

**COMBINED PROJECT INFORMATION DOCUMENTS / INTEGRATED  
SAFEGUARDS DATA SHEET (PID/ISDS)**

**Appraisal Stage**

Report No.: PIDISDSA21821

**Date Prepared/Updated:** 24-Apr-2017

**I. BASIC INFORMATION**

**A. Basic Project Data**

<b>Country:</b>	Tajikistan	<b>Project ID:</b>	P158298
		<b>Parent Project ID (if any):</b>	
<b>Project Name:</b>	Strengthening Critical Infrastructure against Natural Hazards (P158298)		
<b>Region:</b>	EUROPE AND CENTRAL ASIA		
<b>Estimated Appraisal Date:</b>	24-Apr-2017	<b>Estimated Board Date:</b>	10-Jul-2017
<b>Practice Area (Lead):</b>	Social, Urban, Rural and Resilience Global Practice	<b>Lending Instrument:</b>	Investment Project Financing
<b>Borrower(s)</b>	MINISTRY OF FINANCE (Project Implementation Unit under the Ministry of Finance)		
<b>Implementing Agency</b>	Agency for Land Reclamation & Irrigation (Project Management Unit at ALRI), Ministry of Transport (Project Implementation Group under the Ministry of Transport)		
<b>Financing (in USD Million)</b>			
<b>Financing Source</b>			<b>Amount</b>
International Development Association (IDA)			27.50
IDA Grant			22.50
Financing Gap			0.00
Total Project Cost			50.00
<b>Environmental Category:</b>	B-Partial Assessment		
<b>Appraisal Review Decision (from Decision Note):</b>	The review did authorize the team to appraise and negotiate		
<b>Other Decision:</b>			
<b>Is this a Repeater project?</b>	No		

**B. Introduction and Context**

## Country Context

1. Tajikistan is one of the youngest and fastest-growing countries in the Europe and Central Asia Region during the last decade. Over 8.4 million people live in this lower-middle-income country characterized by high mountainous terrain and landlocked geography, with an estimated 27 percent living in urban areas (among which 9.5 percent living in Dushanbe). In 2015, gross domestic product (GDP) of Tajikistan was estimated at US\$7.853 billion. The same year, the main sectors contributing to GDP were services (57 percent), agriculture (25.7 percent), and industry (17.3 percent).

2. The economy has low capacity to absorb losses caused by major shocks. Export of commodities and remittances drive the country's growth, making Tajikistan vulnerable to world prices, market fluctuations, and external conditions. Despite the fall in demand for Tajikistan exports and rising import prices, as well as the drop in remittances from the Russian Federation, stricter labor migration laws, and ruble depreciation, Tajikistan's economic growth recovered after a slowdown from 6.0 percent in 2015 to an estimated 6.9 percent in 2016. At the same time, Government debt grew from 34.7 percent in 2013 to an estimated 46.6 percent of GDP in 2016, culminating at 62.3 percent in 2017, while the country's financial sector remained vulnerable.

3. Poverty rates have dramatically fallen in the past years but remain high. Tajikistan is one of the poorest former Soviet republics with a GDP per capita of US\$928 in 2015. Although, poverty rates declined from 73 percent to 31.3 percent during 2003–2015 (based on the national poverty line), poverty rate is expected to continue declining at a slower pace. This pattern is particularly strong in rural areas, given that four out of five poor persons live in rural households. In rural areas, the strong seasonality of poverty rates also reflects fluctuating incomes (mostly in low-productivity sectors). At a household level, there are no differences in the relative rates between men and women (poverty rates), but female-headed households are more at risk of falling into poverty and extreme poverty than households headed by male. Access to basic public services is low and decreasing due to a lack of investment as well as the difficulty of providing services to a dispersed population. At a subnational level, there are currently large regional variations in terms of poverty rates that indicate that the Khatlon Oblast and Gorno-Badakhshan Autonomous Oblast (GBAO) are among the poorest regions of the country. While the Khatlon Oblast is the most populated rural area, GBAO is the most remote and difficult area to access with a density of 7.3/km<sup>2</sup>. In the future, poor people will be the most affected by extreme weather events induced by climate change and related natural hazards as they tend to depend more directly on vulnerable land and water resources. Today, at least 15 years of poverty reduction and shared prosperity is therefore at risk as is the achievement of Tajikistan's national development goals - food and energy security in particular.

## Sectoral and Institutional Context

4. Tajikistan ranks first among countries in the Europe and Central Asia Region in terms of vulnerability to climate change, a situation exacerbated by its lack of adaptive capacity to respond to such frequent shocks. Its unique terrain and geological and hydrological features make it prone to many natural hazards such as floods, earthquakes, landslides, mudflows, avalanches, droughts, and heavy snowfalls. In addition, the occurrence of events dependent on hydrometeorological conditions is expected to grow due to climate change. Future rainfall patterns are projected to be irregular in terms of intensity, duration, volume, and geographical distribution. Mean annual temperatures are projected to be 2°C warmer by 2050, the number of 'dry' days will increase by 3 days per year, and the number of 'cold' days will decrease by 35 days per year. As a result, increase in annual temperature is already triggering stronger glacier melting, while droughts, floods, and heat/cold waves could occur more frequently. For instance, the current warming rates in the high-altitude areas of Tajikistan are already causing significant changes to glaciers, one of the most vulnerable ecosystems, and many small glaciers will completely disappear in 30–40 years or even earlier if the present rate of glacial

degradation continues. Overall, due to the cumulative effects of climate change factors, summers are expected to be wetter, while winters are expected to be drier, which could result in both erratic unseasonal floods and intensified droughts.

5. In Tajikistan, natural disasters have a significant social and economic impact. Natural disasters, particularly floods, earthquakes, and landslides, remain a persistent obstacle toward sustainable development in locally affected areas. From 1992 to 2016, economic losses from disasters in Tajikistan went over US\$1.8 billion and over the same period, disasters have affected almost 7 million people. Further, a recent World Bank study on earthquakes and floods in the Europe and Central Region estimates that average annual losses from floods in Tajikistan can reach 1.4 percent of GDP and from earthquakes, 5 percent of GDP. According to various scenarios tested in this same study, a major earthquake of a 50-year return period can damage around 34 percent of Tajikistan's GDP, while floods of a 50-year return period can cause a loss of around 7.6 percent of GDP.

6. As the most frequent hazards in the country, floods and mudflows in Tajikistan are a recurrent threat, and are expected to increase due to climate change. Given its complex geography, settlements and economic activities in Tajikistan tend to be naturally concentrated in more fertile but also more disaster-prone areas such as alluvial fans and floodplains along rivers. On an annual basis, floods occur either in spring following heavy rains or during snowmelt in the summer time. Due to climate change, unseasonal floods are expected to be among the extreme weather events faced by the country. Floods affect not only mountainous and hilly rural areas that are sparsely populated but also major urban areas, while flash floods can be extremely destructive in the valleys. Floods occur most frequently in the Zerafshan, Pyanj, and Vakhsh River basin, with an average of over 70 events per year across the entire country. On smaller rivers such as the Yakhsu or Vanj and tributaries, flows during flood periods can exceed the monthly average by the factor of five or more, while for larger rivers such as the Pyanj, this figure is generally two or less. For rivers with glaciers in their uppermost catchment areas, so-called Glacial Lake Outburst Floods can appear. In such events, the average flow is exceeded by even higher factors.

7. Earthquakes are less frequent but represent a threat of the highest adverse impact to Tajikistan. From 2010 to 2015, 145 earthquakes were registered, causing US\$4.7 million in damages. With 74 percent of the population living in 8- to 9-magnitude earthquake zones (Richter scale), high seismicity endangers both urban and rural areas, including important facilities for the country such as hydropower plants. Although almost all the territory of the country (96.8 percent) is exposed to some level of seismic threat, high seismicity characterizes the capital city Dushanbe. Less-populated areas, such as the Pamir Mountains, instead, combine the exposure to high-seismic risks together with extreme poverty and lack of resources for risk reduction and infrastructure maintenance, which exacerbate the impact seismic events have in these areas. In 2015, a 7.2 magnitude earthquake struck GBAO, causing widespread damages to infrastructure, blocking transportation routes, displacing 652 people, and leaving 4,000 more in need of assistance. Due to the remote location of the affected area and lack of alternative routes, emergency response activities to this event were significantly constrained as a result.

8. Landslides are another hazard that pose serious threat to Tajikistan. Landslides are usually triggered by heavy rains and floods and, periodically, by earthquakes. More than 50,000 landslides sites have been registered, of which 1,200 put human settlements, roads, irrigation, and other facilities at high risk. About 36 percent of the country's surface is exposed to landslides, potentially putting 728,000 people (11 percent of total population) living in these areas at risk.

9. The agricultural sector already suffers from low productivity and a lack of income diversification. Tajikistan has a total land area of 143,000 km<sup>2</sup>, of which 93 percent comprises mountainous terrain

which houses thousands of glaciers and rivers and only 7 percent of which is arable. Despite the limited arable land in the country and low productivity, agriculture continues to offer a solid foundation for economic development as one of the main contributors to GDP and employment. Even if this sector has the lowest compensation of any sector, it continues to dominate the labor market by accounting for almost 70 percent of total employment and 25 percent of the country's GDP. More than 60 percent of its population is solely dependent on agriculture as a primary source of livelihood and cotton is one of the main commodities exported by the country (together with aluminum and gold). Cotton fields, as well as other agricultural crops, are frequently exposed to extreme weather events, such as droughts, cold weather, hail, and floods. This is especially true for the Khatlon Oblast, where agriculture contributes to about 80 percent of the GDP of the region and 40 percent of exports. In the context of growing sensitivity to climate change, the productivity and yields out of the limited arable land can be seriously impeded due to natural disaster damage, and affect people's livelihoods, particularly in mountainous areas. By 2100, climate change projections indicate that agricultural yields could drop by as much as 30 percent in some regions of the country.

10. Tajikistan is Central Asia's least accessible, most isolated country, with low regional and international connectivity. The transport system includes railways of an approximate length of 680 km and 14,000 km of roads. Tajikistan increasingly depends on external trade for its export-driven business in agriculture and industry development, which both require reliable, safe, and affordable transport and telecommunication connectivity. With a population density of 58.6 persons per km<sup>2</sup>, the transport network of Tajikistan plays a critical role for exporting and importing goods, and providing access to services and facilities for the population—many of which are living in dispersed and remote settlements—through a mountainous terrain with intense natural hazards frequently disrupting connectivity and damaging assets, especially in winter. Such frequent disruptions add an additional burden to populations' restricted mobility to access district centers and nearby markets. In GBAO, the international M41 route, the only link of Tajikistan to one of its main trading partners, China, is frequently exposed to avalanches, mudflows, landslides, floods, and rockfalls, making the transportation of goods via that particular route generally unsafe and, at times, dangerous. More recently, disasters in 2015 caused numerous destructions of assets (for example, bridges) and interruption of services along the M41 route in the Vanj and Murghab districts of GBAO. Without building increased resilience in new or existing infrastructure based on climate change and improved technical guidelines, future extreme weather events and related hazards could put these infrastructures at further risk.

11. Tajikistan's infrastructure is gradually deteriorating due to insufficient maintenance and repeated exposure to natural hazards. Today, the country has acute infrastructure investment needs given that most of the capital assets, including irrigation channels, flood protection, and river embankments, as well as transport infrastructure and dams which have been mainly built during the Soviet Union period. The resulting situation not only reflects inadequate access of the population to basic social and infrastructure services but also accentuates its vulnerability to extreme weather events and seismic risks. For instance, in 2005, floods hit the Khatlon Oblast and destroyed or damaged flood protection dikes, irrigation infrastructure, and water supply networks, as well as roads, bridges, and hectares of agricultural lands. This event provides an illustration of what takes place when recurrent disasters take away precious resources to respond and reconstruct affected areas. In Tajikistan, scarce budgetary resources are frequently stretched over a large number of competing needs, which tend to reduce options for budget allocations dedicated to ex ante measures such as risk prevention and infrastructure maintenance. This is particularly the case for remote areas and costly civil works projects undertaken in difficult terrains. As a result, a pressing need to monitor, preserve, and/or repair aging infrastructure and systematically invest in risk reduction is rapidly growing across the country.

12. The needs are numerous and the Government of the Republic of Tajikistan (GoT) has scarce resources in competing development projects. Among many other needs, systematic investments in disaster risk reduction are necessary across various sectors in the country. For example, transportation infrastructure, such as roads and bridges, requires the integration of risk information as well as robust resilience standards to withstand natural disasters, and minimize the disruption of infrastructure services and related socioeconomic activities. This requirement is seen on a yearly basis through the accumulated effects of several disasters, such as the mudflows and floods that caused significant disruption of access and services in GBAO in 2015. In addition, financial capacity of the GoT will need to be strengthened and become more agile. If the recovery process encounters bottlenecks and constraints due to lack of funding, disaster impact is likely to be amplified overtime. The inability to rapidly restore public infrastructure not only causes immediate complications but also has long-lasting impact on local communities and their livelihoods.

13. Moving from disaster response to risk mitigation. Tajikistan has inherited a disaster risk management (DRM) system oriented toward emergency response. As in many other countries, civil protection in the Soviet Union was oriented primarily at response. Investments in risk reduction were usually executed under a responsibility of other line ministries and institutes. However, after gaining its independence, Tajikistan inherited this system with fewer possibilities for addressing such risks and lower human and resource capacities. In fact, after the dissolution of the Soviet Union, many institutions involved with DRM—such as the Institute of Seismology and Earthquake Engineering (IoSEE)—had both human resources and required funds to perform their activities considerably reduced based on the available financing and shifting priorities.

14. The GoT has taken a number of steps to mainstream DRM into its development planning. It has formed the Committee for Emergency Situations and Civil Defense (CoESCD) under the GoT in 1994, which is directly authorized and responsible for management of emergency situations due to natural and manmade disasters. The ‘State Commission for Emergency Situations’ (SCES) is a national multisectoral mechanism to coordinate plans for rehabilitation and reconstruction, and a key platform to engage in policy making in this area. The GoT has been collaborating proactively with donors and development partners. In addition, with support from the United Nations Office for the Coordination of Humanitarian Affairs, a coordinating structure for international disaster response to Tajikistan was established in 2001—Rapid Emergency Assessment and Coordination Team (REACT). It has expanded since and now serves to share information and experiences on disaster management, including preparedness, response, and mitigation among the Tajikistan development partners and the CoESCD and other stakeholders.

15. The GoT has recently adopted the Sendai Framework for Disaster Risk Reduction in 2015 to replace its predecessor Hyogo Frameworks for Action. In 2010, the GoT, with support from the United Nations Development Programme (UNDP), has approved a National Disaster Risk Management Strategy for 2010–2015. The strategy emphasized importance of disaster risk reduction and preparedness, and a need for establishing a sustainable foundation for effective prevention, mitigation, warning, and response to possible disasters. Following the adoption of the strategy, the GoT has established the National Platform for Disaster Risk Reduction (NPDRR) as part of the SCES in 2012 to serve a consultative and advisory body for coordinating the activities of organizations working on DRM in Tajikistan. As of 2016, the National Strategy is being revised to align with the 2015 Sendai Framework for Disaster Risk Reduction.

16. The World Bank is currently strengthening institutional DRM capacity, with a particular focus on early warning systems and preparedness. For example, the Central Asia Hydrometeorology Modernization Project (P120788) is supporting national hydrometeorological services of the five Central Asian countries to collaborate, share data and expertise, and rebuild infrastructure and human

capacity to improve the accuracy and timeliness of weather and river flow forecasts for better hazard warnings and reduced risks of weather-related disasters. In 2015, following an earthquake and destructive landslide debris flow, the World Bank partnered CoESCD to undertake a rapid risk assessment and made recommendations for reinstating transport links and establishing an emergency management plan. FurtherBuilding on this collaboration, the Strengthening Early Warning of Mountain Hazards in Central Asia (P158373) project is also expected to provide support to Tajikistan to enhance its capacity to assess flash floods and landslides. More recently, the Japan-World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries, administered by the Global Facility for Disaster Reduction and Recovery (GFDRR) is also providing technical assistance by using hazard assessments to design more resilient transport and flood protection infrastructure. Finally, the Capacity and Needs Assessment, which is currently taking place in coordination with donors and key development partners, is reviewing CoESCD's current DRM status. Improving and modernizing the country's crisis management system was identified as the key priority to better monitor hazards (including weather-related hazards exacerbated by climate change), improve inter-agency coordination, establish best international practices on decision-making models, issue timely early warnings, decentralize and add redundancy to the system, and reduce the overall emergency response time. Relevant capacity building, encompassing operation and maintenance plans for the improved crisis management system, will also be produced under the ongoing Capacity and Needs Assessment (supported by GFDRR-funded technical assistance) to ensure the sustainability of the investments under this Project. Additional activities also include capacity reviews, and needs assessment for improving the crisis management systems in the country.

17. Ongoing technical assistance builds on wider policy dialogue and DRM collaboration, which was initiated at the regional level. In Central Asia, the World Bank, with GFDRR support, has also provided technical assistance to enhance national and regional knowledge of seismic risks reduction and share best practices in terms of seismic risk mitigation. To review ongoing seismic risk reduction efforts, their potential fiscal impacts, and stimulate dialogue on risk reduction initiatives (national and regional scales), the World Bank held a Central Asia Earthquake Risk Reduction Forum supported by the World Bank, the Government of Japan, and GFDRR in October 2015, in Almaty, Kazakhstan. This collaborative effort reviewed ongoing seismic risk reduction efforts across Central Asia, their potential fiscal impacts, and stimulated dialogue on risk reduction initiatives. Over 70 policy makers, experts, and practitioners from the governments of Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, as well as development partner representatives, international experts, regional research and academic institutions, universities, civil society groups, media, and World Bank staff attended this forum. The results of this regional engagement will contribute to the design and implementation of the project's activities and help strengthen the DRM capacity of the GoT over time.

18. In Tajikistan, the World Bank has also been involved in upgrading infrastructure such as irrigation, road networks, and energy infrastructure. The World Bank has supported the GoT to address important legacy issues such as aging infrastructure and unsustainable land and water management. Legacy issues are important drivers of climate and seismic vulnerability but at the same time offer significant opportunities for 'no regrets' intervention to generate climate and disaster resilience cobenefits, reduce carbon emissions, and generate insightful lessons learned for similar interventions in the future. For example, the Tajikistan Second Public Employment for Sustainable Agriculture and Water Resources Management Project (PAMP II) (P133327) has provided initial support on rehabilitation of some of the flood protection infrastructure damaged during the July 2015 floods/mudflows. Phase II of the Central Asia Road Links - Tajikistan (CARs) program (P145634) currently helps increasing connectivity between the Sugd Oblast in Tajikistan, the Batken and Osh Oblasts in the Kyrgyz Republic, and the Fergana Oblast in Uzbekistan. It also supports improvements in road operations and asset management practices.

19. Despite recent efforts to enhance legal and institutional frameworks for DRM and a number of related programs undertaken by the World Bank and other development partners in Tajikistan, significant needs for improvement persist in Tajikistan. Among many of them are (a) a need for systematic disaster risk reduction and risk-informed investments for critical infrastructure, (b) a need to increase its response capacity by modernizing its crisis management systems to respond to emergencies more efficiently and putting in place financial protection mechanisms, (c) a need to produce and share disaster risk information to inform planning and investments in various development sectors, and (d) a need for further capacity of DRM stakeholders. The project will establish a foundation to address these significant needs.

20. The World Bank's experience in building resilience will be also essential for (a) consolidating global and regional experiences to finance and scale up DRM investments; (b) coordinating and harmonizing the efforts of donors and development partners to leverage additional funding for DRM; and (c) utilizing previous experiences and work in Tajikistan to support flood protection, transport, and hydrometeorological services.

### **C. Proposed Development Objective(s)**

#### **Development Objective(s)**

The Project Development Objective is to strengthen the Recipient's disaster risk management capacities, enhance the resilience of its critical infrastructure against natural hazards and improve its capacity to respond to disasters.

#### **Key Results**

### **D. Project Description**

29. Project overview. The proposed project is envisioned to establish the foundation of the GoT's long-term DRM program and is based on a high demand for support to overall DRM and reconstruction of critical infrastructure in the country, such as bridges and flood protection and river bank erosion prevention infrastructure, through the 'building back better' principle. As an initial step, the project will target areas in GBAO that were affected by floods/mudflows in July 2015 and in the Khatlon Oblast and finance reconstruction of infrastructure (including bridges and flood protection and river bank erosion prevention infrastructure) to reduce disaster risks and avoid potential damages in the long-term, given the area's exposure to natural hazards. Finally, the project will strengthen the Government's capacity for DRM to address countrywide disaster risks, including floods, mudslides, rockfalls, avalanches, landslides, and earthquakes. The Project consists of the following four components:

Component 1: Strengthening Disaster Risk Management Capacity (Estimated Cost: US\$4 million). This component is intended to strengthen the Government's capacity on DRM through selected activities that focuses on disaster risk identification, disaster preparedness, and financial protection against disasters. This component will be implemented in coordination with UNDP, which has been continuously strengthening the capacities of CoESCD at the national and regional levels, while building regional mechanisms for disaster risk management and mainstreaming disaster risk reduction into state policy at the national and sub-national levels.

\* Subcomponent 1.1 . Modernizing the Crisis Management Centers and Systems for Improved Disaster Preparedness. The project will finance (a) necessary works to build or renovate a facility to host the national CMC; (b) purchasing of required information and communication technology equipment to be installed within the national CMC, including equipment for dispatching early warnings, automated emergency call receiving system and dispatch services, disaster management information system, and robust crisis communications; (c) purchasing of mobile command and communication vehicles for the improved crisis management systems at the regional/local levels; (d) consultancy services for preparing an operations manual for the CMCs and systems; and (e) trainings for relevant staff and operators of the CMC and users of mobile command and communication vehicles. This activity will be implemented by the MoF Project Implementation Unit (PIU) with technical inputs and supervision from the CoESCD.

\* Subcomponent 1.2 . Seismic Hazard Assessment for Improved Disaster Risk Identification. The project will finance the purchasing of necessary equipment, such as seismic stations, seismic sensors, analytical software, and so on, for the IoSEE to conduct probabilistic seismic hazard assessment of the territory of Tajikistan and seismic microzoning for Dushanbe and its surrounding area based on the results of the national probabilistic seismic hazard assessment. This activity will be implemented by the MoF PIU with the technical inputs and supervision from the IoSEE.

\* Subcomponent 1.3 . Preparation of a Financial Protection Strategy for Mitigating Fiscal Shocks Caused by Natural Disasters. As an initial step for increasing the financial protection of Tajikistan, the project will support conducting of detailed fiscal risk diagnostics and assessments that will help identify contingent liabilities, resources available, and funding gaps. Furthermore, based on the fiscal risk diagnostics, the project will support preparation of a financial protection strategy that will cover ways for Tajikistan to mitigate fiscal shocks caused by disasters. This strategy will also touch upon actions to improve existing financial instruments or introduce the new ones. To conduct these activities, the project will finance consultancy services for conducting the fiscal risks diagnostics, further capacity-building activities, and preparation of the financial protection strategy. This activity will be implemented by the MoF PIU with technical inputs and supervision from the relevant departments within the MoF.

Component 2: Making critical infrastructure resilient against natural hazards (Estimated Cost: US\$38 million). This component will finance capital works and contingency planning (for example, equipment for emergency situations) for the transportation network in GBAO that suffered the most significant damages in July 2015, as well as flood protection infrastructure that has repeatedly been damaged in the Khatlon Oblast. Capital works for the transportation network will mainly include reconstruction and repair of a number of bridges, while works for flood protection will include strengthening of damaged existing infrastructure, complemented with adequate erosion prevention measures.

\* Sub-component 2.1. Rehabilitation of Bridges (US\$ 19 million). The works to be financed under this component will mainly consist of the reconstruction of bridges in the districts of GBAO. Preliminarily identified target bridges include those in Vanj and Rushon districts in GBAO along the Vanj-Yazgulem, Vanji-Bolo, and Chikhoh-Ravgada roads and the Dushanbe-Kulyab-Khorog-Kulma (M41) routes. In cases where the new bridge will have to be constructed, the new bridge will replace the old one.

\* Sub-component 2.2 Rehabilitation of Flood Protection (US\$ 19 million). The project will support the strengthening of selected flood protection infrastructure in the Khatlon Oblast. Preliminarily identified target catchments for intervention include the Ziraki, Dahana, Yakshu, Kyzylsu, Surkhob and

Kofarnikhon rivers in the Khatlon Oblast. Capital works for flood protection will include the reconstruction and strengthening of damaged river embankments, flood protection dykes, and infrastructure for the prevention of riverbank erosion, and potentially including irrigation as well as drainage intakes and outlets.

Component 3: Contingent emergency response (Estimated Cost: US\$ 6million). The objective of this component is to improve Tajikistan's capacity to respond to disasters. A crisis or emergency eligible for financing is: an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact to the Borrower, associated with a natural or man-made crisis or disaster. Rapid disbursement of funds will allow the GoT to request a reallocation of project funds to partially cover emergency response and recovery costs. This component will be triggered if: (i) the GoT has determined that an eligible crisis or emergency has occurred and has submitted to the Bank a request to include said activities in the CERC for emergency response, (ii) the GoT has prepared and disclosed all safeguards instruments required for said activities; and (iii) the Borrower has adopted the CERC Annex in the Project Operational Manual (POM) in form, substance and manner accepted to the Bank. This component could also be used to reallocate project funds to this component or channel additional funds to fully or partially replenish funds reallocated to the CERC should they become available due to an eligible emergency. The initial allocation of US\$6 million under this component is partially due to the imminent risks of floods, mudflows, and so on during the summer of 2017, stemming from the heavy snowfall during the winter of 2016 and delayed snow melting during spring of 2017.

Component 4: Project management (Estimated Cost: US\$ 2 million). This component will support incremental operating costs for the implementing agencies (IAs) (MoF, MoT, and ALRI) for project execution, including overall project administration and management, prioritization of subprojects, management of social and environmental safeguard issues, financial management (FM), procurement, contract administration, project reporting, and monitoring and evaluation (M&E).

**Component Name:**

Strengthening Disaster Risk Management Capacity

**Comments ( optional)**

**Component Name:**

Making Critical Infrastructure Resilient against Natural Hazards

**Comments ( optional)**

**Component Name:**

Contingent Emergency Response Component

**Comments ( optional)**

**Component Name:**

Project Management

**Comments ( optional)**

**E. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)**

The project will be implemented at various locations in Tajikistan. Natural environment and human settlements including associated transport infrastructure and houses in many project locations were damaged by the natural events such as landslides and mudflows. Rehabilitation of bridges will be

conducted on the Vanj-Yazgulyam, Vanji bolo, Chikhoh-Ravgada and Dushanbe-Kulyab-Khorog-Kulma (M41) routes. Rehabilitation of flood protection infrastructure will be conducted in Khatlon region along river Vakhsh. CMC Centers will be constructed in Dushanbe and, possibly, in other cities of Tajikistan utilizing the space withing existing areas under the jurisdiction of emergency response agencies. Component 3 may be applied to any area in Tajikistan

## **F. Environmental and Social Safeguards Specialists**

Angela Nyawira Khaminwa( GSU03 )

Rustam Arstanov( GEN03 )

Svetlana K. Sharipova( GSU03 )

## **II. IMPLEMENTATION**

46. The MoF PIU will lead the overall supervision and coordination of the project implementation, FM consolidation, and monitoring and reporting consolidation. Component 1 (Strengthening of DRM capacity) and Component 3 (Contingent Emergency Response Component) will also be executed by the MoF PIU, including procurement and safeguard-related aspects, with technical inputs and supervision from relevant agencies, such as the CoESCD, IoSEE, and relevant departments within the MoF. Component 2 will be implemented by the MoT for activities related to the reconstruction of bridges and ALRI for those related to the reconstruction of flood protection and riverbank erosion prevention infrastructure. Both the MoT and ALRI will be in charge of the procurement, FM, technical inputs and supervision, and safeguard-related aspects for their respective activities.

47. FM. The MoF PIU will have overall responsibility for FM and disbursement functions, including consolidation and submission of the interim financial reports (IFRs) and audit reports, while the MoT and ALRI, through its financial and accounting units, will have overall responsibility for FM of Subcomponent 2.1 and Subcomponent 2.2 and provide information to the MoF PIU for consolidation. The FM assessment found that the MoF PIU, Project Implementation Group (PIG) of MoT, and ALRI Project Management Unit (PMU) staff have experience under existing World Bank projects; however, the FM staffing capacity in terms of numbers is not adequate, and dedicated FM consultants will need to be contracted for project FM and disbursement functions. Accounting and financial reporting at the agencies will need to be modified, with inbuilt controls to enhance reliability of financial reports produced by the accounting system as well as to have capacity to generate IFRs required under the project. The MoT PIU will prepare and submit to the World Bank consolidated unaudited IFRs in form and content satisfactory to the World Bank. Project financial statements will be subject to independent audit by auditors satisfactory to the World Bank, with the MoF PIU responsible for the audit.

## **III. SAFEGUARD POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies</b>	<b>Triggered?</b>	<b>Explanation (Optional)</b>
Environmental Assessment OP/BP 4.01	Yes	Component 1 includes a creation of CMCs in Dushanbe and, possibly, in other regions of Tajikistan. The CMCs will be created either in a new building specifically constructed for

	<p>that purpose, or in an existing building renovated/retrofitted for that purpose. Associated civil works will likely pose minor environmental and health and safety risks. These risks include dust, noise, vibration, risks related to improper management of construction waste, health and safety risks during construction, and others. Contractors, who will work in accordance with the site-specific environmental management plan checklist, will manage such risks and ensure good construction practices. Civil works under the Component 2 of the project will include rehabilitation/ reconstruction of the bridges at already existing bridge sites, reinforcement of the riverbanks and flood protection structures and clean up operations in the streambeds filled with mudflow material. . Such activities might generate adverse environmental impacts such as water and air pollution, noise, soil erosion, dumping of excavated rock material, occupational hazards and other. Therefore, OP 4.01 Environmental Assessment will be triggered. However, adverse environmental impact of such activities is expected to be minor and limited to the preparation and construction phases. All associated risks can be managed with appropriate environmental management plans. Overall environmental impact of such activities is expected to be positive due to restitution of the streambeds and better protection of the riverbanks from erosion. Civil works in case of emergency could include demolition, removal, repair or reconstruction of damaged public infrastructure, clearing of debris, or other activities which could have potential negative impacts if not mitigated, and would therefore fall into Category B. These activities will be a subject to an expedited review by safeguards specialists to determine if they are eligible under the safeguard policies and to exclude certain activities if the environmental or social impacts are significant, or to include appropriate mitigation measures for a proposed activity if feasible. It will be difficult to describe mitigation measures associated with emergency response and likely vulnerable locations and/or groups in the</p>
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		current EMF at this stage. Thus, a special chapter in the EMF describes a screening process for the potential activities, the institutional arrangements for environmental and social due diligence, and monitoring and required capacity-building measures.
Natural Habitats OP/BP 4.04	No	The Project will focus on existing infrastructure (bridges and flood protection structures). Some minor short term impact such as increased siltation during the construction works may be expected. However, such impacts will be regulated via proper mitigation measures included in the EMPs. In addition, EMF studi prepared prior to appraisal will contain detailed description of the sensitive species and habitats near the project sites.
Forests OP/BP 4.36	No	not applicable since no forest areas or industries are involved in the project.
Pest Management OP 4.09	No	no reconstruction of irrigation and drainage systems is not expected. Exposure of the project to agriculture activities is not expected
Physical Cultural Resources OP/BP 4.11	No	No objects that could be defined as Physical Cultural Resources were observed in the area. EIA, EMF and ESMP documents will contain provisions for chance finds.
Indigenous Peoples OP/BP 4.10	No	There are no indigenous people in Tajikistan as per OP 4.10.
Involuntary Resettlement OP/BP 4.12	Yes	The project triggers OP 4.12. As a multi-sectoral investment operation it may potentially require land acquisition for sub-projects under Component 2 for activities related to the transport network critical links and those related to flood protection. Impacts may include destruction of assets, fences, trees and crops as well as demolition and subsequent compensation for small structures along the roads and other resilient infrastructure. As the specific design of these sub-projects will be known only during implementation, a Resettlement Policy Framework (RPF) was prepared. Site-specific Resettlement Action Plans (RAP) will be prepared as necessary, following the detailed design of sub-projects. The RPF in Russian was disclosed in-country and public consultations held at four sites in March 2017.

Safety of Dams OP/BP 4.37	Yes	The project will not finance the rehabilitation/ reinforcement of dams. Also, the selected project sites/ project regions will not depend on the performance of the existing dams.
Projects on International Waterways OP/BP 7.50	Yes	LEGEN has confirmed that the project is granted an exception from the notification requirements under the OP 7.50 since it will be implemented in the “ongoing schemes, involving additions or alterations that require rehabilitation, construction, or other changes that in the judgment of the Bank will not adversely change the quality or quantity of water flows to the other riparians; and will not be adversely affected by the other riparians’ possible water use. The Exception Memo was cleared by the regional VP on March 10, 2017.
Projects in Disputed Areas OP/BP 7.60	No	N/A

#### IV. Key Safeguard Policy Issues and Their Management

##### *A. Summary of Key Safeguard Issues*

##### **1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:**

Component 1 includes a creation of Crisis Management Centers (CMCs) in Dushanbe and, possibly, in other regions of Tajikistan. Associated civil works will likely pose minor environmental and health and safety risks. These risks include dust, noise, vibration, risks related to improper management of construction waste, health and safety risks during construction, and others. Contractors, who will work in accordance with the site-specific environmental management plan checklist, will manage such risks and ensure good construction practices. Environmental impacts related to bridge works under Component 2 will include temporary water siltation during the construction works, air pollution from machinery and equipment, river slopes erosion, dumping of excavated rock material, and debris from dismantled old bridges and road sections. Some adverse environment and health and safety impacts are anticipated from construction camps (discharges of wastewater, generation of domestic waste); vehicle parking; and maintenance areas (spills). Environmental impacts associated with flood protection will include cutting of trees and shrubs, noise and generation of dust from construction, and temporary worsening of the quality of water due to erosion and sedimentation during construction. Activities under Component 2 will also include risks associated with the transportation of material and operation of borrow pits. Component 3 will be triggered following paragraph 13 of OP 10.00 (Investment Project Financing). Activities under this component will cover both natural and man-made disasters. Potential risks and mitigation measures associated with emergency response are likely to be associated with possible delays in reconstruction effort that might adversely affect vulnerable locations and/or groups.

Involuntary land acquisition may result from project activities, however these impacts are not expected to be large in scale.

**2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:**

It is expected that a longer-term environmental impacts of activities will be positive due to restitution of the streambeds and better protection of the riverbanks from erosion. As ecosystems were adversely affected by the natural disasters, activities under the project may help these ecosystems to recover. Communities in climate change induced disaster zones will be better adapted to natural hazards and their vulnerability to them would be better managed.

Communities in climate change affected disaster zones will be better adapted to natural hazards and their vulnerability to these risks reduced.

**3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.**

In most cases, project interventions will deal with existing infrastructure that was significantly damaged by the natural disasters. "No project" alternative would mean that anticipated long term positive impacts will not materialize.

In regards to involuntary land acquisition, screening of the project area will include exploring the possibility of carrying out all improvements within the existing footprint and/or ensuring that appropriate technology is used to reduce land requirements, and thereby avoid or minimize involuntary resettlement.

**4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.**

The MoF PIU has involved three people who will bear the responsibility for the implementation of the environmental safeguards. They are as follows:

- (a) The PIU Project Coordinator is responsible for the overall safeguards implementation.
- (b) The PIU Environmental Specialist is responsible for environmental safeguards implementation in rehabilitation of infrastructure critical links (Subcomponent 2.1).
- (c) The PIU Environmental Specialist is responsible for safeguards implementation in rehabilitation of flood protection (Subcomponent 2.2.).

These three people have developed a comprehensive EMF document that covers all components of the project. In addition, the feasibility study and detailed design consultants have provided their inputs to the EMF as specified in their ToR. The EMF describes the requirements for the site-specific EMPs. The development of the framework document in this case is justified by the fact that the scope and locations of interventions under the Components 1 and 3 were not defined by the time of Appraisal. Also, as regards the Component 2, new bridges were added to the project scope just before the Appraisal. The location of some of the bridges is known, but the overall list of bridges is not finalized by the time of Appraisal and needs further prioritizing. The feasibility studies and detailed designs with integrated site specific EMPs will be developed during the project implementation.

According to the project design and the implementation timeline, the site-specific EMPs for the construction works will be developed by detailed design consultants in parallel with the detailed design study. The site-specific EMPs will be included in the bidding documents for

construction contractors. The site supervision will be implemented by the contractors' responsible people on-site and during the site supervision visits of the PIU Environmental Specialists. Thus, a special chapter in the EMF describes a screening process for the potential activities, the institutional arrangements for environmental and social due diligence, and monitoring and required capacity-building measures. The screening process will allow indicating which kinds of emergency response actions can proceed with no additional environmental or social assessment and which ones will require assessment (and at what level) before being initiated. Component 3 will not finance any activities that will be categorized as Category A according to the World Bank OP 4.01 Environmental Assessment.

On involuntary resettlement a Resettlement Policy Framework has been prepared. In addition, the PIU has hired two social safeguards consultants and strategically placed them in the MOT and the ARLI to respectively bear responsibility for overseeing social and safeguards issues related to the reconstruction of bridges and flood protection facilities. These consultants were closely involved in the development and conduct of the Social Assessment and the RPF and their subsequent in-country disclosure.

**5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.**

Main beneficiaries of the project are the people who live in the disaster prone areas of Tajikistan covered under the project. As the EMF document consists of several different parts each covering one component, the Borrower has conducted a series of consultation meetings on the ground. Thus, during March 2017 meetings were conducted in the Khatlon oblast focusing on flood protection works and in GBAO focusing on bridges reconstruction. Before the meeting participants were provided with the printed summary describing environmental impacts and proposed mitigation measures. In addition, a public consultation meeting was conducted in Dushanbe, in April 2017, focusing on the overall EMF document. The EMF document was disclosed on the website of the MOF prior to consultation meeting. It is stated in the EMF that each site specific EMP will be consulted with the stakeholders who live in the vicinity of civil works. The project is strongly focused on engaging with citizens. These engagement has already been activated during the conduct of the Social Assessment in the potential project areas in GBAO and Khatlon oblast, including focus group discussions with potential beneficiaries of both genders. Furthermore, public consultations to discuss the SA and the RFP were held at four sites in these oblasts in March 2017. The feedback and recommendations (on employment, the GRM, a labor influx management and etc.) from these consultations have been incorporated into both documents to be used during implementation.

***B. Disclosure Requirements***

<b>Environmental Assessment/Audit/Management Plan/Other</b>	
Date of receipt by the Bank	14-Apr-2017
Date of submission to InfoShop	24-Apr-2017
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	
"In country" Disclosure	

Tajikistan	24-Apr-2017
<i>Comments:</i> Parts of the EMF covering Component 2 were disclosed on March 23. The full EMF document was disclosed on Apr 24nd.	
<b>Resettlement Action Plan/Framework/Policy Process</b>	
Date of receipt by the Bank	14-Apr-2017
Date of submission to InfoShop	24-Apr-2017
"In country" Disclosure	
Tajikistan	13-Mar-2017
<i>Comments:</i> The resettlement action plan was shared during public consultations that were held on March 15-17 in Khatlon Oblast, and on March 25 in GBAO.	
<b>If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.</b>	
<b>If in-country disclosure of any of the above documents is not expected, please explain why::</b>	
n/a	

### C. Compliance Monitoring Indicators at the Corporate Level

<b>OP/BP/GP 4.01 - Environment Assessment</b>						
Does the project require a stand-alone EA (including EMP) report?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
<b>OP/BP 4.12 - Involuntary Resettlement</b>						
Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Is physical displacement/relocation expected?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	TBD	<input checked="" type="checkbox"/>
Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	TBD	<input checked="" type="checkbox"/>
<b>OP/BP 4.37 - Safety of Dams</b>						
Have dam safety plans been prepared?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input checked="" type="checkbox"/>

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input checked="" type="checkbox"/>
Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input checked="" type="checkbox"/>
<b>OP 7.50 - Projects on International Waterways</b>						
Have the other riparians been notified of the project?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input checked="" type="checkbox"/>
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Has the RVP approved such an exception?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
<b>The World Bank Policy on Disclosure of Information</b>						
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	NA	<input type="checkbox"/>
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
<b>All Safeguard Policies</b>						
Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Have costs related to safeguard policy measures been included in the project cost?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>

**V. Contact point****World Bank**

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### **VII. Approval**

Task Team Leader(s):	Name: Jose C. Joaquin Toro Landivar, Bobojon Yatimov, Ko Takeuchi	
<i>Approved By:</i>		
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Practice Manager/Manager:	Name: David N. Sislen (PMGR)	Date: 24-Apr-2017
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