013 affected almost 800,000 people, while approximately 900,000 people were affected in 2012 floods. These disaster events have continuously led to the disruption of economic activity and service delivery, in addition to burdening the public exchequer to provide for relief, recovery and rehabilitation.

4. The low-lying areas close to the banks of the Indus River and its tributaries experience regular flooding on an almost yearly basis during annual monsoon season which takes place from July to September. Snowmelt from the Karakoram, Hindu Kush and Himalayan mountains further

¹ Budget estimate taken from 2014-2015 Budget in Brief (<http://finance.gov.pk/>) exchange rate fixed at 102

² World Bank. 2015. *Fiscal Disaster Risk Assessment: Options for Consideration*, Pakistan

³ World Bank. 2015. *Fiscal Disaster Risk Assessment: Options for Consideration*, Pakistan

feeds the flood-plains during this period, especially the catchment areas of Indus River. Increased and concentrated precipitation has been experienced over the catchment areas of rivers Chenab and Jhelum, both of which flow through northern and central Punjab, before merging with the Indus in Southern Punjab. As a result, several districts in the north and center of the province have become prone to floods. Further, flash floods and hill torrents are also a regular feature in southern Punjab as is the risk of urban flooding in major cities due to various human factors such as rapid urbanization, unplanned development and settlements, encroachments on waterways and solid waste dumping.

5. **The northern regions are at risk from flooding, landslides, earthquakes and avalanches because of mountainous terrain and climatic conditions.** In eight districts – Neelum, Hattian, Bagh, Poonch, Haveli, Kotli, Bhimber and Muzaffarabad – Floods in 2014 resulted in 56 deaths, with approximately 30,000 houses damaged and 60,000 people affected. Extreme weather events have had an adverse impact on agriculture productivity and the average per capita income of the rural household. Landslides, mudslides, and rockslides in these districts cause frequent injuries, deaths, road closures, and can disrupt economic activities for months. Landslides have been on the increase in recent years with the impact of deforestation and flooding and are particularly common in the most mountainous districts. Avalanches are more frequent in district Neelum due to the movement of glaciers.

6. Neelum, Hattian, Bagh, Poonch, Haveli, Kotli, Bhimber and Muzaffarabad located over an active seismic zone are at high risk. These districts are also recovering from extensive infrastructural damage incurred during the 2005 earthquake in which 73,338 people died, 128,304 people were injured, 600,000 houses were destroyed, and 3.5 million people displaced. The earthquake caused extensive damage to roads, water and sanitation facilities, power, and telecommunication infrastructure and other services while civil administration in affected areas became largely dysfunctional with the destruction of almost all government buildings. 6,298 educational institutions and 796 health facilities were destroyed or damaged⁴.

B. Situations of Urgent Need of Assistance or Capacity Constraints

7. **Floods hit parts of Pakistan in early September 2014, including Punjab and the State having jurisdiction over the eight districts of Neelum, Hattian, Bagh, Poonch, Haveli, Kotli, Bhimber and Muzaffarabad (hereby referred to as the ‘State’).** The disaster caused 367 deaths, mostly in Punjab province, in addition to damages to houses, agriculture, transport, irrigation and communications infrastructure. It is estimated by the National Disaster Management Authority (NDMA) that the floods affected over 2.5 million people in both rural and urban areas. The Federal and Provincial Governments were proactive in relief operations in the immediate aftermath of the floods. The relief phase has concluded and the response is now gradually moving from early recovery to medium and longer-term planning for recovery, reconstruction and increasing resilience.

Damage and Needs Assessment

⁴ Earthquake Reconstruction and Rehabilitation Authority (ERRA), *Annual Review*, 2009 -2010

8. The Bank, in coordination with ADB, provided technical support to finalize needs assessment reports to determine medium- to long-term recovery and reconstruction strategies, as well as identify broad areas for enhancing disaster resilience, in Punjab and the State. Reconstruction costs have been estimated at around USD160 million for Punjab and USD120 million for the State. The Government of Pakistan sent an official request for assistance to the Bank through the Economic Affairs Division on December 15, 2014.

9. At the request of the Government in responding to the flood emergencies of 2014, the project would support restoring/upgrading flood protection infrastructure based on the impacts of the floods as well as seek to address resilience through non-structural approaches, including disaster management capacity building, policy and fiscal preparedness related to flood events. The project is hence being processed pursuant to OP10.00 paragraph 12 as an emergency operation triggered by a natural disaster event to improve readiness when the next disasters occur.

C. Sectoral and Institutional Context

10. Since the devastating impact of the 2005 earthquake, Pakistan has worked to change how the country addresses natural disasters - from an ex-post disaster response perspective to an ex-ante risk management approach. The promulgation of the National Disaster Management Ordinance (NDMO) of 2006, which established the National Disaster Risk Management Framework (NDRMF), reflects this more pro-active approach towards disaster risk management (DRM).

11. The National Disaster Management (NDM) Act was approved in 2010 and builds on the 2006 NDMO. This Act established the National Disaster Management Authority (NDMA) as the lead agency at the federal level to coordinate disaster response. A National Disaster Management Commission (NDMC), chaired by the Prime Minister, was created by the Act to serve as the main policy-making institution for DRM. Passage of the 18th Amendment devolved some powers to the provinces, including greater responsibility to prepare for and respond to disaster.

12. The NDM Act of 2010 established not only a national level disaster management authority, but also, mandated the replication of the NDMA structure at more decentralized levels. The Chief Minister chairs a Provincial Disaster Management Commission (PDMC) and serves as the executive arm of the PDMC in most provinces and regions. The NDM Act of 2010 also provides for the establishment of District Disaster Management Authorities (DDMAs), which have been implemented in a small number of districts.

13. Five years after its enactment, the NDM Act 2010 is not yet fully implemented, and details on how to operationalize it are still to be defined. At the Federal level, while the necessary legal, institutional and policy measures have been taken by the Government of Pakistan for DRM, there are a number of entities working on DRM with overlapping mandates in addition to NDMA. These include the Earthquake Reconstruction & Rehabilitation Authority (ERRA), the Emergency Relief Cell (ERC), and the Federal Flood Commission (FFC), amongst others. At the provincial level, the multiplicity of institutions is also present, which include, PDMAs, the Provincial Irrigation Departments (PIDs), and the Civil Defence and Rescue Services. PDMAs also have differing capacities across provinces and administrative regions; similarly, DDMAs have only been established in selected districts and their operational capacity varies significantly. There is a need

to advance the implementation of the NDM Act 2010, through greater clarity in functional mandates, strengthening capacities of disaster management institutions, and operationalization of disaster management funds at the federal, provincial and district levels.

Rationale for Bank’s Involvement and Recovery Strategy

14. The Bank’s global knowledge in DRM and Climate Change areas makes it an important partner to Pakistan in building knowledge, strengthening institutional capacity and mobilizing financial resources to prepare for and respond to disaster events. Indeed, the Bank’s extensive global and regional experiences in financing DRM projects, its successful financing of several DRM capacity development and institutional development in Pakistan, combined with its broad understanding of DRM strategic, fiscal and operational issues and challenges, enhance the likelihood of a positive outcome of the proposed project. The proposed project will also strengthen donor coordination on the DRM agenda in Pakistan.

15. The ADB is preparing a loan to the Government of Pakistan to support restoration and recovery from the damage to infrastructure and livelihoods resulting from the 2014 floods in Punjab Province and in the State. ADB support is to provide rehabilitation and reconstruction of damaged provincial roads, irrigation infrastructure, and livelihood restoration efforts as well as technical assistance to relevant agencies. The proposed ADB engagement is expected to complement the menu of interventions proposed under the proposed World Bank-financed Disaster and Climate Resistance Improvement Project (DCRIP) for the restoration of flood protection works with the aim of increasing resilience.

D. Higher Level Objectives to which the Project Contributes

16. **Building disaster and climate resilience is essential to supporting the World Bank’s twin goals of ending extreme poverty and promoting shared prosperity.** Disaster events can undermine hard-earned development gains, potentially trapping vulnerable groups into poverty. Therefore, activities contributing to resilience are directly linked to sustained development and allows the poorest – the most affected by such disasters – to escape cycles of poverty.

17. The project is also in line with Pakistan’s Vision 2025 development strategy as well as provincial strategies. Specifically under its Vision 2025, the Government of Pakistan aims to achieve sustained and inclusive higher growth: an approach focused on resilience would prevent fiscal shocks linked to post-disaster response that would otherwise restrain such sustained growth. Another priority area relies on institutional reform which DCRIP is supporting through its technical assistance components at the provincial and state levels. DCRIP also supports provincial strategies including Punjab’s focus on agriculture in its 2018 growth strategy through improved flood management infrastructure to help mitigate loss of agricultural productivity in flood events. It is envisioned that DCRIP would be part of a longer term engagement with the Government of Pakistan in issues of resilience.

18. **The project is consistent with the Country Partnership Strategy (CPS) 2015-19 for the Islamic Republic of Pakistan, which is committed to supporting and further improving Pakistan’s DRM capacity as an outcome.** This effort is highlighted through Outcome Indicator 3.3 “Increased Resilience to Disasters in Targeted Regions” under Result Area 3 “Inclusion”. The

CPS seeks to increase the number of provinces with disaster risk management plans, improved management, and early warning systems. The Table below indicates the result area and the outcome towards which the project contributes.

Table 1: Project Contribution to the CPS

Result Area (RA)	Outcome	Project Contribution
Inclusion (RA 3)	Increased Resilience to Disasters in Targeted Regions (Outcome 3.3)	Enhance disaster and climate resilience through increasing technical capacity of Government entities and restoring key flood protection infrastructure that would reduce the impact of future hazards.

19. The project also supports the CPS Cross-cutting theme of climate change. The third cross-cutting theme - climate change adaptation and mitigation in public and private sectors - is addressed in that climate adaptation and disaster resilience are core themes in reducing vulnerability and improving preparedness towards disaster and climate related emergencies. In addition, the second theme - deepening engagement at the province level, while further clarifying the roles between provinces and the local governments – is being addressed with the support to the Provincial entities of Punjab and relevant disaster management entity for the State and their links in terms of disaster resilience at the district level.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

20. The project aims to support restoration of flood protection infrastructure and strengthen government capacity to manage disasters and climate variability.

B. Project Beneficiaries

21. Direct beneficiaries include the population of Punjab and the State, affected by the 2014 floods and exposed to recurrent flooding in Chenab, Jhelum and Indus rivers, where flood protection infrastructure will be restored to resilient standards, particularly in the irrigation zones of DG Khan, Sargodha, Bahawalpur, Multan and Faisalabad in Punjab and the State. Additionally, in the State, beneficiaries would include those exposed to landslide risk - exacerbated during periods of high precipitation and flooding – in selected districts where landslide stabilization works will take place.

22. Through technical assistance and institutional strengthening of disaster management and irrigation authorities, the entire population of Punjab and areas adjoining Neelum, Hattian, Bagh, Poonch, Haveli, Kotli, Bhimber and Muzaffarabad, will indirectly benefit from increased capacity to identify, manage and respond to disasters and climate variability.

C. PDO Level Results Indicators

23. The achievement of the PDO will be monitored by the following indicators. Details are included in Annex 1.

- Number of people benefiting from restored flood protection infrastructure through the project.
- Number of people at risk receiving early warning notifications through mobile short messaging service.
- Improved institutional capacity for flood risk management.

III. PROJECT DESCRIPTION

A. Project Components

Component 1: Restoring flood protection infrastructure and upgrading flood management systems– USD 100 million

24. Component 1 aims to enhance physical resilience through the restoration, rehabilitation and improvement of critical flood protection infrastructure.

25. *Subcomponent 1.1. Flood Protection Works (USD 80 million):* This subcomponent will finance the restoration of flood protection infrastructure damaged during 2014 flood in Punjab and the State. These investments will include:

- a) Restoration of flood embankments to resilient standards
- b) Rehabilitation of other infrastructure such as spurs and river channelization works

26. Potential flood mitigation investments in Punjab and the State include some works that are at an advanced stage of readiness and could be taken up under this subcomponent in the short term. The Government has shared a prospective list of ready investments with the Bank in this regard. The financing requirements for these immediate works are USD 65 million in Punjab and USD 15 million for the State.

27. A framework approach will be used to finalize subprojects under this component based on selection criteria⁵. This approach is being taken due to the emergency nature of the project. In addition, the component will finance preparatory work for those additional investments requiring longer preparation times. It will also support the agency implementing the infrastructure work in Punjab to further enhance their flood management systems.

28. *Sub Component 1.2. Feasibility Studies and Diagnostics for Medium-Long Term Works (USD15 million):* This subcomponent will finance preparatory activities (feasibility studies, consulting services for surveys, designs, environmental and social impact assessments, etc.) for proposed medium-long term investments that may bring about significant improvements to flood

⁵ These criteria will inter alia include: (i) economic impact; (ii) technical readiness and feasibility criteria; (iii) demand by local communities; (iv) implementation duration; and, (v) scale of safeguards issues and mitigation costs. As and when the selection criteria are met, activities would be eligible to be included in the Project

protection and have high economic benefits. Once preparatory activities are completed, these works may also be considered for support through the framework approach.

29. *Sub Component 1.3. Upgrading Flood Management Systems (USD 5 million):* The sub-component would support the Punjab Irrigation Department for implementation of non-structural measures to enhance flood management and its related equipment upgrades and studies. Specifically, (i) *Establishment of a Decision Support System* with its required telemetry system to facilitate evidence based decision making related to selecting optimal breaching sites, information sharing for evacuation of communities at risk, managing flood peaks, and irrigation infrastructure management during flood events; (ii) *Safety evaluation of flood protection structures*, which will involve building in-house capacity at PID and providing the required equipment for structural safety assessments; (iii) *Supporting the Irrigation Research Institute* to undertake studies/ trainings on improving design, operations, and maintenance of flood protection infrastructure to manage future risks and impacts associated with climate change, and; (iv) *River morphology studies and floodplain mapping* of selected eastern rivers impacted by the 2014 floods (i.e. Jhelum and Chenab Rivers) as well as floodplain mapping for these rivers, to identify risks including climate variability and possible mitigation measures.

Component 2: Managing Disasters and Climate Variability – USD 17 million

30. Component 2 aims to strengthen the government’s capacity to better manage disasters. This component would finance risk identification, institutional strengthening for improved management of disasters and enhancing fiscal resilience.

31. *Subcomponent 2.1. Disaster and Climate Risk Identification (USD 2 million):* This subcomponent will focus on identifying the disaster and climate risk environment for informed planning and decision-making, development of framework to undertake the assessments, as well as tools to allow the optimal utilization of risk information. Specifically a) Studies on urban and flash flooding in Punjab and; b) Slope stabilization studies in the State.

32. *Subcomponent 2.2. Institutional Strengthening for DRM and Climate Variability (USD 12 million):* This subcomponent will provide support towards strengthening the DRM institutional structure as well as building capacity and equipping the Disaster Management Authorities in Punjab and the State. Activities will include: a) Institutional and policy review; b) Strengthening of DMAs down to district level and improving early warning systems; and c) Mainstreaming DRM and climate variability aspects in the planning process in collaboration with Planning and Development (P&D) Department, Punjab.

33. *Subcomponent 2.3. Fiscal Resilience (USD 3 million):* The subcomponent would support the Punjab government to develop a Disaster Risk Finance Strategy. The strategy will formalize objectives and scope, evaluate various financial instruments to finance contingent liability to natural disasters, and recommend implementation of selected instruments.

34. The project would also provide advisory services to Punjab Provincial Disaster Management Fund (PDMF). The project would support the development of an appropriate governance structure, SOPs, fiduciary safeguards and controls, and transparent allocation criteria, drawing on international good practices.

35. The Government of Punjab used early recovery cash transfers for the floods in 2010, 2011, and 2014. The sub-component would support the development of a standard emergency cash transfer system in collaboration with the PDMA and Punjab Social Protection Authority (PSPA).

Component 3: Project Management – USD 8 million

36. The project will be implemented through mandated government departments including Punjab Irrigation Department, Punjab Disaster Management Authority, and the State planning and development department. This component will support engagement of additional resources at Project Implementation Units (PIUs) within these departments.

Component 4: Contingent Emergency Response– USD 0 million

37. Following an adverse natural event that causes a major natural disaster, the government may request the Bank to re-allocate project funds to support response and reconstruction. This component would allow the government to request the Bank to reallocate financing from other project components to partially cover emergency response and recovery costs. This component could also be used to channel additional funds should they become available for such an emergency.

B. Project Financing

38. The cost of the project is SDR88.9 million (equivalent to 125 million USD). It will be financed through an IDA credit. No counterpart funding is expected for this project.

Project Cost and Financing

39. A summary of the allocation of IDA financing per component, in addition to IDA financing amount and % financing, is provided in the table below:

Table 2: Component-wise Summary of Costs

Project Components	Punjab	State	Project cost (USDM)	IDA Financing (USDM)	% Financing
1. Restoring flood protection infrastructure and upgrading flood management systems	80	20	100	100	80%
<i>1.1. Flood Protection Works</i>					
<i>1.2. Feasibility Studies and Preparation Activities for Medium-Long Term Works</i>	65	15	80	80	54%
<i>1.3. Upgrading Flood Management Systems</i>	10	5	15	15	9%
	5	0	5	5	3%
2. Managing disasters and climate variability	14	3	17	17	13%
<i>2.1. Disaster and Climate Risk Identification</i>	1	1	2	2	1%

<i>2.2. Institutional Strengthening for DRM and Climate Variability</i>	10	2	12	12	8%
<i>2.3. Fiscal Resilience</i>	3	0	3	3	3%
3. Project Management	6	2	8	8	7%
4. Contingency Emergency Response Component	0	0	0	0	0%
Total Project Costs	100	25	125	125	100%
Total Financing Required	100	25	125	125	100%

C. Lessons Learned and Reflected in the Project Design

40. There are a number of lessons to be learnt from the Balochistan Disaster Management Project (BDMP), which is the Bank’s first dedicated DRM project in Pakistan. The capacity building of DRM institutions in Punjab and the State under the project would be informed by BDMP. The proposed project also incorporates lessons learnt from the Bank’s other post-disaster / recovery projects in the South Asia region, as well as from around the world.

- a) Disaster Management Authorities are nascent and have weak institutional capacity. The Project recognizes the need for strengthening the capacity of PDMA Punjab and the relevant disaster management entity in the State towards disaster risk mitigation and has allocated funds and activities towards the same. The PDMA Balochistan is a good example and lessons are drawn from its evolution and development process.
- b) DRM institutions are frequently overstretched between regular operations and emergencies. This means that the PIU should have a clear role so that staff can continue to work on the ongoing project independent of emergencies. The PIUs will have the responsibility of overseeing the all project activities in their respective regions and appropriate funds have been allocated for the same. In addition, due to the evolving conditions of the project, close support and supervision will be provided during Project implementation, with intensive and focused efforts during the crucial first 18 months of Project implementation.
- c) Globally, there is evidence that some flood response programs have focused too heavily on rebuilding infrastructure and not enough on better adaptation and preparedness for the future in complementary investments, such as flood management, fiscal resilience, enhancing capacities, early warning systems, etc. A strong disaster response mechanism plays a crucial role in not only saving lives and livelihoods, but also for achieving sustainable recovery and long-term disaster risk reduction. The project will focus on providing technical assistance in sustainable risk mitigation and response to increase resilience to disasters.

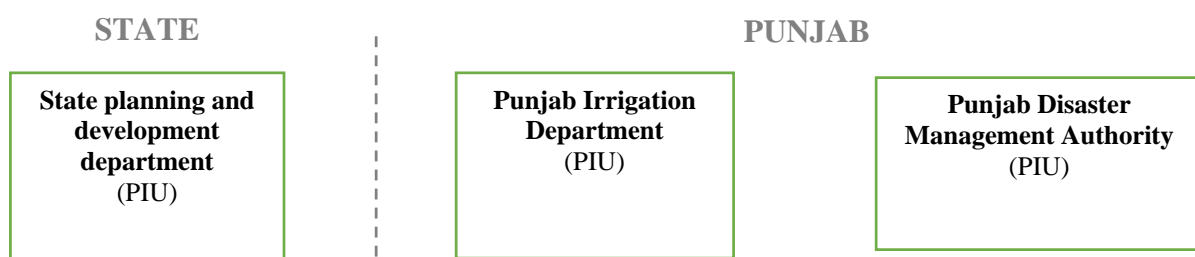
- d) International experience has demonstrated that flood management strategies and interventions typically tend to be longer term phased engagements. While DCRIP is an emergency operation, it will lay the foundations for flood resilience and mitigation through several interventions expected to have a longer term impact. These include: preparation (feasibility and design work) of flood mitigation investments; interventions for strengthening relevant institutions and systems; and, analytical work related to floodplain mapping and urban flooding. These activities are expected to lead to a progressive multiphase engagement on floods.
- e) Technical codes and standards utilized for restoration of flood protection works should be resilient to natural hazards. Previous projects have shown that upstream consideration of technical standards during the design phase is important in order to rebuild to higher standards that adequately factor in hazard risks. The type of design and construction methods should be tailored to local conditions and utilize appropriate reconstruction materials and practices. Technical assistance and international expertise in this area will be provided to ensure compliance with resilient standards of restoration and rehabilitation.
- f) The project will develop operating procedures and tools to foster better communication and collaboration across government institutions and relevant civil society stakeholders for early warnings, information dissemination, and knowledge sharing.
- g) Other important lessons reflected in the project design involve the need for: (i) Thorough hydrological and hydraulic analyses. The Project will support in-depth studies to determine the frequencies for the occurrence of floods of various magnitudes, flood routing studies, and assessment of flood impacts with various return periods; (ii) Implementation of Project works through large civil works contracts following the best contract management models, and whereby consultants with proper qualifications and adequate resources would assist the Government in construction supervision and third party validation; (iii) Identification of any resettlement and land acquisition issues and using these as eligibility filters for prospective investments.
- h) With regards to targeting poor and vulnerable communities, including women, close relationships will be established with the Bank's ongoing safety net interventions.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

41. The activities and investments under the Project will be implemented at: a) Province of Punjab; and, b) the State. The project envisages the use of existing government structures for implementation. Restoration activities in Punjab would be led by the Punjab Irrigation Department (PID), while DRM capacity building activities would be undertaken by the Provincial Disaster Management Authority (PDMA). In the State, all activities will be implemented by the State planning and development department. These departments would dedicate resources to PIUs established at these departments. Further, a dedicated PIU has already been established at the State planning and development department.

42. The departments through their respective PIUs would have responsibility for project implementation including, but not limited to, reporting, monitoring and evaluation, social and environmental management, procurement, financial management, audit and disbursements, as well as coordination with the line agencies and the Bank. The PIU will be adequately resourced with skillsets and competencies required for project implementation and monitoring. The PIUs would be created within one month of project effectiveness. The figure below provides an overview of the Implementation Arrangements.



43. The Table below presents a mapping of Project components and subcomponents in relation to the implementing agencies for each tier. Detailed Implementation Arrangements are provided in Annex 3.

Table 3: Institutional Mapping of Project Components

Component	Implementing Agency	
	Punjab	State
Component 1 – Restoring flood protection infrastructure and upgrading flood management systems		
1.1. Flood Protection Works	Punjab Irrigation Dept. (PID)	State planning and development department
1.2. Feasibility Studies and Preparation Activities for Medium-Long Term Works	PID	State planning and development department
1.3. Upgrading Flood Management Systems	PID	-
Component 2 - Managing disasters and climate variability		
2.1. Disaster and Climate Risk Identification	Provincial Disaster Management Authority (PDMA) Punjab	State planning and development department
2.2. Institutional Strengthening for DRM and Climate Variability	PDMA	State planning and development department
2.3. Fiscal Resilience	PDMA	-
Component 3 – Project Management		
3.0 Project Management	PID, PDMA	State planning and development department

44. **Project Operations Manual:** The project would be implemented according to guidelines and procedures outlined in the Operations Manual (OM), which should be adopted within one month of project effectiveness. The documents will lay out roles and responsibilities of different stakeholders and provide details of project processes and project cycle. The POM will further

incorporate experiences gained through implementation of similar projects in Pakistan as well as the outcomes from detailed deliberations, institutional capacity and fiduciary assessments, and risk analyses that were carried out as part of project preparation. The Operations Manual will be reviewed periodically by the Borrower subject to approval by IDA, and revised as needed to address any constraints to the successful implementation of the project.

45. **Communications:** The Bank will support the Implementing Agencies in developing an effective internal and external communications strategy during project implementation which would ensure adequate dissemination of information regarding the resilience agenda being supported as part of the project. The communication functions for the project will be housed in mandated disaster management and flood management institutions.

B. Results Monitoring and Evaluation

46. The Results Framework in Annex 1 will be used to monitor and evaluate the achievement of the PDO and the outcome indicators. Project monitoring will occur as a periodic function, and will include process reviews/audits, reporting of outputs, and maintaining progressive records. Broad thematic areas that will be supervised and monitored include the following: i) Social and Environmental Monitoring; ii) Regular Quality Supervision and Certification; iii) Periodic Physical Progress Monitoring and Third Party Quality Audit; and iv) Monitoring and Evaluation of results.

47. *Social and Environmental Monitoring* – This will comprise the following sets of activities: i) Monitoring compliance with national environmental regulations, social and environmental safeguards as laid out in Bank’s policies and provisions of the Environmental and Social Management Framework (ESMF) and the other safeguard documents and will also be reflected in the relevant assessments, management and mitigation plans; and ii) Overall Project-level monitoring and oversight of social and environmental impacts resulting from the project interventions.

48. *Regular Quality Supervision & Certification* – This will be carried out by the respective PIUs within the line departments. Third party quality monitoring and independent certification of goods and works procured under the Project shall form the Quality Management System. Detailed quality guidelines will be developed by the PIU and adopted by all other stakeholders. A mechanism will also be developed for Grievance Redressal and beneficiaries’ feedback.

49. *Periodic Physical Progress Monitoring & Third Party Quality Audit* – Physical progress monitoring will be carried out by the PIUs within the line departments on a monthly basis and which will in turn share the reports on a quarterly basis with the Bank. Financial progress will be reported through the quarterly Interim Financial Reports (IFRs). In addition, a third party will be deployed for quality monitoring of works and compliance on social and environmental aspects. The PIUs will strengthen the existing MIS and create a detailed MIS where needed for the management of the information database, which will be an online tool for gathering updates. A portion of this database will also be uploaded on the Project website as part of regularly sharing information with the public.

Monitoring and Evaluation: The continuous monitoring of the Project and its implementation will be taken up by the Departments through their respective PIUs.

C. Sustainability

50. The Disaster and Climate Resilience Improvement Project has strong institutional buy-in from the Government given the frequency and impact of flood events. Given its ex-ante nature, the project requires embedding disaster technical capacity and risk financing mechanisms within institutional structures for it to prove successful post project completion. Implementation arrangements follow government mandates and institutional responsibilities: each component is implemented by the institution that would follow on its management so as to ensure the sustainability of these activities. In addition, the use of an integrated cross-institutional approach will also facilitate the sustainable operation of these mechanisms.

51. Owing to previous experience at concerned departments, the contracts for procurement of new software will include after sales support, upgrading, problem fixing, and client training mechanisms. Similarly, the procurement of equipment will make use of warranty and after sales maintenance provisions. This will ensure that the contracts also provide for operations and maintenance of the equipment and software to ensure that these continue to provide intended benefits throughout their design life.

V. KEY RISKS

52. The overall risk rating for the project is defined as “Substantial”. Though the 2014 floods have not incapacitated the Provincial or State Governments, the volatile security situation in Pakistan remains, which, combined with limited implementation record in the State, as well as the required coordination of various departments under the project pose risks that may hamper its timely implementation and oversight. The project is mitigating such Capacity and Stakeholder risks by supporting dedicated PIUs at the State planning and development department and the implementing departments in Punjab.

53. Sector strategy and policy risk is also high given the lack of operational implementation of the NDM Act and overlapping mandates of a number of entities. However, the team has widely discussed the project among all relevant stakeholders and developed strong buy-in from the government particularly in the context of this emergency. Such process mitigates sector risks related to strategy and policy.

54. In terms of environmental and social risks, the project would finance restoration works of flood protection infrastructure which could have low to moderate environmental and social impacts. Therefore a framework approach has been employed whereby all subprojects would be screened at the identification level for their environmental and social impacts. Subproject specific Environment Management plans and Resettlement Action Plans would be developed upfront if necessary, and will be sent by IAs to the Bank for review and clearance, and disclosed as per mechanism laid down in ESMF and in accordance with Bank policies. In addition, dedicated environmental and social specialists would be hired under the PIUs set up within the PID and the State planning and development department, to manage such risks in compliance with ESMF, and in consultation with the Bank team.

55. Fiduciary risks are also high as linked to the political and governance context at the State and provincial levels. However, this risk would be mitigated with dedicated PIUs and appropriate financial management arrangements including regular audits, supplemented by close contact with the Bank team.

56. The technical design of the project is complex by nature; it is spread over a wide geographical area with a large number of direct beneficiaries. It involves many departments: the PID, PDMA Punjab, and the State planning and development department. Appropriate implementation arrangements with clearly defined roles and responsibilities of the PIUs will be documented in the OM. The Project’s success will depend, in part, on effective coordination between different line departments. It will require the dynamic and sustained involvement of stakeholders, along with capacity building in resilience, risk reduction, and mitigation.

A. Systematic Operations Risk Rating Tool

Systematic Operations Risk- Rating Tool (SORT)	
Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
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	Moderate
8. Stakeholders	Moderate
9. Security	Substantial
OVERALL	Substantial

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

57. Pakistan is vulnerable to a number of adverse natural events and has experienced a wide range of disasters over the past 40 years, including floods, earthquakes, droughts, cyclones and tsunamis. On average, approximately 3 million people are affected by natural catastrophes each year in Pakistan, which equates to approximately 1.6 percent of the total population. According to an analysis of historical natural disaster data, since 1973 approximately 77 percent of all the people affected by natural disasters were impacted by flooding events. The annual economic impact of flooding is estimated between USD 1.2 billion and USD 1.8 billion, equivalent to between 0.5 percent and 0.8 percent of national GDP.

58. Within this context the project, aims at restoration, rehabilitation, building disaster and climate resilience, improving technical skills of personnel at concerned departments and working to improve the early warning system. Pakistan is a developing country and most of the floods-affected population is poor. Therefore, the project is in line with the Bank’s twin goals of ending extreme poverty and promoting shared prosperity. The project will address the issue of poverty and will create distributional effects as benefits of the project will go, disproportionately, to the poor.

59. While costs of the project are directly observable, the benefits are difficult to estimate as there will be multi-dimensional and multiplier effects. The project will result in improved infrastructure, reduced income inequality, resilient infrastructure, skilled human resource to better manage the disasters, reduced risk of deaths and injuries in the future, improved early warning system and fiscal resilience.

60. The benefits which can be estimated are of three types: First, the different components of the project will result in saving valuable lives and reducing casualties. Second, the project will reduce the magnitude of damage to private and public physical infrastructure including houses, commercial businesses, social assets / services, roads, barrages, agriculture produce, livestock, and vulnerable groups. Further, the first component of the project aims at restoring physical infrastructure, which will have direct effect as well as externality effects on economic activity.

61. Value of Statistical Life and Value of Statistical Injury are used to measure benefits of reduced risk of deaths and injuries. The benchmark values of mortality and injuries are taken from the Assessments of Damages after 2014 floods. Similarly the values of damage to physical infrastructure due to 2014 floods are taken for loss calculation. Benefits of VSL and VSI saving and that of reduced damage to physical infrastructure are calculated for the next 10 years which are then discounted to find present value of benefits. The benefits of rebuilding physical infrastructure and rehabilitation are estimated through the cost of project component aimed at restoration and rehabilitation and using assumptions of q-theory of investment and externalities of public goods.

62. The overall present value of benefits ranges from USD 619.21 million to USD 1,051.76 million with an average of USD 835.48 million. These values are well above the proposed cost of the project; therefore, the net present value of the project is positive and benefit-cost ratio ranges 4.13 to 7.01 with an average of 5.57 (Table 4). The major contribution in the overall benefits is due to reduced probability of damage to physical infrastructure which is estimated at USD 310.83 million. The saving in value of statistical life and value of statistical injury, together, are expected to generate benefits worth USD 168 million in case of lower limit of VSL and about USD 600 million in case of upper limit of VSL. The value of assets, which are planned to restore, is approximately USD 140 million.

Table 4: Benefits-Cost Ratio

	Million USD		
	Lower Limit	Upper Limit	Average
PV of Benefits	619.21	1051.76	835.48

VSL Saving	167.40	597.06	382.23
VSI Saving	0.98	3.87	2.42
Reduction in Damage to Physical Infrastructure	310.83	310.83	310.83
Value of Assets Rebuilt	140.00	140.00	140.00
Cost of the Project	125.00	125.00	125.00
Benefit-Cost Ratio	4.13	7.01	5.57

63. Above all, the project, through reduced risk of damage, will enhance the satisfaction of households and vulnerable communities in risky areas. The objective of public policy and intervention is to maximize social welfare / protection which is sum of individuals' utility or satisfaction. The loss of assets, especially houses and livelihoods assets, contributes to vulnerability of citizens in flood affected areas. The proposed intervention is expected to increase households' resilience by reducing the probability of losing valuable assets and impacts on physical and psychological health. As these benefits distribute disproportionately towards poor and vulnerable, therefore, the project will achieve the objectives of reduced poverty and shared prosperity.

B. Technical

64. The Project will support in-depth studies to determine the frequencies for the occurrence of floods of various magnitudes, flood routing, and assessment of flood impacts with various return periods through (i) hydrological and hydraulic analyses; (ii) implementation of Project works through large civil works contracts following the best contract management models, and whereby consultants with proper qualifications and adequate resources would assist the Government in construction supervision and third party validation; (iii) identification of environment and resettlement issues and using these as eligibility filters for prospective investments; (iv) preparatory work for additional investments requiring longer preparation times. A framework approach is being used for identification, selection and screening of restoration works subprojects to be financed by the Bank.

65. Institutional capacity assessments and risk identification exercises will be undertaken to identify critical needs and inform recommendations for strengthening capacity of institutions to better manage disasters and climate variability. This would also include improved flood forecasting and response capabilities, enhanced fiscal resilience and better post disaster recovery planning to the benefit of the target population. The project also aims to upgrade early warning systems (EWS) at the disaster management authorities in Punjab and the State

C. Financial Management

66. The financial management assessment reviewed the current financial management arrangements relevant to the Project in the executing/implementing agencies to determine whether they give reasonable assurance that project funds will be used for their intended purpose. Based on this assessment, and subject to the implementation of mitigating measures for the identified risks, the Project's overall financial management environment provides reasonable assurance that the financing proceeds will be used for the intended purposes, with due attention

to the principles of economy, efficiency, effectiveness, transparency, and accountability, and appears able to support implementation and achieve the desired results.

67. FM risk is rated “substantial” (see Annex 3 for the detailed assessment).

D. Procurement

68. All procurements envisaged for the implementation of this project would be carried out in accordance with the Bank Guidelines: “Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers January 2011 revised July 2014”; “Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers January 2011 revised July 2014”. The Bank’s standard bidding documents for procurement under International Competitive Bidding (ICB), and sample bidding documents for procurement under National Competitive Bidding (NCB) which are already being used on other Bank financed projects in Pakistan, will be used for procurement of Goods and Works under the Project. The Bank’s Standard Request for Proposal (RFP) document will be used in the selection of consulting firms.

69. The project’s components will be implemented by the PIUs. Some of the implementing entities, Punjab PID and the State planning and development department, have experience of working on significant procurement activities; however there is a need to develop strong bidder’s qualification process; realistic procurement planning keeping in view external constraints like climatic conditions; trusted complaint management; amicable dispute resolution mechanism and firm debarment procedures. There is also a need for building robust contract management and monitoring capacity for smooth operations of the project. PDMA Punjab has limited experience of managing substantial procurement processes and contract management/implementation. PDMA Punjab requires strong support in building overall capacity to achieve an efficient and reliable procurement and contract management function. Overall for the project there is also a need to develop robust project management capacity for completion of project activities in planned time and cost.

Measures to Minimize Procurement Risks

70. As discussed above the project is considered “high risk” operation from procurement and contract management point of view. Though performance in carrying out procurement under the ongoing World Bank and ADB financed barrages and other major projects managed by PID has been satisfactory, however the rating is assessed based on the nature and complexity of activities and the varied capacity of implementing agencies under the project. There are other external factors like market conditions, fluctuating prices, climatic conditions, multiple interdependent activities, security conditions etc. which can also contribute to the level of risk factor.

71. In order to minimize this risk, a PIU will be established at each Implementing Agency to manage their respective project components. Each PIU will be headed by a Project Director and depending on the components involved will have a separate well experienced Procurement staff. The project is procurement intensive involving Goods, Works and Services; therefore Procurement Management and capacity building firm (PMC) will also be hired at a central level

to support the smooth execution of the project. The Bank will conduct procurement trainings for the PIU staff for works, goods and services during first year of the project.

72. The PIU at each entity shall be responsible for carrying out the procurement under the project including the consulting services, works and goods with the support of Procurement staff and Procurement Management firm. PIU with support of the consultant shall develop a procurement website which will be managed and updated regularly, develop a credible system for handling procurement related complaints and will develop and maintain a Procurement documentation system, filing system and the procurement database.

73. Project procurements would largely cover selection of consultancies, both firms and individuals, besides major works and goods. These works and goods will inter alia include restoration of flood embankments, and modeling software. With proper assessment and implementation of the above discussed mitigation measures the procurement under the project is likely to be effective and transparent resulting in smooth implementation of the project leading to achievement of the project development objectives. Overall procurement risk at this stage is rated as *High*.

E. Social (including Safeguards)

74. ***Poverty, Gender and Inclusion:*** The project will have direct impact on poverty, gender and contribute to overall social and economic development of vulnerable population. The project will strengthen the capacity of government IAs in disaster preparedness and response which will benefit the larger vulnerable population including poor. The rehabilitation of infrastructure will assist in restoring their livelihood and bringing back a sense of normalcy to their communities. Natural disasters disproportionately affect the poor and the vulnerable, including women and children. A gender analysis was integral part of social analyses and found ways to mitigate possible risks that exacerbate gender inequality and explored opportunities to enhance positive impact of the project on gender. Gender equality and climate change are priority focus areas for results under IDA17. The WDR 2012 framework has been followed to mainstream gender sensitive approach to the project and will be used to strengthen the capacity of Disaster Management Authorities and IAs to address gender issues. A social inclusion and gender plan is laid down in the Social Assessment Report. It provides a mechanism for giving priority to vulnerable families / communities in early recovery and risk reduction activities (vulnerable include poor below poverty line, families headed by female, socially excluded minorities, or having disabled members). A school awareness program to teach students and teachers the disaster risks and actions required in emergencies to better understand and manage risks would be implemented. This program will include school based awareness on household level risk reduction measures before, during and after disasters; education on health issues during disasters; school disaster safety measures; information communication of messages to households and communities; dissemination of disaster safety knowledge through informal means of communication etc. As experience from other countries shows that educating children and teachers on this subject greatly contributes to overall public understanding on what actions to take before, during and after an emergency and saves more lives than just children's.

75. ***The Involuntary Resettlement Policy (OP/BP 4.12)*** is triggered by the project as works planned for the restoration of flood protection infrastructure, could potentially lead to the low to

moderate temporary or permanent involuntary resettlement impacts on encroached land. A rapid resettlement impacts screening exercise, conducted for a sample of indicative subprojects, identified potential adverse social impacts, which are of minor to moderate nature and can be mitigated in a short period of time through adequate social management. Such social impacts include minor loss of crops due to loss of encroached public lands, damages to kacha rooms' use for storage of agriculture inputs and grains, and animal sheds; and in few cases loss of grazing land. The restoration related social impacts will involve health and safety issues of professional staff/labor and access issues to be faced by communities residing near subproject areas. All efforts will be made to ensure that such adverse impacts are avoided, minimized, and/or mitigated and/or fully compensated. The screening process will allow the exclusion of certain activities/subprojects that would have potential to cause immense social impacts. Three social safeguard instruments are anticipated to fully manage and mitigate the potential adverse impacts of activities (i) Resettlement Policy Framework (ii) Social Management Plans (iii) Resettlement Action Plans. The Social Assessment (SA) has further clarified the nature and extent of potential impacts and benefits including potential positive impacts that would lead to reduction in poverty and vulnerabilities of poor, women and children, particularly girls. The SA identified key institutional stakeholders including potentially affected and intended beneficiaries communities. A number of consultations have been carried out with key stakeholders i.e. potentially affected and beneficiary communities, non-governmental organizations, implementing agencies, line agencies and other groups, which have been involved in project design and intend to be involved in project implementation, as well as in subprojects design and implementation of project activities. Several appropriate means for consultations were used such as meetings, Focus Group Discussions, in-depth Interviews, key informant interviews, corner meetings, open community meetings and workshops for institutional stakeholders. The ESMF includes feedback / comments and suggestions and recommendations received from consultations and also defined measures to address them.

76. ***A Resettlement Policy Framework (RPF)*** has been developed as part of ESMF to comply with OP 4.12. RPF defines objectives and principles of resettlement, provide subprojects screening mechanism at early stage to identify any subprojects that may potentially have high social impacts. In addition to this, RPF provides for the preparation of RAPs to efficiently mitigate and compensate low to moderate level social impacts, organizational arrangements, monitoring of safeguard instruments and funding mechanism for RAPs. The ESMF along with its executive summary in local (Urdu) language has been disclosed in country on April 29, 2015, on websites of IAs and distributed to institutional stakeholders. It was also disclosed at the World Bank InfoShop on April 29, 2015. Its copies in Urdu will be distributed to representatives of target communities before start of civil works.

77. For each of the subprojects, social impact assessment will be undertaken and based on an analysis of impacts, the requirements for Resettlement Action Plans (RAPs) will be identified and subproject specific RAPs will be prepared in order to develop mitigation measures for any identified impacts. Appropriate and context specific Grievance Redressal Mechanism for the project has been developed and annexed to the ESMF. Institutional arrangements for social impact assessment, preparation, implementation and monitoring the RAPs implementation will be put in place and managed by the PIUs. The IAs will monitor compliance with the ESMF, RPF and RAPs. The prepared RAPs will be consulted upon, reviewed and cleared by the Bank and disclosed prior

to implementation as per mechanism laid in RPF. Social Management Plans (SMPs), will be prepared as part of ESMPs to address social impacts of the subprojects. During preparation of RAPs and SMPs consultations will be undertaken, assessing and ensuring positive support of targeted communities for the subprojects and recording stakeholders' comments, and incorporating measures to address them. These stakeholders will be engaged during implementation of RAPs and SMP and monitoring of subproject results will be done via development of a citizen's engagement mechanism such as access to information, education and communication and grievance redressal mechanism. These mechanisms will ensure transparency and accountability of project implementers and enhance positive impacts of the project. The ESMF laid down institutional arrangements to ensure monitoring, reporting and documentation protocols of safeguard instruments.

78. Capacity to prepare safeguard instruments and adequate reporting on safeguards implementation is acknowledged to be limited. The capacity of IAs will be augmented by engaging qualified and experienced social staff and consultants. Provision for training will be made in RAPs. In addition to this technical assistance, guidance will also be provided by the Bank's Social Specialist.

79. The World Bank OP/PB 4.10 on Indigenous People will not be triggered as no indigenous communities are recognized by the Bank in Punjab and the State, based on the Bank's screening process that was undertaken in the past.

F. Environment (Including Safeguards)

80. Majority of the proposed activities under DCRIP are restoration/reconstruction and or rehabilitation of existing flood protection infrastructure (embankments, dykes, spurs) both in the Punjab and the State (component 1; sub-component 1.1 and 1.2). Sub-component 1.1 for restoring flood protection infrastructures may involve physical works with potential environmental impacts. The physical activities identified that can have potential impacts include restoration and rehabilitation of flood protection works, raising of embankments on bunds and flood protection works. Most of the physical works are expected to be restoration or rehabilitation works on small infrastructure involving local labor, with limited or no use of heavy construction machinery and employing locally sourced construction material.

81. The project activities will be conducted in Punjab and the State. The project area occupies a wide geographic region with urbanized, peri-urban, rural and some uninhabited land across plains, forests and mountainous areas. The project activities can be conducted in either of these geographical and geological zones. There are also some protected areas and ecologically sensitive habitat especially in the mountainous regions; however the project interventions being restoration and rehabilitation of existing structures in nature will be limited to the existing locations. The wide variety of flora and fauna, the varied geography and geology, the varied population and socioeconomic profiles mean that project environmental and social screening would have to be especially cognizant of the environmental and social baseline of the specific location where project activity is being carried out. Project activities shall be screened to ensure integrity of protected areas, forests or ecologically sensitive habitat.

82. The project will support restoration works, therefore, resettlement impacts are not expected as private land acquisition is not required. The task team has therefore categorized the project as B in terms of safeguards risks. The project does not involve any potential degradation of natural habitats or forests or damage to physical resources. *OP 4.01 Environmental Assessment* and *OP 4.12 Involuntary Resettlement* are triggered to ensure that in case there is any loss of low to moderate impacts caused by the project activities, the losses are mitigated in a timely and systematic manner. The policies triggered are listed below.

Safeguard Policies Triggered	Yes	No
Environmental Assessment (OP/BP 4.01) The project components 1 and 2 include activities that can potentially cause environmental impacts of low to moderate intensity and significance. Hence the project has been categorized as Environment Category B.	X	
Natural Habitats (OP/BP 4.04) The project interventions will be carried out in areas where the natural habitat has already been modified. In addition, the ESMF includes a screening process for the subprojects to ensure that no activities are planned at/near any sensitive habitat and or protected areas and that the proposed activities do not have any significant impacts on natural habitat.		X
Forests (OP/BP 4.36) The project interventions will be carried out in areas that are not forested. In addition, the ESMF includes a screening process for the subprojects to ensure that no activities are planned at/near any forests and that the proposed activities do not have any significant impacts on forests.		X
Pest Management (OP 4.09) The project does not involve procurement or usage of agro-chemicals nor will it promote any increase in the usage of these chemicals.		X
Physical Cultural Resources (OP/BP 4.11) No damage to physical cultural resources is expected. In addition, the ESMF includes a screening process for the subprojects to ensure that no activities are planned at/near any physical cultural resources and that the proposed activities do not have any significant impact on such resources.		X
Indigenous Peoples (OP/BP 4.10) No indigenous communities as recognized by the Bank and other development partners reside in the Punjab province or the State.		X
Involuntary Resettlement (OP/BP 4.12) The project components 1 and 2 can potentially cause resettlement impacts.	X	
Safety of Dams (OP/BP 4.37) The project does not involve any works on dams.		X
Projects on International Waterways (OP/BP 7.50) As the tributaries of Indus River are international waterways, the Project triggers the Bank's policy on Projects on International Waterways. Proposed project activities however only entail rehabilitation or reconstruction of existing infrastructure and technical studies and as such fall under the exception to the notification requirement under paragraphs 7(a) and 7(b) of OP 7.50. In accordance with the requirements of the policy, a memo outlining the rationale for the decision not to notify riparians has been prepared and approved by Bank Management.	X	
Piloting the Use of Borrower Systems to Address Environmental and Social Safeguard Issues in Bank-Supported Projects (OP/BP 4.00)		X

83. Only an indicative list of subprojects is available and the list may be revised at a later stage based on the need of the affected communities. The exact locations of the subprojects cannot be finalized at this stage. Therefore a framework approach has been adopted and the Borrower has

prepared an Environmental and Social Management Framework (ESMF). The ESMF includes a list of screening instruments adequate to the activity scale and impact and takes into account the geographic variation and difference in environmental resource base between Punjab and the State.

84. The initial screening of impacts indicates that the project will bring environmental benefits to the affected communities like protection of their assets including natural assets such as soil and water both in terms of quality and quantity. Any negative impacts envisaged will be short-term and would be limited to the physical works phase. Negative environmental impacts can include water pollution, diversion of water for works, elimination of washing areas/sites, leakages of chemicals, runoff from roads, change in natural flow of water bodies, solid waste, noise and vibration due to movement of machinery, air pollution due to smoke and dust, traffic and public nuisance, removal of trees, vegetation cover during site clearance, and felling of trees. Mitigation measures for all of these potential impacts have been considered in the development of the ESMF.

85. The ESMF includes screening criteria for selection of the subproject activities that will ensure that the activities selected; a) do not have any significant, irreversible or long-term environmental or social impacts, b) do not involve any greenfield construction, c) do not involve any works in protected areas or in or around sensitive natural habitats, d) do not cause any degradation of forestry or damage to physical cultural resources, e) do not involve work on any flood infrastructure up to or more than 10 meters in height, f) does not merit an Environmental Impact Assessment according to Pakistan Environmental Act and relevant guidelines and g) is not expected to cause any land acquisition, heavy resettlement or significant loss of livelihood. The ESMF includes a social and environmental checklist that assesses the potential project impacts on the basis of the scale of the subproject, nature and type of potential negative impacts. For all restoration activities that may potentially cause environmental impacts, an ESMP shall be prepared. Where necessary the project shall engage consultants to prepare a detailed Environmental and Social Impact Assessment in compliance with the OP 4.01 (as OPs 4.04, 4.36, 4.09, 4.11, and 4.37 are not likely to be triggered as explained for this operation). The ESMF proposes mitigation measures for low significance impacts including compensatory tree plantation at a ratio of four for each tree felled, water sprinkling for keeping dust and air pollution down, provision of employment to local labor to avoid social conflicts, proper maintenance of vehicles, generators and machinery, waste pits for solid waste management, designated areas for vehicles and generators with potential oil spills away from the water bodies, labor and working conditions, health and safety measures for professional employees, skilled and unskilled labor, and communities residing in subproject areas. Additionally the ESMF proposes institutional arrangements to ensure that the mitigation measures are implemented as well as propose monitoring, reporting and documentation protocols.

86. The ESMF suggests that both implementing agencies in Punjab and the State shall employ environmental and social safeguards specialists to oversee and ensure compliance with the ESMF and the RPF before identifying and designing the subprojects that may cause low to moderate environmental and or social impacts.

87. The ESMF has been disclosed in compliance with the Bank's Access to Information Policy. The ESMF and Urdu translation of its executive summary has been placed on the official websites of the implementing agencies. The ESMF has also been disclosed on the World Bank's InfoShop.

The ESMF and Urdu translation of its executive summary are being placed at all regional offices of the relevant departments and sent to all institutional stakeholders. Copies of ESMF will be provided to target communities after the selection of subprojects for financing under this operation.

88. The project will employ a three tiered monitoring structure with focal persons nominated from the concerned staff to monitor implementation of safeguards instruments during works phase. The safeguards specialist will compile the monitoring checklists to prepare and collate a quarterly environmental progress report. In addition to this, supervision consultants and contractors will also engage social and environment staff to comply with ESMF and RPF, and ensure implementation of RAPs and ESMPs.

89. During preparation of ESMF, SEMU (PID, Punjab) and the State planning and development department organized consultations with intended beneficiaries, potentially affected persons and other key stakeholders. Consultations were held with key government and civil society stakeholders at different levels through meetings, focus group discussions and key informant interviews with smaller groups of grassroots stakeholders such as potentially affected persons, project beneficiaries and local communities. Whereas discussions with institutional stakeholders were arranged in consultation workshops. The ESMF includes feedback/comments and suggestions/recommendations received from consultations, and measures to address them. Additional subproject-specific consultations will be carried out during the subproject designing and implementation.

G. Other Safeguards Policies Triggered

90. As the tributaries of Indus River are international waterways, the Project triggers the Bank's policy on *Projects on International Waterways OP/BP 7.50*. Proposed Project activities however only entail rehabilitation or reconstruction of existing infrastructure and technical studies and as such fall under the exception to the notification requirement under paragraphs 7(a) and 7(b) of OP 7.50. In accordance with the requirements of the policy, a memo outlining the rationale for the decision not to notify riparians has been prepared and approved by Bank Management.

H. Grievance Redress Mechanism

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

Annex 1: Results Framework and Monitoring

PAKISTAN: Disaster and Climate Resilience Improvement Project

Program Development Objective (PDO): To support restoration of flood protection infrastructure and strengthen government capacity to manage disasters and climate variability.											
PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values				Frequency	Data Source/ Methodology	Responsibility for Collection	Notes
				YR 1	YR 2	YR3	YR4				
Indicator One: Direct project beneficiaries	X	Percentage	0	20	50	60	100	Annual	Project Reports	PID, PDMA, SPIU	Target numbers for beneficiary population depend upon selection of flood protection investments through framework approach. Initial target numbers to be populated once ready investments are known early on, according to percentage values listed. Estimated beneficiary numbers to be used from feasibility reports.
		Number	0								
Indicator Two: Female beneficiaries	X	Percentage	0	20	50	60	100	Annual	Project Reports	PID, PDMA, SPIU	
		Number	0								
Indicator Three: Number of people benefiting from restored flood protection infrastructure through the project		Percentage	0	20	50	60	100	Annual	Design, Feasibility, and Completion Reports; and Progress Reports	PID, SPIU	
		Number	0								
Indicator Four: Number of people at risk receiving early warning notifications through mobile short messaging service		Number	50,000	50,000	100,000	200,000	500,000	Annual	Project reports of piloting and simulations	PDMA, SPIU	
Indicator Five: Improved institutional capacity for flood risk management		Text	No SOPs for Punjab disaster fund; limited disaster management plans at sub-national levels.	SOPs for Punjab disaster fund operation alized	Emergency Operations Centers (EOCs) set up at DMAs	Improved flood risk information available for planning at sub national governments.	Integrated disaster management plans adopted by government departments at sub-national levels	Annual	Institutional coordination reviews	PDMA, SPIU	Assessment for evaluation of institutional coordination mechanisms (before-after analysis).
INTERMEDIATE RESULTS											
Component 1 - Restoring Flood Protection Infrastructure											
Intermediate Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values				Frequency	Data Source/ Methodology	Responsibility for Collection	Notes
				YR 1	YR 2	YR3	YR4				

Indicator One: Length of embankments rehabilitated or constructed		Percentage	0	20	50	60	100	Annual	Design, Feasibility and Completion Reports	PID, SPIU	Target numbers depend upon selection of flood protection investments through framework approach. Initial target numbers to be populated once ready investments are known early on, according to design documents and percentage values listed.
		Kilometer	0								
Indicator Two: Number of flood protection investments for which preparatory analytical work completed		Number	0	1	2	4	4	Annual	Analytical outputs from preparatory work; Project reports	PID, SPIU	
Indicator Three: Establishment of a Decision Support System (DSS) for PID		Yes/No	No			Yes	Yes	Annual (Years 3 and 4)	Project Reports	PID	DSS to facilitate evidence based decision making for selecting optimal breaching sites, managing flood peaks, etc.
Component 2 – Managing Disasters and Climate Variability											
Intermediate Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values				Frequency	Data Source/ Methodology	Responsibility Collection	Notes
				YR 1	YR 2	YR3	YR4				
Indicator One: Number of Risk identification studies completed.		Number	0		1	2	4	Annual	Project Reports, Analytical outputs	PDMA, SPIU	Envisaged studies to focus on urban and flash flooding in Punjab, and slope stabilization studies in the 'Districts'
Indicator Two: Development and adoption of operational procedures for responding to disasters		Yes/No	No			Yes	Yes	Annual (Years 3 and 4)	Project Reports	PDMA, SPIU	
Indicator One: SOPs for Punjab Disaster Management Fund established		Yes/No	No			Yes	Yes	Annual (Years 3 and 4)	Project reports	PDMA	

Annex 2: Detailed Project Description

PAKISTAN: Disaster and Climate Resilience Improvement Project

Component 1: Restoring flood protection infrastructure and upgrading flood management systems– USD 100 million

1. Component 1 aims to enhance physical resilience to floods in the selected regions primarily through the restoration, rehabilitation and improvement of critical flood protection infrastructure. The Component will use a framework approach, where selection criteria will be used to identify subprojects to be taken up immediately as well as those to be undertaken in the medium term. In addition, the component will finance feasibility studies and detailed design work for additional flood mitigation works requiring more extensive preparatory activities. It will also support the agency implementing the infrastructure work in Punjab to further enhance their flood management systems. Physical works under this component are estimated to amount to USD 80 million.
2. Subcomponent 1.1. Flood Protection Works (USD 80 million): This subcomponent would focus on restoring flood protection infrastructure in Punjab and the State
3. Heavy monsoon rains occurred in the catchment areas of the eastern rivers raised water levels during the first week of September 2014. Flooding in the eastern rivers, particularly Chenab and Jhelum, emanating from across the eastern borders caused extensive damages to infrastructure, private assets, and livelihoods. The nature of damages in irrigation sector are classified mainly as breaches, relief cuts, washing of stone apron, disturbance of hydraulic gradient and overtopping of flood bund/spur/irrigation channels.
4. The government has developed and communicated a potential list of flood mitigation investments in Punjab and the State including works that are at an advanced stage of readiness and could be taken up under this subcomponent in the short term. The financing requirements for these immediate works are USD 65 million in Punjab and USD 15 million for the State.
5. A framework approach will screen for flood protection subprojects. This approach will be used for screening works both that are ready to be undertaken immediately as well as those that may require more extensive preparatory activities and longer preparation times. This screening would apply selection criteria and include safeguards screening to appraise and decide on financing these additional subprojects in the medium term. These selection criteria are:
 - Economic impact, as reflected by the size of incremental benefits and the number of expected beneficiaries
 - Technical readiness and feasibility filters
 - Demand and agreement by local communities established through survey instruments
 - Likely implementation durations for investments
 - Scale of social issues and environmental issues and corresponding mitigation costs (e.g. issues of land acquisition, clearing, and resettlement)

6. The above selection criteria will identify additional subprojects that may be financed under this subcomponent. In case that the current envelope does not meet the financing needs, additional financing may be used to support the framework approach.
7. Sub Component 1.2. Feasibility Studies and Diagnostics for Medium-Long Term Works (USD 15 million): This subcomponent will finance preparatory activities (feasibility studies, consulting services for surveys, designs, environmental and social impact assessments, etc.) for proposed medium-long term investments in Punjab and the State that may bring about significant improvements to flood protection and have high economic benefits. Once preparatory activities are completed, these works may also be considered for support through the framework approach.
8. Sub Component 1.3. Upgrading Flood Management Systems (USD 5 million): The subcomponent would support implementation of non-structural resilience measures at the Punjab Irrigation Department (PID) to enhance flood management capabilities. Key activities include:
9. *Establishment of a Decision Support System:* The Project would support the development of an integrated Decision Support System at PID to facilitate evidence based decision making related to selecting optimal breaching sites, information sharing for evacuation of communities at risk, managing flood peaks, and irrigation infrastructure management during flood events. This will entail the development of a robust model that will integrate and analyze information from multiple sources in an integrated geo-spatial system. Required inputs to the DSS development may include Digital Elevation Maps (DEM), land contour maps, upgrading telemetry equipment, monitoring sensors and communication equipment etc.
10. *Safety Evaluation of Flood Protection Structures:* The Project would assist the PID to strengthen the capabilities for assessing the structural safety of the flood protection works. This will involve building in-house capacity at the department and providing the required equipment to undertake these diagnostics. The results generated will be initially validated through outsourcing a few inspections on a sample basis.
11. *Supporting the Irrigation Research Institute:* The Irrigation Research institute under the PID will be supported to undertake studies/ trainings on improving design, operations, and maintenance of flood protection infrastructure to manage future risks and impacts associated with climate change.
12. *River Morphology Studies and Floodplain Mapping:* The subcomponent will further support study of the entire morphology of selected eastern rivers impacted by the 2014 floods (i.e. Jhelum and Chenab Rivers) as well as floodplain mapping for these rivers to identify risks including climate variability. The morphology study will analyze and identify critical protective infrastructure works needed for river bank strengthening.

Component 2: Managing Disasters and Climate Variability – USD 17 million

13. Component 2 aims to strengthen the government's capacity to better manage disasters. Financing through this component would be provided for risk identification, institutional strengthening for improved management of disasters, and enhancing fiscal resilience. It will be implemented through the Disaster Management Authorities in Punjab and the State.
14. Subcomponent 2.1. Disaster and Climate Risk Identification (USD 2 million): This subcomponent will focus on identifying the disaster and climate risk environment for informed planning and decision-making, development of framework to undertake the assessments, as well as tools to allow the optimal utilization of risk information. Specifically, a) Studies on urban and flash flooding in Punjab and; b) Slope stabilization studies in the State.
15. *Studies on Urban and Flash Flooding:* This subcomponent will provide technical assistance to PDMA Punjab to undertake urban and flash flood risk assessments in selected priority areas to quantify the risks factoring in climate change and prioritize risk mitigation investments. This subcomponent will include: (i) development of the framework and implementation of the assessment models; (ii) development of a historic hazard and loss database; (iii) analysis of climate variability factors; (iv) development of a monitoring and evaluation framework; (v) development of tools that will allow the optimal utilization of disaster and climate risk information towards increasing the resilience of the communities and DRM capacity of disaster management agencies.
16. *Slope Stabilization Studies:* The State is mostly mountainous with high risks of landslides, exacerbated by afforestation and erosion from resulting flash floods. Landslides cause loss of access and damages to critical public infrastructure as well as private assets, particularly during periods of high precipitation, glacial and snowmelt, and flood situations. A detailed catalogue of landslide sites has been prepared for these districts, and a prioritized list based on criteria which include severity, frequency and human and socio-economic losses. The Project will undertake analytical work on high priority landslide sites, including learning about slope stabilization from existing successful techniques, ongoing cutting edge work, and technology trials through small demonstrative works.
17. Subcomponent 2.2. Institutional Strengthening for DRM and Climate Variability (USD 12 million): This subcomponent will provide support towards strengthening the institutional structure as well as building capacity and equipping the Disaster Management Authorities in Punjab and the State. Key activities include:
18. *Institutional and policy review:* This subcomponent will provide support towards improved institutional mapping and coordination mechanisms between a wider spectrum of government institutions relevant to disaster management and climate change impacts. This will entail the institutionalization of assessment methodology, especially in the area of data preparedness and sector baselines using GIS architecture with communications systems and protocols at provincial and sub-provincial levels. Additionally, there will be an emphasis on development of recovery policy and planning systems including institutional arrangements with clear roles and responsibilities and incorporating public-private partnerships, recovery financing, and monitoring and evaluation of recovery projects. Further, the subcomponent support

mainstreaming DRM and climate variability aspects in the planning process in collaboration with the Planning and Development (P&D) Department, Punjab.

19. The subcomponent will also support specific interventions to improve the coordination mechanisms with the health and education departments, including: (i) Development of SOPs and emergency procurement procedures for health and education institutions, amongst others; (ii) Dissemination of flood risk information to guide the institutional decision-making process for construction of new schools and health facilities; (iii) Coordination with the overall disaster management plans for health including emergency recovery, medium term relief efforts and longer term investments for flood/ disaster protection; (iv) Conduction of an assessment of health system readiness to respond to disasters and preparation of immediate rescue SOPs in coordination with PDMA; (v) Development of annual training, simulation exercises, logistics system coordination with PDMA.
20. Further areas where the Project will provide policy review and recommend improvements include land-use planning and enforcement, as well as building codes enforcement, particularly for areas at high risk as identified through the disaster and climate risk assessment.
21. *Strengthening of DMAs*: This will entail developing the institutional set up and operational capacities at Punjab Disaster Management Authority (PDMA) and State disaster management authority, down to the district level. Activities will include technical enhancement of the operational facilities such as Emergency Operations Centers (EOCs), and training programs and regular drills for EOC staff and relevant officials at the provincial and district levels. This will further focus on strengthening the capacity of Punjab and the State to manage disaster events through: a) an improved system for dissemination of early warnings and instructions to communities at risk; and, b) better integrating SOPs and resources at emergency response agencies, fire services personnel, and District governments. Envisaged improvements to early warning systems include enhancing the capacity of Disaster Management Authorities to disseminate information products such as flood forecasts and evacuation instructions to a greater number of people at risk with a wider geographic coverage using media such as short messaging services and radio broadcasts. Furthermore, the Project will also provide better search and rescue equipment and improve stockpiles and associate logistics for rescue and relief operations by DMAs and other relevant agencies.
22. *Subcomponent 2.3. Fiscal Resilience (USD 3 million)*: Towards improving fiscal and economic resilience, the project seeks to operationalize key recommendations from the analytical work on Disaster Risk Financing and Insurance being undertaken in collaboration with the Ministry of Finance, Securities and Exchange Commission (SECP), and the Punjab Provincial Finance Department.
23. Pakistan faces a major financing challenge arising from natural catastrophes. Preliminary analysis by the Bank estimates the fiscal impact of floods alone at 3 to 4 percent of the Federal Budget⁶ (USD 1.2 billion and USD 1.8 billion, equivalent to between 0.5 percent and 0.8

⁶ Figures from the World Bank Fiscal Disaster Risk Assessment Report for Pakistan. Budget estimate taken from 2014-2015 Budget in Brief (<http://finance.gov.pk/>) exchange rate fixed at 102

percent of national GDP⁷). The same analysis shows that a major flood event (with a 1% probability of occurring in any year, or, on average, once every 100 years) could cause losses in excess of USD 15.5 billion⁸ (around 7 percent of national GDP or almost 40 percent of the Federal Budget).

24. The sub-component will support the government to better manage this significant contingent liability through a comprehensive disaster risk financing strategy which combines different financial instruments to protect against events of different frequency and severity, and meeting specific financial needs for post-disaster emergency response and reconstruction. The sub-component would support both the Finance Department of Punjab in coordination with the PDMA. Financing through this subcomponent would be provided to support government to develop a National Disaster Risk Finance Strategy, which would finalize the objective and scope of the government's work in disaster risk financing, evaluate various financial to finance its contingent liability to natural disasters, and prepare implementation of selected instruments. Capacity building and resources to operationalize recommendations would also be provided.
25. The sub-component would also provide advisory services to *Punjab Provincial Disaster Management Fund (PDMF)*. Supporting the Finance Department of Punjab and the PDMA in operationalizing the PDMF is a high priority. The PDMF has been created through the 2010 National Disaster Management Act, but has not been put into action. The project would support the development of an appropriate governance structure, SOPs, fiduciary safeguards and controls, and transparent allocation criteria, drawing on international good practices. To accompany the work to implement the PDMF, further support could be provided to the Punjab Finance Department to develop a DRF Strategy for Punjab, accompanied by capacity building and potential support of local staff dedicated to this topic.
26. To improve coordination and enhance the efficiency and impact of its various social protection programs, the Government of Punjab has recently established the Punjab Social Protection Authority (PSPA) under an Ordinance promulgated in January 2015. The overall mandate of the Punjab SPA is to provide a comprehensive, efficient, effective and gender-equitable social protection system to the poor and vulnerable in Punjab. The Authority also plans to test and promote systems for, among others post disaster social programs including cash transfers. The SP team at the World Bank is currently providing an NLTA to the Government of Punjab to develop the SPA's legal and institutional arrangements and support the design of various programs, based on global practices, to enable the Authority to carry out its mandate as per the Ordinance.
27. The Government of Punjab used early recovery cash transfers for the floods in 2010, 2011, and 2014 through the PDMA to support immediate consumption needs of affected households. Moving forward, the PSPA may be supported to develop a standard system that can be used in collaboration with the PDMA for emergency cash transfers. The envisaged system will include: (a) beneficiary identification through the use of an objective and verifiable eligibility criteria that identifies poor and vulnerable using the National Socio-Economic Registry; (b) enrolment of beneficiaries through biometric verification; (c) payments using technological

⁷ 2013 GDP figure used, numbers rounded

⁸ Upper bound estimate taken from two methodologies. See Chapter 3 for further detail.

options for efficient delivery and reconciliation; (d) effective grievance management mechanisms to enhance credibility of programs and minimize exclusion errors; and (e) M&E, communications and beneficiary outreach.

Component 3: Project Management – USD 8 million

28. The project will be implemented through mandated government departments including Punjab Irrigation Department, Punjab Disaster Management Authority, and the State planning and development department. This component will support engagement of additional resources at PIUs within these departments. The departments through these PIUs will be responsible for: (i) project implementation and coordination; (ii) project financial management; (iii) project reporting; (iv) monitoring and evaluation; (v) environment and social management; and (vi) procurements.

Component 4: Contingent Emergency Response– USD 0 million

29. Following an adverse natural event that causes a major natural disaster, the Borrower may request the Bank to re-allocate project funds to support response and reconstruction. This component would allow the government to request the Bank to reallocate financing from other Project components to support emergency response and recovery costs. This component could also be used to channel additional funds should they become available for such an eligible emergency.

30. Disbursements would be made against a positive list of critical goods or the procurement of works, and consultant services required to support the immediate response and recovery needs. All expenditures to be financed under this component, will be in accordance with OP 10.00 and will be appraised, reviewed and found to be acceptable to the Bank before any disbursement is made. In accordance with paragraph 12 and 13 of OP 10.00, this component would provide immediate, quick-disbursing support to finance goods (positive list agreed with the Governments), works, and services needed for response, mitigation, and recovery and reconstruction activities. Operating costs eligible for financing would include the incremental expenses incurred for early recovery efforts arising as a result of the impact of major natural disasters.

31. Goods, Works and Services under this component would be financed based on review of satisfactory supporting documentation presented by the government including adherence to appropriate procurement practices in emergency context. All supporting documents for reimbursement of such expenditures will be verified by the Internal Auditors of the Government and by the Project Director, certifying that the expenditures were incurred for the intended purpose and to enable a fast recovery following the damage caused by adverse natural events, before the withdrawal application is submitted to the Bank. This verification should be sent to the Bank together with the application.

32. Specific eligible expenditures under the category of Goods include: (i) construction materials; water, land and air transport equipment, including supplies and spare parts; (ii) school supplies

and equipment; (iii) medical supplies and equipment; (iv) petroleum and fuel products; (v) construction equipment and industrial machinery; and (vi) communications equipment.

33. Specific eligible expenditures under the category of Works may include urgent infrastructure works (repairs, rehabilitation, construction, etc.) to mitigate the risks associated with the disaster for affected populations. Specific eligible expenditures under the category of Services may include urgent studies (either technical, social, environmental, etc.) necessary as a result of the effects of the disaster (identification of priority works, feasibility assessments, delivery of related analyses, etc.).

Annex 3: Implementation Arrangements

PAKISTAN: Disaster and Climate Resilience Improvement Project

1. The activities and investments under the Project will be implemented at: a) Province of Punjab; and, b) the State. For the State, a dedicated PIU will be set up at the State planning and development department. In Punjab, PIUs will be created at the Punjab Irrigation Department and Provincial Disaster Management Authority (PDMA). All PIUs would be created within one (01) month of project effectiveness.
2. The Table below presents a mapping of Project components and subcomponents in relation to the implementing agencies at the provincial and district levels.

Table: Institutional Mapping of Project Components

Component	Implementing Agency	
	Punjab	State
Component 1 – Restoring flood protection infrastructure and upgrading flood management systems		
1.1. Flood Protection Works	Punjab Irrigation Dept. (PID)	State planning and development department
1.2. Feasibility Studies and Preparation Activities for Medium-Long Term Works	PID	State planning and development department
1.3. Upgrading Flood Management Systems	PID	-
Component 2 - Managing Disasters and Climate Variability		
2.1. Disaster and Climate Risk Identification	Provincial Disaster Management Authority (PDMA) Punjab	State planning and development department
2.2. Institutional Strengthening for DRM and Climate Variability	PDMA	State planning and development department
2.3. Fiscal Resilience	PDMA	-
Component 3 – Project Management		
3.0 Project Management	PID, PDMA	State planning and development department

3. Detailed implementation arrangements are discussed below for the provincial and State levels.
4. **Punjab:** Institutional stakeholders for various activities to be implemented in Punjab will include: Punjab Irrigation Department (PID) for Component 1; the Punjab Disaster Management Authority for Component 2; the provincial Finance Department (FD) for the subcomponent on Fiscal Resilience; all District Governments in Punjab for strengthening of Disaster Management capacities at the district level; and, various provincial departments and line agencies for the Institutional and Policy Review subcomponent.
5. The Project Implementing Agencies in Punjab will include the PID and PDMA. The implementing agencies will be responsible for managing activities and investments to be undertaken in Punjab as shown in the Table above. A dedicated PIU, headed by a dedicated

Project Director, will be established at the PDMA and manage the implementation of concerned activities. The PIU will be adequately resourced with skillsets and competencies required for project implementation and monitoring.

6. On the other hand, PID will establish a PIU to implement both physical infrastructure and non-structural aspects of Component 1. The PIU would be headed by a Project Director and will further include technical experts and concerned officials from within the PID staff itself. The project will finance key positions that are needed, particularly for contract management, M&E, environmental and social safeguards, financial management, procurement, and technical specialists.
7. The responsibilities of the PIUs established at PDMA and PID will include, inter alia: project management; reporting; monitoring and evaluation; procurement and financial management; audits; engaging with third party validation agencies for specific investments; compliance with Environmental and Social Frameworks; as well as coordination with the line agencies and the World Bank.

Figure 2: Implementation Arrangements for Punjab



8. **The State:** The Recipient has nominated the State planning and development department as the project implementing agency. A dedicated PIU for the State is being set up for project implementation including, but not limited to, reporting, monitoring and evaluation, procurement control, financial management, audit and disbursements, compliance with Environmental and Social Frameworks, as well as coordination with the line agencies and the World Bank. The State PIU would be adequately capacitated with required skill sets. Officers from relevant line departments would be deputed to the PIU as dedicated resource persons.
9. **Project Operations Manual:** The project would be implemented according to norms, rules and procedures outlined in the Operations Manual (OM). The documents will lay out roles and responsibilities of different stakeholders and provide details of project processes and project cycle. The OM will further incorporate experiences gained through implementation of similar projects in Pakistan as well as the outcomes from detailed deliberations, institutional capacity and fiduciary assessments, and risk analyses including social and environment impact analysis, that were carried out as part of project preparation. The OM will be reviewed periodically by the Borrower subject to approval by IDA and revised as needed to address any constraints to the successful implementation of the project.
10. **Contingent Emergency Response Component:** In case Component 4 is activated, the Recipient will need to designate the responsible agency/s for implementation of activities under Component 5, and may delegate the development and adoption of CER Implementation

Plan as well as the development, adoption, and disclosure of safeguard instruments to the responsible agency.

11. **Communications:** The Bank will support the Implementing Agencies in developing an effective internal and external communications strategy during project implementation which would ensure adequate dissemination of information regarding the resilience agenda being supported as part of the project. The communication functions for the project will be housed in mandated disaster management and flood management institutions.
12. It is important that the communications strategy is designed in a way that it distinguishes between the achievements under the project, which focus on the mitigating future risk of floods through restoring flood mitigation infrastructure to more resilient standards, and areas beyond the scope of this project, such as longer term integrated flood management and broader water sector issues. Strategic communication will help in creating buy-in and support both from within the various government entities involved and the external stakeholders to ensure sustainability of risk reduction measures.
13. Institutional strengthening interventions being supported at relevant institutions, particularly improvements in early warning and its dissemination would need to be communicated to populations at risk so that there is awareness of the new systems and how communities would be expected to respond when such information is disseminated.
14. The strategy would also help inform the population about availability of mechanisms, such as grievance redressal and information disclosure systems. The communications strategy should aim to inform the citizens of such initiatives and also set up communication channels with stakeholders to engage and receive feedback on impacts and concerns from the beneficiary population. A Grievance Redressal Committee will also be formed at the project level separately for Punjab and the State to handle complaints in an efficient manner.

FINANCIAL MANAGEMENT, DISBURSEMENTS AND PROCUREMENT

FINANCIAL MANAGEMENT

15. **Staffing:** Punjab Irrigation Department (PID) will execute payments against eligible expenditure financed under the project through a designated account. Payments will be made centrally from Lahore. Recording and reporting is intended to be carried out in Lahore independently from its existing accounting structure placed at various divisions for effective financial management. There is sufficient number of existing FM staff available with PID which will be transferred to the PIU to cater for project specific needs. The PIU will have a Finance Manager supported by an accounting and financial reporting officer.
16. Staffing at PDMA requires strengthening. The current staff at PDMA consists of a few officers on deputation from Punjab Board of Revenue and Services and General Administration Department (S&GAD). The project is expected to finance procurement of assets which will be managed through a designated account. Currently the department does not have staff for recording and reporting of financial transactions. The PDMA management is writing to the

CGA for posting one officer of grade 18 on deputation basis to strengthen the financial management capacity at PDMA. Availability of dedicated and qualified FM staff is an essential requirement for the project.

17. The State planning and development entity is fully supported by the concerned Accountant General's (AG) office which is adequately staffed. The Additional AG has a number of officers awaiting posting and has agreed to depute senior staff from its current strength to PIU for smooth running of the project.
18. **Planning and Budgeting:** Funding for project financed activities will be allocated to the Government of Pakistan, Government of Punjab, and the State planning and development department, respectively, using detailed object and functional classification prescribed in the New Accounting Model (NAM). It is imperative that the implementing agencies make sure that the project's estimated disbursements are included in the estimates of foreign assistance on the receipt side of the budget. The expenditure budget is to be prepared using function and object codes of chart of accounts to capture expenditures for project identified schemes and assets to be procured under the three components and TA for all implementing agencies.
19. The concerned Accountant General office for the State can only capture and track the development expenditure through scheme numbers, therefore each scheme to be financed under the project needs to be approved and coded in the budget, which is yet to be prepared and dependent on the approval of the PC1.
20. Government of Punjab follows a detailed budget calendar, and a budget call circular including detailed instructions is circulated during the year. This calendar provides deadlines for all the steps involved to ensure that there is sufficient time and follow up to receive, review, discuss, and compile the inputs from PID and PDMA. The consolidated budget is prepared by the Finance Department for submission to the legislature.
21. **Accounting and Reporting:** Each PIU will maintain its own books of accounts for the project-related activities (for all components) on a cash basis, using the government's accounting policies and procedures given in the NAM. PIUs will be given access to client connection to properly reconcile project payments as recorded by PIUs and the Bank. The differences, if any, will be resolved by the FM staff of PIU and the Bank. The PIU will also reconcile and sign-off on accounts with the concerned AG.
22. PDMA and PID will approach the Accountant General (AG) Punjab through CGA for provision of Government's FMIS terminal. The AG Punjab can allocate up to 4 terminals to the project for maintenance of designated account / revolving fund account without incurring additional licensing costs. In case of additional cost of installation of Government's FMIS (PIFRA terminal) the same will be financed through the Project Management Component.
23. Accounting and reporting will be carried out by the concerned AG office for activities in the State. The AG office already has the necessary equipment with SAP connectivity to allow separate budgeting and accounting of the projects expenditure. The AG office will establish a separate FM office within its office to support all needs of the project accounting and recording.

24. The government's FMIS generated fiscal reports will be the basis for preparation of the Project's Budget Execution Reports by each PIU. The Financial Reports (interim and annual) will also be produced, showing such details as are required by the Bank. The Financial Reports will take the form of IFRs and Annual Financial Statements. The template for IFRs will be communicated to various PIUs within three months of signing of the agreement. IFRs will be submitted to the Bank within 45 days of the close of each quarter

Internal controls

25. *PID & PDMA*: GoPb has a comprehensive internal control framework comprising the Punjab General Financial Rules (PGFR), Treasury Rules (TR), and Punjab Delegation of Financial Powers Rules (PDFPR) 2006, which will be observed for project's expenditure. Most of these regulations were enacted a few decades ago and have undergone several revisions from time to time. The PEFA Assessment 2012 reports that the controls, though comprehensive, involve the duplications of approvals and multiple reporting, leading to inefficiency. Moreover, it also reported the absence of an effective internal audit function in Punjab. The existence of strong payroll controls (except the absence of periodic payroll audits) was noted during the PEFA Assessment. The Finance Department is in the process of updating certain rules in line with generally accepted best practices and is also working on a proposal to establish the internal audit function. Punjab PEFA has indicated the absence of internal audit with limited pre-audit function (especially in donor funded projects) besides highlighting the absence of payroll specific audit.

26. *The State*: The project will follow rules and regulations as are applicable in the State. Delegation of Financial Powers Rules, 2011 have been notified which are applicable on all departments in the State. The relevant Accountant General office applies a pre-audit check on all payments wherein compliance to all rules is checked beside the compliance of NAM and CGA, Pakistan instruction.

27. The project is expected to follow Government rules and regulations as notified and applicable. However, no consolidated manual exists for finance and accounts in the implementing agencies. More so in case of GoPb, the pre-audit check is not applicable on the expenditure financed through foreign assistance. It is recommended that key internal control procedures are included in the Project Operations Manual. The Manual would contain clearly-defined control policies and procedures related to payments verification and processing, segregation of duties, regular and timely reconciliations, record and asset management. For each process, the Manual will define key tasks, responsibilities, specific steps and timelines so it also serves as a benchmark for management to measure performance. Internal control activities for the project will at minimum include:

- (a) Authorization and Approvals: For payments to be made under various Components, the financial and administrative authority will be exercised in accordance with the approved delegation of powers.
- (b) Verifications: For each payment the Financial Management sections placed at PIUs at PID, PDMA and the State planning and development department will review that the

payment claim is appropriately supported by documents, is in compliance with approved policies and has been approved by the competent authority.

- (c) Segregation of Duties: The FM function will be independent of procurement and administration. There will be dual bank signatories, one of which will be from a unit other than FM.
 - (d) Physical Controls: PDMA, PID and the State planning and development department will maintain a fixed assets register for assets procured from credit proceeds. All assets will be tagged, entered in the stock registers, and periodically verified.
 - (e) Reconciliations: Expenditure reconciliation with the Accountant Generals and bank reconciliation will be carried out on a monthly basis. Any difference in the reconciliation will be reviewed and the reasons for the difference will be documented.
 - (f) Supervisory Controls: Monthly reconciliations with the Accountant General and the Bank, physical stock verifications reports and periodic financial reports will be reviewed by the head of each PIU.
28. **Project Audit:** The Project external audit will be carried out by the Auditor General of Pakistan (AGP) as the supreme audit institution of the country. Each of the three PIUs will submit the related activities/ components for audit. The accounts will be audited by DG (Audit) Punjab, the concerned DG (Audit) for the State, and DG (Audit) foreign, as the case may be.
29. In the latest PEFA Assessment, the external audit function of GoP/GoPb was rated “B” owing to extended scope and coverage and good quality of audit. For the Punjab government, the audit up to financial year 2013/14 has been completed and audit reports have been submitted to the legislature. There is no pendency of audit reports in PAC for the State. However, the Punjab PAC has huge pendency of audit reports.
30. The audited financial statements of each PIU established in implementing agencies will be submitted to the Bank within six months after the close of the financial year. The audit will be carried out in accordance with Financial Audit Manual (FAM), which is based on INTOSAI Auditing Standards and international best practices and is generally compliant with International Auditing Standards. For each financial year closing on June 30, acceptable audited financial statements of the project along with Management Letter will be submitted to the Bank by December 31, i.e. within six months after the close of the financial year.
31. **Disbursement and Funds Flow:** The procedure for operating of designated account/ revolving fund account has been revised by the Ministry of Finance, GoP for foreign funded projects vide notification dated Aug 2, 2013. The revised procedure is applicable in Punjab as well the State. The funds under the project will be disbursed and utilized by the PIUs following the same procedure.

32. Three segregated designated/revolving-fund accounts in USD (assignment accounts or child account) will be established within each of the 3 PIUs for TA and non-TA components at the National Bank of Pakistan to receive IDA funds.
33. The table below summarizes Eligible Expenditures that may be financed out of the proceeds of the Financing ("Category"), the allocations of the amounts of the Financing to each Category, and the percentage of expenditures to be financed for Eligible Expenditures in each Category.

Category*	Amount of the Financing Allocated (expressed in USD)	Percentage of Expenditures to be Financed (inclusive of Taxes)
Expenditure by Punjab Irrigation Department	84,000,000	100%
Expenditure by Punjab Disaster Management Authority	16,000,000	100%
Expenditure by the State planning and development department	25,000,000	100%
Emergency Expenditures for the CER Component	0	100%
TOTAL AMOUNT	125,000,000	

* All categories will cover expenditures on goods, works, non-consulting services, consultants' services, Insurance Premia, Training and Workshops, and Incremental Operating Costs for Component 1 to 5 of the Project. The Recipient will not use the critical goods financed under the Project for military or paramilitary purposes nor any other purpose than for the Project.

34. The project financing will be disbursed based on initial estimates given below, which may be re-appropriated with the consent of Bank.

	PDMA (USD M)	PID (USD M)	State planning and development department (USD M)
Component 1	-	80.0	20.0
Component 2	14.0	-	3.0
Component 3	2.0	4.0	2.0

35. Disbursements will be report-based where advance equivalent to six months forecast of expected payments will be provided and subsequent quarterly Interim Financial Reports (IFRs) will be the basis of documentation of the expenditures. Subsequent IFRs will also provide forecast for the following six months, on the basis of which the amount of funds to be disbursed will be determined. However due to the lapsed loan issue in the Pakistan portfolio, the advance method of disbursement and the use of designated account is presently not available to the project. Once the issue of lapsed loan is resolved, a revised disbursement letter incorporating the use of designated account and Advance disbursement method will be issued. Other disbursement methods include reimbursement, direct payment and special commitment.
36. **Retroactive Financing:** Retroactive financing will be available under the Project for an aggregate amount up to 40 percent of the Credit (SDR 35,560,000 or US\$50 million) for payments made for eligible expenditures carried out on or after September 1, 2014. All

expenditures, for which retroactive financing is sought, will be submitted to the Bank in order to verify their eligibility as per the project description and disbursement table, safeguards policies and procurement requirements.

PROCUREMENT

37. Procurement for the proposed Project would be carried out in accordance with the World Bank's "Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers January 2011 revised July 2014"; "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers January 2011 revised July 2014", as well as the provisions stipulated in the Financing Agreement. The general description of various items under different expenditure categories are described below. For each contract to be financed by the Project, the different procurement methods or consultant selection methods, estimated costs, prior review requirements, and time frame are to be agreed between the Borrower and the Bank Project team in the Procurement Plan. A full plan is yet to be developed. The Procurement Plan will be updated at least annually or as required to reflect the actual Project implementation needs and improvements in institutional capacity. A General Procurement Notice shall be published as soon as the procurement plan is prepared.
38. **Procurement of Works:** In addition to other staff, the PIU will also be supported by the Procurement Management Consultant (PMC) who would help in construction supervision, contract management and management aspects of the project. For civil works contracts, the Project Director shall serve as the Employer and the PMC supervising consultant would be responsible for the evaluation of bids and recommendation of the award for major contracts. PMC would also be the "Engineer" or "Project Manager" under the civil work contracts. Whenever possible, procurement of works, goods and services would be packaged into large packages/contracts implemented through international competitive bidding procedure to attract good contractors.
39. The civil works contracts which are: (i) estimated to cost up to or more than USD 2,000,000 equivalent would be procured through ICB procedures. Prequalification would be mandatory for contracts estimated to cost more than USD10 Million equivalent; (ii) Estimated to cost less than USD 2,000,000 would be procured through NCB procedures; (iii) For Minor works estimated to cost up to USD 50,000 equivalent per contract may be procured through shopping procedures. The PIU would validate authenticity of the quotations provided by suppliers under this procedure; (iv) Direct contracting may be used for any urgently required goods after prior approval of the Bank.
40. **Procurement of Goods:** Major goods contracts are expected to cover field equipment, heavy equipment, vehicles, furniture and office equipment etc. (i) ICB procedures shall be followed for each Goods contract estimated to cost more than USD 600,000 equivalent;(ii) Goods estimated to cost up to USD 600,000 per contract may be procured through NCB procedures acceptable to the Bank; (iii) Vehicles and small value off-the-shelf goods etc. estimated to cost up to USD 50,000 equivalent per contract may be procured following shopping procedures in accordance with the Bank's procurement guidelines; (iv) Computer software, books, journals, training material and other goods with individual contract costing less than USD 50,000

equivalent may be procured following direct contracting procedures, with prior approval of the Bank.

41. ***Additional Provisions for National Competitive Bidding:*** The procedures applicable to the procurement of Goods and Non-consulting services under contracts awarded on the basis of National Competitive Bidding shall be those set out in Rule 5 and 38 through the Punjab Public Procurement Rules, 2014 (No. ADMN(PPRA)10-2/2014) for Punjab; or Rules 5 and 20 through 36(a) of the Federal Public Procurement Rules (2004) (S.R.O. 432(I)/2004) for the Recipient and the State. As agreed to with the Association, the Recipient shall ensure that the following additional requirements be applied in order to align such procedures with the principles of economy, efficiency, transparency and broad consistency with the provisions of Section I of the Procurement Guidelines, pursuant to paragraph 3.3 of said Guidelines. In the event of a conflict between the Recipient's procedures and the additional provisions set out above, the latter shall govern:

- (i) Invitation to bid shall be advertised in at least one national newspaper with wide circulation, at least thirty (30) days prior to the deadline for the submission of bids;
- (ii) bid documents shall be made available, by mail or in person, to all who are willing to pay the required fee;
- (iii) foreign bidders shall not be precluded from bidding and no preference of any kind shall be given to national bidders in the bidding process;
- (iv) bidding shall not be restricted to pre-registered firms;
- (v) qualification criteria shall be stated in the bidding documents;
- (vi) bids shall be opened in public, immediately after the deadline for submission of bids;
- (vii) bids shall not be rejected merely on the basis of a comparison with an official estimate without the prior concurrence of the Association;
- (viii) before rejecting all bids and soliciting new bids, the Association's prior concurrence shall be obtained;
- (ix) bids shall be solicited and works contracts shall be awarded on the basis of unit prices and not on the basis of a composite schedule of rates;
- (x) contracts shall not be awarded on the basis of nationally negotiated rates;
- (xi) a single bid shall also be considered for award;
- (xii) contracts shall be awarded to the lowest evaluated and qualified bidder;
- (xiii) post-bidding negotiations shall not be allowed with the lowest evaluated or any other bidders;
- (xiv) draft contract shall be reviewed by the Association in accordance with the prior review procedures;
- (xv) any firm declared ineligible by the Association, based on a determination by the Association that the firm has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for or in executing an Association-financed contract, or a contract financed by another institution with which the Association has entered into a cross-debarment agreement, shall be ineligible to be awarded an Association-financed contract during the period of time determined by the Association;
- (xvi) each contract financed from the proceeds of the Financing shall provide that the

suppliers, contractors and subcontractors shall permit the Association, at its request, to inspect their accounts and records relating to the performance of the contract and to have said accounts and records audited by auditors appointed by the Association. The deliberate and material violation by the supplier, contractor or subcontractor of such provision may amount to obstructive practice.

- (xvii) Recipient-owned enterprises shall be eligible to bid only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the Recipient
- (xviii) The Association shall declare a firm ineligible, either indefinitely or for a stated period, to be awarded a contract financed by the Association if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for or executing a contract financed by the Association.

42. ***Selection of Consultants:*** It is assumed that major consulting services under the project would be required for the Project Implementation Consultants (PICs), Equipment and Instrumentation engineers, and development of management information and decision support systems. Contracts with consulting firms will be procured in accordance with Quality and Cost Based Selection procedures or other methods given in Section III of the Consultants' Guidelines. Consulting services selection would be carried out through Quality and Cost Based Selection (QCBS) for contracts with consulting firms costing more than USD 300,000 equivalent, and through Consultants Qualification (CQ) for contracts costing up to USD 300,000. Other methods as mentioned in Section III of Consultants' Guidelines shall be used as required.
43. ***Other Methods of Procurement of Consultants' Services:*** The following methods, other than QCBS, may be used for procurement of consultants' services for the Project as specified for each individual contract in the Procurement Plan: (a) Quality-based Selection; (b) Selection under a Fixed Budget; (c) Least Cost Selection; (d) Selection based on Consultants' Qualifications; (e) Single-source Selection of consulting firms; (f) Procedures set forth in paragraphs 5.2 and 5.3 of the Consultant Guidelines for the Selection of Individual Consultants; and (g) Single-source procedures for the Selection of Individual Consultants.
44. ***Selection of Individual Consultants:*** This is envisaged to include any full-time or part-time technical assistance required for the Project. Services for assignments that meet the requirements set forth in paragraph 5.1 of the Consultant Guidelines may be procured under contracts awarded to individual consultants in accordance with the provisions of paragraphs 5.2 through 5.3 of the Consultant Guidelines, which stipulate that the selection should be made through comparison of at least 3 CVs that meet the requirements of the Terms of Reference including those for qualifications and experience. Under the circumstances described in paragraph 5.4 of the Consultant Guidelines, such contracts may be awarded to individual consultants on a sole-source basis.
45. ***Assessment of the Agency's Capacity to Implement Procurement:*** The assessment reviewed the organizational structure, staffing and capacity for implementing the project. Assessment of Implementing Agencies involved in project are given below in the Procurement paragraph

- a. **Punjab Irrigation Department (PID)** is a Punjab Provincial Government Department. It is headed by a Provincial Secretary and is divided into approximately 130 Operational Divisions located throughout Punjab Province which are headed by Executive Engineers. Procurement function for works less than Rs.100 Million is decentralized and is carried out at Executive Engineer level and approved by the authority under delegation of Financial Rules – 2006. For procurement of works larger than Rs. 100 Million the procurement process is centralized. Smaller contracts are approved by the Executive Engineer (XEN) and the Superintendent Engineer and for larger contracts the contract award is approved by the Administrative Department and Chief Engineer. There is a tender Evaluation committee whose composition depends on the amount of contract to be awarded. PID follows the Punjab PPRA 2009 and PPRA 2014 Rules for all procurement and if it is a Bank financed project then it follows the Bank regulations, rules and guidelines. PID informed that the procurement staff of the Project Management Offices of the PID are fully familiar with the Bank procurement policies, guidelines and standard bidding documents (SBD) based on FIDIC Conditions of Contract as they have already worked and are also presently working on International donor-funded projects of World Bank, ADB and JICA.

The department had setup a Project Management Office (PMO) (Punjab Irrigation System Improvement Project – PISIP) which was managing this large JICA financed project involving civil works with construction and lining/rehabilitation of irrigation lines. The PMO is headed by a Project Manager who was an ex Superintending Engineer of the Punjab Irrigation Department and also had 4 to 5 years of prior experience working on the Bank financed project. The Head PMO is assisted by other staff including a Director Finance who has 21 years of prior private sector experience and 6 years in PMO, a senior Accounts Officer deputed from the Punjab Accountant General Office, Director Procurement (in-charge of procurements) assisted by Deputy Director Procurement and Deputy Directors claims and additional staff, Deputy Director Monitoring who is also from PID, Deputy Director Institutional Department (safeguard) and several other staff. They advised that works on the project were continuing systematically with regular disbursements being made. The Work invoices are generated by the field office which are then checked and vetted by the consultant and then forwarded to the PMO. The timelines followed for payments on these projects are strict with average time of 30 days from invoice submission to payment. The project consultants prepare and distribute Monthly Progress Reports which are used to monitor the timely completion of the project. PID settles any contractual disputes by Mediation or Arbitration under Rule – 68 PPRA 2014. An audit of all procurement cases is carried out by the Auditor General of Pakistan on an annual basis.

- b. **Provincial Disaster Management Authority Punjab (PDMA)** is an attached Department of the Board of Revenue, Government of Punjab. It was created under the Provincial Disaster Management Act 2010. The Director General of PDMA is the executive authority and looks after the disaster prevention and disaster relief efforts throughout Punjab.

Punjab PPRA Rules 2014 are applicable to PDMA. So far PDMA has not formulated its procurement plan. Procurements are being made on emergency basis, as per magnitude of any disaster or eventuality. However PDMA intends to devise a mechanism for procurement in accordance with the provisions contained in the PPRA rules 2014. In this regard the

following committees have been notified; Departmental Purchase committee headed by Director General and other Directors as members. There is a Departmental Standardization Committee and Departmental Prequalification Committee to assist in the procurement process. There is also a Departmental Quality Control Committee headed by one of the Directors for inspection of procured goods. PDMA has never used procurement agents or supervisory Consultants for monitoring their procurements. They are mostly supplying emergency relief items in floods or other emergency situations under Emergency Rule of Punjab PPRA by purchasing from prequalified suppliers. Generally strict timelines are followed for procurements because these are mostly made in emergency situations. A Senior Accounts Officer is posted at PDMA, on deputation from AG Punjab.

- c. **State planning and development department** is headed by a Secretary who coordinates with other departments for budgeted works and oversees the bulk of development activities. Procurements are carried out in accordance with Financial Power Rules 2011, Rules of Business 1985 and Notification of Central Purchase Committee (CPC). Procurement function is decentralized till an amount of Rs. 10 Million and is looked after by the head of the concerned department. For procurements above this amount the function is centralized including that with the development budget central purchase committee. For large projects including International Competitive Bidding (ICB) the procurement process is centralized. Pakistan Engineering Council (PEC) documents are enforced in the State through notification and the entity follows the Guidelines of Pakistan Engineering Council and PEC Standard Forms of Bidding Documents for procurement of all works and all kinds of engineering consultancy services. There is a Tender Evaluation Committee on a case by case basis. All contractual disputes are settled according to the terms and conditions of the contract and guidelines of PEC.

The State has experience of managing large foreign donor funded projects previously and some still ongoing by establishing a project specific PIUs. These PIUs are following the donor guidelines for all procurements of works, goods and hiring of consultants. The engineers of the entity are familiar with activities relating to planning and preparation of bidding documents, advertising, printing and publication, responses to clarifications and queries, pre-bid meetings, bid opening, bid evaluation and other procurement activities as envisaged by the Pakistan Engineering Council Documents. Having worked on other large donor funded projects the entity is also familiar with Bank's Procurement Policies and Guidelines.

46. **Market Constraints:** As this is a large project, consulting firms may be reluctant to participate in selected areas of the project given the law and order situation. The assignments shall be developed in a manner that local as well as external participation is encouraged and the contract sizes are large enough to solicit good response. There shall be adequate dissemination of the opportunities.
47. **Transparency:** Bank's guidelines on publication of award paragraph 2.28 of consultant guidelines and 2.60 of the procurement guidelines shall be followed for disclosure. PIU's procurement website would be used for providing procurement plan, procurement notices, invitation to bid, bid documents and RFPs as issued, latest information on procurement

contracts, status of evaluation, complaints and actions taken, contract award and performance under the contracts and other relevant information related to procurement. The website would be accessible to all bidders and interested person equally and free of charge. The website should be operational as soon as competitive procurements for the project commence.

48. The Government shall also ensure that the Project is carried out in accordance with the provisions of the Anti-Corruption Guidelines.
49. **Complaints:** The PIU of each implementing entity would manage the complaint handling system. This system would include documentation and address complaints within a period of 7 days. The PIU shall keep the Bank informed by forwarding any complaints within 3 days of the receipt. This system would include maintenance of a database, a standard protocol with appropriate triggers for carrying out investigations, and taking action against involved parties. Each PIU would develop the system as soon as possible and it would be reviewed by the Bank.
50. For ICB/international selection of consultants the Bank-prescribed complaint redressal mechanism will apply.
51. **Filing and Management of Documents:** The PIUs will develop and maintain a Procurement documentation system, filing system and the procurement database. A procurement manual shall be prepared documenting the procurement processes and approval procedures for each agency responsible for procurement under the project, circumscribing roles and responsibilities, and service delivery standards. An electronic backup system for all procurement record will be maintained periodically.

Table: Procurement Actions (Summary of the above identified issues and agreed actions)

	Issues	Action	Timeline	Responsibility
i.	Capacity of Implementing Entities	<p>Training session</p> <p>Procurement Management and Capacity building firm to be hired for supervision of works, capacity building and support of Implementing Entities for smooth execution of project, at the PIU level.</p> <p>Notification of Procurement Focal Persons</p>	<p>To commence as soon as the Procurement Plan is identified and Staff is appointed.</p> <p>Firm within 2 months after effectiveness</p> <p>By negotiations</p>	<p>Bank</p> <p>Implementing Entities</p> <p>Implementing Entities</p>
ii.	Market Constraints	Adequate packaging	TBD	Implementing Entities

		Wide circulation		Implementing Entities
iii.	Transparency	Disclosure on website	TBD	Implementing Entities
iv.	Complaints	Letter from Implementing Entities notifying Independent complaint redressal mechanism	TBD	Implementing Entities
V	Approve and adopt SOPs	Notification for developing and adopting SOPs/ Manual	TBD	Implementing Entities
Other measures (mentioned in Procurement Para above) will be added after agreement of Implementing Entities				

52. **Procurement Plan:** The Recipient will develop a Procurement Plan for Project implementation which provides the basis for the procurement methods and review by the Bank. This plan will be made available in the Project's database, Implementing Entities website, and the Bank's external website. The Procurement Plan will be updated in agreement with the Bank annually or as required to reflect the actual Project implementation needs and improvements in institutional capacity Frequency of Procurement Supervision.

53. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended frequent supervision missions to visit the field to carry out post review of procurement actions.

54. **Review of Procurement by the Bank:** Thresholds for prior review of contracts under eligible expenditures are given in the table below. All other contracts will be subject to Post-Review by the Bank unless otherwise specified in the Procurement Plan. Implementing Entities will send to the Bank a list of all contracts for post-review on a quarterly basis. Post-reviews as well as the implementation reviews would be done six monthly. Such review of contracts below threshold will constitute a sample of about 15-20 percent of the contracts.

Table: Thresholds for Procurement Methods and Prior Review

Prior Reviews Identified in Approved Procurement Plan

Expenditure Category	Contract Value (Threshold) US \$	Procurement Method	Contracts Subject to Prior Review US\$ thousand
1. Civil Works	> 2,000,000	ICB	All
	<2,000,000	NCB	First two contracts, thereafter as provided in Procurement Plan

	<50,000	Shopping	First Contract, thereafter as provided in Procurement Plan
2. Goods	> 600,000	ICB	All
	< 600,000	NCB	First two contracts, thereafter as provided in Proc. Plan
	< 50,000	Shopping	First contract, thereafter as provided in Proc. Plan
	Regardless of value	Direct Contracting	All
3. Consulting Services			All TORs and Training Programs to be reviewed by Bank's TTL
-3.A Firms	>300,000	QCBS	All
	< 300,000	CQS	First contract by any process and thereafter as provided in Proc. Plan
	Regardless of value	Single Source	All
Individual Consultants		Comparison of 3 CVs	First contract and thereafter as provided in Proc. Plan

Note: ICB = International Competitive Bidding; NCB = National Competitive Bidding; QCBS = Quality- and Cost-Based Selection; QBS = Quality-Based Selection; FBS = Fixed Budget Selection; LCS = Least-Cost Selection; CQS = Selection Based on Consultants' Qualifications; TOR = Terms of Reference.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS

55. As the list of project activities and locations are not finalized, a framework approach is being taken. An Environmental and Social Management Framework (ESMF), which also includes a Resettlement Policy Framework (RPF), has been prepared by the borrowers by enlisting the potential negative environmental impacts, proposed mitigation measures, provided basic screening criteria, list the type of instruments to be developed and provided institutional, monitoring, reporting and documentation arrangements for ESMF and RPF compliance.

56. **Summary of Physical Works:** The activities under components 1 and 2 of the project will cause environmental and social impacts and therefore the physical works are relevant for analysis. The summary list of potential physical activities is provided below.

- Restoration and rehabilitation of flood protection works
- Rehabilitation of other infrastructure such as spurs and river channelization works

57. Most of the proposed activities include rehabilitation, maintenance or repair works which is not expected to require private land and would cause low to moderate resettlement impacts. The work on flood protection structures would not involve any structure large enough to trigger the dam safety policy. The activities will be screened to ensure none of the activities result in any significant environmental or negative social impacts.

Safeguard Policies Triggered	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)		X
Forests (OP/BP 4.36)		X
Pest Management (OP 4.09)		X
Physical Cultural Resources (OP/BP 4.11)		X
Indigenous Peoples (OP/BP 4.10)		X
Involuntary Resettlement (OP/BP 4.12)	X	
Safety of Dams (OP/BP 4.37)		X
Projects on International Waterways (OP/BP 7.50)	X	
Piloting the Use of Borrower Systems to Address Environmental and Social Safeguard Issues in Bank-Supported Projects (OP/BP 4.00)		X

58. **Environmental and Social Safeguards Screening:** As part of environmental and social assessment process, environmental and social safeguards rapid screening exercises of an indicative list of subprojects have been conducted by the Government of Punjab and the State and draft screening reports for potential impacts have been submitted. The rapid screening exercise has identified the following potential impacts from the construction activities:

59. Positive Impacts

- Protection of human lives
- Poverty reduction through protection of livelihood and productive assets
- Protection of vulnerable population from extreme poverty, deprivation, social and economic inequalities that would impact positively on economic growth and human development index.
- well-being of children i.e. safety from behavioral and psychological disorders due to traumatic stress, continuity of education, physiological protection etc.
- Improvement in farmer's income and living standards.
- Protection of vulnerable groups i.e. women and girl child from neglect, abuse, violence, medical issues, and other frightening events
- Protection of villages and settlement from damages to housing and other physical assets.
- Reduction in temporary displacement.
- Protection of grazing areas for livestock.
- Decrease in area of land lost due to erosion.
- Improvement in local environmental and social conditions.
- Decrease in public health risk by reducing incidence of water borne and other disaster related diseases, and mental fears
- Protection against damages to crop and livestock.

- Increase in agricultural production and economic gain.
- Provision of better conditions for intensive agriculture.
- Reduction in poverty through generation of employment opportunities for the locals.
- Protection of wildlife and Development of new habitats.

60. Potential Negative Impacts

- Water pollution
- Diversion of water for construction
- Elimination of washing areas/sites
- Leakages of chemicals etc.
- Runoff from roads
- Change in natural flow of river.
- Land pollution may happen when solid waste material, camp site area, stone stacking area, stock yard area and removed vegetative cover is left unattended
- Noise and vibration due to movement of machinery
- Air pollution due to smoke and dust
- Traffic and public nuisance
- Removal of trees, vegetation cover during site clearance
- Loss of partial agriculture lands due to loss of encroached public lands.
- Damages to *kacha* rooms used for storage of agriculture inputs and grains and animal sheds
- Loss of partial grazing lands
- Health and safety issues of subprojects professional staff/labor and communities residing near subproject areas
- Access issues for communities residing near subprojects areas

61. The safeguards instruments shall assess all of these and other potential negative environmental and social impacts and shall provide options for alternatives to avoid or minimize adverse impacts and/or mitigation measures to address these impacts as well as institutional arrangements for implementation and monitoring, to ensure that the mitigation measures are implemented in an efficient manner.

62. ***Safeguards Instruments and Disclosure:*** The project has prepared and disclosed an Environmental and Social Management Framework (ESMF) that specifies how all physical activities for the project shall be screened for impact and what institutional arrangements, documentation, reporting and monitoring protocols shall be followed.

63. The ESMF identifies the instrument types that will be used to screen subprojects to identify negative environmental and social impacts, details and extents of the stakeholder consultation that shall be needed for each assessment type, the disclosure requirements and the institutional, reporting and monitoring measures that shall be needed to ensure implementation of mitigation measures. The ESMF includes provision to conduct an assessment of environmental and social impacts of any proposed subprojects and preparation of an Environmental Management Plan (EMP) to mitigate the adverse impacts of Project activities on the environment or maintain them at an acceptable level.

64. In compliance with OP 4.01 Environmental Assessment, the screening instruments prescribed by ESMF includes identification of all possible project-environment interactions, categorization of environmental impacts and identification, identification of mitigation measures, a comprehensive environmental and social baseline including environmental trends, analysis of alternatives on the basis of their environmental and social impacts, identification of stakeholders and results of a comprehensive stakeholder consultation exercise, institutional arrangements needed to comply with the ESMF, monitoring, reporting and documentation regimes and table of costs associated with compliance with the ESMF. A Resettlement Policy Framework (RPF) has been developed, as part of the ESMF, to ensure compliance with OP 4.12. The RPF defines objectives and principles of resettlement, provides subprojects a screening mechanism to identify adverse social impacts and provides an estimation of magnitude/extent of potential impacts, organizational arrangements, monitoring requirements for safeguard instruments and funding mechanism for the development of Resettlement Action Plans (RAPs) when needed.
65. **Safeguards Screening:** The ESMF includes screening criteria for selection of the subprojects that will ensure that the subprojects selected, a) do not have any significant, irreversible or long-term environmental or social impacts, b) do not involve any greenfield construction, c) do not involve any works in protected areas or in or around sensitive natural habitats, d) do not cause any degradation of forestry or damage to physical cultural resources, e) do not involve work on any flood infrastructure up to or more than 10 meters in height, f) does not merit an Environmental Impact Assessment according to Pakistan Environmental Act and relevant guidelines and g) does not cause any displacement or severe loss of livelihood. The ESMF includes social and environmental checklists to assess the potential impacts of proposed subprojects on the basis of the scale, nature and type of potential negative impacts. The checklists prescribed environmental management instruments to be prepared for subprojects which might have low to moderate impacts. For all flood works restoration activities that may potentially cause environmental impacts, an Environmental and Social Management Plan (ESMP) shall be prepared. The OPs 4.04, 4.36, 4.09, 4.11, and 4.37 are not likely to be triggered. The proposes mitigation measures for low to moderate environment impacts including compensatory tree plantation at a ratio of four for each tree felled, water sprinkling for keeping dust and air pollution down, provision of employment to local labor to avoid social conflicts, proper maintenance of vehicles, generators and machinery, waste pits for solid waste management, designated areas for vehicles and generators with potential oil spills away from the water bodies, health and safety issues of professional staff and unskilled labor.
66. In RPF, a mechanism devised for each of the subprojects' screening for an analysis of impacts, the requirements for Resettlement Action Plans (RAPs) identified and, in case of low to moderate social impacts, subproject specific RAPs will be prepared in order to analyze and develop measures to mitigate any identified impacts. The RAP will include Grievance Redressal Mechanism (the GRM has been developed by each of the IAs, which will be made a part of each RAP), arrangements for monitoring RAPs implementation, and managed by the PIUs. The each prepared RAP will be consulted, and disclosed prior to civil works of subproject. Social Management Plan (SMP) will be prepared to address any civil works related social impacts of subprojects as a part of ESMP. During preparation of RAPs consultations will be conducted with affected persons, to ensure support of potentially affected and

beneficiary communities. These stakeholders will be engaged during implementation of RAPs and SMP and monitoring of subproject results will be done via development of a citizen's engagement mechanism such as access to information, education and communication and grievance redressal mechanism. These mechanisms will ensure transparency and accountability of project implementers and enhance positive impacts of the project. The ESMF laid down institutional arrangements to ensure monitoring, reporting and documentation protocols of safeguard instruments.

67. **Monitoring and Reporting:** The project will employ a three tiered monitoring structure with focal persons nominated from the construction staff to monitor impacts during works phase. The environmental and social safeguards specialist will compile the monitoring checklists to prepare and collate regular environmental progress reports. In addition to this, annual third party validation will also be conducted to validate compliance with the ESMF and RPF, and implementation of safeguard instruments such as RAPs, ESMP.
68. **ESMF Disclosure:** The ESMF has been disclosed in compliance with Bank's Access to Information Policy. The ESMF and Urdu translation of its executive summary have been placed on the official websites of the Implementing Agencies and disclosed on the WB InfoShop on April 29, 2015. The ESMF and Urdu translation of its executive summary are being placed at all regional offices of the relevant departments/line agencies and sent to all institutional stakeholders.
69. **Stakeholder Consultations:** : During preparation of the ESMF, the SEMU and the State planning and development department organized consultations with intended beneficiaries, potentially affected persons and other key institutional stakeholders. Consultations were held with key government and civil society stakeholders at different levels. The consultation includes meetings, focus group discussions and key informant interviews with smaller groups of grassroots stakeholders such as potentially affected persons, intended project beneficiaries and local communities. Whereas discussions with institutional stakeholders were arranged in consultation workshops. The ESMF includes feedback/comments and suggestions/recommendations received from consultations and integrated measures to address them. Additional activity-specific consultations will be carried out during the preparation of RAPs and ESMP and their implementation.
70. **Institutional Arrangements:** Both Punjab and the State implementing agencies shall employ environmental and social safeguards specialists to oversee and ensure compliance with the ESMF and the RPF before identifying and designing the subprojects that may cause environmental and or social impacts.

MONITORING AND EVALUATION

71. The Bank will participate in joint review missions with the implementing agencies in order to formally review project implementation semi-annually. The missions will conduct a comprehensive review of Project performance against the Results Framework and agree on planned actions (including financing plan). The findings of the review will be discussed in detail with the implementing departments and follow-up actions will be agreed upon. One month prior to the joint review missions, the IAs will provide the Bank with a comprehensive progress report on project activities.
72. The PIUs will also monitor and supervise implementation of project activities through a system of reporting that will include the submission of quarterly and annual progress reports. A uniform simple progress-reporting format focusing on physical and financial progress and outcomes achieved will be adopted in this regard. Progress reports will be shared with the Bank within one month of the end of the reporting period. The list of monitoring indicators and a detailed Results Framework is included at Annex 1.
73. An internet supported MIS will be installed based on formats for review and monitoring that have already been agreed upon and developed. PIUs will hire an experienced agency for development and customization of this system. Responsibility for the management and periodic updates of the system will lie with the PIU. The Project will also set up a base line for monitoring and evaluation of results through a Monitoring and Evaluation agency which will be appointed by the PIU.
74. A third party quality audit firm will be hired to monitor compliance with standards and specification as defined in the bidding documents. The consultant would also report on specific issues related to compliance with the Environmental and Social Action Framework and other social and environmental management actions. This would be done on a random and continual basis throughout the Project. The audit system will also be linked to the payment mechanism to ensure effective resolution of issues prior to payments to contractors.
75. External procurement audits will be carried out for all the post-review contracts. Statutory and internal audits will be conducted for the Project as detailed in Annex 3.
76. Besides regular monitoring by implementing agencies, the PIUs will engage entities for third party monitoring/validation to ensure that the required outcomes as per acceptable standards have been achieved. The firm will also review and comment on the continuing adequacy of the FM system, and any actions that IAs needs to take. In addition, innovative supervision strategies such as geo-referenced photographs and video-conferencing are expected to be utilized since the geographic scope of the project is widely spread.

Annex 4: Implementation Support Plan

PAKISTAN: Disaster and Climate Resilience Improvement Project

Strategy and Approach for Implementation Support

1. The Implementation Support Plan (ISP) for the Disaster and Climate Resilience Improvement Project (DCRIP) has been developed based on the specific nature of project activities, the planned implementation schedule, lessons learned from similar emergency operations, and the risk profile as identified in SORT, as well as the fact that the project was prepared based on emergency procedures. The ISP envisages frequent implementation support missions by the Bank team. The Bank team will monitor implementation progress through: i) reporting against key performance indicators as outlined in the results framework; ii) implementation agency level project reports; iii) independent verification of progress through field visits; iv) fiduciary oversight of the PIU activities; and v) regular communication with the Departments and the PIU.
2. Project implementation will be supported by the task team based out of the Bank's Islamabad office. This will ensure that it is possible to rapidly field missions should the need arise. Formal missions will be conducted at least three times during the first year of implementation and semi-annually thereafter. In addition, as required frequent 'Thematic' missions will be made to provide targeted support to address emerging issues.

Implementation Support Plan

3. 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 implementation support needs of the Project.
4. **Procurement, Financial Management, Environmental and Social Safeguards:** The Bank's procurement, financial management, environmental and social safeguards specialists will provide regular implementation support and technical assistance to the counterpart teams during the project implementation. These team members will also identify capacity building needs to strengthen procurement, financial management, and safeguard capacity of the PIUs.
5. **Procurement:** In addition to the procurement prior review to be carried out by the Task Team, procurement support missions will be undertaken once a year to carry out post review of procurement actions in the field. The Procurement specialist will provide focused procurement support including: (i) reviewing procurement documents and providing timely feedback to the counterparts; (ii) providing detailed advice and guidance on the application of the World Bank's Procurement Guidelines; and, (iii) monitoring procurement progress against the Procurement Plan.
6. **Financial management:** The Bank will conduct risk-based financial management supervisions, at appropriate intervals, in the following ways: (a) review the project's interim financial reports (IFRs), the project's annual audited financial statements, the auditor's management letter and remedial actions, if any; and (b) during the Bank's on-site supervision

missions, review the following key areas (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) disbursement management and financial flows, including counterpart funds, as applicable; and (iv) any transparency issues involving project resources. As required, a Bank-accredited Financial Management Specialist will assist in the supervision process.

7. **Environment and social safeguards:** During the period of civil works the environmental and social safeguards specialists shall make annual or more frequent mission visits to ensure compliance with project safeguard requirements. The Bank team would maintain close coordination with the counterpart to ensure compliance with the screening criteria as laid out in the framework approach. Further, between missions the team will review the supervision consultant's reports to monitor progress and identify issues that may arise. The Safeguards specialists will monitor the implementation in accordance with the Bank safeguard policies, and advise on corrective measures as needed. The implementation of the ESMF will be closely monitored, both through reviewing the supervision consultant's reports and through field visits.

Time (months)	Focus	Skills Needed	Resource Estimate (Staff Weeks)
<i>First six months</i>	Technical review of procurement bidding documents	Structural Engineer	8
		Procurement Specialist	4
	Technical review of TA documents	Technical Specialists	4
	Environmental Monitoring	Environmental Specialist	6
	Social Monitoring	Social Specialist	6
	Review of financial management	Financial Specialist	4
	Implementation Support	Task team	20
	Team Leadership	TTL	20
<i>6 – 48 months</i>	Project Construction	Structural Engineer	30
	Technical Reviews of TA Outputs	Technical Specialists	20
	Environmental Monitoring	Environ. Specialist	8
	Social Safeguards Monitoring	Social Specialist	8
	Review of procurement documents	Procurement Specialist	10
	Review of financial management	Financial Specialist	10
	Implementation Support	Task Team	100
	Team Leadership	TTL	100

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Team Leadership	120		
Environmental Specialist	12		
Financial Specialist	14		
Structural Engineer	38		
Implementation Support	120		
Procurement Specialist	14		

Social Specialist	12		
Technical Specialists	24		In various disciplines (DRM, flood protection, hydro-met)