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Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 15-Jun-2017 | Report No: PIDISDSC22032



BASIC INFORMATION

A. Basic Project Data

Country Pakistan	Project ID P163924	Parent Project ID (if any)	Project Name Pakistan Hydro-meteorological and Climate Services Project (P163924)
Region SOUTH ASIA	Estimated Appraisal Date Feb 05, 2018	Estimated Board Date May 31, 2018	Practice Area (Lead) Social, Urban, Rural and Resilience Global Practice
Financing Instrument Investment Project Financing	Borrower(s) Economic Affairs Division	Implementing Agency Pakistan Meteorological Department	

Proposed Development Objective(s)

The objective of the project is to strengthen the capacity of the Government of Pakistan to deliver reliable and timely weather, hydrological and climate information and services to user departments and communities.

Financing (in USD Million)

Financing Source	Amount
Borrower	20.00
International Development Association (IDA)	135.00
Total Project Cost	155.00

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track II-The review did authorize the preparation to continue
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Other Decision (as needed)



B. Introduction and Context

Country Context

Pakistan is prone to a range of hydro-meteorological hazards including flash floods, riverine floods, droughts, heat waves, cyclones. Pakistan is one of the most flood prone countries in South Asia. The 2010 floods were particularly catastrophic in that they affected approximately 20 million people with around 2,000 lives lost and 2 million homes damaged or destroyed. Flood exposure is very high throughout the country, due to the runoff from snow-fed rivers through mountain ranges, and heavy rains during the monsoon season. In addition, people of Pakistan are subject to greater flood risk because of limited existing meteorological and flood forecasting capabilities in the country. On the other hand, most of Pakistan experiences low rainfall and as much as 60 percent of the country is classified as semi-arid to arid, with the most susceptible regions experiencing drought 2 or 3 years every decade. Drought events include those of 2000, 2002, 2009 and 2010, which severely impacted livelihoods and forced thousands to migrate. More than 1,000 people died in Pakistan in the heatwave of 2015. Additionally, 14 cyclones have occurred in the region over the past 40 years with various degrees of adverse impacts, primarily due to storm surges, threatening lives, livelihoods and properties. Fog affects the transport sector, especially the aviation, leading to considerable economic losses.

The adverse effects of climate change could increase Pakistan's vulnerability to natural disasters. Globally, Pakistan is considered the 6th country most affected by extreme weather events constituting a major challenge for development¹. The possible effects of climate change in Pakistan are expected to increase glacial melt, raise the sea level along Pakistan's coast, and increase periods without precipitation, potentially leading to dry spells and droughts. Increased glacial recession in the present and near future, will result in re-distribution of seasonal water inflow to the Indus River Basin.

The performance of Pakistan's key economic sectors depends heavily upon managing weather and disaster risks. Sectors such as agriculture, aviation, water, urban infrastructure and hydropower underpin economic productivity, employment and poverty reduction efforts. Improved development and delivery of hydro-met-based information services and early warnings can make important contributions to economic productivity while also enhancing community resilience to natural hazards.

Sectoral and Institutional Context

A number of federal key institutional actors within the hydro-meteorological sectors, a number of federal, provincial, and local government agencies may also be identified that are either parallel producers of localized hydro-meteorological observation data or important consumers of information services. While the mandate for hydro-meteorological services provision resides with PMD, there are a few other agencies, such as WAPDA and Provincial Irrigation Departments, that operate in-situ observation networks. Similarly, public sector entities that are dependent on forecasts and other information generated by PMD for decision making and their mandated operations are discussed below. It is important to note that the products and services currently provided by the PMD do not respond to the users' and stakeholders' requirements, and the modernization of the service is essential to provide fit for purpose services in pursuance of safety of lives and assets, and for economic and social development in the country.

¹ The Global Climate Risk Index (CRI) analyses the quantified impacts of extreme weather events (e.g. meteorological events such as tropical storms; hydrological events such as storms surges, floods and landslides; and climatological events such as droughts)— both in terms of fatalities as well as economic losses that occurred—based on data from the Munich Re NatCatSERVICE. Source: Global Climate Risk Index, 2015. Sonke Kreft, David Eckstein, Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2013 and 1994 to 2014. Germanwatch: November 2015.



The modernization of hydro-meteorological and climate services will bring cross-cutting socioeconomic benefits across many sectors and user departments. Different stakeholders and users have different requirements for hydro-meteorological data, information, and services on all time scales (from very short to short to medium to long-range) in a wide range of sectors in Pakistan. The current meteorological and hydrological services have limited capacity and capability to provide quantitative information to guide timely decision making. The present capability of PMD allows it to generate weather and hydrological forecasts for 1-2 days and an outlook for 3-5 days. This does not respond to the needs of stakeholders who require information from PMD for short-term operations as well as medium to long-term planning.

Relationship to CPF

The proposed project aligns with Result Area 3 'Inclusion' of the World Bank's Country Partnership Strategy 2015-19, related to outcome 3.3 'Increased resilience to disasters in targeted regions', specifically through establishment of Multi-Hazard Early Warning Systems (MHEWS). Further, by improving climate services, the project also aligns with Result Area 2 'Private sector development', related to Outcome 2.2 'Increased productivity in farms in selected irrigation schemes'. The project also addresses the cross-cutting theme of the CPS on climate change adaptation and mitigation in public and private sectors, and contributing towards mitigating the risks which climate change poses to the water, food and energy security of Pakistan.

C. Proposed Development Objective(s)

The objective of the project is to strengthen the capacity of the Government of Pakistan to deliver reliable and timely weather, hydrological and climate information and services to user departments and communities.

Key Results (From PCN)

Proposed key indicators are:

- Improved accuracy and lead time for weather forecasts and warnings
- Improved accuracy and lead time for hydrological forecasts and warnings
- Improved climate information and advisory services made available to user departments and farmers
- Increase in satisfaction of user departments and target communities that the information is available on time, corresponds to their needs and is actionable

D. Concept Description

The project interventions are expected to lead to improved hydro-meteorological information and services, strengthened forecasting and early warning systems, and improved dissemination of weather, climate and hydrological information to end-users. The project will be implemented over a period of 5 years. The project will have the following three components:

Component 1: Institutional Strengthening, Capacity Building and Implementation Support of PMD (USD 30 million). Component 1 will aim to improve the performance of Pakistan Meteorological Department (PMD) in line with international best practices, through investment in strengthening institutional setup and building capacity of human resources at the PMD.



Component 2. Modernization of the Observation Infrastructure, Data Management Systems and Forecasting (USD 90 million). Component 2 will finance: i) Technical modernization of the observation networks; ii) Modernization of PMD data management, communication and IT system; iii) Improvement of the weather forecasting process, including numerical weather prediction system, focusing on equipment and software upgrades; iv) Improvement of hydrological forecasting process, including flood modeling system at WAPDA and PIDs; v) Expansion and refurbishment of PMD facilities and offices; vi) Modernization of the seismic monitoring and tsunami warning systems, and vii) Modernization of the meteo-oceanographic monitoring system.

Component 3. Enhancement of the PMD Service Delivery & Building Partnerships with the Private Sector (USD 15 million). Component 3 will provide technical assistance for delivery of more accurate, timely and user-friendly products and services to users and decision-makers across a wide range of sectors.

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SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The Project will establish new meteorological and other related structures across the country. The location of these installations is expected to be on government owned land and very possibly in remote areas with low population densities. Some interventions are also related to upgradation of existing installations for which sites will be selected during project preparation. This is expected to have some resettlement impact. However, this is likely to be small scale and localized. The new installations could possibly be located in Chitral District where Indigenous People will reside. Further, the presence of physical cultural resources in these sites cannot be ruled out.

B. Borrower’s Institutional Capacity for Safeguard Policies

The Pakistan Meteorological Department (PMD) does not have the capacity on implementation and supervision of environmental and social safeguards. The ESMF and RPF will provide guidance on building institutional capacity. Technical support will be provided to PMD and relevant stakeholders where required and institutional strength will also be augmented.

C. Environmental and Social Safeguards Specialists on the Team

Salma Omar, Rahat Jabeen

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project environmental safeguards is categorized as B. The categorization is predominantly due to the project activities of Modernization of the observation infrastructure and data management systems and



forecasting which involves the installations of Automated Weather Stations (AWS), Radars, expansion and refurbishment of PMD facilities and offices; Modernization of the seismic monitoring and tsunami warning systems, and Modernization of the meteo-oceanographic monitoring system. Therefore, project activities particularly under Component 2 may potentially cause environmental and social impacts which are most likely to be small scale, localized, and reversible in nature. The locations for new installations of AWS and radars will be identified during later stage of the project preparation. An Environmental and Social Management Framework (ESMF) will be prepared by PMD which will serve as a roadmap outlining the prerequisite environmental and social screening and assessments that will need to be undertaken for all physical interventions of the project, as per the Bank's OP4.01. The ESMF will also be completed, consulted, cleared and disclosed to the public as per the World Bank Safeguard policies prior to appraisal of the proposed project.

Natural Habitats OP/BP 4.04	TBD	
Forests OP/BP 4.36	TBD	
Pest Management OP 4.09	No	
Physical Cultural Resources OP/BP 4.11	Yes	Since the exact location of new installations is not known, impact on PCR cannot be ruled out.
Indigenous Peoples OP/BP 4.10	Yes	Since the exact location of new installations is not known, impact on IP cannot be ruled out.
Involuntary Resettlement OP/BP 4.12	Yes	Land will be required for new installations. While this is expected to government-owned land and likely to be located in remote areas, impacts on resettlement are not expected to be large scale.
Safety of Dams OP/BP 4.37	No	
Projects on International Waterways OP/BP 7.50	No	
Projects in Disputed Areas OP/BP 7.60	No	

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 05, 2018



Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

An Environmental and Social Management Framework (ESMF) and Environment and Social Management Plans (ESMPs) will be prepared with potential impacts and their mitigation plans due to the project interventions. Consultations and finalization of ESMF and ESMPs where locations are identified would be completed by October 2017, followed by Public Disclosure of ESMF and ESMPs by November, 2017.

A Resettlement Policy Framework (RPF) will be prepared for guidance on sub-projects that may require land acquisition which may lead to resettlement. RPFs would be completed by November 2017.

Resettlement Action Plans (RAPs), where required, will be prepared for existing sites where project interventions will take place. RAPs would be completed by November 2017.

Ingenious People's Planning Framework (IPPF) will be prepared by November 2017.

The World Bank Group Environmental Health and Safety Guidelines will apply to all activities.

For any activity known by the time of appraisal, the relevant safeguards plans will be prepared and cleared by the World Bank and disclosed in local language.

CONTACT POINT

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APPROVAL

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