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Report No: PAD2804

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 6.9 MILLION
(US\$10 MILLION EQUIVALENT)

AND A

PROPOSED GRANT

IN THE AMOUNT OF SDR 6.9 MILLION
(US\$10 MILLION EQUIVALENT)

TO THE

GOVERNMENT OF THE KYRGYZ REPUBLIC

FOR A

ENHANCING RESILIENCE IN KYRGYZSTAN PROJECT

May 4, 2018

Social, Urban, Rural And Resilience Global Practice
Europe And Central Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2018)

Currency Unit = Kyrgyzstan Som (KGS)

KGS 68.40 = US\$1

US\$ 0.01 = KGS 1

Currency Unit = Special Drawing Right (SDR)

SDR 0.688 = US\$1

US\$ 1.454 = SDR 1

FISCAL YEAR

January 1 - December 31

Regional Vice President: Cyril E Muller

Country Director: Lilia Burunciuc

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Practice Manager: David N. Sislen

Task Team Leader(s): Ko Takeuchi, Fernando Ramirez Cortes

ABBREVIATIONS AND ACRONYMS

B/C	benefit-cost ratio
CPF	Country Partnership Framework
CRI	Corporate Results Indicator
DFIL	Disbursement and Financial Information Letter
DLI	Disbursement Linked Indicator
DRM	disaster risk management
ECA	Europe and Central Asia
ERR	economic rate of return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	financial management
GDP	gross domestic product
GFDRR	Global Facility for Disaster Reduction and Recovery
GRM	grievance redress mechanism
GRS	Grievance Redress Service
IDA	International Development Association
IFI	international financial institution
IPF	Investment Project Financing
IRI	Intermediate Results Indicator
M&E	monitoring and evaluation
MoE	Ministry of Education and Science
MoES	Ministry of Emergency Situations
MoF	Ministry of Finance
NPV	net present value
PAID	Insurance Pool against Natural Disasters
PAP	project-affected person
PforR	Program-for-Results
PIU	Project Implementation Unit
POM	Project Operational Manual
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SAACCS	State Agency for Architecture, Construction and Communal Services
SEE CRIF	South East Europe Catastrophe Risk Insurance Facility
SIO	State Insurance Organization
SSFMRs	State Service for Financial Market Regulation and Supervision
STEP	Systematic Tracking of Exchange in Procurement system
TA	technical assistance
TCIP	Turkish Catastrophe Insurance Pool
ToR	terms of reference

UNICEF	United Nations Children's Fund
VSL	value of statistical life



BASIC INFORMATION

Is this a regionally tagged project? No	Country(ies)	Financing Instrument Investment Project Financing
<input type="checkbox"/> Situations of Urgent Need of Assistance or Capacity Constraints <input type="checkbox"/> Financial Intermediaries <input type="checkbox"/> Series of Projects		
Approval Date 25-May-2018	Closing Date 31-Jan-2024	Environmental Assessment Category B - Partial Assessment
Bank/IFC Collaboration No		

Proposed Development Objective(s)

The Project Development Objective is to support the Recipient to strengthen its capacity to respond to disasters, provide safer and improved learning environment for children, and reduce adverse financial impacts of natural hazards on the Recipient's budget and population.

Components

Component Name	Cost (US\$, millions)
Strengthening Disaster Preparedness and Response Systems	4.00
Improving Safety and Functionality of School Infrastructure	12.00
Enhancing Financial Protection	3.00
Project Management and Monitoring & Evaluation	1.00
Contingent Emergency Response	0.00



Organizations

Borrower : Government of the Kyrgyz Republic

Implementing Agency : Ministry of Emergency Situations

PROJECT FINANCING DATA (US\$, Millions)

<input type="checkbox"/> Counterpart Funding	<input type="checkbox"/> IBRD	<input checked="" type="checkbox"/> IDA Credit	<input checked="" type="checkbox"/> IDA Grant	<input type="checkbox"/> Trust Funds	<input type="checkbox"/> Parallel Financing
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Total Project Cost:
20.00

Total Financing:
20.00

Financing Gap:
0.00

Of Which Bank Financing (IBRD/IDA):
20.00

Financing (in US\$, millions)

Financing Source	Amount
IDA-62380	10.00
IDA-D3180	10.00
Total	20.00

Expected Disbursements (in US\$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023	2024	2025
Annual	0.00	1.12	2.55	3.83	4.48	4.10	3.41	0.50
Cumulative	0.00	1.12	3.68	7.50	11.98	16.09	19.50	20.00



INSTITUTIONAL DATA

Practice Area (Lead)

Social, Urban, Rural and Resilience Global Practice

Contributing Practice Areas

Energy & Extractives

Education

Finance, Competitiveness and Innovation

Climate Change and Disaster Screening

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

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

No

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

No

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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



8. Stakeholders	● Moderate
9. Other	● Substantial
10. Overall	● Substantial

COMPLIANCE

Policy

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

Yes No

Does the project require any waivers of Bank policies?

Yes No

Safeguard Policies Triggered by the Project

Yes No

Environmental Assessment OP/BP 4.01

✓

Natural Habitats OP/BP 4.04

✓

Forests OP/BP 4.36

✓

Pest Management OP 4.09

✓

Physical Cultural Resources OP/BP 4.11

✓

Indigenous Peoples OP/BP 4.10

✓

Involuntary Resettlement OP/BP 4.12

✓

Safety of Dams OP/BP 4.37

✓

Projects on International Waterways OP/BP 7.50

✓

Projects in Disputed Areas OP/BP 7.60

✓

Legal Covenants

Sections and Description

The Recipient shall establish no later than one (1) month after Effective Date and thereafter operate and maintain during the Project implementation, a Project Coordination Council with terms of reference, composition and resources acceptable to the Association, including, inter alia, the responsibility for Project-level decision making. (Section I. A.1 in Schedule 2)



Conditions

Type	Description
Effectiveness	The Project Operational Manual has been adopted by the Recipient, through MoES, in a form and substance acceptable to the Association. (Article 4.01)
Disbursement	<p>No withdrawal shall be made for payments under Category (2), for Emergency Expenditures under Part E of the Project, unless and until the Association is satisfied, and has notified the Recipient of its satisfaction, that all of the following conditions have been met in respect of said activities:</p> <ul style="list-style-type: none"> (i) the Recipient has determined that an Eligible Crisis or Emergency has occurred, has furnished to the Association a request to include said activities in the IRM Part in order to respond to said Eligible Crisis or Emergency, and the Association has agreed with such determination, accepted said request and notified the Recipient thereof; (ii) the Recipient has prepared and disclosed all Safeguard Documents required for said activities, and the Recipient has implemented any actions which are required to be taken under said instruments, all in accordance with the provisions of Section I.C of Schedule 2 to this Agreement; and (iii) the Recipient’s Coordinating Authority has adequate staff and resources, in accordance with the provisions of Section I.D of this Schedule 2 to this Agreement, for the purposes of said activities. <p>(Section III. B. 2 in Schedule 2)</p>

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Ko Takeuchi	Team Leader(ADM Responsible)	Sr DRM Specialist	GSU09
Fernando Ramirez Cortes	Team Leader	Sr DRM Specialist	GSU09
Irina Goncharova	Procurement Specialist(ADM Responsible)		GGOPC
Aliya Kim	Financial Management Specialist		GGOEE
Aimonchok Tashieva	Social Safeguards Specialist		GSU03
Benedikt Lukas Signer	Team Member	Senior Financial Sector Specialist	GFCCR



Carina Fonseca Ferreira	Team Member	Disaster Risk Management Specialist	GSU09
Diana Katharina Mayrhofer	Team Member	Economic Analysis	GEDGE
Eugene N. Gurenko	Team Member	Lead Financial Sector Specialist	GFCEW
Jasna Mestnik	Team Member	Finance Officer	WFACS
Jose C. Joaquin Toro Landivar	Team Member	Sr DRM Specialist	GSU10
Kristine Schwebach	Social Safeguards Specialist		GSU03
Laisa Daza Obando	Team Member		GSU10
Levent Gerdan	Team Member	Crisis Management Systems Expert	GSU09
Rustam Arstanov	Environmental Safeguards Specialist		GEN03
Ruxandra Costache	Counsel	Country Lawyer	LEGLE
Svetlana K. Sharipova	Team Member	Social Safeguards Consultant	GSU03
Tatiana Skalon	Team Member	Disaster Risk Financing Analyst	GSU09
Tolkun Jukusheva	Team Member	Operations Officer	GSU09
Yann Kerblat	Team Member	Disaster Risk Management Analyst	GSU09
Zhanetta Baidolotova	Team Member	Program Assistant	ECCKG
Extended Team			
Name	Title	Organization	Location
Eric Bardou	Senior Hazard Monitoring and Assessment Specialist		
Guillaume Dulac	Senior Economist Consultant		



KYRGYZ REPUBLIC
ENHANCING RESILIENCE IN KYRGYZSTAN

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I. STRATEGIC CONTEXT

A. Country Context

1. Since gaining its independence in 1991, the Kyrgyz Republic has sought to reduce the social and economic vulnerability of its population. The country has maintained economic growth since independence, but its gross domestic product (GDP) has fallen, from US\$7.5 billion in 2014 to US\$6.6 billion in 2016,¹ following deterioration in the external environment (including falling exports and remittances, a decline in gold output, and other factors). Significant efforts by the government since the independence have contributed to an overall downward trend in poverty, but according to World Bank estimates, the poverty rate (measured by national standards) remains high and above that of most countries in the Europe and Central Asia (ECA) region: in 2015, 32.1 percent of the total population was in poverty, and this rate is projected to stagnate.² Poverty is concentrated in rural areas, where utility services are also of inferior quality, with 7 out of 10 poor persons living there³. At the same time, a large majority of the population is clustered near the poverty line, facing broken steps to upward mobility (incomes too low to allow for savings and investments) and a high risk of falling further into poverty (exposure to shocks and insufficient safety nets).

2. The economy of the Kyrgyz Republic is fragile, making it difficult for the country to support further poverty reduction efforts and to absorb shocks. The country follows an export-oriented growth strategy. Exports and public finance are supported by exploitation of natural resources, and more specifically by reliance on a single gold mine. Recent economic growth has been supported by urbanization, which has been driving one-time gains in productivity and income, but much of this growth is concentrated in the informal sector. Growth has also been supported by expansion of domestic consumption fueled by remittances, which accounted for 30 percent of GDP by 2013.⁴ While the services sector has been one of the key contributors to the country's growth, agriculture and industry have grown below the overall average. The importance of remittances declined after 2013, as the stock of migrants abroad stabilized and the share of households receiving remittances declined. At the same time, the country has difficulties accommodating an excessive labor supply because of low business and industrial growth. The economy is further challenged by weak governance and political instability. Socioeconomic disparities in urban and rural areas, exacerbated by ethnic and other divisions between the rural south and urban north, have also generated communal tensions, leading to at least two cases of violent conflict during the last 20 years. The state has significantly eroded its fiscal buffers, and the fiscal deficit of the budget is one of the highest in the ECA region. As a result, the Kyrgyz Republic has limited fiscal space to respond to shocks, and a significant shock could significantly harm the country's fragile economy and the well-being of its population.

¹ World Bank data.

² To ensure comparability, the 2005 poverty rate is adjusted here using the 2013 poverty line.

³ World Bank, "Kyrgyz Republic Poverty Infographic," February 2016.

⁴ World Bank, "Personal Remittances, Received (% of GDP)," <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=KG>.



B. Sectoral and Institutional Context

3. **Natural hazard events are undermining hard-won development gains, exacerbating poverty in vulnerable groups, and preventing economic growth in the Kyrgyz Republic.** The country is exposed to catastrophic damages and losses from infrequent but large-intensity events such as earthquakes. Evidence shows that the largest proportion of economic losses due to natural hazards results from earthquakes. According to a recent nationwide seismic risk assessment supported by the World Bank,⁵ the average annual economic losses associated with direct damage to buildings are expected to exceed US\$280 million annually (i.e., 4.3 percent of 2016 GDP).⁶ Three earthquake events alone—in May 1992, August 1997, and October 2008—have together caused more than 130 fatalities, affected almost 150,000 people, and resulted in almost US\$200 million in economic losses.⁷ The impact of floods on people and infrastructure is also significant. About 80,000 people are affected by floods every year, and the expected average annual economic losses associated with floods are estimated at US\$70 million (i.e., 1.1 percent of 2016 GDP).⁸ Floods in 1998 and 2005 each caused over US\$3 million worth of damage. More recently, in 2012, flooding in Osh, Batken, and Jalal-Abad affected around 11,000 people.⁹ The country is also highly prone to other natural hazards, including landslides, mudflows, glacial lake outburst floods, and avalanches. Finally, the country is highly vulnerable to the effects of climate change, which exacerbate the threat posed by weather-related disasters like floods, landslides, and mudflows. Of countries in the ECA region, the Kyrgyz Republic ranks as the third-most vulnerable to climate change.¹⁰

4. **Aging and poorly maintained public infrastructure and housing, along with weaknesses in the regulatory environment and urban planning, are the main drivers of seismic vulnerability in the Kyrgyz Republic.** The country's existing public infrastructure and housing were mostly built during the Soviet period (between the 1920s and 1991) and were designed according to outdated standards prescribed by the seismic code of the time. Most infrastructure in the country is currently at the end of its design life expectancy, and in need of intervention to meet current seismic code standards. Over the past three decades, lack of proper maintenance has accelerated decay of buildings' structural elements and other components, which has further increased vulnerability. Until independence in 1991, building regulations followed Soviet norms. After independence, a number of the Soviet norms were updated, but regulations are still largely based on Soviet standards. Significant updates were made to provisions of the seismic code in 2009; however, these did not address seismic hazard, design criteria or new requirements for the safe anchorage and design of nonstructural components. Moreover, the country has not adopted guidelines for seismic assessment and retrofit of existing infrastructure, although doing so would facilitate the implementation of risk reduction actions at scale. Regarding land use planning, local authorities are not

⁵ World Bank, *Measuring Seismic Risk in Kyrgyz Republic: Seismic Risk Reduction Strategy* (Washington, DC: World Bank, 2017), <http://documents.worldbank.org/curated/en/689251517034023101/Measuring-seismic-risk-in-Kyrgyz-Republic-seismic-risk-reduction-strategy>.

⁶ Kyrgyz 2016 GDP is equal to US\$6.551 billion according to World Bank data.

⁷ United Nations Economic Commission for Europe (UNECE), *Country Profiles on the Housing Sector: Kyrgyzstan* (New York and Geneva: United Nations, 2010).

⁸ World Bank and GFDRR, *Europe and Central Asia: Country Risk Profiles for Floods and Earthquakes* (Washington, DC: World Bank, 2016).

⁹ Ibid.

¹⁰ World Bank, *Adapting to Climate Change in Europe and Central Asia* (Washington, DC: World Bank, 2009).



legally required to develop up-to-date plans or to periodically update existing plans. As a result, many settlements do not have plans, or have plans that are not up-to-date. In addition, existing plans lack the wider considerations for risk reduction and disaster planning that are intended to avoid increased exposure of people and assets in high-risk locations. Finally, enforcement of building regulations and building control procedures (including the issuing of construction licenses) needs to be strengthened to ensure transparency, efficiency, and participation of qualified professionals.

5. **The government of the Kyrgyz Republic finds it challenging to meet the need for emergency response and post-disaster recovery associated with the country's frequent natural hazard events.** According to the Ministry of Emergency Situations (MoES), over 200 emergencies take place every year from floods, landslides, mudflows, avalanches, and windstorms, among other events. The government has sought to increase the institutional capacity for preparedness and response, but further strengthening of its emergency response systems remains a government priority. The post-disaster recovery capacity in the country is still very low. For instance, lack of ex ante financial instruments for disasters causes delays in recovery and reconstruction and increases secondary impacts of disasters. This situation also forces the government to divert funds from other development programs to immediate disaster response and rehabilitation. Overreliance on the ex post approach leads to instability in fiscal planning and amplifies the disaster impact over time.

6. **In this context, the government of the Kyrgyz Republic has been prioritizing disaster risk management (DRM) through national policies and strategies.** At the global level, the Kyrgyz Republic has signed the UN frameworks for disaster risk reduction (Hyogo 2005, Sendai 2015) and has declared disaster resilience a national priority. The government has developed and has been implementing a sector-specific National Strategy for Comprehensive Safety of Population and Territories of the Kyrgyz Republic from Disasters and Emergencies (2012–2020), which outlines a set of DRM measures. More broadly, the government has integrated disaster risk management into overarching national strategies, including the National Sustainable Development Strategy (2013–2017). In addition, Taza Koom, a program for digital transformation of the Kyrgyz Republic, highlights the need to reduce disaster risks, provide ICT in emergencies, and develop digital services and solutions for adaptation to climate change and mitigation of its consequences.

7. **The country's prioritizing of DRM has led to progress in a number of areas.** On risk identification, the hydromet observation network is being upgraded under the World Bank–financed Central Asia Hydrometeorology Modernization Project (P120788), and a national-level probabilistic seismic risk assessment (funded by Global Facility for Disaster Reduction and Recovery (GFDRR)) has been conducted, which provides a solid basis for design of policies and programs within government development plans. On disaster preparedness and response, national-level crisis management centers were established in Bishkek and Osh in 2014 with GFDRR/World Bank support; this work entailed significant improvements to the “112” emergency call system, early warning systems, and disaster information management. Necessary institutional mechanisms, such as the Disaster Risk Coordination Unit and the Rapid Emergency Assessment and Coordination Teams, have been established to coordinate disaster preparedness and response. On disaster risk reduction, in 2015 the government established the State Program on Safer Schools and Preschools of the Kyrgyz Republic 2015–2024 to improve the safety of all schools (2,222 schools and 806 preschools) by 2024; this work was based on a countrywide vulnerability assessment of schools conducted



with the support of UNICEF. On financial protection, the government has focused on homeowners, introducing a national disaster insurance program for private dwellings and establishing the State Insurance Organization (SIO) to manage it.

8. **Despite these efforts, the country's overall capacity to manage disaster risk is still at an incipient stage; hence it is critical to ensure that efforts to strengthen preparedness and emergency response capacity can continue, and that risk reduction investments in public infrastructure can be implemented—all while creating an enabling environment in which to scale up the mandatory disaster insurance program and overcome obstacles to its operation.** Because evidence shows that the country will face new disasters in the medium term, it is imperative that efforts to enhance preparedness and emergency response capacity continue. This approach will help minimize the impact of emergencies on the population (i.e., reduce response time and ensure operation of early warning systems), even though asset damages and economic losses will continue. To complement this approach, it is important to continue strengthening financial protection against disasters, specifically in the housing sector; this will allow the government to reduce financial, fiscal, and economic impacts of disasters while promoting faster recovery and incentivizing risk reduction measures. Finally, by initiating the implementation of the State Program on Safer Schools and Preschools of the Kyrgyz Republic, the government will not only prevent the catastrophic loss of lives in highly vulnerable school facilities (school infrastructure is the most vulnerable public infrastructure in the country), but also build the enabling environment for scaling up vulnerability reduction interventions across the country. The proposed project supports these priorities, as explained below.

9. **First, disaster preparedness and response capacities require further strengthening through expanded crisis management systems, equipment and training for rescue teams, and enhanced access to hazard and risk information for involved institutions and communities.** Gaps must be closed if the country is to have full nationwide coverage by emergency communication systems. Talas and Naryn Oblasts currently lack the “112” emergency call and dispatch system and operate their emergency call and dispatch services manually. The MoES can issue public notification and warning through national TV channels, radio broadcasting, and SMS, but some areas—specifically Bishkek and Osh Cities and Naryn, Talas, Osh, and Batken Oblasts—lack sufficient local communication means (i.e., electronic sirens) and equipment to intercept TV and radio broadcasting at the Oblast level, to alert the population about upcoming potential hazards. On the other hand, the MoES is expanding its Fire and Rescue Services at the regional level and increasing its branches. The teams have been set up; however, they lack basic equipment to properly respond to emergencies.

10. **The country also needs to improve the monitoring, assessment, and information management related to the risk of landslide and other mass-movement hazards, which are the most common type of hazards in the country.** Improvements are needed in collecting historical data, strengthening operational surveys, and monitoring and enabling sharing of information among involved institutions with proper standards and protocols. Progress in this area will ultimately facilitate improved hazard monitoring and assessment, generate new hazard/risk information, and improve early warning systems, emergency response planning, and risk reduction activities.

11. **Second, implementation of the State Program on Safer Schools at national level is a priority, one requiring an intervention and financial strategy that convenes donors and attracts investment.** The education sector is a high priority because school buildings are the asset most vulnerable to earthquakes (table 1).



Although the total value of school buildings across the country is estimated to be US\$1.5 billion, which is 40 times less than the value of residential buildings, the estimated economic losses as a percentage of total value is highest in the education sector (26 percent for schools as compared to 18 percent for houses). The situation is even more critical in terms of estimated fatalities. Even though the housing sector serves six times as many people as the education sector, expected fatalities are highest in schools, with around 1.1 percent of school occupants (students and teachers) at risk of death under large-intensity earthquakes. The high number of expected fatalities in schools is explained by the fact that a large proportion of school buildings are of very vulnerable building types, namely adobe structures, unreinforced masonry, and confined masonry.

Table 1. Earthquake scenario results for each asset portfolio, for a return period of 475 years

Asset portfolio	Estimated economic losses		Estimated fatalities	
	US\$ (billion)	% total portfolio value	Number	% total occupants
School buildings	0.4	26%	11,400	1.1%
Residential buildings	11.0	18%	10,300	0.2%
Hospital buildings	1.9	n/a	385	n/a
Fire station buildings	0.04	n/a	11	n/a
Transport: Roads	1.0	3%	n/a	n/a
Transport: Bridges	0.02	4.4%	n/a	n/a

Source: World Bank, “Measuring Seismic Risk in Kyrgyz Republic: Final Report,” November 2017.

Note: n/a = not available.

12. **Given the Kyrgyz Republic’s estimated 1 million students and its portfolio of around 3,000 schools and preschools with over 5,500 school buildings, reducing the vulnerability of existing infrastructure at scale poses a complex challenge.** More than two years after approval of the State Program on Safer Schools in 2015, implementation of this program has not yet commenced. To secure contribution from donors and international financial institutions (IFIs) and investments needed to meet program’s goal, it is necessary to design a national intervention strategy that can be replicated at scale, while also building the enabling environment in the education sector to ensure the strategy can be implemented. To reach scale, this strategy will need to: (i) meet preestablished safety standards; (ii) apply affordable and cost-effective engineering solutions; (iii) maximize safety benefits; (iv) minimize disruption of the education service; and (v) integrate safety along with functional and energy-efficiency improvements. Along with the design of a national intervention strategy, actions will need to be taken to strengthen: (i) the regulatory environment and its capacity for enforcement; (ii) the institutional capacity of key stakeholders, such as the Ministry of Education and Science (MoE) and the State Agency for Architecture, Construction and Communal Services (SAACCS); (iii) the school maintenance program, which operates at the municipality level; and (iv) the management information system.

13. **Building on the ongoing Urban Development Project (P151416) financed by the World Bank, the proposed project is strategically designed to enable scalability of safer school interventions and nationwide implementation of the State Program on Safer Schools.** Hence the proposed project aims to go beyond



improving safety and quality in a batch of priority schools. It provides the foundation for the design of a long-term national strategy that can be scaled up and implemented in schools countrywide. Experiences from similar Bank projects in other countries such as Turkey and Peru have shown that a strategic perspective and long-term vision is critical to accelerate safer school policies, facilitate long-term engagements, and leverage additional financing from various IFIs and donors. Complementary analytical work that will inform the design of the project and the national strategy is being financed by GFDRR as part of ongoing Bank-executed technical assistance within the Japan–World Bank Program on Mainstreaming Disaster Risk Reduction in Developing Countries.

14. **Third, it is necessary to further support the countrywide efforts of the government to reduce the financial impact of natural disasters on households. These efforts have focused on disaster insurance, which could reduce the financial burden on the government budget¹¹ and help affected people by ensuring faster and more sustainable recovery after natural disasters (through bigger and timelier payouts).** This approach could also provide incentives for risk reduction, while still offering affordable insurance coverage. Currently, although disaster insurance coverage is mandatory for Kyrgyz homeowners, only 6.5 percent of homes throughout the country (or over 74,000 homes) are insured. However, the SIO can now pay in full no more than 200 claims in case of a major catastrophe event. This weakness creates financial and reputational risks for the government and requires changes in the design and operation of the program. By enabling the SIO to become a professional insurance organization in charge of managing the national catastrophe insurance pool, the project will help make the mandatory disaster insurance program an effective financial protection mechanism against natural disasters for the population and the government budget.

15. **The SIO faces several challenges in effectively implementing the program,** including (but not limited to) the following: (i) it is not sufficiently capitalized to assume highly correlated catastrophe risks under the program;¹² (ii) the compulsory product covers an excessive number of risks (many of which cannot be measured and priced), and there is no minimum deductible (as provided for by law); (iii) its operations, IT system, and business processes are outdated; and (iv) the premium rates provided for by law are too low to allow the SIO to build adequate reserves, buy reinsurance, and thus become financially sustainable. Altogether these challenges mean that with every new policy sold the risk of insolvency for the SIO grows exponentially. The SIO risks insolvency even in case of a relatively mild catastrophe event (once in 100 years) and despite its portfolio of insurance policies remaining rather small (around 74,000 policies). In the event of the SIO's insolvency, the government would incur major reputational damage, since numerous policyholders would not receive the contractual indemnity payments unless the government stepped in to make them. Therefore, major efforts are needed today to ensure that the budget of the government is effectively protected, that the population receives insurance indemnity payments in time and in full, and that the SIO remains solvent even after major disasters. To meet these goals, the SIO needs to be reformed into a professional insurance organization capable of implementing and managing the disaster insurance program. Further, a number of legal amendments will be required, for example, to ensure that the insurance product sold by the SIO is actuarially sound. These amendments could also ensure the

¹¹ Prior to introducing mandatory insurance in 2015, the government annually spent around US\$5–6.6 million in compensations to affected people, and this support was still insufficient to ensure timely recovery.

¹² Currently, the SIO has at its disposal only around US\$2 million in capital.



participation of other private insurers in the mandatory insurance program through the introduction of national risk pooling and reinsurance concepts.

C. Link to CPF

16. The Country Partnership Strategy for the Kyrgyz Republic FY14–17 recognizes the country's susceptibility to natural hazards (such as droughts, earthquakes, and landslides) and the need for strengthened risk reduction and response capacity, and it recommends mainstreaming climate adaptation and disaster risk management measures, including proper land use planning, enforcement of disaster-resilient building codes, critical infrastructure retrofitting, and disaster response and post-disaster reconstruction support. The proposed project will directly address critical infrastructure retrofitting and disaster response as well as ensure smooth post-disaster rehabilitation and reconstruction through reducing the government's fiscal vulnerability to disasters.

II. PROJECT DESCRIPTION

A. Project Development Objective

17. The Project Development Objective (PDO) is to support the Recipient to strengthen its capacity to respond to disasters, provide safer and improved learning environment for children, and reduce adverse financial impacts of natural hazards on the Recipient's budget and population.

B. Project Beneficiaries

18. The beneficiaries of the project are as follows:

- (a) Approximately 3.6 million people living in the oblasts and cities where the crisis management systems will be expanded and improved will benefit under Component 1. As the completed crisis management system will cover the whole country, roughly 170,000 people annually affected by emergency situations can be considered indirect beneficiaries of this investment, since they will gain access to improved emergency response and search and rescue services.
- (b) At least 6,000 students in schools with safer infrastructure and an improved learning environment—and in the long term 1 million students and teachers—will benefit from the operationalization of the State Program on Safer Schools under Component 2.
- (c) The direct beneficiary of Component 3 is the SIO, which will witness an overhaul of its insurance operations (as of February 2018, the SIO employed 506 people, including agents). By improving the SIO's efficiency, Component 3 will indirectly benefit at least the 6.5 percent of Kyrgyz households that are currently insured under the program (or 74,041 households, with an average of five people per household). All current and future policyholders will receive access to a better-quality insurance product, and they will benefit from the considerably reduced claims processing time and the higher likelihood that their claims will be paid in full even after the worst natural disasters.
- (d) Representatives of the MoES, MoE, SAACCS, and State Service for Financial Market Regulation and Supervision (SSFMRs) will also benefit from technical and institutional capacity building in planning, implementation, and monitoring under the project.



19. **Gender-specific indicators will be collected throughout project implementation.** Once schools are identified for intervention, data to be collected through the social assessment will be monitored through follow-up surveys that include, among other information, level of satisfaction of beneficiaries on school improvements and gender-disaggregated data on the project-affected population.

C. PDO-Level Results Indicators

20. **The PDO-level results indicators will measure strengthening of disaster preparedness and response capacity; increased safety and improvement of the learning environment for children; and reduction of adverse financial impacts of natural hazards on the government budget and population.** Indicators will be disaggregated by gender where relevant. Specific descriptions are provided in the Results Framework.

D. Project Components

21. The proposed components of the project are described below.

Component 1: Strengthening Disaster Preparedness and Response Systems (US\$4 million)

22. The objective of this component is to strengthen the disaster preparedness and response systems of the Kyrgyz Republic in order to reduce the negative impacts from disasters the country is exposed to, primarily by expanding the crisis management systems to cover the whole country and by increasing the capacity to monitor hazards so that decision makers can prepare for possible hazard impacts. The project will finance the following activities:

- (a) **Increasing the coverage of emergency warning and notification to the population; enhancing the capacity to receive, analyze, and respond to emergency calls; and increasing the integration and redundancy of communications among national, regional, and district-level crisis management systems.** Based on the completed feasibility study on creating a unified information and management system in emergency and crisis situations in the Kyrgyz Republic (financed by the GFDRR/World Bank Recipient-executed Trust Fund completed in 2014), this activity will include: (i) improvements in the “112” emergency call and dispatch system for selected cities and oblasts, through purchase, installation, and operationalization of ICT equipment and software; (ii) improvements in the public emergency warning and notification system in selected cities and oblasts, as well as TV and radio interception systems for selected oblasts, through purchase, installation, and operationalization of ICT equipment and software, warning devices, etc.; and (iii) strengthening of crisis management centers through purchase, installation, and operationalization of ICT equipment and software. Consultant services will be used where relevant for design and supervision activities. Together with activities funded by the above-mentioned Recipient-executed Trust Fund completed in 2014 and other donor support, this activity will complete national coverage of improved warning and notification systems, emergency call and dispatch systems, and local crisis management centers, as proposed in the feasibility study.
- (b) **Strengthening monitoring and assessment of landslides and other mass-movement hazards.** The activity will increase the capacity to conduct operational surveys and monitor landslides and other mass movement hazards in the Kyrgyz Republic through purchasing and operationalizing relevant equipment and software; and it will strengthen the capacity to analyze and assess hazards through consultant services and training. The activity will also



include upgrading a web-based platform to compile hazard and disaster information and to share this information with various ministries and government agencies as well as the population. This activity will be implemented in a phased approach: the first phase will focus on building capacity for preliminary operational survey of landslides, including analysis of base topography and establishment of references for operational monitoring; and the second phase will focus on scaling up of the operational monitoring. These activities will ultimately contribute to: (i) producing maps of areas potentially affected by such hazards; (ii) define the levels of risk and deciding relevant actions for risk reduction and preparedness according to the levels of risk; and (iii) planning and implementing risk reduction and preparedness measures, including issuing warnings and alerts for hazards that can be monitored.

- (c) **Strengthening search and rescue.** This activity will provide and install search and rescue equipment to address the needs of expanded fire and rescue branches of the MoES and enable them to properly respond to emergencies.
- (d) **Improving disaster awareness of the public.** This activity will improve the quality of DRM training for the public by introducing an e-learning system and outreach.

Component 2: Improving Safety and Functionality of School Infrastructure (US\$12 million)

23. The objective of this component is to improve the safety and functionality of existing state school infrastructure by supporting the Government in the implementation of the State Program on Safer Schools. Specifically, Component 2 aims to: (i) maximize the number of school children protected from earthquakes by implementing cost-effective interventions which are primarily intended to protect life safety; (ii) reduce economic losses and minimize disruptions in the normal operation of schools and the education service caused by earthquakes; (iii) improve functional conditions and learning environment of schools, including water and sanitation and energy efficiency; and (iv) develop capacity in the education sector to take implementation of the State Program on Safer Schools to scale.

24. The project will finance the following main activities under Component 2:

- (a) **Civil works to improve safety against earthquakes and functionality of selected school infrastructure.** Among other complementary activities, this activity will include: (i) feasibility studies and detailed design of interventions, including on-site inspection of facilities; and (ii) building works and construction supervision. To minimize disruptions in the normal operation of schools during building works, the project will consider alternative solutions such as construction of temporary classrooms. Two main lines of intervention will be implemented (as detailed in table 2): (i) replacement of existing buildings by new safer buildings; and (ii) seismic retrofitting of existing buildings.



Table 2. Lines of intervention to be financed under Component 2

Lines of intervention	Objectives	Application	Complementary interventions
1. Replacement of existing buildings and systems	Reduce seismic vulnerability (improve seismic performance up to a minimum of life safety), and improve functional conditions and quality of learning environment	If seismic retrofitting is not viable from a safety and/or economic viewpoint	Construction of new classrooms (if needed)
2. Seismic retrofitting of existing buildings		If current seismic performance of existing school building does not meet life safety	Functional rehabilitation: <ul style="list-style-type: none"> - Water and sanitation - Energy efficiency (e.g. insulation of building envelope, replacement of windows/doors) - Capital repairs Construction of new classrooms

Seismic retrofitting will be accompanied by functional rehabilitation of school buildings; both replacement and seismic retrofitting might include construction of additional classrooms to cover current or future needs.

- (b) **Building capacity of the education sector by providing support to the implementation of State Program on Safer Schools.** This activity will support the preparation of a long-term national intervention and investment plan, which will enhance the capacity of the government to implement the state program. This plan will include: (i) an intervention strategy to improve the safety and functionality of school infrastructure countrywide; (ii) an investment strategy to finance the implementation of the plan; and (iii) explicit prioritization criteria to maximize the benefits of the investment, with clear short- to long-term goals. This activity will also contribute to creating the enabling environment needed to implement the state program by designing and delivering a capacity-building program for key stakeholders in the country.
- (c) **Design and integration of a web-based school infrastructure module in management information system.** This activity will support the design and production of a web-based school infrastructure module and its integration into the existing information system to assist the MoE and other relevant agencies in the management of school assets, and it will contribute to efforts to monitor implementation of the State Program on Safer Schools.

25. **Priority schools to be financed under Component 2 will be selected through a transparent risk-informed decision-making process established by the recipient in close consultation with relevant stakeholders and supported by World Bank technical assistance.** To ensure that objectives are met and that the selection process is transparent, a risk-informed decision-making process will be applied in the school selection. This process involves the definition of selection criteria, such as school location in highest seismic risk areas, vulnerable school building types, minimum number of students, and school occupancy, among others. From the group of schools that meet the selection criteria (eligible schools), prioritization criteria will be applied for defining the final group of schools for intervention. Prioritization criteria will aim to



maximize safety benefits, cost-efficiency, and social equity. Both selection and prioritization criteria have already been approved by the MoES, MoE, and SAACCS.

26. **The Component 2 design and implementation methodology will contribute to establishing a framework for scaling up interventions nationwide.** Interventions designed and implemented under Component 2 are intended to address the needs of different vulnerable school building types in a way that can be replicated nationwide. Instead of the usual case-by-case approach, in which solutions are designed for a specific school facility, the project will build on analytical results from ongoing World Bank technical assistance supported by GFDRR, which analyzes existing information about the entire school portfolio. By using advanced seismic and cost-efficiency analyses, retrofitting interventions can be optimized to identify cost-efficient solutions for different school building types that can be implemented at scale. Previous experiences indicate that this approach will make the interventions more affordable and the investments more efficient. For instance, an intervention cost reduction of over 50 percent was achieved in a similar safer schools program in Peru (P152216) using similar analyses. Through the GFDRR grant, moreover, the World Bank is supporting activities to build the capacity of key stakeholders in the country to carry out seismic performance-based assessment, seismic retrofitting, and cost-efficiency analysis. Overall, the outcomes of the project will assist the government with a stronger and more transparent technical and operational platform through which to convene IFIs and donors and leverage further investments.

27. **The project will ensure that the school users (parents and teachers) are engaged in the implementation process.** To engage school users in the process of improving the functionality of school infrastructure, each target school will establish a school monitoring committee. Connected to other school governance structures (e.g. Board of Trustees), this committee will be established at the outset to engage in the process of implementing the school improvements and ensure strong beneficiary participation (both men and women). This will include, inter alia, participatory processes to develop temporary relocation plans that ensure minimal disruption to students and their families during the construction period, participatory school needs assessments and prioritization regarding functional improvements (e.g. deteriorated roofs, draft proof windows and doors, efficient heating systems, etc.), and monitoring of the construction process. The role of the school monitoring committees will continue throughout the school subproject implementation cycle and include recommendations to other school governance structures on operations and maintenance plans to ensure the sustainability of the investments as part of the completion process. The committees will also be tasked with raising awareness on the need to reduce seismic vulnerability of the school facility to improve children's safety. This school-level community awareness building, planning and monitoring will be defined in detail in the project operations manual, and measured through an indicator in the results framework. The project will also conduct a beneficiary satisfaction survey to assess the level of satisfaction of beneficiaries on the school improvements, among other information, and ensure gender-disaggregated data.

Component 3: Enhancing Financial Protection (US\$3 million)

28. The objective of Component 3 is to turn the SIO into a professional, modern insurance organization capable of effectively implementing and managing at national scale the mandatory disaster insurance program for private residential property. The ultimate goal is for the SIO to become the operator of a domestic insurance pool, which will enable local private insurers to participate in sales of mandatory



insurance products through an automated web-based production platform and fully reinsure the risk with the pool. The pool will then transfer most of the risk to the global reinsurance market.

29. The main activities under Component 3 will be the following:

- (a) **Review of the SIO business processes and provide support to customize web-based insurance production system.** As the basic step, this activity will support a comprehensive review of the SIO's business processes. This will in turn clarify how best to streamline business processes and requirements and enhance efficiency, as well as how to customize the web-based insurance production system to support the core functions of the company. The main output of the activity will be the web-based system, which can be used by the SIO (and other insurers at a later stage) for countrywide insurance sales and claims management. The system will fully integrate the company's core business functions (i.e., underwriting, quoting, policy issuance, claims inputs and claims processing, risk management, financial and regulatory reporting, and data storage and management) and maintain a centralized database of policies and claims records. The objective is to improve the operations of the SIO by increasing its efficiency and transparency, introducing core risk management functions, and enabling access to reinsurance.
- (b) **Optimization of SIO core business processes.** The activity will focus on building the internal capacity of the SIO in core business areas. It will be based on the review of business processes prepared as part of the review described in letter (a) above. Among other things, the activity will involve (i) development of a risk model for earthquake; (ii) development of internal pricing terms for core risks; (iii) development of an outward reinsurance function, inclusive of accumulation control; and (iv) development of rapid claims assessment capabilities and improved technical soundness of the current claims assessment procedure. The activity is expected to result in an overhaul of the SIO insurance operations and will be carried out through expert advisory services, development and transfer of technical know-how, preparation of operational manuals, and training of the staff. ☒
- (c) **Risk management and regulatory compliance.** The activity will assist the SIO with developing essential risk management functions and incorporating them into its insurance operations. It will include setting the company's underwriting policies, risk appetite, investment guidelines, reinsurance guidelines, and anti-money-laundering and anti-fraud policies. The activity will also support the SIO and the SSFMRS with developing the regulatory compliance and data reporting standards. The main outputs of the activity will include (i) an internal risk management system; (ii) risk-based solvency margin requirements for SIO and regulatory monitoring compliance tools; and (iii) training of the SIO and the SSFMRS staff on all essential regulatory reporting and compliance functions.
- (d) **Procurement of equipment for the regional SIO offices.** Due to lack of resources, SIO insurance agents operate without essential technical means for their professional activities. None of the 54 SIO's regional offices is sufficiently equipped to enable insurance agents to effectively sell insurance policies and accept claims. The activity will finance installation of desktop computers, printers, Internet routers, and essential office furniture for up to 54 regional offices, thus creating working spaces for up to 400 agents. In addition, to ensure real-time backup and storage of policy and claims data, the activity will finance installation of two professional servers in the main office.



The component will also be supported through ongoing World Bank technical assistance, which will finance (for example) work on legal and regulatory amendments to the existing legislation on mandatory insurance, as well as knowledge exchange activities.

Component 4: Project Management and Monitoring & Evaluation (US\$1 million)

30. The component will support operating costs incurred by the Project Implementation Unit (PIU) in efficiently and transparently implementing the project activities, and it will build the institutional capacity needed to sustain the project beyond the formal life of the project. The component will cover technical, safeguards, and fiduciary aspects for project implementation and project management support, including monitoring and evaluation (M&E) and reporting.

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

31. The objective of this component is to improve the Kyrgyz Republic's capacity to respond to disasters. Following an eligible crisis or emergency, the recipient may request the Bank to reallocate project funds to support emergency response and reconstruction. This component would draw from the uncommitted credit/grant resources under the project from other project components to cover emergency response. An emergency eligible for financing is an event that has caused or is likely imminently to cause, a major adverse economic and/or social impact to the Borrower, associated with a disaster.

32. The Project Operational Manual (POM) will include a specific annex for the Contingent Emergency Response Component, which lays out the provisions for activating and implementing the component.

E. Project Cost and Financing

33. **Financing for the proposed project will be in the amount of US\$20 million.** No counterpart funding is expected. The lending instrument will be Investment Project Financing (IPF), and the project implementation period is five years. An IPF provides the flexibility to build human and institutional capacity and construct infrastructure. This instrument also allows for close follow-up of defined activities and procedures and for adjustments, where necessary, on the part of the government and the International Development Association (IDA). A summary of the allocation of project costs, IDA financing, trust funds, and counterpart funding for each component is provided below.



Project Components	Project cost	IBRD or IDA Financing	Trust Funds	Counterpart Funding
1. Strengthening Disaster Preparedness and Response Systems	US\$ 4 million	US\$ 4 million	US\$ 0	US\$ 0
2. Improving Safety and Functionality of School Infrastructure	US\$ 12 million	US\$ 12 million	US\$ 0	US\$ 0
3. Enhancing Financial Protection	US\$ 3 million	US\$ 3 million	US\$ 0	US\$ 0
4. Project Management and Monitoring & Evaluation	US\$ 1 million	US\$ 1 million	US\$ 0	US\$ 0
5. Contingent Emergency Response	US\$ 0	US\$ 0	US\$ 0	US\$ 0
Total Costs	US\$ 20 million	US\$ 20 million	US\$ 0	US\$ 0
Total Project Costs	US\$ 20 million	US\$ 20 million	US\$ 0	US\$ 0
Front End Fees	US\$ 0	US\$ 0	US\$ 0	US\$ 0
Total Financing Required	US\$ 20 million	US\$ 20 million	US\$ 0	US\$ 0

III. IMPLEMENTATION

A. Institutional and Implementation Arrangements

34. Given the multi-sectoral nature of the proposed project and the increasing need to mainstream DRM across key sectors in the Kyrgyz Republic, the MoES, as the authorized agency with the mandate to coordinate DRM in the Kyrgyz Republic, is tasked with coordinating and supervising the overall project implementation. The increase in the MoES’s institutional capacity arising from this supervisory role is expected to sustain the impact of the project beyond the life of the DRM program, to mainstream DRM in various development sectors, and to further scale up investments in DRM (see figure 1 for a schematic diagram of institutional and implementing arrangements). The proposed implementation arrangement (in which MoES leads the project) follows the existing institutional setup of the government and its programs: (i) MoES is in charge of disaster preparedness and response; (ii) MoES, MoE, and SAACCS were assigned as key ministries and agencies in establishing and implementing the State Program on Safer Schools and Preschools; and (iii) MoES in partnership with SSFMRS has played a leading role in establishing the disaster insurance mechanism.

35. Under the implementation arrangement, the MoES hosts and supervises the PIU of the project. This PIU builds on the existing Project Coordination Unit of the KyrgyzHydromet under the MoES, which has been implementing the Central Asia Hydromet Modernization Project (P120788) since 2011, and which



was upgraded to be housed directly under the MoES to prepare and implement the proposed project. The PIU has experience in implementing activities related to weather and river flow forecasting and in sharing information in coordination with other ministries and agencies. In addition, the MoES has experience in establishing national crisis management centers through a Recipient-executed Trust Fund, including procurement and installation of specialized ICT equipment. The PIU will be responsible for: overall program coordination and implementation; financial management; preparation and submission of audited financial reports; administration of third-party audits; procurement activities, including preparation of terms of reference (ToRs) and bidding documents, evaluation reports, contract management, and so on, in consultation with relevant ministries and agencies, Technical Coordination Councils, and Tender Committees; management of environmental and social safeguards aspects; preparation and submission of progress reports for all components and activities; monitoring of the results framework; and hiring and management of consultants as needed, for project management and coordination and for fiduciary and safeguards aspects of all project components, as well as for technical inputs and quality control for Component 1.

36. **MoE and SAACCS will be responsible for technical inputs and quality control for Component 2, while SSFMRS will be responsible for technical inputs and quality control for Component 3.** Components 1, 2, and 3 will each have a Technical Coordination Council to endorse relevant ToRs and bidding documents and a Tender Committee to evaluate bidding on respective procurement packages. In order to promote stronger coordination among relevant agencies in prioritizing, designing, executing, and monitoring school retrofitting/reconstruction under Component 2, a Technical Working Group was established. Chaired by MoE and including SAACCS and MoES, this group has been contributing to the preparation of Component 2 activities. Components 1, 2, and 3 will each be given a technical coordinator who will coordinate between the MoES PIU and the focal ministries and agencies working on the relevant component and ensure technical compliance. Component 5 will be implemented by the MoES PIU in close coordination with the Ministry of Finance (MoF) and relevant line ministries.

37. **For project-level decision making—on project restructuring and reallocation of funds between different components, for example—a Project Coordination Council will be established.** This council will also undertake critical decision making related to school selection under Component 2. It is expected that the Project Coordination Council will consist of MoES (implementing agency), MoF, MoE, SAACCS, and SSFMRS, chaired by the vice prime minister.

38. Detailed procedures for project implementation will be described in the POM.

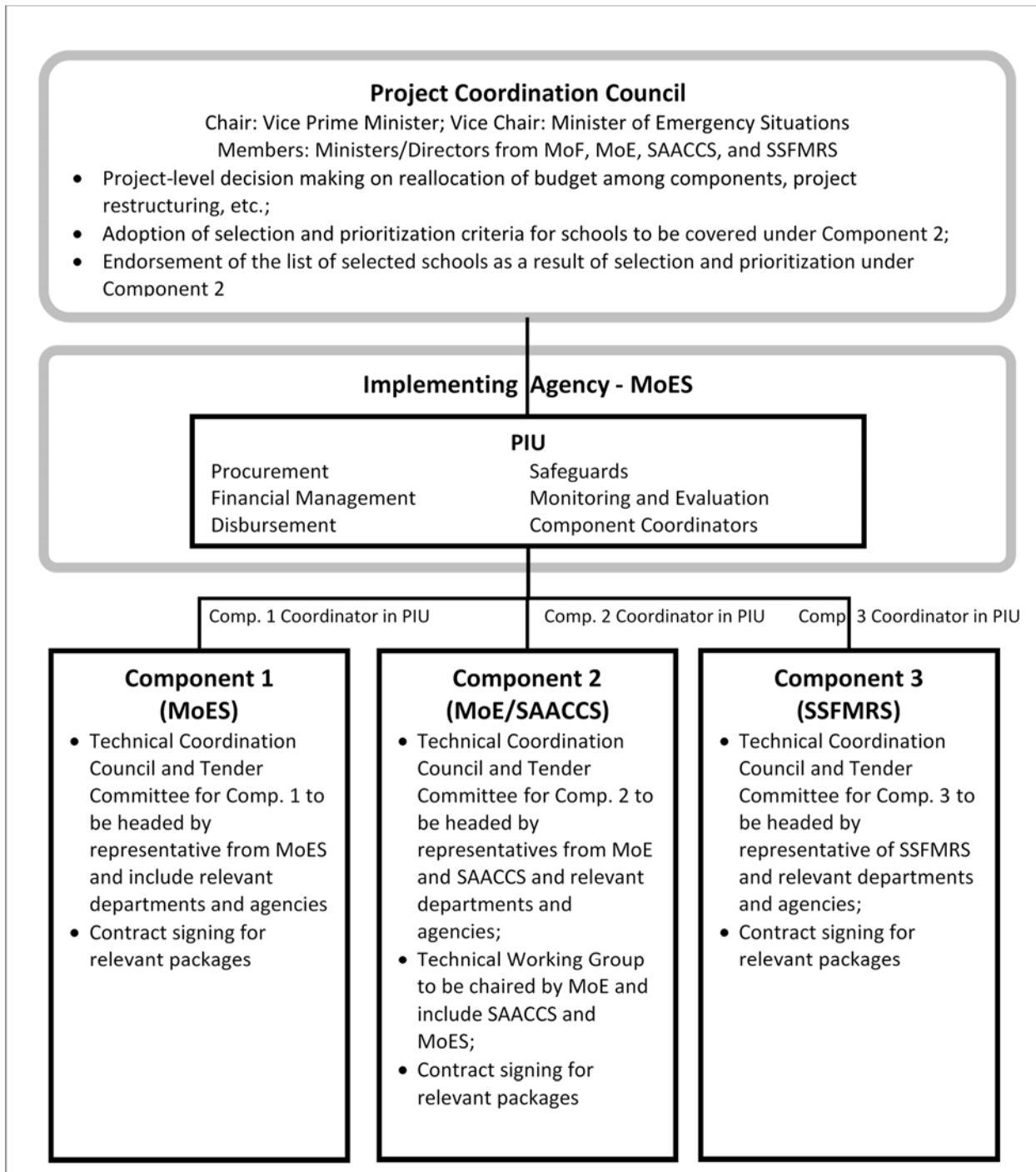


Figure 1. Institutional and implementation arrangements

B. Results Monitoring and Evaluation Arrangements

39. The Results Framework was developed in coordination with the government of the Kyrgyz Republic, and the World Bank’s core indicators have been included where applicable. The MoES PIU will be responsible



for monitoring of and reporting on the performance indicators defined for this project, including periodic reporting to the World Bank. The PIU will assign a dedicated staff to coordinate monitoring and evaluation with relevant ministries and agencies and to keep track of progress in and outcomes of project activities. The POM will provide specific details regarding monitoring and evaluation responsibilities, including data collection requirements, timing, and use of the information.

40. **Thematic areas that will be supervised and monitored include: (i) social and environmental compliance, (ii) regular technical quality supervision, and (iii) periodic monitoring of physical and financial progress.**

IV. PROJECT ASSESSMENT SUMMARY

A. Theory of Change/Results Chain

41. **Poverty and natural hazards have a strong two-way link. While poverty increases vulnerability to disasters, disasters exacerbate poverty—resulting in the vicious cycle of a poverty trap.** The impact of natural disasters can disproportionately affect poor communities and disadvantaged groups by harming their economic livelihoods and limited assets. Activities contributing to resilience are therefore directly linked to sustained development; they allow the poorest—those most affected by disasters—to escape the cycle of poverty. A recent World Bank report entitled *Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters*¹³ discusses multiple reasons why the poor are often hit hardest by disasters, including their inability to cope and recover and the permanent impact of disasters on their health and education. DRM interventions can significantly reduce the potential impacts of disasters and thereby protect existing development gains. These interventions are also in line with the World Bank’s corporate agenda, in which DRM was adopted as a priority item during the 2012 Annual Meetings in Tokyo (via the Sendai Statement).¹⁴

42. **The project is expected to contribute to reducing loss of lives, physical damages, and economic losses, as well as enable faster government response and recovery efforts and minimize the long-term impacts of natural hazards; it will thereby protect development gains and the population, and in particular keep low-income groups from falling further into poverty.** In the education sector, the reduction of loss of lives, physical damages, and economic losses will be achieved primarily through the implementation of the initiative to provide safer and improved learning environments under Component 2. This component will also contribute to building the enabling environment needed to scale up a comprehensive risk reduction strategy for school infrastructure countrywide. Promoting quicker response and recovery (resilience gains) will be achieved through a combination of strengthening crisis management systems and search and rescue under Component 1, operationalizing and improving the disaster insurance system under Component 3, and providing liquidity in case of an eligible emergency under the Contingent Emergency Response component.

43. **The project is also expected to contribute to climate change mitigation and adaptation** by: (i) promoting more effective and efficient response to disasters, in particular climate-related events (i.e., floods, mudflows,

¹³ Stephane Hallegatte, Adrien Vogt-Schilb, Mook Bangalore, and Julie Rozenberg, *Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters* (World Bank: Washington, DC: 2017).

¹⁴ “Sendai Statement: Mainstreaming Disaster Risk Management for Sustainable Development,” Joint Statement by the Finance Minister of Japan and the World Bank President at the Sendai Dialogue, October 10, 2012, Sendai, Japan, http://www.mof.go.jp/english/international_policy/mdbs/wb/20121010_sendai_statement.htm.



landslides) exacerbated by climate change, under Component 1 (climate change adaptation); (ii) promoting energy savings and reducing greenhouse gas emissions as a result of energy efficiency interventions for educational facilities, as well as reducing reconstruction needs in case of earthquakes, under Component 2 (climate change mitigation); and (iii) increasing the penetration of catastrophe insurance that covers floods and other hazards, under Component 3 (climate change adaptation).

B. Economic Analysis

44. **This project comprises three components, each of which was assessed to be economically viable.** In accordance with existing guidelines at the Bank, a uniform discount rate of 5 percent was applied over an horizon of 25 years. Only a small part of Component 2, related to investments in replacing existing schools, was assessed over a horizon of 50 years, matching the estimated lifespan of these assets.

45. **Component 1 entails two types of benefits, enhanced preparedness and improved emergency response.** The enhanced preparedness will reduce exposure, which is estimated to save US\$30,000 per year. The improvement of the emergency response will reduce the time it takes the injured to reach health services. The valuation of this reduced time, derived from the literature and scaled to the Kyrgyz context, is US\$920,000 per year. Overall, Component 1 shows a mean **net present value (NPV) of US\$5.7 million, a benefit-cost ratio (B/C) of 1.6, and an economic rate of return (ERR) of 13.8 percent.**

46. **The economic assessment of Component 2 builds on three main dividends: (i) saved lives, (ii) avoided economic losses, and (iii) co-benefits of the intervention.** The evaluation of the first two is based on a national-level probabilistic seismic risk assessment included in a comprehensive study commissioned by the World Bank and completed in 2017. It identified two geographic areas with the highest seismic risk levels, the Ferghana Valley and the Issyk Ata region, where it was estimated that the program would save on average four lives a year, yielding a total present value of US\$10.6 million; this calculation is based on a value of statistical life (VSL) of US\$180,000 (derived from U.S. literature and scaled to the Kyrgyz income level). In a similar fashion, the NPV of avoided damages was estimated at US\$6.8 million, 70 percent of which would stem from rehabilitation and 30 percent from new construction. The co-benefits are expected to primarily stem from energy efficiency measures and other improved functionalities, such as water and sanitation facilities. The benefits of energy savings come to US\$0.43 million due to the low cost of energy currently used in schools—i.e., coal (US\$0.04/kWh). For retrofitted buildings, the annual energy savings per school amount to 4.6kWh/m³ (14 percent), i.e., US\$2,033; for replaced buildings they amount to 6.6kWh/m³ (20 percent), i.e., US\$2,904. Assuming to retrofit approximately 8 and replace 4 schools, this yields total annual energy savings of US\$27,530, i.e. US\$ 17,075 in energy savings from retrofitted and US\$ 10,454 from replaced schools.

47. **Overall, Component 2 has an estimated mean NPV of US\$17.9 million: 59 percent from avoided loss of lives, 38 percent from avoided economic damage, and 2 percent from saved energy consumption. The B/C is 1.5 and the ERR stands at 9.6 percent, in both cases above the thresholds of economic viability.**

48. **Component 3 primarily aims at avoiding the adverse effects of a likely SIO bankruptcy:** a bailout would likely result in a budget crisis, while a default would send a very adverse signal to the private sector and the Kyrgyz population as a whole. The justification for hedging against the risk of the SIO bankruptcy stems from the value of what the SIO produces when functioning as intended.



49. **The value of what the SIO produces when functioning as intended first relates to insurance basics: losses incurred by big disasters are not commensurate with individuals' savings.** Other benefits relate to the macroeconomic value of insurance. There is quantitative evidence for this, based on the analysis of a disaster database where post-disaster growth is regressed against the share of insured and uninsured losses, controlling for past growth patterns, macroeconomic variables, and the level of economic development. Lost asset insurance has an overall cumulated growth impact of 2.9 percent of GDP for low- to middle-income countries. A sensitivity analysis confirmed that under most likely scenarios, the overall generation of wealth associated with Component 3 far exceeds its costs. The breakeven point is reached with only 2 percent penetration of the insurance scheme and rare triggering of the policy (once in 25 years).

50. **Overall the three components are expected to have an NPV of US\$12.8 million, B/C of 1.6, and ERR of 9.8 percent, all above the typical threshold to be considered economically viable.**

C. Technical Soundness

51. **Component 1: The feasibility study and programming for the activities for crisis management systems have been conducted as part of the Recipient-executed Trust Fund Project funded by the GFDRR.** The first two phases of the program have already been implemented and have proven successful, so the proposed activities under this component replicate and expand the previous phases rather than experiment with something new. However, the project will ensure that newly procured equipment and software are fully compatible with those already installed and operating.

52. **Component 2: The risk-informed approach for this component is aligned with the aim of maximizing the social benefits (number of schoolchildren protected), the risk reduction benefits, and the scalability of the state program.** By prioritizing two regions, the project is focused on the highest seismic risk raions. Building on this approach, the Bank is now supporting further analytic work to deepen the understanding of the current seismic performance of different existing school building typologies in the priority areas. A group of 50 eligible school buildings will be inspected and representative buildings types will be defined through a standard taxonomy and classification system. Advanced structural performance-based analysis will be conducted for these representative building types. Thus, the actual seismic performance of existing school buildings will be assessed as well as alternatives that could offer higher performance levels. In parallel, the need for energy efficiency interventions and capital repairs will be identified as well. Once there is a preliminary estimate of the intervention and investment needs, prioritization criteria will aim to maximize safety, cost-efficiency, and social equity.

53. **Building on this process, the implementation strategy of this component addresses the need to reduce the uncertainty regarding the actual cost-efficiency of the combination of different intervention alternatives (retrofitting, reconstruction, energy efficiency, capital repairs, etc.) for a given school facility.** Therefore, within the group of prioritized schools, the implementation will be phased: a first batch of different school building typologies will inform the second batch, making it possible to learn in each case about optimal engineering solutions, actual cost of different lines of intervention, and implementation details. Based on these results, the PIU will be able to review and adjust the lines of intervention and the implementation strategy moving forward. Likewise, this process will be critical to identify opportunities for solutions at scale and inform the design of the long-term intervention and investment plan.

54. **A key element of this component is the strategy to build the capacity of local engineers in advanced structural modeling techniques.** A group of engineers from the SAACCS and the International University for



Innovative Technology will be trained. In complement, the Bank-executed technical assistance will support the MoE in the design of an information system for school infrastructure.

55. **Component 3: The technical design of the component is rooted in a thorough diagnostic undertaken by the World Bank task team on the current state of insurance operations of the SIO, the national insurance carrier entrusted with implementing the mandatory disaster insurance program.** The team has conducted in-depth technical interviews with the company's senior management, heads of its main operational departments (sales, reinsurance, claims, finance), and its insurance supervisor SSFMRS. In addition, to put the assessment of the SIO in a broader legal context, the Bank team carried out a survey of the current pertinent insurance legislation that guides the operations of the disaster insurance program. All findings and recommendations of the Bank team have been discussed with the key project stakeholders, including the SSFMRS, the SIO, and the MoES.

D. Lessons Reflected in Project Design

56. **Functional crisis management system and hazard monitoring.** The World Bank has experience financing similar investment projects with similar investments in emergency preparedness in other parts of the world, including the Istanbul Seismic Risk Mitigation Project (ISMEP) and Bangladesh Urban Resilience Project (BURP). Experiences from such projects suggest that an integrated approach is desirable in order to consider aspects of facilities, information flow and exchange, equipment, personnel, and the legal and institutional framework. The project is therefore complemented by World Bank technical assistance to support improvements in information flow, institutional framework, training and knowledge development, etc.

57. **Scaling up investments in the safer schools program.** Through convening other development partners and donors, other World Bank-funded safer school programs have successfully scaled up investment. For example, the ISMEP has scaled up from the initial World Bank investment of €400 million to include financial resources from other donors and IFIs and has become a €2 billion program. The proposed project has learned from these relevant experiences and has adopted several key features that facilitate successful scaling up: (i) establishment of clear and evidence-based selection and prioritization criteria for school retrofitting and reconstruction in close consultation with relevant ministries and agencies and with inputs from local experts; (ii) integration of functional upgrades (to modern service provision standards) with seismic safety measures to increase effectiveness and sustainability; (iii) embedding of investment projects within a larger and longer intervention and investment strategy for safer schools; and (iv) building of capacity in relevant ministries and agencies to monitor the progress of program implementation with proper database setup.

58. **Utilizing analytics and project experience in the Kyrgyz Republic.** The experience of designing and implementing the ongoing Urban Development Project (P151416) shows that the actual cost of the interventions to increase schools' seismic resistance and energy efficiency remains uncertain until a detailed design and cost plan is prepared. To avoid cost overruns and maximize the benefits of the investment, the proposed project will follow a progressive implementation process: the implementation will start with the detailed design of a first batch of schools, which will offer conclusions that can then optimize the implementation of the second batch of schools. Furthermore, the World Bank has been engaging in DRM activities in the Kyrgyz Republic for several years under GFDRR grants; this work has included technical assistance to introduce the latest methodologies for seismic risk assessment, disaster-resilient urban planning, the Post-Disaster Needs Assessment methodology, an open data platform for disaster information (Geonode), technical guidelines on school retrofitting/reconstruction, etc. The results of the analytics and output products will be utilized in the project where relevant.



59. **Use of lessons learned from other insurance programs.** The design of Component 3 reflects lessons learned from the implementation and operation of such programs as the Turkish Catastrophe Insurance Pool (TCIP), Romania’s Insurance Pool against Natural Disasters (PAID), the South East Europe Catastrophe Risk Insurance Facility (SEE CRIF), and other disaster insurance programs operating throughout the world. Specifically, the project will heavily draw on the experience of TCIP, which relies on a nationwide private sales network operated by private insurers, and which provides the dedicated reinsurance capacity for all earthquake risk through sales of TCIP policies, with the subsequent transfer of most of the risk to the global reinsurance market. The experience of TCIP also provides invaluable lessons on how to combine affordability and actuarial soundness in an insurance product, and on how to efficiently use checkpoints to ensure the enforcement of mandatory insurance requirements. The project will also draw on the creation and operation of the PAID, specifically its handling of challenges and development of solutions. In addition, ongoing World Bank technical assistance will support knowledge exchange with both TCIP and PAID. Component 3 will also take into account lessons learned from the SEE CRIF program about efficient insurance technologies and risk-based regulation that promote effective management of catastrophe risk accumulation through massive sales of catastrophe insurance policies. Finally, it will consider other disaster insurance examples from such countries as France, New Zealand, and the United States.

E. Fiduciary

i. Financial Management

60. **The financial management (FM) assessment for the project was conducted in accordance with the Financial Management Manual for World Bank Investment Project Financing Operations (effective on March 1, 2010, and revised on February 10, 2017). Overall, the MoES PIU’s FM arrangements for project implementation are adequate and meet the minimum requirements of the Bank’s Policy and Directive on IPF.** With regard to the FM covenants to be included in the Disbursement and Financial Information Letter (DFIL), the following should be noted: (i) interim unaudited financial report formats will be agreed with the PIU before negotiations and submitted to the Bank within 45 days after the end of the calendar quarter; and (ii) the project’s annual audited financial statements will be submitted to the Bank within six months after the end of the audit period. The audit reports for the Bank-funded project currently being implemented by PIU are received on time (with no overdue audit reports), have clean (unmodified) audit opinions, and have identified no significant internal control or accountability issues that would have an impact on the implementation of this project. Details of the FM assessment, including the formats of the interim financial reports, will be included in the POM. The project will receive disbursements from the Bank through advances using statements of expenditure, direct payments, reimbursements, and special commitments. Details with respect to disbursements will be included in the DFIL. The overall FM residual risk rating of the project is assessed as *Moderate*.

ii. Procurement

61. **A procurement capacity assessment was performed by the Bank using the Procurement Risk Assessment and Management System. Based on the assessment and recognizing the existing procurement capacity of the MoES PIU and the risks associated with operations, the procurement risk is considered *High*.**

62. **The activities under the project will be subject to the World Bank’s New Procurement Framework.** All procurement of contracts will be conducted through the procedures specified in the World Bank’s “Procurement Regulations for IPF Recipients: Procurement in Investment Project Financing—Goods, Works, Non-Consulting and



Consulting Services,” dated July 2016, revised November 2017 (Procurement Regulations). The project will also be subject to the World Bank’s Anti-Corruption Guidelines, dated July 1, 2016. The procurement and contract management processes will be tracked through the Systematic Tracking of Exchange in Procurement (STEP) system. As required by the Procurement Regulations, a Project Procurement Strategy for Development has been developed; based on this, a procurement plan has been prepared that sets out the selection methods to be followed by the borrower during project implementation in the procurement of goods, works, and nonconsulting and consulting services financed by the World Bank.

63. **Use of National Procurement Procedures.** In accordance with paragraph 5.3 of the Procurement Regulations, when approaching the national market (as specified in the Procurement Plan tables in STEP), procurement under World Bank financed operations may be carried out in accordance with “Single-Stage Bidding” method set forth in the Public Procurement Law of the Kyrgyz Republic dated April 3, 2015 № 72 (the “PPL”) with amendments dated November 18, 2016 N 182, December 10, 2016 N 195, February 14, 2017 N 25, May 30, 2017 N 93, provided that such arrangements continue to meet requirements of the paragraph 5.4 of the Procurement Regulations and the following conditions:

- (a) The request for bids/request for proposals document shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, Bank Anti-Corruption Guidelines, including without limitation the Bank’s right to sanction and the Bank’s inspection and audit rights;
- (b) Bidding documents, including contract forms, acceptable to the Bank shall be used.
- (c) The Bidding process shall not be cancelled solely on the reason that minimum bid price is larger than the amount allocated by procuring entity for this procurement.
- (d) There shall be no preference applied during procurement of goods and works.
- (e) Implementing agency shall have an option to publish procurement notice without disclosing cost estimate.

64. **When other national procurement arrangements other than national open competitive procurement arrangements are applied by the Borrower, such arrangements shall be subject to paragraph 5.5 of the Procurement Regulations.** Other national procurement arrangements such as “Simplified Method” (Request for Quotation) may be applied on the same conditions stated above for procuring limited quantities of ready available off-the-shelf goods or simple civil works of small value. In addition, not less than three quotations shall be requested to ensure competition.

F. Safeguards

i. Environmental Safeguards

65. **Anticipated impacts.** Component 2 of the project will include the following civil works in the educational facilities: (i) replacement of existing buildings by new safer buildings; or (ii) seismic retrofitting of existing buildings (structural intervention of structural and non-structural elements such as columns, beams, walls, foundation, among others). The latter will most probably include: replacement of doors and windows; repair of roofs; and



energy efficiency improvements. These activities are associated with: certain health, safety, and environmental risks, including dust, noise, and vibration; generation of construction waste, including hazardous waste (asbestos-containing materials); and occupational health and safety hazards, such as works at height and in confined spaces. New construction and demolition of old school buildings, in addition to the typical impacts described above, will likely be associated with larger-than-usual volumes of construction waste, environmental and health and safety impacts from construction camps, and possible interaction with sensitive ecosystems such as rivers and mountains, which typically surround rural schools in the target regions. In addition, construction works in schools, especially boarding schools, may require temporary relocation of pupils and inhabitants, and this may pose additional health and safety risks in transportation and hygiene.

66. **Project safeguards category and proposed safeguards instruments.** Risks mentioned above are expected to be site-specific, minor, and short-lived, with low to moderate probability and severity of harm. The project was assigned environmental category “B” based on the OP 4.01 Environmental Assessment. The sites will be identified based on a clearly defined prioritization process agreed with the government and will not be defined before the time of the project appraisal by the World Bank. Therefore, the instrument proposed by the borrower and approved by the World Bank specialists is an Environmental and Social Management Framework (ESMF). Apart from describing expected environmental and social impacts from the anticipated works, the ESMF will define the environmental screening and assessment process for site-specific interventions, and will outline the requirements and template for the site-specific Environmental and Social Management Plans (ESMPs). The ESMF will become an integral part of the POM. Site-specific ESMPs will become an integral part of the bidding documentation for construction contractors.

67. **Component 5 will be triggered following paragraph 13 of OP 10.00 (Investment Project Financing).** It will be difficult to describe potential risks and mitigation measures associated with emergency response and likely vulnerable locations and/or groups in the ESMF. Thus, a special chapter in the ESMF 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 identify 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 5, along with any other components in the project, will not finance any activities that are designated environmental category “A” according to the World Bank OP 4.01 (Environmental Assessment).

68. **Implementation arrangements.** The PIU under the MoES has contracted an experienced environmental and social consultant to assist the project during the preparation and implementation stages. The distribution of responsibilities for implementation of environmental safeguards is presented in table 3.

Table 3. Implementation of environmental safeguards

Participant	Responsibility	Evidence
Construction contractor (site specific)	<ul style="list-style-type: none"> Allocates adequate budget for environmental mitigation during the bidding process based on the ESMP Assigns a person responsible for environmental health and safety at every site Ensures the implementation of the site-specific ESMP 	<ul style="list-style-type: none"> Inclusion of the ESMP in the tender documents Copies of the regular reports Copies of permits, licenses Clearance statements from the supervision contractor and the PIU environmental consultant



	<ul style="list-style-type: none"> • Obtains clearance from authorized body or local executive authority if required • Obtains required permits/licenses • Reports regularly (once a month) to supervision contractor and PIU environmental consultant on the implementation of the mitigation measures; reports immediately in case of incidents • Ensures that complaints by the public are recorded and taken care of following the grievance redress mechanism (GRM) 	<ul style="list-style-type: none"> • Periodic reports and subproject completion report • ESMPs/ESMP checklists • Decision on the need for environmental and social impact assessment (ESIA) from the authorized body or local executive authority (if applicable) • GRM instructions and log on site.
MoES PIU	<ul style="list-style-type: none"> • Ensures that environmental safeguards support for the project is provided by the qualified specialists/consultants • Discloses the required safeguards instruments on website of and other information sources • Conducts public consultation process providing venue and resources • Ensures that necessary resources are allocated for safeguards consultants 	<ul style="list-style-type: none"> • ToR and contract with environmental specialist • Links to disclosure web pages • Minutes of public consultation meetings • Procurement matrix that includes consulting services for environmental safeguards for the duration of the project
PIU environmental consultant	<ul style="list-style-type: none"> • Provides input to site-specific ESMPs • Ensures the quality of site-specific ESMPs • Identifies key stakeholders and project-affected people • Plays a key role in public consultations and disclosure • Conducts regular site supervision (no less than once a month) • Provides quarterly reports to the World Bank on environmental mitigation and monitoring • Reviews project design and other documentation in the application package for required environmental documentation and licenses/permits from the authorized body or local executive authority • Maintains complete files of environmental documentation for review by the World Bank • Monitors compliance with mitigation plans (if necessary) • Conducts environmental screening when the emergency response (Component 5) is triggered • Prepares ESIA and ESMP documentation for emergency response activities in Component 5 (if required) 	<ul style="list-style-type: none"> • Inputs to the ESMPs or ESMP checklists • Site supervision reports • Quarterly reports to the World Bank • Environmental screening and categorization forms for Component 5 • ESIA and ESMP documentation for emergency response activities (as required)
World Bank	<ul style="list-style-type: none"> • Organize training for PIU staff on environmental safeguards requirements • Identify problems/issues and propose solutions • Review and clear ESMF document 	<ul style="list-style-type: none"> • Documentation of project implementation in Implementation Status and Results reports and the mission aide-memoires



	<ul style="list-style-type: none"> • Review and clear selective site-specific ESMPs • Review and clear ESIA and EMP documentation for emergency response activities in Component 3 (if required) 	<ul style="list-style-type: none"> • Training records
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ii. Social Safeguards

69. **As mentioned above, schools will be selected through a transparent risk-informed decision-making process established by the recipient and supported by World Bank technical assistance.** The selection and prioritization process will be informed by structural performance based analysis of representative building types. Therefore, it is not known during project preparation which schools will be selected for intervention. As a result, it is not known what the impacts will be, and if those impacts will trigger the World Bank’s policy on Involuntary Resettlement. As a precaution, therefore, a Resettlement Policy Framework has been prepared for the project that describes the standards and procedures for a Resettlement Action Plan in the event that the civil works trigger the policy.

70. **A Social Impact Mitigation Plan will be prepared for school interventions that require temporary relocation of students to address negative impacts of the move and to ensure student learning is not hampered by project activities.** Student and community safety measures will be included in the environmental and social management planning.

71. **It is expected that the project will have very low impacts on land, as most school interventions will occur on existing school campuses.** When a school is first constructed, enough land is allotted to allow for future expansion and provision of sporting fields. Campus land may be used by staff for growing of gardens. If project activities cause impact on garden areas, the gardens will be relocated within the school campus or the alternate plots provided by the local government. In the unlikely event that there is land acquisition, impact on assets, or negative impact to livelihoods, a Resettlement Action Plan will be prepared to mitigate impacts.

72. **Although the PIU itself does not have the staffing capacity to monitor environmental and social impacts, the PIU will hire a monitoring firm during civil works that will cover all relevant oblasts.** The PIU will select from a number of existing firms within the Kyrgyz Republic with capacity to provide environmental and social oversight throughout the entire country.

73. **Project Grievance Redress Mechanism.** Guided by the Law of the Kyrgyz Republic of May 4, 2017, No. 67 (In the version of Law no. 214 of February 26, 2008, and Law no. 16 of July 26, 2008) "On the procedure for citizens' appeals" and the internal rules for the work of the Ministry of Emergency Situations with complaints and suggestions, citizens can send requests and appeals on issues related to the scope of the project. The appeals can be sent to the Ministry of Emergency Situations by means of various channels: by phone, through the ministry website (<http://mes.kg/ru/contacts/>), and through PIU staff, as well as via e-mail and postal service. Appeals of citizens can also be transferred during the reception of citizens by the leadership of the Ministry of Emergency Situations according to the schedule of admission. Time for public reception of citizens by relevant high-officials, such as Minister, State Secretary and Deputy Ministers, have been designated and sufficiently allocated. The mechanism for dealing with complaints on resettlement will be established as required by OP4.12. An employee will be assigned responsibility for handling this mechanism and for regularly providing information on the



operation of the mechanism, the number of appeals received, and the responses given to them. The process for considering complaints will be set out in the POM.

74. **Citizen engagement.** The project engages citizens through School Monitoring Committees tasked with raising awareness, informing and monitoring the implementation progress. Membership of these School Monitoring Committees will be at least 50% participation of women, and processes will be established to ensure that women can actively participate. School students will be invited to meetings to obtain the perspective of students and will ensure that the specific needs of girls in schools are met, in the school improvements that are proposed. School Monitoring Committee meetings and oversight tasks will be documented through minutes which will be reported by the PIU in progress reports. The project will report on the percentage of schools that establishes functioning committees and empowers these committees effectively in subproject implementation.

G. World Bank Grievance Redress

75. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank'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 World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank 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 <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

76. **The overall risk of the project is assessed as *substantial*.** This rating is based on potential political and governance risks, macroeconomic risks, risks related to technical design of the project and institutional capacity for implementation and sustainability, fiduciary risks, and other risks.

77. **Political and governance risks are *high*.** While the political environment has stabilized since 2010 and democratic principles have become firmly established, the vibrancy of the political process also entails challenges to policy continuity. In particular, the short lifespan of governments and frequent cabinet dismissals continue to pose a risk to achieving the program's development outcomes. However, the Kyrgyz authorities have broadly maintained their commitment to key policy initiatives, even if implementation has often been delayed. This risk rating is aligned with the assessment included in the 2016 Performance and Learning Review of the Country Partnership Strategy.

78. **Macroeconomic risks are rated as *substantial*,** although they are mostly exogenous. They stem largely from adverse regional developments, which have put pressure on remittances, exports, exchange rates, and prices. Further exchange rate depreciation could result in heightened financial sector vulnerability, while undermining the debt sustainability outlook, which would also deteriorate in the event



of substantial additional borrowing. Renewed economic hardship in neighboring countries would affect external balances (through decreased exports) and fiscal balances (through lower external tariff revenues).

79. **Technical design of the project has *substantial* risk.** This is due to lack of experience in the engineering community and relevant ministries and agencies, and lack of quantitative and reliable data to inform project activities. Quantitative and reliable data are critical to manage the complexity and sensitivity of selecting and prioritizing schools for retrofit or replacement and for defining the intervention strategy to be financed under Component 2 of the project. The design of the intervention strategy for each school facility will require not only careful engineering considerations on seismic design; it will also require cost-efficiency criteria considering both safety and functional needs in order to evaluate whether retrofitting is feasible or if buildings should be replaced by new construction. Furthermore, unexpected results in the project could undermine the opportunity for scaling up the State Program on Safer Schools. Integration of all these elements in the design of school interventions is new in the country; and therefore, the PIU and relevant ministries and agencies will require substantial technical support and guidance. In order to minimize the risk associated with the project design, the design will include (i) a Technical Working Group with participation of relevant ministries and agencies to advise and guide the PIU; (ii) a phased implementation strategy, in which lessons learned and knowledge from previous phases are used to refine the planning of subsequent phases; and (iii) complementary analytical work and capacity-building activities (through ongoing World Bank technical assistance).

80. **Institutional capacity for implementation and sustainability has *substantial* risk.** This is due to lack of sufficient experience by the PIU and relevant ministries and agencies in integrating various technical elements for school retrofitting and reconstruction, as mentioned above concerning technical design of the project. In addition, interagency coordination for mainstreaming DRM in multiple sectors may be challenging: as the implementing agency hosting the PIU, the MoES has the experience to carry out its mandate and coordinate on DRM among various ministries and agencies, at both the policy and strategy level, but the MoES has limited experience in implementing IFI-financed projects together with other line ministries, especially projects involving civil works. The project will minimize this risk through establishing a high-level Project Coordination Council consisting of all relevant ministries and agencies involved in the project.

81. **Fiduciary risks are rated as *high* based on the financial management assessment and procurement capacity assessment (described in part IV, section E).** A number of risks were identified related to procurement and institutional arrangements. The currently identified procurement risks include but not limited to the following: (a) there is a number of officials from various agencies, who be involved in project procurements through Tender Committees, they may not be familiar with Bank procurement procedures; Political developments may lead to the frequent turnover of tender committee members; (b) potential procurement delays: Experience with execution of the past and ongoing procurement packages show frequent procurement delays; (c) low level of competition: past experience indicates that procurement in the country has not attracted adequate competition; (d) inadequate contract management and lower-than-required quality of procured equipment and civil works; (e) perceived high level of corruption as measured by Transparency International. The project will ensure that relevant stakeholders receive training in procurement and FM by the World Bank.



82. **Other risks include risks of natural disasters, rated as *substantial*.** In case of natural disasters, Component 5 may need to be triggered and activated, which would require readjustment and restructuring of the project.



VI. RESULTS FRAMEWORK

A. Indicators and Targets

COUNTRY: Kyrgyz Republic
Enhancing Resilience in Kyrgyzstan Project

Project Development Objective(s): The Project Development Objectives are to support the recipient to strengthen its capacity to respond to disasters, provide safer and improved learning environment for children, and reduce adverse financial impacts of natural hazards on the recipient budget and population.

Results Indicators*	DLI**	CRI***	Unit	Baselines	Yearly Cumulative Targets (Optional)				End Targets	
					Y1	Y2	Y3	Y4	Y5	
PDO Indicators by Sub-objective /Outcome*										
Objective 1: Capacity to respond to disasters is strengthened	PDO 1-1: Population covered by improved emergency preparedness and response systems in the country	N	N	Percentage	42%	42%	100%	100%	100%	100%
	PDO 1-2: Landslides of highest risks are monitored and have an associated emergency plan	N	N	Percentage	0%	0%	20%	20%	60%	100%
Objective 2: Safer and improved learning environment for children is provided	PDO 2-1: Students (disaggregated by gender) having access to safer and resilient school facilities	N	N	Number	0	0	0	2,400	2,400	6,000
	PDO 2-2: School facilities with improvements in functional conditions (fraction of total number of school facilities with improved safety and resilience)	N	N	Percentage	0%	0%	0%	25%	25%	50%
Objective 3: Adverse financial impacts of natural hazards on the government budget and population are reduced	PDO 3-1: Reinsurance program introduced	N	N	Y/N	N	N	N	N	Y	Y
Intermediate Results Indicators (IRI)										
Component 1: Strengthening Disaster Preparedness and Response Systems	IRI 1-1: ICT equipment required to cover the whole country is purchased and installed for improved emergency preparedness and response	N	N	Y/N	N	N	Y	Y	Y	Y
	IRI 1-2: Web-based platform is setup and becomes operational	N	N	Y/N	N	N	Y	Y	Y	Y
	IRI 1-3: Landslide monitoring tasks & needs are defined, and staff trained	N	N	Percentage	0%	0%	50%	100%	100%	100%



Results Indicators*	DLI**	CRI***	Unit	Baselines	Yearly Cumulative Targets (Optional)				End Targets	
					Y1	Y2	Y3	Y4	Y5	
	IRI 1-4: Monitoring equipment are purchased, installed and operationalized by staff	N	N	Percentage	0%	0%	50%	50%	100%	100%
	IRI 1-5: Search and rescue equipment are purchased and being used by teams	N	N	Y/N	N	Y	Y	Y	Y	Y
	IRI 1-6: Distant Learning System for educating the public is setup and becomes operational	N	N	Y/N	N	N	N	Y	Y	Y
Component 2: Improving Safety and Functionality of School Infrastructure	IRI 2-1: Local engineers trained on advanced seismic risk techniques	N	N	Number	0	0	0	80	80	200
	IRI 2-2: Intervention and investment plan for the implementation of State Program on Safe Schools and Preschools of the Kyrgyz Republic for the period of 2015 – 2024 is defined	N	N	Y/N	N	N	N	N	N	Y
	IRI 2-3: School infrastructure module integrated in the Ministry of Education’s Information System, and accessible to other relevant stakeholders	N	N	Y/N	N	N	N	N	N	Y
	IRI 2-4 Percentage of schools with school monitoring committees established and functioning as planned throughout project cycle (Citizen Engagement)	N	N	Percentage	0%	0%	40%	100%	100%	100%
Component 3: Enhancing Financial Protection	IRI 3-1: Web-based insurance production system is developed	N	N	Y/N	N	N	Y	Y	Y	Y
	IRI 3-2: Number of regional offices of the SIO equipped	N	N	Number	0	0	0	54	54	54
	IRI 3-3: Claims assessment methodology improved	N	N	Y/N	N	N	N	Y	Y	Y
	IRI 3-4: Risk management system of the SIO is in place	N	N	Y/N	N	N	N	Y	Y	Y
Component 4: Project Management and Monitoring & Evaluation	IRI 4-1: Grievances raised by stakeholders are addressed and closed	N	N	Percentage	0%	0%	0%	0%	0%	95%
	IRI 4-2: Direct project beneficiaries	N	N	Number	0	0	3.6 million	3.6 million	3.6 million	3.6 million



Results Indicators*	DLI**	CRI***	Unit	Baselines	Yearly Cumulative Targets (Optional)				End Targets
					Y1	Y2	Y3	Y4	Y5
IRI 4-3: Female beneficiaries (Percentage - Sub-Type: Supplemental)	N	N	Percentage	0%	0%	51%	51%	51%	51%

* Organize PDO indicators by sub-objective (outcome) and intermediate results indicators by component (for IPF) or results areas (for Program-for-Results [PforR]).

**DLI = Disbursement Linked Indicators (for PforR and IPF with DLIs).

*** CRI = Corporate Results Indicators.



B. M&E Plan for Indicators

Indicator Name	Definition/Description	Frequency	Data Source/ Methodology	Responsibility for Data Collection
PDO 1-1: Population covered by improved emergency preparedness and response systems in the country	The definition is the percentage of population that has been fully equipped with the required “112” emergency system, public emergency warning and notification system, and local crisis management centers. While some cities and oblasts already have some equipment installed, this project is expected to fill in gaps and complete national coverage by installing required equipment in Bishkek and Osh Cities and Batken, Naryn, Osh, and Talas Oblasts, whose populations total 3.6 million (58 percent of the Kyrgyz Republic’s total population as of 2017).	Semiannual	Project progress reports, support missions	MoES through MoES PIU
PDO 1-2: Landslides of highest risks are monitored and have an associated emergency plan	The definition is the percentage of landslides identified by MoES as presenting the highest risk that are surveyed and under improved monitoring with purchased equipment and devices, and that have an associated emergency plan.	Semiannual	Project progress reports, support missions	MoES through MoES PIU
PDO 2-1: Students (disaggregated by gender) having access to safer and resilient school facilities	This indicator measures the number of students attending the schools that will be financed by the project. All financed schools will have safer and more resilient buildings, and therefore all students in these schools will benefit from the interventions. MoE’s data will indicate the total number of students who attend the schools.	Mid-point and end of project	Project progress reports, MoE’s data	MoE through MoES PIU
PDO 2-2: School facilities with improvements in functional conditions (fraction of total number of school facilities with improved safety and resilience)	The project aims to improve the safety and resilience of school facilities. However, it is expected that some schools also require basic functional improvements to improve students’ well-being. These functional improvements include (i) energy efficiency improvements, such as replacement of windows/doors and insulation of the building envelop, and (ii) interventions to ensure basic hygiene and sanitation	Mid-point and end of project	Project progress reports, MoE’s data	MoE through MoES PIU



Indicator Name	Definition/Description	Frequency	Data Source/ Methodology	Responsibility for Data Collection
	conditions. This indicator measures the percentage of school facilities with improvements in functional conditions against the total number of schools financed by the project.			
PDO 3-1: Reinsurance program introduced	Without having reinsurance, the SIO is unable to cover its current liabilities. This indicator includes development of a reinsurance program for the SIO. Further, it includes introduction of this program into the SIO to increase the likelihood that the SIO can cover its liabilities in full.	End of project	Support missions, final report	SIO, SSFMRS through PIU
IRI 1-1: ICT equipment required to cover the whole country is purchased and installed for improved emergency preparedness and response	The definition is the proper installation of ICT equipment required for the emergency system, public emergency warning and notification system, and local crisis management centers in relevant cities and oblasts in the country.	Semiannual	Project progress reports, support missions	MoES through MoES PIU
IRI 1-2: Web-based platform is setup and becomes operational	The definition is the proper design, setup, and installation of the web-based platform with required functions for hazard monitoring and forecasting and accumulation/linkage of data from relevant sources and technical agencies.	Semiannual	Project progress reports, support missions	MoES through MoES PIU
IRI 1-3: Landslide monitoring tasks & needs are defined, and staff trained	The definition is identification of tasks for improved landslide monitoring and relevant training of staff.	Semiannual	Project progress reports, support missions	MoES through MoES PIU
IRI 1-4: Monitoring equipment are purchased, installed and operationalized by staff	The definition is the purchase and installation of required monitoring equipment and devices and their operationalization by the staff in charge of landslide monitoring.	Semiannual	Project progress reports, support missions	MoES through MoES PIU



Indicator Name	Definition/Description	Frequency	Data Source/ Methodology	Responsibility for Data Collection
IRI 1-5: Search and rescue equipment are purchased and being used by teams	The definition is the purchase and use by relevant teams of required search and rescue equipment.	Semiannual	Project progress reports, support missions	MoES through MoES PIU
IRI 1-6: Distant Learning System for educating the public is setup and becomes operational	The definition is the setup of the required Distant Learning System for educating the public on disaster risk management, with required equipment, curriculum, and materials.	Semiannual	Project progress reports, support missions	MoES through MoES PIU
IRI 2-1: Local engineers trained on advanced seismic risk techniques	This indicator measures the number of local engineers from relevant state agencies and academia, along with other relevant local practitioners, who are trained in performance-based engineering and seismic retrofitting techniques. This activity will be supported by technical assistance (TA) from the World Bank.	Mid-point and end of project	World Bank TA reports, support missions	Component 2 Technical Working Group (TWG) with support from World Bank
IRI 2-2: Intervention and investment plan for the implementation of State Program on Safer Schools and Preschools of the Kyrgyz Republic for the period of 2015–2024 defined	The definition is the finalization of a national intervention and investment plan to improve the safety and resilience of school infrastructure nationwide. The plan includes the identification of solutions to improve the safety and resilience of all structural typologies of school buildings, and the quantification of the investment needed to replicate those solutions nationwide. The preparation of this strategy will be supported by TA from the World Bank.	End of project	World Bank TA reports, support missions	Component 2 TWG with support from World Bank
IRI 2-3: School infrastructure module integrated in the Ministry of Education’s information system and made accessible to other relevant stakeholders	The definition is the integration of a school infrastructure module in the MoE’s information system, with functions required to manage the assets of the state program and monitor the progress of its implementation. This module will be accessible to other relevant stakeholders in the country.	End of project	Project progress reports, World Bank TA reports, support missions	MoE through the MoES PIU



Indicator Name	Definition/Description	Frequency	Data Source/ Methodology	Responsibility for Data Collection
IRI 2-4 Percentage of schools with school monitoring committees established and functioning as planned throughout project cycle (Citizen Engagement)	This indicator will measure the percentage of the number of schools that have established and functioning school monitoring committees, out of the total number of schools to be intervened by the project. Functioning will be defined as a set of 4 steps which include priority needs identification, collaborating on temporary relocation plans, safety and security monitoring and operation and maintenance planning.	Every 2 months during implementation of each school subproject	Minutes of meetings reported in Project progress Reports	MoES through the MoES PIU
IRI 3-1: Web-based insurance production system developed	This indicator includes development and introduction in the SIO of a customized web-based insurance production system. Currently, the SIO uses an outdated system: its staff manually accounts for the policies sold and transfers data about policies from agents to the central office, while proper risk management is almost entirely absent. The web-based insurance production system, customized to the needs of the SIO and with the potential for future improvements, will integrate all core functions of the SIO.	Semiannual	Inspection and testing	SIO, SSFMRS through PIU
IRI 3-2: Number of regional offices of the SIO equipped	This indicator estimates the number of regional offices (that have an Internet connection) that will be equipped with personal computers and essential office furniture. The SIO's regional offices currently entirely lack equipment for operating properly. The project will equip up to 54 regional offices (at the moment, only 20 out of 54 regional offices have an Internet connection—a prerequisite for using the web-based platform).	Semiannual	Field inspection, acceptance certificate, support missions, reporting	SIO, SSFMRS through PIU
IRI 3-3: Claims assessment methodology improved	This indicator measures development and introduction of a revised claims assessment methodology based on an engineering assessment.	End of project	Support missions, final report	SIO, SSFMRS through PIU
IRI 3-4: Risk management system of the SIO in place	This indicator measures improvement in the SIO's risk management. Currently, the SIO does not control accumulation of risks because of deficiencies in its	End of project	Support mission, final report	SIO, SSFMRS through PIU



Indicator Name	Definition/Description	Frequency	Data Source/ Methodology	Responsibility for Data Collection
	operations. The indicator will measure development of an internal risk management system; development of risk-based solvency margin requirements for the SIO and regulatory monitoring compliance tools; and trainings of the SIO staff on all essential regulatory reporting and compliance functions.			
IRI 4-1: Grievances raised by stakeholders addressed and closed	This indicator measures the percentage of grievances addressed and closed, out of the total number of grievances received.	Semiannual	Project progress reports, support missions	MoES PIU
IRI 4-2: Direct project beneficiaries	The definition is the total number of direct project beneficiaries of all components.	Semiannual	Project progress reports	MoES PIU
IRI 4-3: Female beneficiaries (Percentage - Sub-Type: Supplemental)	The definition is the percentage of female beneficiaries out of total direct project beneficiaries in IRI 4-2.	Semiannual	Project progress reports	MoES PIU



ANNEX 1: MAP

