Environmental Assessment and Review Framework

Project No. 53022-001
January 2021

Kyrgyz Republic: Landslide Risk Management Sector Project

Prepared by the Ministry of Emergency Situations for the Asian Development Bank (ADB).

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Weights and Measures

kg - Kilogram
mm - Millimetre
m, m2, m3 - Metre, square metres, cubic metres
km, km2 - Kilometre, square kilometre
ha - Hectare

Currency Equivalents

(as of 31 December 2020)

$1.00 = KGS 82.83578

KGS refers to Kyrgyz Som and “US$” to US dollars.
### Abbreviations

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<thead>
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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>CBO</td>
<td>Community-based organization</td>
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<td>CDC</td>
<td>Civil Defense Commission</td>
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<td>CWRD</td>
<td>Central and West Asia Department</td>
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<td>EA</td>
<td>Executing Agency</td>
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<td>EARF</td>
<td>Environmental Assessment and Review Framework</td>
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<td>EHS</td>
<td>Environment, Health and Safety</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EMP</td>
<td>Environmental Management Plan</td>
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<td>EMR</td>
<td>Environmental monitoring report</td>
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<td>FSDC</td>
<td>Feasibility Study / Design Consulting services</td>
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<td>GIS</td>
<td>Geographic Information System</td>
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<td>GOKR</td>
<td>Government of the Kyrgyz Republic</td>
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<td>GRG</td>
<td>Grievance Redress Group</td>
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<td>GRM</td>
<td>Grievance Redress Mechanism</td>
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<td>IEE</td>
<td>Initial Environmental Examination</td>
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<td>ILO</td>
<td>International Labor Organization</td>
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<td>InSAR</td>
<td>Interferometric synthetic aperture radar</td>
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<td>KCHE</td>
<td>Kyrgyz Complex Hydrogeological Expedition</td>
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<td>KR</td>
<td>Kyrgyz Republic</td>
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<td>LFP</td>
<td>Local Focal Points</td>
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<td>LSG</td>
<td>Local Self Government</td>
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<td>MES</td>
<td>Ministry of Emergency Situations</td>
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<td>MOT</td>
<td>Ministry of Transport</td>
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<td>MRM</td>
<td>Mid-term Review Mission</td>
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<td>NGO</td>
<td>Non-Government Organization</td>
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<td>OVOS</td>
<td>Russian acronym for “Assessment of Environmental Impacts”</td>
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<td>PC</td>
<td>Public Consultation</td>
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<tr>
<td>PCM</td>
<td>Public Consultation Meeting</td>
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<td>PER</td>
<td>Public Environmental Review</td>
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<tr>
<td>PIC</td>
<td>Project Implementation Consultant</td>
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<td>PIU</td>
<td>Project Implementation Unit</td>
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<td>PMO</td>
<td>Project Management Office</td>
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<td>PSA</td>
<td>Poverty and Social Assessment</td>
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<td>REA</td>
<td>Rapid Environmental Assessment</td>
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<td>RSP</td>
<td>Representative Subproject</td>
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<td>SAEPF</td>
<td>State Agency for Environment Protection and Forestry</td>
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<td>SCIESU</td>
<td>State Committee for Industry, Energy and Subsoil Use</td>
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<td>SEMP</td>
<td>Site-Specific Environmental Management Plan</td>
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<td>SER</td>
<td>State Environmental Review</td>
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<td>SPS</td>
<td>Safeguard Policy Statement</td>
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<td>SST</td>
<td>Social Safeguards Team</td>
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<tr>
<td>TOR</td>
<td>Terms of Reference</td>
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<tr>
<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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Glossary

Activity - A group of tasks carried out using project inputs to produce the desired outputs.

Critical habitat - Critical habitat includes areas with high biodiversity value, including habitat required for the survival of critically endangered or endangered species; areas having special significance for endemic or restricted-range species; sites that are critical for the survival of migratory species; areas supporting globally significant concentrations or numbers of individuals of congregatory species; areas with unique assemblages of species or that are associated with key evolutionary processes or provide key ecosystem services; and areas having biodiversity of significant social, economic, or cultural importance to local communities. Critical habitats include those areas either legally protected or officially proposed for protection, such as areas that meet the criteria of the World Conservation Union classification, the Ramsar List of Wetlands of International Importance, and the United Nations Educational, Scientific and Cultural Organization’s world natural heritage sites.

Hazard - A condition with the potential for causing an undesirable consequence (e.g. an unstable slope above a settlement). The description of landslide hazard should include the location, volume (or area), classification and velocity of the potential landslides and any resultant detached material, and the probability of their occurrence within a given period of time.

Impacts - Positive and negative, short and long-term effects produced by a development intervention, directly or indirectly, intended or unintended.

Impact statement - (a) Report describing the results of an impact assessment process. (b) The expected results of a project, typically sourced from a government national or sector plan before the project is conceptualized (ADB 2016).¹

Natural habitat - Land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area’s primary ecological functions.

Outcome - The immediate and direct benefits of the use or application of a project’s outputs (ADB 2016).

Outputs - Goods, services or products delivered by the project to beneficiaries (ADB 2016).

Results chain - A series of expected achievements, or positive changes, linked by causality. The results chain can be seen as a continuum from inputs to outputs to outcomes (ADB 2016).

Risk - (a) A measure of the probability and severity of an adverse effect to health, property or the environment (e.g. a potential slope failure). (b) Factors outside the project’s control that can hinder its progress from one results level to the next.

I. INTRODUCTION

A. Background

1. The Kyrgyz Republic is naturally highly prone to landslides due to its rainfall patterns, sloping terrain, geology, soil, land cover and high seismic activity. Landslides can also be caused by industrial development activities such as mining and road construction, or by changes in land use such as agricultural activities, especially irrigation. Landslides result in injury and loss of life, destroy productive land, damage infrastructure and settlements, and disrupt transport and services. According to the Ministry of Emergency Situations (MES), there are around 5,000 active landslides in the country and over 540 settlements and 10,000 residential houses exposed to some degree of landslide risk (accounting for 33% of total settlements).\(^2\) Between 1991 and 2018, 591 landslide events occurred in the country, resulting in 275 fatalities.\(^3\)

2. Landslides occur across the Kyrgyz Republic, but with higher intensity and frequency in the south, especially across the Osh – Jalal-Abad region. Landslide activity in this part of the country is controlled by complex interactions between geomorphological, hydrological, meteorological and anthropogenic factors, such as construction and changes in land use. Landslides primarily occur during the rainy season in spring, with precipitation and hydrogeological processes the main triggering factors. The southern region of The Kyrgyz Republic is the most densely populated, rural and poorest area of the country, increasing both exposure and vulnerability to landslides. Recent significant landslide events include 38 people killed in Kara-Taryk village in 2003 by a landslide with a volume of about 1.5 million m\(^3\); and 24 people killed in Ayu village in 2017 by a landslide with a volume of about 200,000 m\(^3\), both in Uzgen region of Osh oblast.\(^4\)

3. To address some of these challenges, the Asian Development Bank (ADB) has prepared a proposed investment project to fill gaps in landslide risk management in the Kyrgyz Republic. The project is called “The Landslide Risk Management Sector Project” (hereinafter “the Project”) and will be executed by the MES of the Government of the Kyrgyz Republic (GoKR). A key feature of the Project is identification and implementation of slope stabilization subprojects. These will involve significant earthworks and related construction activities, in rural areas.

B. Purpose of the Environmental Assessment and Review Framework

4. The purpose of the Environmental Assessment and Review Framework (EARF) is to guide the environmental screening, assessment and management of subprojects that can only be identified after Board approval. The EARF document describes the procedures to be followed in the environmental assessment of subprojects prepared and implemented under the Landslide Risk Management Sector Project. The Project will incorporate the environmental safeguards required by ADB’s Safeguard Policy Statement (2009) and ADB’s Environment Safeguards, A Good Practice Sourcebook (2012), Government of the Kyrgyz Republic environmental laws and regulations, and any subsequent modifications and additions agreed by the Executing Agency and ADB. This EARF is disclosed on the ADB website as part of the Report and Recommendations of the President for the Project.

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\(^3\) Data provided by MES on 25 July 2020.

5. The procedures set forth in this document have been formulated to satisfy the environmental assessment frameworks of the GOKR and the ADB, as defined in their respective environmental policies, guidelines, laws, and regulations. These are documented in Section III.

C. Safeguards Categorization of the Project

6. The planned stabilization activities on hillsides and associated spoil disposal are relatively simple civil engineering procedures (‘earthworks’). The specific techniques proposed are in common use throughout the world. Impacts during the construction process are predictable, limited and can be mitigated by standard best practice measures. The physical works will be limited to specific sites with clear boundaries. After construction and associated site restoration (‘re-greening’) both the engineered slopes and the spoil disposal sites will be stable in the long-term, with no off-site or indirect impacts. Consequently, the project is categorized as B for environment.

7. A climate change risk assessment has been carried out for the selected shortlist of subprojects where risk mitigation works will be conducted (under Output 1). Considering the effect that climate change can have on landslide risk (change in soil freeze/thawing, infiltration of runoff, etc.), there is a high risk of climate change effects having an impact on the project-supported risk mitigation measures if such measures are not designed considering climate change aspects. Although the main aim of the project is to reduce landslide risks, including from climate change, the overall project climate change risk classification is High.

8. The project will not involve any significant involuntary land acquisition or resettlement, and therefore is categorized as B for involuntary resettlement.

9. There are no indigenous people as defined by ADB Safeguards Policy Statement (SPS; 2009) in the Kyrgyz Republic. Therefore, the project is categorized as C for indigenous peoples.

D. Subproject Selection Guidelines

10. Subprojects for physical investment (slope stabilization works and/or monitoring) under the Project have been identified through a process of analysis and discussion during project preparation (see Appendix C). In summary, an initial list of about 1,000 sites at risk from landslides throughout the country was reduced by MES to ~200 sites based on the following selection criteria:

   (i) The number of houses, government buildings and infrastructure that could be affected by landslides at each site;
   (ii) The geological-geomorphological and engineering-geological conditions of the area;
   (iii) The social and economic status of the local population; and
   (iv) The number of houses and occupants earlier directed to be resettled from landslide prone areas, but currently continuing to live on dangerous sites due to objective and subjective reasons

11. This list was further reduced to 46 sites (Appendix A), including two transport-related sites identified by the Ministry of Transport (MOT), by using the following eligibility criteria. The criteria were formally agreed during consultations with MES and ADB in February 2020:

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5 Typically, topsoil stripping, storage and replacement; ‘unloading’ of slopes by physical removal of material (‘spoil’); installation of drains; safe disposal of spoil; in some cases, installation of slope instrumentation, with very small footprint.

6 The IEE for the representative subproject at Ayusai confirms the limited scale of impacts and the routine mitigation measures required.
(i) Approved by both the national and local government (Government priority);
(ii) Areas that meet a certain level of landslide hazard (current and future levels considering climate change and seismic risk);
(iii) Areas that meet a minimum threshold for assets at risk, e.g.:
    (a) Minimum number of houses; and/or
    (b) Critical infrastructure potentially impacted: roads, electricity and communication, energy;
    (c) Community infrastructure such as: schools, clinics, markets, community access roads, water and sanitation, etc.
    (d) Proportion of vulnerable people at risk (with disaggregation for gender, age, poverty, literacy, ethnicity etc. by rayon or settlement level), e.g. at least 50% population consists of vulnerable groups;
(iv) No major social impacts, i.e., resettlement, unemployment, or alienation of productive agricultural land;
(v) Not in an area with uranium sites or mine tailings (mining sites excluded);
(vi) Not located in or adjacent to an environmentally sensitive area unless there is a significant threat to sensitive downslope and/or downstream values (ecological, socio-economic). Such areas could include but are not limited to physical cultural heritage, historical landscapes, areas protected for nature conservation including buffer zones, wetlands and catchment protection areas, any natural or critical habitats;
(vii) Not classified as ADB environmental category A subprojects (Category A: The project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. Impacts may affect an area larger than the sites or facilities subject to physical works); and
(viii) Potential economic viability in line with ADB economic analysis guidelines.

12. Hydropower-related sites were excluded by MES due to their relatively low risk of direct impact on human life.

13. The short-list of 46 eligible subprojects will be further prioritized according to seven additional criteria. These criteria have already been used to select a representative subproject.
   (i) Geomorphological and geological conditions of the site (e.g. elevation, area, volume, geolithological properties) and phases of landslide development;
   (ii) Government priority area;
   (iii) Geographic diversity;
   (iv) Existing national and local Government implementation capacity;
   (v) Command areas with sufficient geographic spread and levels of settlement/vulnerable groups/infrastructure development to allow the subproject to demonstrate integrated risk reduction measures and a landscape wide approach;
   (vi) Effectiveness of the proposed measures in addressing landslide risk, and potential of the measures to also address other natural hazard risks; and
   (vii) Accessibility, especially considering winter weather conditions.

II. THE PROJECT

A. Activities, Outputs, Outcome, Costs, Financing, Schedule and Impact

14. The Project interventions are both physical (engineering measures) and institutional (broader risk reduction measures to address gaps in the institutional and regulatory environment and build capacity within government and local communities). The Project will have three Outputs:
   (i) Landslide risks reduced;
(ii) Systems for on-site and national-level landslide monitoring improved;
(iii) Landslide risk assessment, mitigation and resettlement improved.

15. The Project Outcome is “Vulnerability and exposure of infrastructure, community assets, and livelihoods to landslide events reduced”.

16. The Project is financed through a grant of US$ 23.5 million and a loan of US$ 11.5 million, with a Government contribution of an estimated US$ 4 million.

17. The Project has had a 14-month preparation period, has a planned 6½-year duration, is anticipated to start in April 2021 with the first physical works in 2022, and will be implemented until 2028.

18. The Project will use a sector modality, reflecting its provision of strategic and policy implementation support for landslide risk management. A key feature of the Project will be to identify and prepare ‘model’ subprojects that will support the objectives and outcomes expected from a Sector Modality Project by progressively implementing replicable subprojects over an extended period. In parallel, national capacity to manage landslide risk will be strengthened.

19. The focus of the Project is on building resilience and enabling disaster risk reduction to ease the burden on poor and vulnerable rural communities who are exposed to natural hazards (specifically landslides). These can have significant impacts as a result of damage to critical infrastructure (homes, roads, canals, land).

20. The three core outputs are:
   (i) Output 1: Landslide risks reduced. At a selected number of sites in the country, the project will implement landslide risk mitigation engineering measures to reduce the risk of landslides to infrastructure, community assets and livelihoods. The measures will include physical works such as unloading, reshaping of bulging areas and opening cracks, and drainage of underground and surface water. Nature-based solutions, such as bioengineering for slope stabilization and regreening of both stabilized slopes and spoil disposal sites, will be applied where appropriate.

MES has assembled a list of 46 landslide-prone sites in Jalal-Abad and Osh Oblasts as potential sites for the implementation of slope stabilization measures (Appendix A). Output 1 will be implemented in a cascading approach, starting with the implementation of the works at the selected representative subproject and gradually increasing the number of sites. Project resources are estimated to be sufficient for around 19 sites. The following process will be implemented for each site:
   (a) Geophysical, geotechnical and hydrological surveys and investigations, including groundwater;
   (b) Laboratory testing of soil and rock samples, with international lab testing for complex sites where required;
   (c) Installation of monitoring system for monitoring of landslide activities during and/or after the works;7
   (d) Detailed technical design;
   (e) Safeguards due diligence;

7 Note that some landslides cannot be fully stabilized or are too costly to fully stabilize, so in some cases monitoring is required after slope stabilization works.
(f) Preliminary preparatory works;
(g) Slope stabilization works;
(h) For sites involving unloading: dumpsite preparation and construction;
(i) Regreening/revegetation; and
(j) Monitoring.

As estimated by MES, the successful completion of landslide risk mitigation measures at all 46 sites would result in the protection of approximately 990 houses, 5,000 people, 11 secondary schools, 196 ha of land, 35 km of rural roads, 33 km of power transmission lines and numerous other rural assets.

(ii) Output 2: Systems for on-site and national-level landslide monitoring improved. To improve the capacity of government agencies for on-site and national-level landslide risk monitoring, the project will establish an integrated multi-level landslide monitoring system, comprised of on-site, Oblast and national-level landslide monitoring components. The monitoring system will be integrated with the existing national early warning system ‘OKSION’ and the network of crisis management centers and the national call center. Government standards or procedures, guidelines and associated training materials on landslide monitoring will be developed to promote mainstreaming.

On-site landslide monitoring systems will be installed at 20 sites (Appendix B).© Components of the monitoring systems will consist of:
(a) Devices and sensors to measure the landslide slope stability, including ground-based and underground extensometers, time-domain reflectometers (TDR), inclinometers/tiltmeter and geotesters;
(b) Instruments to monitor changes in groundwater levels such as piezometers and groundwater level sensors;
(c) Instruments to monitor landslide triggering variables such as precipitation and seismic activity, for example rain gauges, automated weather stations or seismic intensity meters;
(d) Data registration and transmission systems, such as supervisory control and data acquisition (SCADA), Global Positioning System (GPS) receivers, data recorders/data loggers, radio transmitters, antennas and repeaters.

The project will build national capacity on the application of multi-image Interferometric Synthetic Aperture Radar (InSAR) for national-level monitoring of surface displacements and analysis of historical slope instability, as a complement to on-site monitoring and more conventional site-based studies. InSAR data and analysis will also be used for updating MES’ landslide inventory and a series of multi-scale landslide risk assessments.

The integrated landslide monitoring and risk assessment system will be established at site, regional and national level, with a network of on-site monitoring systems, data transfer and storage systems, improved databases, software systems, an online portal, all integrated with the existing OKSION system.

(iii) Output 3: Landslide risk assessment, mitigation and resettlement improved. The project will improve the capacity of government agencies, local authorities and

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8 Note that 18 of these sites are also listed in Appendix A where physical works are prioritized, but there are two additional sites for monitoring only.
communities in relation to three major components of landslide risk management: (i) improved risk information through updated and multi-scale landslide risk assessment; (ii) enhanced awareness and capacity of communities and local government on risk assessment and planning; and (iii) improved capacities on resettlement as a landslide risk mitigation strategy.

An improved online GIS platform and database will be established. This will integrate information on landslide hazard, exposure and vulnerability, results from updated risk assessments, risk maps and real-time landslide monitoring data, expanding and improving the existing open-source national disaster risk data sharing platform. The database and platform will be used to conduct national-, oblast- and site-specific landslide risk assessments (integrating climate change, mudflows and seismic risk), prioritizing assessments at national level, for Osh and Jalal-Abad Oblasts and for the identified 46 sites for physical risk reduction and/or monitoring. National standards or guidelines and training materials on multi-hazard and multi-scale risk assessments will be developed.

The results of the site-based risk assessment, including risk maps, will be used as a major input into a participatory, gender-sensitive community risk assessment and planning process at the 46 sites. This will be done by local authorities, after training using materials developed by the project. The resulting community risk plans, in combination with the risk maps, will be publicly displayed in the respective communities. This activity will include exchange visits between communities to facilitate learning about landslide risk mitigation.

The project will develop national guidelines and training materials all aspects of resettlement as a landslide risk mitigation strategy, including monitoring and evaluation of resettlement outcomes and consideration of gender and inclusion issues the resettlement process. The guidelines will then be used for training target national and local Government, community leaders and civil society organizations.

The various capacity building materials developed by the project will be combined into one set of Government standards or procedures and associated training materials on integrated landslide risk assessment, monitoring and risk mitigation.

B. Implementation Arrangements

1. Project proponents

21. The Kyrgyz Republic will be the borrower and the MES will be the executing agency (EA). MES will also be the implementing agency for all Project Outputs.

22. Several state agencies under MES will be closely involved with project implementation, principally the Kyrgyz Complex Hydrogeological Expedition (KCHE), a unit of the State Committee for Industry, Energy and Subsoil Use (SCIESU), and the Ministry’s Department for Monitoring and Forecasting. Output 3 will be implemented by MES but will actively target local self-government.

2. Project management

23. A new PIU will be established within MES to implement the entire project scope, comprising: (i) a PIU Director to manage the overall project; (ii) a Compliance Unit covering finance, safeguards, and procurement for the entire project; (iii) a Disaster Risk Management Unit
for project implementation; and (iv) and Support Staff. The PIU will be responsible for (i) implementing project activities in accordance with the project design; (ii) coordinating activities between MES and other stakeholders and agencies concerned; (iii) ensuring compliance with environmental and social safeguard requirements; (iv) maintaining appropriate accounts, including reports on withdrawal applications and disbursement; (v) carrying out recruitment of consulting services and procurement activities; (vi) developing sustainable management plans and asset management plans; (vii) monitor, evaluate and report on project progress, and disseminate project progress (e.g., planned and completed project activities including procurement) through a dedicated project website; and (viii) preparing quarterly progress and other reports in format acceptable to ADB.

24. A Project Implementation Consultant (PIC) will be recruited to support the PIU.

25. The Project organizational structure is shown in Figure 1.

26. The PIU’s Compliance Unit will include two safeguards specialists, one of whom will be an environmental specialist, the other social. The PIU staffing is shown in Table 1.

**Figure 1: Project Organizational Structure and Staffing**

![Diagram of Project Organizational Structure and Staffing]

Note: PIU additionally includes support staff
Table 1: Expected PIU Staffing

<table>
<thead>
<tr>
<th>PIU Staff</th>
<th>Location</th>
<th>Expected Total Months</th>
<th># Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Director Bishkek</td>
<td>Bishkek</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td><strong>Compliance Unit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Financial Manager Bishkek</td>
<td>Bishkek</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>3 Disbursement Specialist Bishkek</td>
<td>Bishkek</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>4 Environment Specialist Osh</td>
<td>Osh</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>5 Safeguards (Resettlement) Specialist Osh</td>
<td>Osh</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>6 Chief Procurement Specialist Bishkek</td>
<td>Bishkek</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td>7 Procurement Specialist Bishkek</td>
<td>Bishkek</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td><strong>Disaster Risk Management Unit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Geotechnical Coordinator Osh</td>
<td>Osh</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>9 Civil Engineer Osh</td>
<td>Osh</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>10 Landslide Monitoring Specialist Bishkek</td>
<td>Bishkek</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td><strong>Support Staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Office Manager/Translator Bishkek</td>
<td>Bishkek</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>12 Driver Bishkek</td>
<td>Bishkek</td>
<td>78</td>
<td>2</td>
</tr>
</tbody>
</table>

3. **ADB review missions**

27. ADB will conduct review missions twice annually during Project implementation to:
   (i) Assess implementation effectiveness and propose any necessary adjustments to the implementation arrangements;
   (ii) Monitor implementation progress against expectations, identify constraints, and define actions to address them; and
   (iii) Ensure compliance with ADB safeguards conditions set out in the grant agreement and financial framework agreement. In particular, EMP implementation will be scrutinized.

28. 36 months following grant effectiveness, ADB will field a comprehensive midterm review mission (MRM) to assess performance, identify problems, and reach formal agreement with GOKR on any needed changes to the scope of work or implementation arrangements to address shortfalls. MES and ADB will jointly prepare full terms of reference for the MRM during the second year of implementation. Prior to the MRM, MES will submit a detailed progress report on their respective components, including documentation of safeguards implementation.

C. **Physical Interventions Eligible for Project Financing**

29. Physical interventions eligible for project financing comprise:
   (i) Slope stabilization works by unloading:
       (a) Excavation and reshaping of slopes;
       (b) Disposal of excavated material; and
       (c) Revegetation of affected areas.
   (ii) Slope stabilization by drainage: surface and subsurface drainage systems;
   (iii) Slope stabilization by combined measures: unloading, reshaping, drainage, support, reinforcement, bioengineering, revegetation;
   (iv) Hazard risk reduction directly associated with a slope stabilization subproject: for example, localized re-routing of a small-scale irrigation canal, or repair of a protective mudflow crossing structure.9

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9 This description is provided as a contingency; although very minor, such small-scale works may be beneficial on some of the Project’s multiple subprojects.
(v) Repairs to any community assets, features or infrastructure affected by the risk-reduction civil works (e.g. access tracks, culverts, water supply pipes).

**D. Environment in the Subproject Selection Process**

30. Environmental factors were included in three of the eight subproject eligibility screening criteria: no uranium tailings or mining, not in an environmentally sensitive area, and not a Category A subproject. In other words, all projects “likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented” have been excluded from the list of possible subprojects.

**E. Cumulative Impacts**

31. The cumulative negative impact of all subprojects under the Project will be low, since (i) environmental Category A subprojects are excluded; (ii) the works will be localized and involve simple construction activities - earthworks and drainage; and (iii) an assessment of the representative Ayusai subproject confirms minimal environmental impact, mainly related to the earthworks required for unloading the slopes at risk and safe disposal of the excavated material.

32. The only cumulative impact of note is the greenhouse gas emissions associated with excavation, transport and safe disposal of up to an estimated 7.75 million m³ of soil (MES' estimate of unloading volumes at 46 sites). These emissions are unavoidable using the standard technology of diesel-powered excavators and dump trucks.

33. The cumulative positive impacts of the subprojects will be significant, through (i) avoided damage from landslides to slopes, agricultural land, watercourses and infrastructure, and (ii) avoided social impacts, especially direct harm to local residents.

**III. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK**

**A. Kyrgyz Republic**

1. **Legal system and environmental policies and laws**

34. The legal system of the Kyrgyz Republic was developed within the framework of Soviet law, which has Romano-Germanic antecedents. Despite ongoing reforms in the post-independence period, it retains many similarities to the legal systems of the Russian Federation and other former Soviet republics. There is also an informal and limited role for customary law, ‘adat’, involving courts of elders, ‘aksakals’.

35. Article 48 of the Constitution states that everyone shall have the right to an environment favourable for life and health, and everyone should care for the environment, flora and fauna.

36. Civil law is regulated by the laws and codes of the Kyrgyz Republic.

37. The Kyrgyz Republic has developed a series of policies on aspects of environmental management and development. The most recent overall blueprint is the National Development Strategy of the Kyrgyz Republic for 2018-2040. This focuses on governance, the rights of the individual, social development and economic transformation at the same time as protecting and enhancing the nation’s environment and natural resources.
Environmental law is based on the framework Law on Environmental Protection (1999, frequently amended), laws and codes covering rights and responsibilities concerning major aspects of environmental protection and resource management (water, land, air, forests, wildlife, mountains), laws focusing on pollution prevention (manufacturing processes, waste), and instructions and regulations prescribing procedures such as environmental impact assessment. The most important legislation relevant to environmental management in the Kyrgyz Republic is summarized in Table 2.

**Table 2: Principal Legislation on Environmental Protection in the Kyrgyz Republic**

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Passed (Amended)</th>
<th>Purpose / Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constitution of Kyrgyz Republic</td>
<td>2010</td>
<td>The land, its resources, airspace, waters, forests, flora and fauna, as well as other natural resources shall be the exclusive property of the Kyrgyz Republic; these shall be used for preserving a unified environmental system as the basis of life and activity of the people of The Kyrgyz Republic and shall enjoy special protection by the State.</td>
</tr>
<tr>
<td>Civil Code (2 parts)</td>
<td>1996 (2013, 2018, 2019)</td>
<td>Covers (amongst other topics), compensation for loss and damages when rights are violated.</td>
</tr>
<tr>
<td>Forest Code</td>
<td>1999 (2019)</td>
<td>Regulates the use and protection of forest resources.</td>
</tr>
<tr>
<td>Law on Water Resources</td>
<td>1994 (2013)</td>
<td>The primary objective of the water law is to regulate relations in the sphere of water resources use, protection, prevention of negative impact on water resources and water-related facilities, their improvement and improvement of water-distribution relations.</td>
</tr>
<tr>
<td>Law on Protection and Use of Historical and Cultural Heritage</td>
<td>1999 (2020)</td>
<td>Establishes legal norms for protection and use of tangible historical and cultural heritage on the territory of the Kyrgyz Republic, which is of unique value for people.</td>
</tr>
<tr>
<td>Legislation</td>
<td>Passed (Amended)</td>
<td>Purpose / Contents</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Law on Administration of Agricultural Land</td>
<td>2001 (2018)</td>
<td>Regulates the ownership, sale, inheritance and use of agricultural land, including acquisition by the State.</td>
</tr>
<tr>
<td>Law of the Kyrgyz Republic on Access to Information</td>
<td>2006</td>
<td>Defends the right of public access to information held by state bodies and local self-government bodies, and aims to achieve the maximum informational openness, publicity and transparency in the activities of these bodies.</td>
</tr>
<tr>
<td>Law on Fishing in Water Bodies in Kyrgyzstan</td>
<td>2008</td>
<td>Concerns the preservation of fish resources and their habitats, regulation of fishing, organization and management of fishing and capture of aquatic invertebrates in water bodies.</td>
</tr>
<tr>
<td>Law on General Technical Regulation of Environmental Safety in Kyrgyzstan</td>
<td>2009 (2012, 2019)</td>
<td>Concerns protection of the environment when designing and operating economic activities, specifically production, transport, storage and waste disposal; lists activities subject to EIA; describes procedures for establishing hazard categories.</td>
</tr>
<tr>
<td>Law on Pasture</td>
<td>2009</td>
<td>Created Pasture User Unions and Pasture Committees and transferred the competence for pasture management to local municipalities.</td>
</tr>
<tr>
<td>Law on Subsoil (Mineral Resources Act)</td>
<td>2012</td>
<td>Governs the relationship between the state and individuals or legal entities or other states involved in subsurface management.</td>
</tr>
<tr>
<td>Law on Specially Protected Nature Areas</td>
<td>2012 (2015, 2018)</td>
<td>Regulates relationships in the field of organization, management, protection and use, as well as control over Specially Protected Nature Areas. Establishes legal requirements for the protection and use of natural objects within these protected areas.</td>
</tr>
<tr>
<td>Regulation on the Procedure for Environmental Impact Assessment (EIA) in the KR</td>
<td>2015</td>
<td>Prescribes the procedures for EIA, including consultation.</td>
</tr>
<tr>
<td>Law on Industrial Safety of Hazardous Facilities</td>
<td>2016</td>
<td>Defines legal, economic and social grounds to operate potentially dangerous facilities, and promotes emergency prevention and preparedness of operators.</td>
</tr>
<tr>
<td>Law on Civil Protection</td>
<td>2018 (2020)</td>
<td>Covers prevention of emergencies; reduction of the scale of losses and damage; and disaster recovery.</td>
</tr>
</tbody>
</table>

2. Environmental assessment procedures

39. The environmental assessment system in the Kyrgyz Republic is based on two subsystems:
   (i) Environmental impact assessment (EIA) (locally known as “OVOS”, the Russian acronym for “Assessment of Environmental Impacts”); and
   (ii) State Environmental Review (SER).


41. OVOS includes the following stages:
   (i) Making a decision on the need for OVOS;
   (ii) Preliminary OVOS;
   (iii) OVOS; and
   (iv) Post-project analysis.

42. **Need for OVOS:** the project proponent (or “project initiator”) uses an inclusion list (Appendix 1 of the Regulation on the Procedure for OVOS) to identify whether a proposed economic activity is subject to environmental impact assessment. In the case of a production facility or process, the proponent will determine its hazard category following the procedures in the General Technical Regulation on Environmental Safety. Projects on the inclusion list or with possible significant harmful transboundary effects, and those in hazard class I, require full OVOS; projects in hazard classes II and III are subject to a reduced level of OVOS.

43. The Regulation on the Procedure for OVOS also has an exclusion list of project types with “low or insignificant environmental impact” (Appendix 4 of the Regulation). These only require a completed Statement of Environmental Impacts form\(^\text{11}\) (Appendix 3 of the Regulation).

44. OVOS is also required for a wide variety of activities under the Regulation on the Procedure for State Environmental Review.

45. The Output 1 subprojects of the present project (physical works to reduce landslide risk) are likely to qualify for environmental assessment with respect to the following types of activity, as listed in Appendix 1 of the Regulation on the Procedure for OVOS:
   “5. Agriculture
   6) land reclamation projects” (most of the subprojects will involve large-scale earthworks and associated need for reclamation of the sites).
   “17. Construction of roads …” (some of the subprojects will involve construction of access tracks).

\(^{10}\) As of March 2021 the SAEPF has been dissolved under a government reorganization. The bodies to which its functions will be transferred will be formally announced soon.

\(^{11}\) Locally known as a “ZEP” form.
46. The Output 1 subprojects of the present project are also likely to qualify for environmental assessment with respect to the following types of activity, as listed in Article 3 of the Regulation on the Procedure for SER:

4, 7). “materials of .... ecological disaster zones or zones of environmental emergency situations, as well as rehabilitation programs for these territories;”

47. The Output 2 subprojects of the present project (monitoring) will have low or insignificant environmental impact and therefore will only need a completed Statement of Environmental Impacts form. The Output 3 activities concern capacity building and will not require formal environmental impact assessment.

48. When OVOS is required, the project proponent hires a certified consultant (“OVOS contractor”) to conduct the process, including consultation and report preparation and revision.

49. **Preliminary OVOS**: this is carried out to comprehensively analyze the possible consequences of a proposed project, assess alternative options, and develop a plan for environmental protection. The results are presented in the form of an OVOS report, accompanying the project’s Feasibility Study when this is submitted for regulatory approval.

50. **Full OVOS**: the results of a full OVOS must accompany the project’s final working draft documentation, as a section called “Environmental Protection”. In addition to a comprehensive assessment of the proposal, this must include a full and detailed Environmental Management Plan (EMP) for all project phases (construction, operation, decommissioning), details of resources needed to implement the EMP, and a Statement of Environmental Impacts form. Full OVOS documentation is listed in Section 6 of the Regulation on the Procedure for OVOS.

51. Preparation of OVOS reports is the responsibility of the project proponent. It must be done by a certified organization, which is usually sub-contracted or arranged by the design institute responsible for the designing the “technical” aspects of the project.

52. The required contents of an OVOS report are listed in Table 3.

### Table 3: Contents of EIA report

| (i) | Details of the initiator of the Project and the executor of works on OVOS. |
| (ii) | Rationale for the planned activity. |
| (iii) | Description of the characteristics of the proposed activity, and possible alternatives. |
| (iv) | Analysis of the proposed activities for compliance with the best available technologies and technical specific standards. |
| (v) | Assessment of the existing state of the environment by components, including assessment of the historical and cultural value of the location and its socio-economic status. |
| (vi) | Assessment of identified impacts. |
| (vii) | Forecast of changes in the environment and socio-economic conditions when implementing the planned activities. |
| (viii) | Description of measures to reduce, mitigate or prevent negative impacts, assess their effectiveness and implement enhancements. |
| (ix) | A comparison of the expected environmental and related social and economic consequences of the alternatives under consideration, including the option to abandon the activities (the “no-action” situation). |
| (x) | Proposals for the environmental monitoring program. |
| (xi) | Interaction with the public. |
| (xii) | Assessment of the admissibility of the proposed impact. |

Source: Appendix 2 of the Regulation on the Procedure for OVOS
53. **State Environmental Review (SER):** after any revisions needed as a result of consultation, the OVOS report and the Statement of Environmental Impacts, along with other supporting documentation, is submitted by the proponent (for this project, the PIU) to a State Expert Commission for State Environmental Review. The procedures are described in the Law on Environmental Expertise and the Regulation on the Procedure for SER. SER is carried out by registered experts. The duration of the review depends on the complexity of the project, but should not exceed 3 months after submission of all the OVOS documents and associated payment to the SER agency by the project proponent. The Commission provides a Conclusion, which may be positive or negative. Positive conclusions may be conditional. Negative conclusions either require amendments to the submitted plans and designs, or may be outright rejections of the proposal.

54. **Post-project analysis:** this is carried out a year after the start of an activity for which OVOS was required. It is undertaken by a specialized organization on behalf of the project proponent. The results are used to check both compliance with the agreed mitigation and management measures and their effectiveness. The results must be disclosed publicly, if requested.

55. **Participants in the OVOS process** are:
   (i) The initiator (proponent) of the project;
   (ii) The executor of works on OVOS (the OVOS consultant);
   (iii) Local state administrations (rayons) and local self-government bodies (Aïyl Okmotu);
   (iv) The authorized state body in the field of environmental protection and / or its territorial bodies (until recently, the State Agency for Environmental Protection and Forestry, SAEPF; new arrangement will be announced in 2021);
   (v) The public (public organizations, non-government organizations (NGOs), individuals).

56. Other major stakeholders often involved in environmental assessment are:
   (i) Ministry of Health (safety and health issues);
   (ii) Ministry of Emergency Situations (natural hazards), and its subsidiary agency KyrgyzHydromet (responsible for ambient air and water quality monitoring);
   (iii) Ministry of Agriculture (agricultural issues) and its subsidiary agency the State Design Institute for Land Management (Kyrgyzgiprozem, responsible for issues relating to land management, land reclamation and the land cadastre);
   (iv) Ministry of Natural Resources (mineral resources, road construction materials, and quarries).

57. **Duration:** the duration of the environmental assessment process varies. Formal public discussion of draft OVOS documents requires a minimum 30-day notice period and a further maximum 30-day period for the proponent to answer unresolved questions. The SER process may take up to 3 months, depending on work-loads and the complexity of the case.

58. **Clearances and costs:** each subproject will require environmental clearance in the form of a positive Conclusion from the State Expert Commission for State Environmental Review on the submitted documentation. This is separate from any approvals issued by ADB. Preparation of OVOS documentation for submission to SAEPF or its successor agency and the State Expert Commission is estimated to take 2-3 person-months per subproject, including fieldwork and consultations. Table 4 provides the summary of the permits/clearance to be obtained prior to award of contracts.
Table 4: Clearances required for the Project/Subproject

<table>
<thead>
<tr>
<th>Permit/ Clearance</th>
<th>Timeline</th>
<th>Requirement</th>
<th>Estimated Application Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Ecological Expertise (SER)</td>
<td>Timeline determined by complexity of the project but should not exceed three months from the date of receipt of necessary materials in full.</td>
<td>Per Subproject</td>
<td>5,000 KGS</td>
</tr>
<tr>
<td>OVOS procedure (Environmental Impact Assessment)</td>
<td>Formal public discussion of draft OVOS documents requires a minimum 30-day notice period and a further maximum 30-day period for the proponent to answer unresolved questions.</td>
<td>Per Subproject, depending on subproject’s scope of civil works</td>
<td>10,000 KGS</td>
</tr>
</tbody>
</table>

3. International environmental agreements

59. The Kyrgyz Republic participates in international efforts to manage global environmental threats and has ratified 15 international Conventions related to environmental management. The two most relevant to the project are described in Table 5.

Table 5: International conventions relevant to the Project

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
<th>Applicability to the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convention of Biological Diversity (CBD)</td>
<td>Commits parties to conservation of biological diversity, sustainable use of biodiversity, and equitable sharing of benefits of genetic resources. Implemented through National Biodiversity Strategies and Actions Plans (NBSAPs). The Kyrgyz Republic’s current Strategic Plan for Biodiversity 2014-2024 has four strategic targets focused on: 1) integrating biodiversity conservation issues into the activities of State bodies and public organizations by 2020; 2) reducing the impact on biodiversity and promoting its sustainable use; 3) improving the protection and monitoring of ecosystems and species diversity; and 4) improving the social importance of biodiversity and ecosystem services, increasing the benefits of sustainable ecosystem services and traditional technologies.</td>
<td>The objectives of the National Plan will be met by the Project through applying (i) eligibility criteria for subprojects, avoiding those with potential significant negative impacts; (ii) environmental assessment to identify and mitigate other impacts; (iii) best practice for all physical activities.</td>
</tr>
<tr>
<td>UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, (Aarhus Convention)</td>
<td>The Convention grants the public rights regarding (i) access to information, (ii) public participation, and (iii) justice in governmental decision-making processes on environmental matters. It focuses on interactions between the public and public authorities. The principles of the Convention and are being promoted by the responsible body, until recently SAEPF and in future its successor agency. There are four Aarhus Centres in the Kyrgyz Republic, in Osh, Bishkek, Cholpon-Ata and Naryn. Their focus is to monitor pollution in environmental hotspots, facilitate dialogue between mining industries and local communities, facilitate access to information and informed decision-making on</td>
<td>The Convention’s commitments have been incorporated into national legislation and will be met through (i) public consultation when planning each subproject, (ii) transparency in decision-making, and (iii) establishment of accessible and effective local grievance redress mechanisms.</td>
</tr>
<tr>
<td>Convention</td>
<td>Description</td>
<td>Applicability to the Project</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td></td>
<td>the Aarhus Convention Protocol on Pollutant Release and Transfer Register, promote community-based disaster risk reduction, and foster stakeholder engagement in uranium legacy remediation.</td>
<td></td>
</tr>
</tbody>
</table>

60. The Kyrgyz Republic has also ratified the eight core International Labor Organization (ILO) Conventions which concern social topics such as worker’s rights and occupational health and safety.

61. Article 6 of the Kyrgyz Constitution stipulates that “International treaties to which the Kyrgyz Republic is a party that have entered into force under the established legal procedure and also the universally recognized principles and norms of international law shall be the constituent part of the legal system of the Kyrgyz Republic”.

4. National legislation, policies, and regulations

a. Environmental management

62. The Kyrgyz Republic has developed a series of policies on aspects of environmental management and development, the most recent overall plan being the National Development Strategy of the Kyrgyz Republic for 2018-2040. Environmental laws and regulations are described above.

b. Public Consultation

63. The Constitution of the Kyrgyz Republic guarantees the right of the people to access information on the activities of state and municipal authorities, including the disbursement of funds from the state budget. The Law of the Kyrgyz Republic on Access to Information Held by State Bodies and Local Self-government Bodies (October 2006) requires maximum openness of information, publicity and transparency of the activities of the state and local authorities.

64. Public consultation during the OVOS process is described in the Regulation on the Procedure for OVOS in the Kyrgyz Republic of 13 February 2015, No. 60. Consultation and participation activities are the responsibility of the project proponent, assisted by local government departments. Consultation with affected communities must be held throughout the Project cycle, including during the process of preparing the OVOS. Public consultation may also be implemented in parallel to the State Environmental Review (SER) as a Public Environmental Review (PER).

c. Information Disclosure

65. The Access to Information law defends the right of public access to information held by state bodies and local self-government bodies, and aims to achieve the maximum informational openness, publicity and transparency in the activities of state bodies and local self-government bodies. Specific to EIA, information disclosure is mandated by the Regulation on the Procedure for OVOS. The OVOS report (in Kyrgyz and Russian languages) must be made accessible to affected communities through local administrative bodies, as well as being posted on the MES website.

12 Article 33, Chapter II of the Constitution of Kyrgyz Republic.
5. National environmental regulator and proponents’ environmental management capacity

66. Note: as of March 2021, responsibilities for environmental management in the Kyrgyz Republic are being revised as part of a government reorganisation. Both the State Agency for Environment Protection and Forestry and the State Inspection for Environmental and Technical Safety have been dissolved. A formal announcement of how their functions will be carried out in future is expected shortly. The following descriptions present the institutional setup as of 2020, and will require adjustment when the new arrangements have been made known.

a. State Agency for Environment Protection and Forestry

67. The State Agency for Environment Protection and Forestry (SAEPF) is the principal agency involved in environment protection in the KR. SAEPF is responsible for environment protection policy, regulation and coordination, expertise and the issuance of licenses and permits. Its functions are:

(i) Administrative activity, coordination of subordinated structures – regional and territorial offices;
(ii) Ecological policy drafting and its implementation;
(iii) Services on ecological information;
(iv) Drafting policy to develop forestry and gaming activity;
(v) Environmental monitoring;
(vi) State environmental expertise;
(vii) Issuance of ecological licenses; and
(viii) International cooperation.

68. SAEPF has territorial agencies distributed across the country. The Department of State Environmental Review (SER) under the SAEPF is responsible for reviewing environmental assessment documents.

b. State Inspection for Environmental and Technical Safety

69. The State Inspection for Environmental and Technical Safety (SIETS, also known as StateEcoTechInspection) is an independent body directly under the Government. It is the authorised body for state supervision and control of environmental and technical safety, including supervision of labour rights and protection requirements. Despite limited staff and technical facilities, it has a wide range of responsibilities including, among other things:

(i) Supervision and control of observance of the labour legislation of the Kyrgyz Republic;
(ii) Analysis of non-compliance and elimination and restoration of the violated rights of the citizens;
(iii) Analysis of the status and causes of occupational injuries and occupational diseases, and development of proposals for their prevention;
(iv) Technical investigation of failures and fires, occupational accidents and accidents during transmission and use of electric and thermal energy;
(v) Investigation of the use of child labor;
(vi) Awareness raising concerning the labor rights of workers, promotion of employer’s and workers’ training on labor protection.

c. Ministry of Emergency Situations
70. The Ministry of Emergency Situations is the authorized State body in the field of civil protection. The tasks of the Ministry are:
   (i) Prediction of dangerous natural, man-induced processes and phenomena, planning of Civil Protection;
   (ii) Prevention, carrying out of preventive and protective activities to protect from emergencies; and
   (iii) Organization and conduct of search and rescue, emergency response and restoration and other urgent works, elimination of the consequences of emergencies, assessment of their scale/magnitude.

71. As with other ministries, MES is faced with the challenges of limited budgets and shortage of technical staff. MES also has relatively little experience and capacity on ADB safeguard issues, and will require support from the PIC on environmental procedures and documentation.

d. Kyrgyz Complex Hydrogeological Expedition

72. The Kyrgyz Complex Hydrogeological Expedition (KCHE) is a unit of the SCIESU, and has the national mandate to assess, monitor, and warn of landslide risks. KCHE’s Geological Engineering Detachment, and the Osh Landslide Department in particular, have been the key departments for landslide risk research in the Kyrgyz Republic since 1954. However, due to declining resources, landslide monitoring by KCHE has been limited. The MES has been engaged in visual surveying of landslides since 2004.

73. In 2017, the Security Council of the Kyrgyz Republic (Decision #2 of 31.07.2017) instructed the KCHE to resume landslide monitoring, through its southern branch in Osh. Subsequently, in July 2018 KCHE resumed monitoring of landslides through a new project called “Study of the regime of the dangerous exogenous geological processes in the territory of Southern Kyrgyzstan with the aim of forecasting them and developing disaster risk reduction measures”. The project was to be implemented from 2018-2022 and was assigned a budget of KGS ~77 million (US$ ~1 million). However, only 10% of the project has been implemented, mainly due to lack of funding and insufficient capacity: at present the department only has three specialists despite an allocation of 10 full-time staff positions. These do not include environmental specialists.

B. ADB

1. Policies

74. Safeguard Policy Statement (2009). SPS 2009 is ADB’s current main safeguards policy document. It describes the common objectives and policy principles of ADB’s safeguards, and outlines the delivery process for ADB’s safeguard policy. It promotes sustainability through protection of people and the environment from the adverse impacts of projects, and by supporting the strengthening of country safeguard systems. It presents a consistent, consolidated framework for environment, resettlement, and indigenous people safeguards. Appendix 4 of the SPS specifies safeguard requirements for different financing modalities, including sector lending. For this project, the SPS requires:
   (i) Screening of subprojects using a rapid environmental assessment (REA) checklist;
   (ii) Use of subproject selection criteria that exclude subprojects with potential high impact;
   (iii) Environmental categorization of both the overall project and each subproject, with category A subprojects excluded;
   (iv) Preparation of both an Initial Environmental Examination and an Environmental Management Plan for each subproject;
(v) Consideration of physical cultural resources (PCR) including chance finds;
(vi) Public disclosure of project plans, designs and impacts;
(vii) Consultation and participation with all stakeholders, especially those directly affected;
(viii) Establishment and operation of an accessible and effective Grievance Redress Mechanism (GRM);
(ix) Consideration of occupational safety and health (OSH) at all stages of subproject planning and implementation;
(x) Making provision for management of unanticipated environmental impacts;
(xi) Use of international best practice for pollution prevention.

75. **ADB Operations Manual, Safeguard Policy Statement, Section F1/BP [Bank policies] & Safeguard Review Procedures, Section F1/OP [operational procedures] (2013).** These documents operationalize SPS 2009. The policy sets out the scope of SPS 2009 applicability to ADB operations, and the procedures describe the safeguards process and outputs, including consultation and disclosure requirements, through the various stages of project preparation.

76. The **Access to Information Policy (2018)** guides ADB’s efforts to be transparent and accountable to the people it serves, which it recognizes are essential to development effectiveness. The policy recognizes the right of people to seek, access, and impart information about ADB’s operations, and it aims to enhance stakeholders’ trust in and ability to engage with ADB, through clearly stated principles including proactive disclosure, presumption in favor of disclosure, recognition of the right to access and impart information and ideas, country ownership, limited exceptions, and the right to appeal.

2. **Guidance**

77. **Environmentally Responsible Procurement (ERP; 2007)** provides guidance to ADB staff, consultants, and executing agencies on ERP, defined as “a systematic approach to the purchase of goods and services that are thought to be less damaging to the environment than other goods and services that serve the same purpose,” specifically, products that “reduce waste, improve energy efficiency, limit toxic by-products, contain recycled content or are reusable, and are produced with the least environmental impact...[and] services...that help improve the environment, are rendered with minimum environmental and social impacts, and use resources and energy efficiently.”

78. **Complaint Handling in Development Projects - Grievance Mechanisms: A Critical Component of Project Management (2010).** This document presents definitions, concepts, rationale, and history relevant to ADB project grievance redress mechanisms.

79. **Complaint Handling in Development Projects - Building Capacity for Grievance Redress Mechanisms (2010).** This document presents a framework and practical suggestions for building the capacity of an organization to manage an effective grievance redress mechanism.

80. **Environment Safeguards, A Good Practice Sourcebook (2012).** This draft working document aims to add clarity, provide technical guidance, and recommend good practices in SPS (ADB 2009) implementation.
81. **Selected References for Good Practice in Environmental Safeguards Implementation (2014).** This internal Central and West Asia Department (CWRD) document presents internet hyperlinks to exemplary environmental safeguards documents (IEEs, EIAs, EARFs, etc.) prepared for CWRD country projects.

### 3. ADB environmental screening & categories

82. ADB projects are screened in-house using a rapid environmental assessment checklist, either generic or specific to the sector. The checklist captures the type, location, sensitivity, scale, nature, and magnitude of potential environmental impacts, and availability of cost-effective mitigation measures. Based on the checklist findings, a proposed project is assigned to one of the following ADB environmental categories:

- **Category A** - likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment (EIA), including an environmental management plan (EMP), is required;
- **Category B** - potential adverse environmental impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination (IEE), including an EMP, is required;
- **Category C** - a proposed project is likely to have minimal or no adverse environmental impacts. An EIA or IEE is not required, although environmental implications need to be reviewed.

83. The category of a project is determined by its most sensitive component (output). The potential impacts of Output 1 of the Project (physical landslide stabilization measures) define it as Category B. However, since it is a sector investment project with multiple subprojects, the Project requires an Environmental Assessment and Review Framework (EARF) as well as the IEEs and EMPs necessary for all subprojects in Category B.

84. An EARF will (i) describe the project and its subprojects and/or components; (ii) explain the general anticipated environmental impacts of the components or subprojects to be financed under the proposed project; (iii) specify the requirements that will be followed in relation to subproject screening and categorization, assessment, and planning, including arrangements for meaningful consultation with affected people and other stakeholders and information disclosure requirements and, where applicable, safeguard criteria that are to be used in selecting subprojects and/or components; (iv) assess the adequacy of the borrower's/client's capacity to implement national laws and ADB's requirements and identify needs for capacity building; (v) specify implementation procedures, including the budget, institutional arrangements, and capacity development requirements; (vi) specify monitoring and reporting requirements; and (vii) describe the responsibilities of the borrower/client and of ADB in relation to the preparation, implementation, and progress review of safeguard documents of subprojects.

85. This Project's subprojects will be screened using a rapid environmental assessment checklist adapted to the sector (Appendix D). This will be done by the PIU at an early stage of subproject planning. Subprojects assigned to Category A are excluded from Project financing.

86. All Output 1 subprojects will involve civil works, will be screened into Category B and will require an IEE and EMP. Output 1 subprojects will normally be treated individually, but if two or more are sited very close together and/or fall into one procurement package, one IEE and EMP may be sufficient. Output 2 subprojects will not involve large-scale civil works and are likely to all
be screened into Category C. They will not require an IEE, but will be subject to environmental due diligence and preparation of a simplified EMP. Typical Category C physical activities are:

(i) Drilling for geophysical surveys;
(ii) Installation of slope monitoring instruments;
(iii) Installation of weather stations, seismic intensity meters, data recorders and telemetry equipment.

87. An IEE and EMP have been prepared for the representative subproject at Ayu village.

C. Compatibility between Country’s and ADB Safeguard Policies

88. The ADB’s SPS is in line with the other multilateral development financing institutions. The environmental policies and laws of the Kyrgyz Republic law are similar in many ways, but with some differences.

89. Table 6 provides a comparison of ADB SPS policy principles and KR regulations, identifying gaps and measures to be implemented by the project to address the gaps.
<table>
<thead>
<tr>
<th>ADB SPS Requirement</th>
<th>ADB SPS Policy Principle</th>
<th>GOKR Regulation</th>
<th>Gap</th>
<th>Measures to Address Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Screening of environmental impacts and risks</td>
<td>Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.</td>
<td>Law on Environmental Protection, Law on General Technical Regulation on Environmental Safety, Regulation on the Procedure for Environmental Impact Assessment, Regulation on the Procedure for Environmental Impact Assessment, Regulation on the Procedure for State Environmental Review.</td>
<td>No significant gap.</td>
<td>None needed.</td>
</tr>
<tr>
<td>2. Assessment of potential impacts and risks to physical, biological, socioeconomic and physical cultural resources of the project affected area</td>
<td>Conduct an environmental assessment for each proposed project to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.</td>
<td>Law on Environmental Protection, Law on General Technical Regulation on Environmental Safety, Regulation on the Procedure for Environmental Impact Assessment, Regulation on the Procedure for State Environmental Review.</td>
<td>Laws are less rigorous concerning assessment of climate change effects and strategic environmental assessment.</td>
<td>None needed for this project.</td>
</tr>
<tr>
<td>3. Examination of alternatives for project’s location, design, technology and potential environmental impacts</td>
<td>Examine alternatives to the project’s location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.</td>
<td>Law on Environmental Protection, Law on General Technical Regulation on Environmental Safety, Regulation on the Procedure for Environmental Impact Assessment, Regulation on the Procedure for State Environmental Review.</td>
<td>Consideration of alternatives is a requirement for national EIA (OVOS).</td>
<td>None needed.</td>
</tr>
<tr>
<td>4. Preparation of Environmental Management Plan</td>
<td>Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation</td>
<td>Law on Environmental Protection, Law on General Technical Regulation on Environmental Safety, Regulation on the Procedure for Environmental Impact Assessment, Regulation on the Procedure for State Environmental Review.</td>
<td>EMP is required by national law. No significant harm to third parties and the polluter pays principle</td>
<td>No action needed for this project.</td>
</tr>
<tr>
<td>ADB SPS Requirement</td>
<td>ADB SPS Policy Principle</td>
<td>GOKR Regulation</td>
<td>Gap</td>
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<tr>
<td>measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.</td>
<td>Assessment, Regulation on the Procedure for State Environmental Review.</td>
<td>are implied but not specified.</td>
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<tr>
<td>5. Public consultation and consideration of concerns</td>
<td>Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women’s participation in consultation. Involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment.</td>
<td>Regulation on the Procedure for OVOS in the Kyrgyz Republic.</td>
<td>Effective public consultation is mandatory in the national OVOS process.</td>
<td>None needed.</td>
</tr>
<tr>
<td>6. Grievance redress mechanism</td>
<td>Establish a grievance redress mechanism to receive and facilitate resolution of the affected people’s concerns and grievances regarding the project’s environmental performance.</td>
<td>No specific requirements for project-related grievance redress mechanisms.</td>
<td>No specific government regulation on addressing grievances.</td>
<td>Component of Environment Assessment report on Grievance Redress Mechanism should be addressed in accordance with the ADB requirement.</td>
</tr>
<tr>
<td>7. Disclosure of draft and final IEE reports</td>
<td>Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.</td>
<td>Law of the Kyrgyz Republic on Access to Information Held by State Bodies and Local Self-government Bodies, Regulation on the Procedure for OVOS in the Kyrgyz Republic.</td>
<td>Draft OVOS documents are made available for public comment. The final OVOS is posted on the MES website and made available through local administrative bodies. No gap.</td>
<td>Conduct public disclosure in accordance with ADB requirements such as posting the safeguard documents on its website as well as disclosing relevant information in an accessible format in local communities.</td>
</tr>
<tr>
<td>ADB SPS Requirement</td>
<td>ADB SPS Policy Principle</td>
<td>GOKR Regulation</td>
<td>Gap</td>
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</tr>
<tr>
<td>8. Implementation of effective monitoring</td>
<td>7. Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.</td>
<td>Law of the Kyrgyz Republic on Access to Information Held by State Bodies and Local Self-government Bodies, Regulation on the Procedure for OVOS in the Kyrgyz Republic.</td>
<td>A monitoring program is a required item in an OVOS report. There is no specific requirement to disclose monitoring reports during project implementation, although this is implied by the legislation.</td>
<td>Ensure subproject monitoring programs include requirements and procedures for disclosure.</td>
</tr>
<tr>
<td>9. Protection of critical habitats and protected flora and fauna</td>
<td>8. Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.</td>
<td>Law on Specially Protected Areas and Biosphere Territories in Kyrgyzstan, Law on Wildlife, Law on Protection and Use of Flora.</td>
<td>National law protects wildlife, flora and habitat but does not use the same terminology or approach as the ADB SPS policy principle.</td>
<td>Apply ADB approach to protection of habitats and biodiversity in addition to national requirements.</td>
</tr>
<tr>
<td>10. Application of pollution prevention and control technologies</td>
<td>Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank’s Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions,</td>
<td>Law on General Technical Regulation of Environmental Safety in Kyrgyzstan.</td>
<td>ADB requires the adaptation of the more stringent requirements between the international standard and government regulations.</td>
<td>The PIU shall apply pollution prevention and control technologies and practices consistent with international good practice. When the Government of Kyrgyz regulations differ from these levels and measures, PIU shall achieve whichever is more stringent. If less stringent</td>
</tr>
<tr>
<td>ADB SPS Requirement</td>
<td>ADB SPS Policy Principle</td>
<td>GOKR Regulation</td>
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<tr>
<td>waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phaseouts. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.</td>
<td></td>
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<td></td>
<td>levels or measures are appropriate in view of specific subproject circumstances, PIU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS.</td>
</tr>
</tbody>
</table>

11. Ensure worker and community health and safety

Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.

Law on General Technical Regulation on Safe Operation and Utilization of Machinery and Equipment.

Occupational health and safety is covered by national law, but not the potential associated risks to local communities, except through the OVOS process.

Consider site-specific hazards and prepare appropriate management plans to avoid, minimize or mitigate risks to workers and the public.

12. Conservation of physical cultural resources and avoidance of destroying or damaging them

Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of “chance find” procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.

Law on Protection and Use of Historical and Cultural Heritage.

National law is not as project-related as ADB’s policy principle.

Ensure cultural heritage authorities and local community are consulted during subproject planning; ensure chance finds procedure is included in contract documents, including awareness for workers
IV. ENVIRONMENTAL IMPACTS OF REPRESENTATIVE SUBPROJECT

90. The project’s potential environmental impacts have been assessed on one sample subproject using the ADB REA checklist (Appendix D). The subproject is at Ayu village, Uzgen district (rayon), Osh Oblast. Based on the IEE prepared for physical works in Ayu village, the project will interact physically with the environment almost entirely only during construction; operational impacts will be minimal. Table 7 provides a summary of potential negative environmental impacts which may arise during project implementation and general measures to avoid, minimize and mitigate those impacts to acceptable levels. Note that the table lists indicative impacts specific to the type of physical works planned for this specific project (relatively simple earthworks), and will be further explored during the detailed engineering design phase of each subproject.

Table 7: Potential impacts and mitigation measures

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Mitigation Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction Phase</strong></td>
<td></td>
</tr>
<tr>
<td>Impact on important habitat</td>
<td>Identify potential biodiversity impacts during subproject planning and design phase, and alter design to avoid impacts on critical habitat</td>
</tr>
<tr>
<td></td>
<td>For significant unavoidable impacts, develop biodiversity action plan to offset</td>
</tr>
<tr>
<td>Land required for project</td>
<td>Temporary: pay compensation for loss of use of asset. Permanent: arrange land-for-land or financial compensation. Note: these actions are governed by the requirements of the Land Acquisition and Resettlement Framework prepared for the project.</td>
</tr>
<tr>
<td>Dust, noise, vibration</td>
<td>Implement standard dust control measures such as watering access tracks and sheeting loads</td>
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<tr>
<td></td>
<td>Ensure all equipment is correctly silenced; limit working hours</td>
</tr>
<tr>
<td></td>
<td>Identify fragile buildings prior to start of works, reduce vehicle speeds at these locations, monitor, and repair or provide compensation Note: all slopes to be treated are in soft materials; no blasting or rock-breaking is anticipated</td>
</tr>
<tr>
<td>Erosion and sediment production from open earthworks</td>
<td>Develop and implement sediment management plan, including earthworks techniques to minimize water concentration during rainstorms and silt traps using, e.g., straw bales</td>
</tr>
<tr>
<td>Construction waste</td>
<td>Develop and implement waste management plan for all waste types</td>
</tr>
<tr>
<td>Pollution from, typically, oils and fuel</td>
<td>Develop and implement standard operating procedures for fuel storage, vehicle refueling and vehicle maintenance</td>
</tr>
<tr>
<td></td>
<td>Develop and train workers in emergency pollution response</td>
</tr>
<tr>
<td>Worker health &amp; safety</td>
<td>Develop and implement health and safety plan, including worker awareness training, first aid, personal protective equipment, and work methods</td>
</tr>
<tr>
<td>Community safety and security</td>
<td>Establish effective contractor-community liaison</td>
</tr>
<tr>
<td></td>
<td>Fencing</td>
</tr>
<tr>
<td></td>
<td>Construction traffic management</td>
</tr>
<tr>
<td></td>
<td>HIV/AIDS and Covid-19 awareness training for both workers and local residents</td>
</tr>
<tr>
<td><strong>Operation Phase</strong></td>
<td></td>
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<tr>
<td>Reduced productivity of engineered slopes</td>
<td>Compensation for reduced productivity</td>
</tr>
<tr>
<td></td>
<td>Support for accelerated recovery of productivity (‘aftercare’)</td>
</tr>
<tr>
<td>False sense of security</td>
<td>Develop and implement monitoring system for engineered slopes</td>
</tr>
<tr>
<td></td>
<td>Ensure infrastructure development respects local hazard and risk maps</td>
</tr>
</tbody>
</table>
91. The subproject selection criteria have eliminated any subprojects with significant negative impacts. The design process for each subproject includes full consideration of environmental issues. The potential impacts of the subproject physical works can be reduced to acceptable levels by standard mitigation measures commonly used in the construction industry. After the subproject works are completed the sites will function with essentially no environmental impacts and minimal maintenance requirements, mainly related to routine maintenance of slope drainage systems.

V. ENVIRONMENTAL ASSESSMENT PROCESS FOR SUBSEQUENT SUBPROJECTS

92. Subsequent subprojects are expected to be within the same range of scope, scale and setting as the sample subproject and produce generally the same impacts at the same or lesser magnitude. Subsequent subprojects will comply with the subproject selection criteria at the screening stage and for environmental categorization.

93. The following paragraphs describe the environmental assessment process, preparation of reports, and safeguards requirements for subsequent subprojects. These are also applicable for any change in scope and/or location due to detailed design during implementation.

94. Screening and Categorization. As soon as sufficient information on a subproject is available, screening is to be conducted using the EARF’s subproject selection criteria and ADB’s REA checklist (Appendix D) to determine the subproject environmental category. As noted above, all Output 1 subprojects will be screened into Category B, and all Output 2 subprojects into Category C. Requirements as per the government regulations (clearances, approvals, consent etc.) will also be identified at this stage, including the statutory clearance requirements.

95. In addition to the REA Checklist, the following questionnaire in Table 8 will be used.

**Table 8: Specific Issues or Concerns for Succeeding Subprojects**

<table>
<thead>
<tr>
<th>Issues and Concerns</th>
<th>Required Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the subproject site within likely critical habitat?</td>
<td>• Conduct Integrated Biodiversity Assessment Tool preliminary screening.</td>
</tr>
<tr>
<td></td>
<td>• If in a likely critical habitat, conduct Biodiversity Assessment and identify mitigation measures and action plans.</td>
</tr>
<tr>
<td></td>
<td>• Follow suggested mitigation measures.</td>
</tr>
<tr>
<td>Are there physical cultural resources within or near the subproject sites?</td>
<td>• Conduct heritage impact assessment for the affected physical cultural resources in the subproject site.</td>
</tr>
<tr>
<td></td>
<td>• Implement mitigation measures as recommended.</td>
</tr>
</tbody>
</table>

96. Based on the screening, subprojects are to be classified into one of the following categories.

(i) **Category A.** A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. Category A subprojects will not be allowed under the project;

(ii) **Category B.** A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects.
An IEE is required; this category will apply to all Output 1 subprojects because of their civil works; and

(iii) **Category C.** A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed. This category will apply to all Output 2 subprojects, unless local sensitivities are identified.

97. **Preparation of IEE:** the outline and contents of an IEE Report are given in Appendix E. The sample IEE prepared can be used as a model document for future subprojects. The subprojects (sites) may be grouped together as appropriate into individual civil works procurement packages. One IEE may be prepared per procurement package subject to concurrence of ADB.

98. **Environmental Management Plan:** the IEE of the sample subproject includes a detailed EMP which describes and addresses the potential impacts and risks identified by the environmental assessment. The EMP included mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Where impacts and risks cannot be avoided or prevented, mitigation measures and actions will be identified so that the subproject is designed, constructed, and operated in compliance with applicable laws and regulations and meets the requirements specified in the EMP. The level of detail and complexity of the EMP and the priority of the identified measures and actions will be commensurate with the subproject’s impacts and risks. Key considerations include mitigation of potential adverse impacts to the level of “no significant harm to third parties,” the “polluter pays” principle, the precautionary approach, and adaptive management.

99. If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation to the environment. Such measures may relate, for instance, to conservation of habitat and biodiversity, preservation of ambient conditions, and greenhouse gas emissions. Monetary compensation in lieu of offset is acceptable in exceptional circumstances if the compensation is used to provide environmental benefits of the same nature and is commensurate with the project's residual impact.

100. **Pollution prevention and applicable standards:** pollution prevention for conservation of resources, environmental standards, occupational and community health and safety, will be addressed in the IEE. During the design, construction, and operation of the project, the PIU will apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group’s Environment, Health and Safety (EHS) guidelines. These standards contain performance levels and measures that are normally acceptable and applicable to projects. When Government of Kyrgyz regulations differ from these levels and measures, PIU will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, PIU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS.
101. The IEE and EMP will be included in bidding and contract documents with specific provisions requiring contractors to (i) comply with all other conditions required by ADB,\textsuperscript{13} and (ii) to submit a site-specific environmental management plan (SEMP), including (a) proposed sites/locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes; (b) specific mitigation measures following the approved EMP; (c) monitoring program as per SEMP; and (d) budget for SEMP implementation.

102. **Environmental Audit of Existing Works:** for subprojects where slope stabilization works have already been undertaken, but need to be extended or modified by the project, an environment audit will be undertaken to identify past or present concerns related to impacts on the environment. Where significant legacy issues are identified, a corrective action plan will be prepared and incorporated in the subproject. The plan will define necessary remedial actions, the budget for such actions, and their time frame for implementation. The audit report (including corrective action plan, if any) will be made available to the public in accordance with the information disclosure requirements of the EARF.

103. **Public Consultation, Information Disclosure and Grievance Redress:** public consultation and information disclosure are mandatory as part of the environmental assessment process. The adequacy of public consultation and disclosure process will be one of the criteria used to determine the project compliance with ADB safeguard policies. Similarly, a GRM to receive, evaluate, and facilitate the resolution of affected persons’ concerns, complaints, and grievances about the social and environmental performance at subproject level is to be established and detailed in each IEE Report. The GRM will be made operational during the EMP implementation phase. The process of public consultation and information disclosure, which is to be carried through the project preparation and implementation, is presented in detail in Section IX.

104. **Review of Environmental Assessment Reports:** subproject IEE reports including EMPs prepared during the subproject design process will be reviewed by the PIU and submitted to ADB for no-objection. Approval of safeguard documents of the respective subprojects is a prerequisite to initiate the bidding process.

105. All IEEs and EMPs will be prepared prior to invitation of the bids for construction contracts. The bid documents will include the requirement to incorporate necessary resources to implement the EMP. The EMP will form part of the contract document. Draft IEEs prepared at feasibility study stage will be updated (i) once detailed design is completed, (ii) if and when a major change in scope, location or design is needed, or (iii) when unanticipated environmental impacts occur. The PIU will submit all IEEs to ADB for approval and disclosure. ADB will review and disclose on its website the final reports (IEEs) of all subprojects.

**Environmental assessment for subprojects must follow both the ADB SPS and the Government processes.**

106. Table 9 notes the steps in complying with these processes per subproject stage.

\textsuperscript{13}Contractors to comply with (i) all applicable labor laws and core labor standards on (a) prohibition of child labor as defined in national legislation for construction and maintenance activities; (b) equal pay for equal work of equal value regardless of gender, ethnicity, or caste; and (c) elimination of forced labor; and with (ii) the requirement to disseminate information on sexually transmitted diseases, including HIV/AIDS, to employees and local communities surrounding the project sites.
Table 9: Environmental Assessment Process for Subprojects

<table>
<thead>
<tr>
<th>Project Stage</th>
<th>Environmental Assessment and Review Framework Procedure</th>
<th>GOKR Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subproject identification</td>
<td>Apply subproject selection criteria (Section I of the EARF).</td>
<td>PIC will support PIU to select subprojects using selection criteria.</td>
</tr>
<tr>
<td>Feasibility/preliminary design</td>
<td>Rapid Environmental Assessment Checklist (REA) Checklist will be prepared by the PIC and submitted to PIU for concurrence of categorization and scope of the IEE. ¹⁴</td>
<td>PIC supports PIU to determine Hazard Class of subproject.</td>
</tr>
<tr>
<td></td>
<td>Initial assessments must include information on site-specific observations such as state of the existing site and land preparation needed, physical cultural resources, and critical habitat assessment.</td>
<td>PIC supports PIU to prepare TOR for Feasibility Study/Design Consultant (FSDC), including impact assessment process through licensed OVOS contractor.</td>
</tr>
<tr>
<td></td>
<td>Categorization (B or C): (PIU) to review the REA checklists and reconfirm the categorization. Preparation of draft IEEs with EMP for Category B and environmental due diligence report for Category C.</td>
<td>FSDC/OVOS contractor prepares Preliminary OVOS as part of Feasibility Study documentation or completes Statement of Environmental Impacts (ZEP) form.</td>
</tr>
<tr>
<td></td>
<td>For subprojects involving works that already exist or are under construction, undertake an environment and/or social audit, including on-site assessment, to identify past or present concerns related to impacts on the environment, and involuntary resettlement. Where issues are identified, a corrective action plan will be prepared, agreed on by ADB and PIU, and implemented accordingly. ¹⁴</td>
<td>FSDC/OVOS contractor checks legacy regulatory compliance issues as part of impact assessment process and includes these in safeguard documentation submitted to the environmental regulator (formerly SAEPF) for State Environmental Review, through the PIU.</td>
</tr>
<tr>
<td></td>
<td>Public consultation will be carried out in a manner commensurate with the impacts of affected communities. The consultation process and its results will be documented and reflected in the IEE.</td>
<td>Public consultation will be carried out during the impact assessment process and the results documented in the Preliminary OVOS.</td>
</tr>
<tr>
<td>Disclosure</td>
<td>For category B: Disclosure of the draft IEE, updated IEEs and corrective action plans, and environmental monitoring reports. In addition, environmental information will be in an accessible place and in a form or language understandable to affected persons and other stakeholders. For illiterate people, other suitable communication methods will be used.</td>
<td>OVOS reports must be made accessible to affected communities through local administrative bodies.</td>
</tr>
<tr>
<td></td>
<td>Identify and incorporate environmental mitigation and monitoring measures (including the EMP) into bid/contract documents</td>
<td>An EMP is required, identifying mitigation measures and specifying administrative arrangements to ensure that mitigation measures are implemented, and their effectiveness is monitored after approval of the OVOS. A budget</td>
</tr>
</tbody>
</table>

¹⁴ The subprojects (sites) may be grouped together as appropriate into individual civil works procurement packages. One IEE may be prepared per procurement package subject to concurrence of ADB.
<table>
<thead>
<tr>
<th>Project Stage</th>
<th>Environmental Assessment and Review Framework Procedure</th>
<th>GOKR Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraisal and Approval</td>
<td>EMP and other environmental covenants (budget, personnel, etc.) are incorporated into the legal agreement, loan or project agreement, and project administration memorandum (PAM). ADB will review draft final reports of all IEEs.</td>
<td>for the EMP should also be provided. No equivalent</td>
</tr>
<tr>
<td>Detailed design</td>
<td>Finalization of draft IEE based on detailed design. Further public consultation will be carried out in a manner commensurate with the impacts of affected communities. The consultation process and its results are to be documented and reflected in the IEE.</td>
<td>Preliminary EIAs are reviewed by the environmental regulator (formerly SAEPF). Preparation of full OVOS as an ‘Environmental Section’ of the project’s detailed design documents. Public consultation on the draft OVOS documentation is held if formally requested by the public.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disclosure is part the consultation. The regulatory agency discloses the Summary OVOS report on their website and invites responses from stakeholders. The Draft OVOS report is made available on request until the public hearing. OVOS is submitted for State Environmental Review and associated Conclusion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mitigation measures specified in IEE incorporated in project design. Mitigation measures specified in OVOS study incorporated in project design by the project initiator and OVOS contractor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identify and incorporate environmental mitigation and monitoring measures (including the site-specific EMP and appointment of an EHS supervisor) into bid/contract documents. An EMP is required, identifying mitigation measures and specifying administrative arrangements to ensure that mitigation measures are implemented, and their effectiveness is monitored after approval of the OVOS. A budget for the EMP should also be provided.</td>
</tr>
<tr>
<td>Contract award</td>
<td>Confirm that all necessary environmental clearances, consents, and no-objection certificates (NOCs) as per the legal framework are in place prior to contract award. Implementation of EMP, including monitoring plans based on IEE findings, to be incorporated into civil works contracts.</td>
<td>There is no regulatory condition on contract award, but as per the OVOS Notification, environmental clearance is to be obtained before any construction work or land preparation (except land acquisition) may commence. All other clearances are also to be obtained before the start of work including land clearance.</td>
</tr>
</tbody>
</table>
Environmental Assessment and Review Framework Procedure

**Project Stage**

**Implementation**

EA will submit to ADB the following documents for disclosure on ADB’s website:
- **Updated IEE (if applicable due to change in scope or detailed design)**
- **Corrective action plan prepared during project implementation, if any**
- **Semi-annual environmental monitoring reports**

EA to ensure the effective implementation of the following:
- **Safeguards induction of Contractors**
- **Information disclosure**
- **GRM establishment**
- **EMP monitoring and supervision**
- **Reporting corrective actions.**

Project proponent to submit regular compliance reports with respect to the stipulated environmental clearance conditions.

**VI. SAFEGUARDS IMPLEMENTATION ARRANGEMENTS**

**A. Inputs, Responsibilities, and Accountability**

107. Responsibility for supervision of EARF implementation, including subproject IEE-EMP preparation, rests with the MES PIU. A PIU environment safeguard officer, with support provided by a PIC, will screen and classify potential subprojects. Preparation of subproject IEE-EMPs will be carried out by the PIC (national impact assessment documentation will be prepared by licensed FSDC services firms who will subcontract licensed OVOS contractors). The PIU will ensure that IEE findings are locally disclosed and that EMP measures are incorporated into civil works designs and contracts as needed.

108. An overview of key environmental tasks and responsibilities is given in Table 10.

**Table 10: Key Environmental Tasks and Responsibilities**

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preparation, review and clearance of IEE and SEMP</td>
</tr>
<tr>
<td>2</td>
<td>Obtaining national clearances, permits etc.</td>
</tr>
<tr>
<td>3</td>
<td>Stakeholder engagement, consultation, information disclosure</td>
</tr>
<tr>
<td>4</td>
<td>Grievance redress</td>
</tr>
<tr>
<td>5</td>
<td>Updating of IEEs</td>
</tr>
<tr>
<td>6</td>
<td>Preparation of corrective action plans, if required, and monitoring their implementation</td>
</tr>
<tr>
<td>7</td>
<td>Reporting to regulatory agencies</td>
</tr>
<tr>
<td>8</td>
<td>Reporting to ADB</td>
</tr>
<tr>
<td>9</td>
<td>Capacity development</td>
</tr>
</tbody>
</table>

109. **PIU**: as the executing agency, the PIU will have the following responsibilities:

(i) Under the loan funds, engage a qualified and experienced PIC who will undertake environmental assessment consistent with the EARF and ADB’s SPS 2009; on
behalf of the PIU, the PIC will also arrange the engagement of one or more feasibility study / design consultants to prepare the landslide stabilization works, including national environmental safeguard requirements;

(ii) Ensure timely preparation of the environmental assessments for subprojects in a manner satisfactory to ADB;

(iii) Submit draft IEEs for subprojects to ADB in a timely manner to permit the necessary review and approval;

(iv) Ensure that IEEs are revised based on ADB comments. Submit the final environmental assessment documents to ADB for approval and disclosure on ADB website;

(v) Prepare and submit an application for an environmental clearance certificate for each subproject to the environmental regulator (formerly the State Agency for Environment Protection and Forestry (SAEPF)), and obtain this clearance prior to the start of construction;

(vi) Ensure that the EMP provisions are implemented for the subprojects;

(vii) Submit to ADB semi-annual environmental reports on project implementation;

(viii) If there is a change in scope of a subproject, confirm to ADB that the environmental category has been reviewed. Review the environmental assessment based on the revised environmental category, if necessary;

(ix) Ensure that necessary regulatory environmental permits and clearances required by the Government are obtained in a timely manner (primarily by the respective FSDC as part of their design responsibilities) and that copies are promptly submitted to ADB;

(x) Ensure efficient operation of the project’s GRM.

110. The PIU will ensure that bidding and contract documents include specific provisions requiring Contractors (i) to comply with all applicable labor laws and core labor standards on (a) prohibition of child labor as defined in national legislation for construction and maintenance activities, (b) equal pay for equal work of equal value regardless of gender, ethnicity, or caste, and (c) elimination of forced labor; and (ii) to disseminate information on sexually transmitted diseases including HIV/AIDS, to employees and local communities surrounding the project sites.

111. For subprojects with IEE-EMP, the PIU will ensure that:

(i) The IEE is approved by ADB prior to bid invitation;

(ii) The subproject tender documents are properly assembled to:

(a) include standard construction contract environmental safeguard clauses (see Appendix F);

(b) include the respective IEE, and

(c) require bids to include a SEMP setting out the bidder’s approach to providing the required construction-phase mitigation and monitoring measures (during technical evaluation of submitted bids, the executing agency may request the PIU to task their environment staff and/or consultants to assist in evaluation of SEMPs).

(iii) Bidders, construction contractors, construction supervisors, and any other entities involved in subproject environmental safeguards have access to subproject IEEs;

(iv) EMP provisions and compliance requirements per (i) covenants and (ii) the Project Administration Manual are explained to bidders in the pre-bid meeting;

(v) Confirmation is obtained that bids include sufficient costs and personnel to implement all environmental safeguards;

(vi) Arrangements are made for implementation of any EMP measures not included in SEMPs as the contractor’s responsibility;
(iv) Contracts and workplans for construction supervision include supervision of EMP implementation (whether undertaken within SEMP s or implemented separately); and 
(vii) Project management monitoring and reporting systems track and report EMP implementation indicators.

112. During subproject construction and operation, the PIU or other organization directly responsible for the subproject will undertake the following tasks:

(i) Supervise and monitor EMP/SEMP implementation;
(ii) Include summaries of EMP/SEMP implementation supervision and monitoring in regular progress reports;
(iii) Promptly identify deficiencies and adverse impacts observed during EMP/SEMP monitoring, and take action to address these;
(iv) Prepare monthly environmental monitoring reports (EMR), documenting achievements and deficiencies in EMP/SEMP implementation, and submit these to the PIU (the reports should be based on the outline at Appendix F); and
(v) Undertake EMP public consultation activities.

113. **PIC:** on behalf of and in support of the PIU, the project implementation consultant will:

(i) Prepare the subproject screening checklists;
(ii) In close cooperation with the FSDC, undertake subproject environmental assessment and prepare necessary ADB reports;
(iii) As part of the environmental assessment process and in close cooperation with the FSDC, ensure that adequate public consultation with affected groups and local stakeholders is undertaken and documented in accordance with ADB’s SPS 2009;
(iv) Based on ADB’s review of the draft IEEs, revise these in a manner satisfactory to ADB.
(v) Ensure that the EMP provisions are incorporated in the design as well as in the bid and contract documents for civil works;
(vi) Ensure that subproject EMP provisions are implemented properly and in a timely manner;
(vii) Prepare and implement an updated EMP or a corrective action plan to address unpredicted environmental impacts and/or non-compliance with EMP measures during subproject implementation; and
(viii) Monitor the environmental performance of contractors and prepare semi-annual environmental monitoring reports.

114. **FSDC:** each feasibility study / design consultant will:

(i) Arrange for the provision of licensed environmental specialists (‘OVOS contractor’) for the respective subproject;
(ii) In close cooperation with the PIC, undertake subproject environmental assessment and prepare necessary reports to obtain environmental clearance;
(iii) As part of the environmental assessment process and in close cooperation with the PIC, ensure that adequate public consultation with affected groups and local stakeholders is undertaken and documented;
(iv) Based on comments from the public and the regulator, revise and update the draft and preliminary OVOS documentation;
(v) Ensure that all approved EMP provisions are included in the draft bid documents.
115. **Contractors:** each contractor will appoint an EHS Officer who will be responsible on a day-to-day basis for (i) ensuring implementation of the SEMP, (ii) coordinating with the PIU and environment specialist/s of project consultant team/s; (iii) consulting with interested/affected people, (iv) field-level grievance redress; and (iv) reporting.

116. Each contractor will be required to submit to PIU, for review and approval, a SEMP including (i) proposed sites or locations for construction work camps, storage areas, haul roads, lay down areas, disposal areas for spoil and for solid and hazardous wastes; (ii) specific mitigation measures following the approved EMP; (iii) monitoring program per SEMP; (iv) budget for SEMP implementation. No works can commence prior to approval of SEMP.

117. A copy of the approved SEMP will be kept on-site during the construction period at all times. Non-compliance with, or any deviation from, the conditions set out in the SEMP constitutes a failure in compliance and will require corrective actions. The EARF and the subproject IEEs specify responsibilities for EMP implementation during the design, construction and operation/maintenance phases.

118. **ADB:** ADB will be responsible for review and timely clearance of the IEEs for subprojects. Technical guidance will be provided by ADB to the PIU as needed. ADB will also be responsible for reviewing regular monitoring reports for the entire Project and officially disclosing the safeguard documents (IEEs and environmental monitoring reports) on the ADB website. During implementation of the Project, ADB will:
   (i) Review and clear IEEs for Category B subprojects and environmental due diligence reports for Category C subprojects to ensure compliance with the EARF and ADB's SPS 2009.
   (ii) Disclose the draft and final IEE and environmental monitoring reports on the ADB website upon receipt from PIU.
   (iii) Review, clear, and disclose environmental monitoring reports submitted by the PIU.
   (iv) Conduct regular review missions during implementation to monitor EMP implementation.
   (v) Provide guidance to the PIU, as required

B. **IEE and EMP Contents**

119. Subproject IEEs will be prepared to satisfy ADB requirements, including any relevant new policies, laws, and regulations promulgated subsequent to this EARF, and any modifications and additions to the EARF agreed by the Executing Agency and ADB. GOKR environmental clearance application requirements demand documentation in a different form.

120. IEEs will include Environmental Management Plans (EMPs) consisting of a mitigation plan and a monitoring plan. Each of these should address subproject pre-construction, construction, and operation phases (decommissioning is not relevant to the physical measures to be implemented).

121. Sample contents of an IEE are given in Appendix E.

C. **Custody and ADB Review/Clearance of Subproject IEEs**

122. Draft IEEs will be placed on file with the PIU. The PIU will submit draft IEEs to ADB for review and approval.
123. Public consultation will be carried out as part of the process of preparing each subproject IEE. Formal local disclosure of the complete IEE will be done after ADB no-objection to the IEE has been received.

124. In cases where local disclosure starts and a request for ADB review is subsequently received, local disclosure will be suspended until the results of the ADB review are received by the PIU. If review results warrant, the IEE-EMP and/or local disclosure information materials (e.g. local language brochure) will be appropriately modified prior to re-starting local disclosure.

VII. REPORTING

125. Environmental monitoring reports: the PIU, assisted by the PIC, will produce six-monthly environmental monitoring reports and submit these to ADB, for disclosure on the ADB website. The reports will include summaries of environmental progress, achievements, and deficiencies related to EMP implementation, monitoring data collected, information on non-compliance notices issued to contractors, complaints received from stakeholders through GRM or other routes, and actions taken to rectify problems. A template for the reports is given at Appendix G.

126. ADB review mission reports: ADB review missions will review and report on compliance with environmental conditionalities in the loan agreement documents.

127. Contractor record keeping and reporting: contractors will maintain records of emissions, spills, accidents and complaints, and provide copies to the PIU as part their monthly progress reports.

128. Public consultation reporting: public consultation during preparation of each IEE will be recorded in a public consultation record (see formats in Appendix H) and included in the IEE as an appendix.

129. GRM reporting: during construction, stakeholder complaints, and actions taken to resolve them, will be recorded in complaints logs maintained GRM local focal points. Monthly environmental monitoring reports will review all active log books and summarize the GRM activity during the period.

VIII. PUBLIC CONSULTATION AND DISCLOSURE

A. Overview

130. ADB requirements: ADB’s environmental safeguard policies require public consultation meetings (PCM) at an early stage of the IEE process for environment Category B investments. Adequacy of public consultation and information disclosure is one of the criteria used to determine compliance with ADB safeguard policies. Requirements for Category B subprojects are documented here. Category A subprojects are excluded from Project financing.

131. Category B: PCM will be undertaken both during the early stages of subproject planning, during the IEE process and throughout project implementation, addressing any environmental issues of concern to local communities, NGOs, government bodies, and other interested parties.

Category C: PCM are not required but may be held if warranted by the nature of the subproject, its environmental and social issues, or stakeholder interest.
132. **Objectives:** PCMs seek to (i) explore genuine local demand for the proposed works; (ii) foster participatory, comprehensive, and accurate preparation of the works, (iii) strengthen local community groups and their commitment and participation in subproject implementation, (v) contribute to effective and transparent communication between implementing agencies and local residents, and (vi) provide opportunities for both men and women to participate and contribute to planning of interventions beneficial to them.

133. All consultations and information disclosure will combine, as far as possible, the requirements of both ADB safeguards processes and the national environmental assessment and review process.

**B. Public Consultation during IEE Preparation**

134. At least two rounds of PCM will be held during each IEE study to present the subproject proposal to stakeholders and affected people, collect their comments, suggestions, and concerns, and agree proposed mitigation measures. A typical round of IEE PCM for a proposed subproject will consist of two or more meetings with local residents from the affected area, with at least one meeting specifically for women. Larger subprojects may require more meetings.

**C. Local Availability of IEE**

135. The PIU will promptly provide a copy of the IEE, in printed or electronic form, to any subproject stakeholder, Project staff, or member of the public on request.

**D. Local Disclosure of IEE Findings**

136. IEE and social safeguards findings relevant to local stakeholders will be disclosed in a form, place, and languages accessible to them. A single combined environmental and social disclosure will be provided that includes:
   1. What will be affected by the subproject?
   2. When will these effects occur?
   3. When and how will the effects be mitigated and/or compensated and how?
   4. How were concerns expressed by stakeholders and affected people in the IEE public consultation meetings addressed by the Project proponents? Have any concerns not been addressed, and if so, which ones and why?
   5. Who is available to listen to concerns, answer questions, and receive complaints?

137. The PIU will prepare a presentation of this information in the local languages (normally Kyrgyz and Russian), after reviewing it with representative local stakeholders (community members, elders, district governors, women, etc.), print and distribute brochures and/or handbills to be placed in public places.

**E. Implementation-Phase Public Consultation Programs**

138. All EMPs will include an implementation phase Public Consultation plan, to be supervised by the PIU as part of the implementation program. Its purpose is to advise stakeholders about Project activities and monitoring results.

**F. Disclosure of Subproject IEEs on ADB and Project Websites**

139. IEEs of all subprojects will be disclosed on the ADB and project websites.
G. Grievance Redress Mechanism

140. **General principles:** the ADB SPS requires that a project GRM is established, implemented and is subject to monitoring. The mechanism should be designed to efficiently receive and facilitate the resolution of affected peoples’ concerns and grievances relevant social, land, compensation, environmental and other issues. The GRM should be scaled to the risks and impacts of the project. It should address affected people’s concerns and complaints promptly and professionally, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all displaced persons (DPs).

141. The Project’s GRM has been designed to address DPs’ grievances, complaints, and requests regarding land acquisition, compensation, resettlement and environmental issues in a timely and satisfactory manner. Information on the grievance redress process will be widely disseminated to all DPs in a way they understand full program details. Information on all aspects of the mechanism will be included in the brochure that will be handed out to each affected household / business during the census.

142. The objectives of the GRM are: (i) to reach mutually agreed solutions satisfactory to both the project and the DPs, and to resolve any grievances locally, in consultation with the aggrieved party; (ii) to facilitate the smooth implementation of the project and prevent delays in project implementation; and (iii) to facilitate the development process at the local level, while maintaining transparency as well as to establish accountability to the affected people.

143. The mechanism consists of grievance resolution at three levels, local, district and central. The role and responsibility of the GRGs is to accept claim and complaints, assess their validity, determine the scope of eventual impacts, and timely resolve the issue, including the claims regarding the compensation and maintain GRM as flexible and efficient to address and resolve the claims as raising during project implementation.

144. The mechanism consists of grievance resolution at three levels, local, district and central. The role and responsibility of the GRGs is to accept claim and complaints, assess their validity, determine the scope of eventual impacts, and timely resolve the issue, including the claims regarding the compensation and maintain GRM as flexible and efficient to address and resolve the claims as raising during project implementation.

145. **Grievance coordination:** the social safeguards team (SST) will be the primary entity that will coordinate all aspects of grievances from local up to the national level. This activity will be done in close consultation with the Civil Defense Commission (CDC) at the local level. The full contact details of SST as well as other contact points for grievance redressal will be provided to all DPs. The SST will have provided adequate training to all key persons that are expected to manage and record grievances that may arise during project implementation.

146. **Institutions:** institutions which will be involved in grievances are the CDC at different levels, including Gosregister, Gosstroy and the State Agency for Environment and Forest Protection, Local State Administration and Local Self Government (LSG) (Ayil Okmotu). The SST will develop procedures to monitor and record grievances and solutions provided by different entities and will also be responsible for maintaining a register of all complaints and report to other levels in order to provide a timely and adequate relief to the aggrieved. A complaint form will be made available at various levels. However, both written and verbal complaints by DPs will be entertained.

147. **Grievance procedures:** Local Focal Points (LFP) will be established at LSG comprising of village heads and an LSG officer on emergency situations. LFP receives and screens complaints, facilitates GRG meetings, provides necessary documents, and keeps all records, including a complaints log. Names and contact details of LFP will be inserted in the Public
Information on all grievances including resolutions arrived and timelines will be documented by SST as part of monitoring and reporting.

148. All project-related grievances will be managed through existing CDCs at various levels, except national level where a GRC will be established at MES level. The GRM process will be facilitated by the social safeguards team.

149. The grievance redress mechanism operates at three levels: Local, Rayon/Oblast and National level. At each level, there will be dedicated officials to receive, handle, resolve and communicate with the aggrieved people. Table 11 provides details of the mechanism at three levels whilst the grievance redress flow-chart is shown in Figure 2. Complaints and appeals from affected persons will be received by any of the three levels. DPs will be educated, and information provided about three levels of the mechanism who will be encouraged to resolve their grievances informally at the local level as the first step. Any grievance that cannot be resolved to the satisfaction of DPs will be passed to the higher levels, keeping the DPs well-informed about the process. The timeline to resolve complaints (Table 11) is different: at local level, grievances will be resolved within 5 days, 10 working days at Rayon/Oblast and 14 working days at national level. Information on all complaints will be collected and recorded by PIU that will feed into a grievance data base. It will be up-dated and information will be used in monitoring reports prepared by PIU. LFP will develop its own grievance log book to monitor status of grievances as well as to facilitate flow of information to DPs. All documentation related to grievances will be stored until the completion and closure of the project.

150. It is the right of DPs that they should ask any questions, concerns or grievances with the local officials of self-governance or any member of the SST.

151. Written complaints can be faxed, sent by email or delivered to the PIU where they will be registered as being received. DPs are also encouraged to submit their complaints to the LFP. SST will collect all complaints for monitoring and recording.

152. It is the right of DPs to take the dispute to the formal court of law during any time within the resolution process.

153. **Error! Reference source not found.** outlines a summary of the grievance resolution process while the process is graphically shown in **Error! Reference source not found..**

Table 11. Grievance Redress Process and Institutions

<table>
<thead>
<tr>
<th>Stage of grievance</th>
<th>Required Actions</th>
<th>Institutions involved</th>
<th>Timeline</th>
</tr>
</thead>
</table>
| First Stage/ Local Level | • LFPs (mostly verbally) attempts to resolve the matter  
                         • Grievance record by SST and LFP | LSG (Ayil Okmotu)  
                         PIU | Five working days |
| Second Stage/ Oblast/Rayon | • Written complaint received  
                         • Safeguards team assists DPs with formalities  
                         • Actions to resolve complaint  
                         • Solution is provided in writing  
                         • SST follows up progress & maintains record | CDC at rayon/ oblast level  
                         PIU | Ten working days |
| Third Stage/ MES | • MES explores different options  
                         • Solution is provided in writing | MES  
                         PIU | Fourteen working days (it can be) |
<table>
<thead>
<tr>
<th>Stage of grievance</th>
<th>Required Actions</th>
<th>Institutions involved</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Complaint and solution are recorded, and document collected by SST</td>
<td></td>
<td>prolonged exceptionally for no more than 30 days)</td>
</tr>
</tbody>
</table>

**Figure 2: Grievance Redress Flow Chart**

DISPLACED PERSON

踬

GRIEVANCE

踬

AVIL OKMOTU / PIU

踬

UNRESOLVED

踬

CDC AT RAYON/OBLAST LEVEL / PIU

踬

UNRESOLVED

踬

MINISTRY OF EMERGENCY SITUATIONS /PIU

踬

UNAFFECTED PERSON

踬

REDRESSED PERSON

154. Any appellant can communicate his/her concern to the court at any stage of the grievance redress process. The PIU or other officials will not restrict or influence the DP from applying to court for legal remedies. If the complaint is found invalid, a response will be formulated at the level concerned and a written letter will be sent to the complainant, explaining the reasons of rejection. Complainants will be assisted in regard to filing the complaints and grievance resolution by SST. In addition, ADB has its Accountability Mechanism Policy (2012) that is to be accountable to people for ADB-assisted projects as a last resort mechanism. The accountability mechanism provides a forum where people adversely affected by ADB-assisted projects can voice and seek solutions to their problems and report alleged noncompliance of ADB’s operational policies and procedures. The complainant, if not satisfied with GRG’s decision or even the court’s decision, can appeal the case to Office of the Special Office Facilitator of ADB.15 The GRGs will not in any way impede DPs’ access to the ADB Accountability Mechanism.

15 [https://www.adb.org/site/accountability-mechanism/main](https://www.adb.org/site/accountability-mechanism/main)
IX. STAFFING REQUIREMENTS

155. Environmental safeguards will be managed and implemented by the PIU with support from the PIC and FSDC:

(i) An MES PIU environment safeguards officer (environmental coordinator) will be available to the Project on a full-time basis. S/he will support and provide input to subproject screening, categorization, IEE-EMP preparation, public consultation meetings, disclosure, and to pre-construction and construction-phase EMP/SEMP implementation.

(ii) PIC staff will undertake public consultation meetings and construction-phase monitoring visits.

(iii) The FSDC will be responsible for national environmental due diligence during subproject design.

(iv) The PIC will include one international (5 months) and one national (24 months) environmental safeguards specialist who will support and provide in-service training for the national PIU environmental coordinator, prepare environmental documentation, set up environmental monitoring systems for project implementation, and associated training.

(v) PIC construction supervisors will monitor EMP implementation by contractors on site, and are the proponent's representatives at the GRM entry level.

(vi) Escalated grievances may be referred to district governors and the PIU.

(vii) No equipment purchases related to environmental activities are anticipated.

156. The PIC environmental specialists will:

(i) Review prospective subproject sites for eligibility with regard to environmental selection criteria and associated categorization.

(ii) Ensure preparation of IEE or environmental due diligence documentation for subprojects, and that IEEs and EMPs are updated during detailed design or if there are significant changes to the scope or design of the subproject.

(iii) Ensure that bidding documents include all provisions necessary to ensure implementation of the subproject’s EMP, and that the bid evaluation procedure includes a review of bidders’ safeguards management understanding, capacity and resources.

(iv) Undertake environmental safeguards monitoring activities and prepare associated reports for submission to ADB.

(v) Provide environmental safeguard training to enhance the capacity of government safeguards staff and other staff involved in project safeguards implementation and compliance.

157. Training for the PIU environmental coordinator: the training should cover the following issues: (a) national legislation and ADB requirements for environmental assessment; (b) screening and scoping procedures including checklists of potential environmental impacts of the proposed activities; (c) main provisions of environmental management plans for proposed subprojects, including mitigation and monitoring requirements; (d) public consultation and communication requirements and techniques; (e) grievance redress mechanisms. Fieldwork should be included in the training program (visits to construction sites; focus group meetings; discussion with Kyrgyz peers and mentors (environmental professionals).
X. INDICATIVE ENVIRONMENT-RELATED COSTS

158. Costs required for implementing the EARF will cover the following activities:
   (i) conducting environmental assessments of new subprojects, preparing and submitting reports, and public consultation and disclosure;
   (ii) application for government regulatory consents and approvals; and
   (iii) implementation of EMPs.

159. For budgeting purposes, it is assumed that all new Output 1 subprojects will be classified by ADB as category B (requiring IEE). Some Output 1 subprojects may require a simpler environmental review, but this is discounted for budgeting purposes. It is assumed that all Output 2 subprojects will be classified as category C (requiring environmental due diligence and a simplified EMP).

160. Preparation of an IEE and EMP requires an experienced environmental specialist for conducting the following activities: (i) desk study, (ii) site visit to assess environmental conditions and potential impacts of the scheme; (iii) liaison with stakeholders and others to obtain any environmental/social data that might be available locally (e.g., population figures, designated sites, etc.); (iv) consultation with the local community to inform them about the scheme and obtain their views and concerns; (v) assessment of impacts and development of mitigation measures and management plan; (vi) liaison with the social specialist and design engineers on the project preparation team; and (vii) report preparation.

161. Environmental supervision during construction will be straightforward and will involve periodic site inspections and interviews with workers and others, plus checks of monitoring reports and other documents. This will be conducted by the Project Implementation Consultant’s environmental specialist on behalf of the PIU, working closely with the PIC’s construction supervision specialist and liaising with the local office of the environmental regulator (formerly SAEPF).

162. Subproject mitigation measures and environmental monitoring tasks during construction will be specified in the Site-Specific Environmental Management Plans. These will be implemented by the contractors and the associated costs included in their bids, which will be binding for implementation.

163. In the case of mitigation and monitoring measures for a particular subproject being identified but not suitable for inclusion in the tender document as a contractual responsibility, their costs will be included in the overall subproject budget.
164. All environmental monitoring during the operation and maintenance phase will be conducted by the PIU in cooperation with local government agencies and self-government bodies, therefore no additional costs are anticipated.

165. No equipment purchases related to environmental activities are anticipated. The PIC will be equipped with standard equipment for use by all staff in the field (cameras, GPS units, flipcharts, projector and screen for meetings). The contractor will supply any specialized equipment needed for environmental monitoring such as pH and conductivity meters for water quality measurement. Analysis of samples (e.g. topsoil) will be carried out in specialized laboratories, as a service.

166. The indicative costs of EARF implementation are shown in Table 12. An implementation period of 84 months is considered for preparing the following costs.

Table 12: Indicative Cost of Environmental Safeguards during Implementation

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Number</th>
<th>Cost per Unit (USD)</th>
<th>Cost (USD)</th>
<th>Source of Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consultant Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIC specialist</td>
<td>Environmental Safeguards Specialist (International)</td>
<td>4 mo</td>
<td>20,000</td>
<td>80,000</td>
<td>PIC operations (line 1152)</td>
</tr>
<tr>
<td>PIC specialist</td>
<td>Environmental Safeguards Specialist (National)</td>
<td>24 mo</td>
<td>2,000</td>
<td>48,000</td>
<td>PIC operations (line 1153)</td>
</tr>
<tr>
<td>PIC specialists</td>
<td>Travel &amp; subsistence</td>
<td>lump sum</td>
<td>20,000</td>
<td>20,000</td>
<td>PIC operations (lines 1156, 1172, 1173, 1183)</td>
</tr>
<tr>
<td>PIC specialists</td>
<td>Office costs</td>
<td>lump sum</td>
<td>7,000</td>
<td>7,000</td>
<td>PIC operations (lines 1191, 1194, 1200)</td>
</tr>
<tr>
<td><strong>Administrative Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permits and fees</td>
<td>State Environmental Review</td>
<td>15</td>
<td>1,000</td>
<td>15,000</td>
<td>PIU</td>
</tr>
<tr>
<td><strong>Environmental Management Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment &amp; pre-works documentation</td>
<td>Surveys, impact assessment, prep. environmental safeguards documentation</td>
<td>15 Category B assessments + 20 Category C assessments</td>
<td>5,000 2,000</td>
<td>75,000 40,000</td>
<td>PIC operations (line 1400)</td>
</tr>
<tr>
<td>Mitigation measures</td>
<td>Measures to mitigate predicted impacts during construction: standard best practice, no additional cost</td>
<td>15 Output 1 sites + 20 Output 2 sites</td>
<td>-</td>
<td>-</td>
<td>Civil works budget</td>
</tr>
<tr>
<td>Monitoring measures</td>
<td>Environmental monitoring during construction: included in contractor and PIC operations</td>
<td>15 Output 1 sites + 20 Output 2 sites</td>
<td>-</td>
<td>-</td>
<td>Civil works budget; PIC operations (lines 1156, 1172, 1173, 1183)</td>
</tr>
<tr>
<td>Component</td>
<td>Description</td>
<td>Number</td>
<td>Cost per Unit (USD)</td>
<td>Cost (USD)</td>
<td>Source of Funds</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>--------</td>
<td>---------------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Public consultations and information disclosure</td>
<td>Information disclosure and consultations during pre-construction and construction phases</td>
<td>15</td>
<td>1,000</td>
<td>15,000</td>
<td>PIC operations (line 1300)</td>
</tr>
<tr>
<td>Capacity development in environmental safeguards</td>
<td>Awareness and training programs - venue and other arrangements</td>
<td>lump sum</td>
<td>15,000</td>
<td>15,000</td>
<td>PIC operations (line 1300)</td>
</tr>
<tr>
<td>GRM implementation</td>
<td>Costs involved in resolving complaints (meetings, consultations, communication, and reporting/information dissemination)</td>
<td>15</td>
<td>1,000</td>
<td>15,000</td>
<td>PIU</td>
</tr>
<tr>
<td>Any unanticipated impact due to project implementation</td>
<td>Mitigation of any unanticipated impact arising during construction phase and defect liability period</td>
<td>contingency</td>
<td>-</td>
<td>-</td>
<td>Grant/Loan</td>
</tr>
</tbody>
</table>

**Subtotal** | **330,000**
Contingency | 7.5% | **24,750**
**Total (USD)** | **354,750**
APPENDIX A: PRIORITY SITES FOR LANDSLIDE RISK MITIGATION

Shortlist of priority sites for landslide risk mitigation

The list below was developed by MES with assistance from a team of consultants during project preparation.

<table>
<thead>
<tr>
<th>Village</th>
<th>Area (m²)</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chakmak</td>
<td>31,300</td>
<td>156,500</td>
</tr>
<tr>
<td>Murdash</td>
<td>34,700</td>
<td>381,700</td>
</tr>
<tr>
<td>Kyzyl-Oi</td>
<td>11,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Ken-Zhylga (Mukur-2 part)</td>
<td>18,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Ken-Zhylga (Mukur-1 part)</td>
<td>15,000</td>
<td>75,000</td>
</tr>
<tr>
<td>Nitske Sai</td>
<td>11,845</td>
<td>94,760</td>
</tr>
<tr>
<td>Biymyrza</td>
<td>31,500</td>
<td>220,500</td>
</tr>
<tr>
<td>Aicha</td>
<td>20,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Kyloozhun</td>
<td>29,000</td>
<td>145,000</td>
</tr>
<tr>
<td>Konokbai Talaa</td>
<td>22,500</td>
<td>180,000</td>
</tr>
<tr>
<td>Altynt-Kurok</td>
<td>15,900</td>
<td>111,300</td>
</tr>
<tr>
<td>Kyzyl-Tuu</td>
<td>54,700</td>
<td>136,750</td>
</tr>
<tr>
<td>Ak-Terek</td>
<td>82,700</td>
<td>330,800</td>
</tr>
<tr>
<td>Miyaly</td>
<td>27,500</td>
<td>55,000</td>
</tr>
<tr>
<td>Arbyn</td>
<td>25,156</td>
<td>125,780</td>
</tr>
<tr>
<td>Olon bulak</td>
<td>75,000</td>
<td>525,000</td>
</tr>
<tr>
<td>Korgon Ural Aral</td>
<td>32,000</td>
<td>160,000</td>
</tr>
<tr>
<td>Raykomol (Katkan-Aniz part)</td>
<td>29,400</td>
<td>205,800</td>
</tr>
<tr>
<td>Avletim (Zhangaktuu-Bulak part)</td>
<td>35,000</td>
<td>210,000</td>
</tr>
<tr>
<td>Zhuzumzhan</td>
<td>26,200</td>
<td>209,600</td>
</tr>
<tr>
<td>Chalk oido</td>
<td>77,000</td>
<td>385,000</td>
</tr>
<tr>
<td>Kairat</td>
<td>47,900</td>
<td>239,500</td>
</tr>
<tr>
<td>Nitske Sai</td>
<td>20,800</td>
<td>145,600</td>
</tr>
<tr>
<td>Ak-Terek</td>
<td>32,800</td>
<td>164,000</td>
</tr>
<tr>
<td>Cors-etty</td>
<td>21,885</td>
<td>131,310</td>
</tr>
<tr>
<td>Kakyr</td>
<td>23,000</td>
<td>230,000</td>
</tr>
<tr>
<td>Ayuu</td>
<td>22,000</td>
<td>220,000</td>
</tr>
<tr>
<td>Communist</td>
<td>11,821</td>
<td>118,210</td>
</tr>
<tr>
<td>Kara-Taryk</td>
<td>78,500</td>
<td>392,500</td>
</tr>
<tr>
<td>Toktogul</td>
<td>35,000</td>
<td>525,000</td>
</tr>
<tr>
<td>Tash-Bulak</td>
<td>15,400</td>
<td>77,000</td>
</tr>
<tr>
<td>Achy</td>
<td>42,000</td>
<td>210,000</td>
</tr>
<tr>
<td>Zhalgyz-Zhangak</td>
<td>150</td>
<td>540</td>
</tr>
<tr>
<td>Ak-Bulak</td>
<td>88,000</td>
<td>880,000</td>
</tr>
<tr>
<td>Alchaluu</td>
<td>16,000</td>
<td>192,000</td>
</tr>
<tr>
<td>Top Zhangak</td>
<td>15,385</td>
<td>107,695</td>
</tr>
<tr>
<td>Sary Bulak</td>
<td>15,000</td>
<td>120,000</td>
</tr>
<tr>
<td>Caramart</td>
<td>30,000</td>
<td>360,000</td>
</tr>
<tr>
<td>Village</td>
<td>Size of Instability</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Area (m²)</td>
<td>Volume (m³)</td>
</tr>
<tr>
<td>39 Ak-Took</td>
<td>30,000</td>
<td>150,000</td>
</tr>
<tr>
<td>40 Soku Tash</td>
<td>28,000</td>
<td>196,000</td>
</tr>
<tr>
<td>41 Humkana</td>
<td>200,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>42 Chkalov</td>
<td>43,000</td>
<td>258,000</td>
</tr>
<tr>
<td>43 Oogan Talaa</td>
<td>15,000</td>
<td>105,000</td>
</tr>
<tr>
<td>44 Chkalov U.Korovnik</td>
<td>56,000</td>
<td>392,000</td>
</tr>
<tr>
<td>45 Besh Badam</td>
<td>50,000</td>
<td>600,000</td>
</tr>
<tr>
<td>46 Toscool</td>
<td>18,000</td>
<td>90,000</td>
</tr>
</tbody>
</table>
APPENDIX B: PRIORITY SITES FOR MONITORING

Sites proposed for installation of on-site landslide monitoring systems

The list below was developed by MES with assistance from a team of consultants during project preparation, and will need adjustment based on in-depth technical investigation of each site.

<table>
<thead>
<tr>
<th>Village</th>
<th>Rural Community</th>
<th>Size of Instability</th>
<th>Area (m²)</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Murdash</td>
<td>Soghondu</td>
<td></td>
<td>34,700</td>
<td>381,700</td>
</tr>
<tr>
<td>2 Aicha</td>
<td>Turban</td>
<td></td>
<td>20,000</td>
<td>100,000</td>
</tr>
<tr>
<td>3 Kyloozhun</td>
<td>Sary Bulak</td>
<td></td>
<td>29,000</td>
<td>145,000</td>
</tr>
<tr>
<td>4 Altyn-Kurok</td>
<td>Kara Guz</td>
<td></td>
<td>15,900</td>
<td>111,300</td>
</tr>
<tr>
<td>5 Kyzyl-Tuu</td>
<td>Papan</td>
<td></td>
<td>54,700</td>
<td>136,750</td>
</tr>
<tr>
<td>6 Ak-Terek</td>
<td>Papan</td>
<td></td>
<td>82,700</td>
<td>330,800</td>
</tr>
<tr>
<td>7 Olon Bulak</td>
<td>Kashka-Su</td>
<td></td>
<td>75,000</td>
<td>525,000</td>
</tr>
<tr>
<td>8 Raykomol (Katkan-Aniz)</td>
<td>Ak Zhol</td>
<td></td>
<td>29,400</td>
<td>205,800</td>
</tr>
<tr>
<td>9 Chalk oido</td>
<td>Ak Zhol</td>
<td></td>
<td>77,000</td>
<td>385,000</td>
</tr>
<tr>
<td>10 Kairat</td>
<td>Zerger</td>
<td></td>
<td>47,900</td>
<td>239,500</td>
</tr>
<tr>
<td>11 Ak-Terek</td>
<td>Zhalpak-Tash</td>
<td></td>
<td>32,800</td>
<td>164,000</td>
</tr>
<tr>
<td>12 Nichke-Sai</td>
<td>Zerger</td>
<td></td>
<td>11,845</td>
<td>94,760</td>
</tr>
<tr>
<td>13 Kara-Taryk</td>
<td>Zhalpak-Tash</td>
<td></td>
<td>78,500</td>
<td>392,500</td>
</tr>
<tr>
<td>14 Zhalgyz-Zhangak</td>
<td>Coc art</td>
<td></td>
<td>150</td>
<td>540</td>
</tr>
<tr>
<td>15 Ak-Bulak</td>
<td>Kyzyl-Tuu</td>
<td></td>
<td>88,000</td>
<td>880,000</td>
</tr>
<tr>
<td>16 Alichaluu</td>
<td>Kyzyl-Tuu</td>
<td></td>
<td>16,000</td>
<td>192,000</td>
</tr>
<tr>
<td>17 Caramart</td>
<td>Kyz-Kol</td>
<td></td>
<td>30,000</td>
<td>360,000</td>
</tr>
<tr>
<td>18 Soku Tash</td>
<td>Kyzyl-Tuu</td>
<td></td>
<td>28,000</td>
<td>196,000</td>
</tr>
<tr>
<td>19 Humkana</td>
<td>Arstanbap</td>
<td></td>
<td></td>
<td>1,000,000</td>
</tr>
<tr>
<td>20 Chkalov U.Korovnik</td>
<td>Mogul</td>
<td></td>
<td>56,000</td>
<td>392,000</td>
</tr>
</tbody>
</table>
APPENDIX C: SUBPROJECT SELECTION PROCEDURE

This Appendix describes the process of selecting and prioritizing a short list of subprojects for consideration under the wider investment project. It was done through the following steps:

(i) Assembling a long list of sites for potential investment;
(ii) Developing a short list of subprojects;
(iii) Prioritization for the selection of the representative subproject;
(iv) Verification of the short list of subprojects and the representative subproject.

1. Assembling a long list of sites for potential investment

As a first step in the selection process, MES collected a long list of approximately 1,000 sites with information per site on Oblast, settlement and elements of infrastructure at risk from landslides such as buildings and transport infrastructure. This constitutes over 20% of the estimated 5,000 active landslides identified in the Kyrgyz Republic. The MES then narrowed down this long list to 200 sites (Figure 14) using the following selection criteria:

(i) Prioritization per landslide hazard level as defined by MES (a three-level hazard ranking system that also integrates criteria on resettlement):
   (a) Level 1: landslides that require monitoring throughout the year and anticipatory decision-making on resettlement of people from the landslide prone area;
   (b) Level 2: landslides that are at the stage of development and have secondary displacements. Monitoring is required on an annual basis, during seasons with active landslide triggering factors. In case of the landslide transferring from the first to the second hazard level, decisions on resettlement of people from the landslide prone area is required;
   (c) Level 3: landslides where, based on previous instructions, people have already been resettled, and/or landslides that are at the stage of possible remaining displacements. These sites require monitoring of the landslides that will likely become hazard level 2-landslides under condition of new slope deloading during: extremely wet months and years, tectonic activity phases, years with active increasing underground water levels; and years with seismic activity affecting the investigated area;

(ii) The number of houses, government buildings and infrastructure that could be affected by landslides at each site;

(iii) The geological-geomorphological and geotechnical conditions of the area;

(iv) The social and economic conditions of the local population; and

(v) The number of houses and occupants earlier directed to be resettled from landslide prone areas, but currently continuing to live on dangerous sites due to objective and subjective reasons.

The 200 sites were then grouped according to proximity to each other, geography, access and the settlements and population they affect. 67 groups of landslide sites were created for the list of 200 sites selected by MES. A sample of the grouping results is provided in Figure 3.

A list of 39 sites with priority transport elements at risk was added to the initial list (Figure 4). In addition, due to their importance for the country’s economy as well as energy provision, hydropower plants were also considered at this stage as potential subproject sites (Figure 5). A consolidated list of approximately 250 sites was the result of this process (Figure 6).

**Figure 4: Example of map for transport sites proposed as potential sub-project**
2. Developing a short list of sub-projects

In order to develop a shortlist of subprojects, the following eligibility criteria were applied to the list of 250 sites through a qualitative assessment:

- Approved by the national and local Government (Government priority);
- Areas that meet a certain level of landslide hazard (current and future levels considering climate change and seismic risk);
- Areas that meet a minimum threshold for assets at risk, e.g.:
  - Minimum number of houses; and/or
  - Critical infrastructure potentially impacted: roads, electricity and communication, energy;
  - Community infrastructure such as: schools, clinics, markets, community access roads, water and sanitation, etc.
  - Proportion of vulnerable people at risk (with disaggregation for gender, age, poverty, literacy, ethnicity etc. by rayon or settlement level), e.g. at least 50% population consists of vulnerable groups;
- No major social impacts i.e. resettlement, unemployment, on productive agricultural land;
- Not in an area with uranium sites or mine tailings (mining sites excluded);
- Not located in or adjacent to an environmentally sensitive area unless there is a significant threat to sensitive downslope and/or downstream values (ecological, socio-economic). Such areas could include but are not limited to physical cultural heritage, historical landscapes, areas protected for nature conservation including buffer zones, wetlands and catchment protection areas;
- Not classified as ADB environmental category A subprojects (Category A: The project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. Impacts may affect an area larger than the sites or facilities subject to physical works); and
- Potential economic viability in line with ADB economic analysis guidelines.

An initial short-list of ~40 landslide sites was developed by MES applying the above criteria. This shortlist was then reviewed by the TA Team and expanded with the latest data from Havenith et al. on landslide susceptibility and other landslide survey information made available from the catalogue of 600 sites from the Kyrgyz Complex Hydrogeological Expedition, under the State Committee for Industry, Energy and Subsoil Use. As a result, the initial MES shortlist was updated and expanded for the following information:

- Landslide hazard level (as defined by MES);
- Stage of evolution of the landslide;
- Landslide volume;
- Geological features;
- History of landslide activity; and
- Susceptibility level (as defined by Havenith et al., 2015).

In terms of the hydropower sites as potential subprojects, after careful consideration, it was agreed to exclude the proposed hydropower related sites, based on the following rationale:

(i) In the south of the Kyrgyz Republic the most landslide hazardous areas are concentrated in river basins and directly on the river banks, including in the areas where hydroelectric power plants are located. In total, there are six landslide hazardous areas that could potentially impact hydroelectric power plant sites;

(ii) However, these landslides in the vicinity of the hydroelectric power stations do not directly threaten the dams and their infrastructure, with five of them located below the dams and only one section located above a dam, but at a considerable distance of 6 km. Therefore, there is a low risk that rockfalls or landslides will pose a direct threat to the dam of the hydroelectric power station. Although these landslides

---

could potential damage hydroelectric power infrastructure, the risk of direct losses for downstream settlements and populations is deemed to be relatively low;

(iii) In addition, all hydroelectric power plants in the Kyrgyz Republic are included in the list of ‘strategic specially protected facilities’, meaning special licensing procedures and approvals are required to carry out landslide surveying and other related activities near these facilities.

The list of 39 transport sites was, after discussion with the MOT, narrowed down to a priority list of five sites to be considered as potential subprojects in the investment project.

Using the proposed eligibility criteria, GIS spatial analysis and geographic grouping of sites, as well as the outcomes of multi-stakeholder consultations, MES with support from the TA consultants assembled a revised shortlist of 46 subproject sites including two transport sites proposed by MOT. Hydropower sites were excluded.

3. Prioritization for selection of the representative sub-project

For the selection of the representative subproject for the technical feasibility study, the following prioritization criteria were used by MES through a qualitative assessment:

- Geomorphological and geological conditions of the site (e.g. elevation, area, volume, geolithological properties) and phases of landslide development;
- Government priority area;
- Geographic diversity;
- Existing national and local Government implementation capacity;
- Command areas with sufficient geographic spread and levels of settlement/vulnerable groups/infrastructure development to allow the sub-project to demonstrate integrated risk reduction measures and a landscape wide approach;
- Effectiveness of the proposed measures in addressing landslide risk, and potential of the measures to also address other natural hazard risks; and
- Accessibility, especially considerations for winter weather conditions.

Based on these criteria and applying a comparative qualitative assessment, MES has selected the Ayusai site as the representative subproject. The documentation describing the selection process and the justification for the site as well as a detailed description of the site have been submitted by the MES State Secretary to ADB on 26 February 2020.
APPENDIX D: RAPID ENVIRONMENTAL ASSESSMENT SCREENING CHECKLIST FOR CANDIDATE SUBPROJECTS

Instructions:

(i) The Project team completes this checklist for each potential subproject to support its classification as ADB environment category A, B, or C.
(ii) The checklist focuses on environmental issues and concerns. Social screening instruments should be used to screen for social dimensions such as involuntary resettlement, indigenous peoples, poverty reduction, and gender.
(iii) Complete checklist items for the “without mitigation” case to identify potential environmental impacts. Document potential mitigation measures in the “remarks” column.

<table>
<thead>
<tr>
<th>Screening Questions</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Subproject Siting</strong></td>
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<tr>
<td>Is the Subproject area adjacent to or within any of the following environmentally sensitive areas? (attach additional sheets if needed for remarks)</td>
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<tr>
<td>• Protected Area</td>
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<tr>
<td>• Wetland</td>
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<tr>
<td>• Buffer zone of protected area</td>
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<tr>
<td>• Special area for protecting biodiversity</td>
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<td></td>
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<tr>
<td><strong>B. Potential Environmental Impacts</strong></td>
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<tr>
<td>Will the subproject cause...</td>
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<tr>
<td>• loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)?</td>
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<td>• conflicts in water supply rights and related social conflicts?</td>
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<td>• impediments to movements of people and animals?</td>
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<td>• potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?</td>
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<td>• Insufficient drainage leading to salinity intrusion?</td>
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<td>• over pumping of groundwater, leading to salinization and ground subsidence?</td>
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<td>• impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?</td>
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<td>• dislocation or involuntary resettlement of people?</td>
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<tr>
<td>Screening Questions</td>
<td>Yes</td>
<td>No</td>
<td>Remarks</td>
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<td>------------------------------------------------------------------------------------</td>
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<tr>
<td>disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?</td>
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<td>potential social conflicts arising from land tenure and land use issues?</td>
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<tr>
<td>soil erosion before compaction and lining of drainage channels?</td>
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<td>noise from construction equipment?</td>
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<td>dust during construction?</td>
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<td>introduction of increase in incidence of waterborne or water related diseases?</td>
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<tr>
<td>dangers to a safe and healthy working environment due to physical, chemical and biological hazards during project construction and operation?</td>
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<td>large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</td>
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<tr>
<td>social conflicts if workers from other regions or countries are hired?</td>
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<tr>
<td>risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?</td>
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<tr>
<td>community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., irrigation dams) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</td>
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</table>
APPENDIX E: SAMPLE CONTENTS OF IEE

1. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

   a. Policy, Legal, and Administrative Framework

   This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

   b. Description of the Project

   This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project’s layout and components, the project site, and the project's area of influence.

   c. Description of the Environment (Baseline Data)

   This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

   d. Anticipated Environmental Impacts and Mitigation Measures

   This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media, and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, and cumulative impacts as appropriate.

   e. Analysis of Alternatives

   This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

   f. Formation Disclosure, Consultation, and Participation

   This section:
(i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;

(ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and

(iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

g. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

h. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project’s impacts and risks):

(i) Mitigation (see template in Table):
   (a) identifies and summarizes anticipated significant adverse environmental impacts and risks;
   (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
   (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project;
   (d) provides performance indicators, institutional responsibilities and cost estimates;
   (e) the plan may also include enhancement measures (i.e. measures that significantly improve the baseline environment at low additional cost); if these are physical works and are within the scope of Project financing, they will be incorporated in the subproject civil works designs.

<table>
<thead>
<tr>
<th>Mitigation Plan Summary Template</th>
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<tbody>
<tr>
<td><strong>Project Stage</strong></td>
</tr>
<tr>
<td>Construction Phase</td>
</tr>
<tr>
<td>Operation and Maintenance Phase</td>
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</tbody>
</table>

(ii) Monitoring (see template in Table):
(a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and

(b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(c) identifies institutional responsibilities for monitoring and estimates approximate costs.

**Monitoring Plan Summary Template**

<table>
<thead>
<tr>
<th>Project Stage</th>
<th>Mitigation Measure</th>
<th>Parameters to be monitored</th>
<th>Location</th>
<th>Measurements</th>
<th>Frequency</th>
<th>Responsibilities</th>
<th>Cost (US$)</th>
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<tr>
<td>Construction Phase</td>
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<td>Maintenance Phase</td>
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</table>

(iii) Implementation arrangements:
(a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
(b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
(c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

(iv) Performance indicators:
(a) describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

**Conclusion and Recommendation**

This section provides the conclusions drawn from the assessment and provides recommendations.
APPENDIX F: STANDARD CONSTRUCTION CONTRACT ENVIRONMENTAL SAFEGUARD CLAUSES

The following standard construction contract environmental clauses will be incorporated in tender documents for all subprojects with IEE-EMP. They will be included and operationalized in the SEMP to be produced by successful bidders to provide the required construction-phase mitigation and monitoring measures.

1. Environmental Protection and Control of Pollution

   a. General

   The Contractor shall observe and comply with all National Laws, Government Regulations, Presidential Decrees, and

   Except where otherwise agreed or provided for by the Employer or expressly stipulated in Particular Specifications or Technical Specifications forming part of the Contract Documents, no separate payment will be made for complying with the provisions of this Clause and attendant sub-clauses; and all costs shall be deemed to be included in the prices for the Contractor's mobilization for construction, and the various rates and lump sum items for the works included in the priced Bill of Quantities.

   b. Pollution of watercourses and streams

   The emission of polluting liquids or other waste into drains, water courses, or groundwater shall not be permitted.

   No concrete or cement washings from the works or drainage from the Contractor's concrete batching and mixing areas, asphalt (hot mix) plants, or other manufacturing or production facilities shall be allowed to discharge into streams or drains without passing through an adequate system of settling ponds.

   Storage of fuels, fueling and maintenance of plant and vehicles, etc. shall take place only on sites and under conditions that that do not allow spilt fuels to be discharged to water bodies. Fuel storage and fueling areas shall be equipped with adequate protective measures to confine and retain accidental spillages. No drainage from fuel store and plant maintenance depots shall be allowed to be discharged without passing through an adequate arrangement of oil traps and separators.

   Washing of vehicles shall not be permitted in streams but only in specially designated and equipped areas.

   Operations in quarries and borrow areas shall be carried out in such a way as to minimize any possible pollution from particulate matter entering the streams. Adequate sanitary waste control facilities shall be provided in site offices and workers camps, and sewage waste shall be collected regularly and disposed in accordance with relevant environmental legislation. The Contractor shall accordingly be responsible for the installation, operation and maintenance of a comprehensive drainage system to all areas of the Works. The system shall be constructed such that no discharges of oil, cement, silt or other liquid or solid waste matter can enter the streams and water courses at the site; and it shall have all necessary solid waste and sediment traps, settling ponds, oil separators, etc., required to ensure that pollution of streams
watercourses and natural bodies of water does not occur. The Contractor shall be responsible for maintaining the system to the satisfaction of the Employer’s Construction Supervisor and all costs of providing the system shall be deemed to be included in the various rates and lump sum items for the works included in the priced Bill of Quantities.

c. Air pollution

The Contractor shall take all necessary steps to minimize air pollution resulting from his/her operations.

Except where stipulated in these Specifications for the disposal of natural vegetation and organic materials from clearing operations, the burning of waste materials for disposal, particularly oil and petroleum wastes, rubber, plastics and similar materials will not be permitted.

During the performance of the work required under the Contract or of any operations appurtenant thereto, whether on the Project Site or elsewhere, the Contractor shall take all steps necessary, and shall furnish all labor, equipment, materials and means, required to reduce dust nuisance from the Works, and to prevent dust originating from his/her operations from damaging crops, orchards, cultivated fields, and dwellings; or causing a nuisance to persons. The Contractor shall be held liable for any damage resulting from dust originating from his operations including on Government roads, rights-of-way or elsewhere.

The emission of dust into the atmosphere shall not be permitted during the manufacture, handling and storage and handling of cement and of concrete aggregates, and the Contractor shall use such methods and equipment as are necessary for the prevention, or the collection and disposal, of dust during such operations. All truckloads of loose materials shall be covered during transportation.

Concrete batching and mixing areas, asphalt (hot mix) plants, or other manufacturing or production facilities shall be sited at least 500m from the nearest habitation. Emission outlets shall be fitted with pollution control devices in compliance with relevant current Government emission control legislation.

The cost of spraying water on haul roads, access roads, government roads, aggregate stockpiles, etc.; or of any other methods of reducing the formation of dust; and the cost of furnishing and applying materials to maintain the works areas, adjacent areas, and roads, in a dustless condition, shall be deemed to be included in the various rates and lump sum items for the works included in the priced Bill of Quantities.

d. Noise pollution

The Contractor shall take all necessary precautions to minimize the amount of noise and vibrations coming from construction activities.

The Contractor shall ensure that all plant and equipment is properly maintained in good operating condition, and that noisy construction activities shall be effectively sound reduced by means of silencers, mufflers, acoustic linings or shields, acoustic sheds or screens or other means, to avoid disturbance to any nearby noise sensitive receivers. All plant and equipment shall comply with relevant Government legislation covering sound emissions.
Quarry operations and blasting shall be undertaken so as to minimize blasting and disturbance during the night and, insofar as possible, noise, vibration and dust. Operation of trucks and heavy vehicles and machinery shall be restricted to the hours of 06:00 to 21:00.

All necessary measures shall be undertaken to protect schools, hospitals and other adjacent noise sensitive receptors, including the use of noise barriers.

e. Damage to property, crops, and vegetation

The Contractor shall limit the movement of his/her employees and equipment within the project area and on adjacent land, including access routes approved by the Employer’s Construction Supervisor, so as to minimize damage to natural vegetation, crops and property, and shall endeavor to avoid any damage to land.

The Contractor shall strictly ensure employees and equipment do not enter any sensitive environmental areas that are demarcated as “no-entry” zones.

The Contractor shall preserve existing trees, plants and other vegetation that are to remain within or adjacent to the Works and shall use every precaution necessary to prevent damage or injury thereto. Trees or shrubs shall only be felled or removed where such impinge directly on the permanent works or necessary temporary works areas; and where such is approved by the Employer’s Construction Supervisor.

On completion of the Works all areas disturbed by the Contractor’s construction activities shall be restored by the Contractor to their original condition, or as may be acceptable to the Employer.

The Contractor shall be responsible directly to the Employer for any excessive or unnecessary damage to crops or lands arising from his/her operations, whether within the project area, on lands adjacent thereto, or adjacent to approved access roads: and deductions will be made from the payment due to the Contractor to cover the cost of such excessive or unnecessary damage, as determined by the Employer.

2. Reporting

The Contractor shall maintain a record of all emissions and spills of liquid, solid and gaseous matter which occur at the site, whether into water courses, streams, on land, or into the air. This record shall be compiled daily and shall include details of date, time and nature of the event, along with details of the remedial and clean-up measures carried out.

Copies of these records shall be given to the Employer monthly.

The Contractor shall also maintain a record of any complaints made by any Governmental or Community Organization or by the public, regarding his/her operations. This record shall contain the date and time of receipt of the complaint, the name and address of the complainant and the action taken to remedy the situation. Copies of these records shall be given to the Employer monthly.

3. Environmental Management Plan

The requirements of this clause and attendant sub-clauses on Environmental Protection and Pollution Control notwithstanding; the Contractor shall observe and comply with all relevant
environmental protection and mitigation, monitoring, and reporting requirements in the Environmental Management Plan (EMP) as stipulated in the Particular Specifications. In the event of any conflict between the foregoing sub-clauses and the environmental protection and mitigation measures and pollution control requirements of the EMP, the EMP shall take precedence.

The Contractor shall prepare and submit to the Employer’s Construction Supervisor a SEMP demonstrating the manner in which the Contractor will comply with the requirements of the foregoing subclauses on Environmental Protection and Pollution Control, the EMP, and any particular environmental mitigation measures as stipulated in the Particular Specifications or Technical Specifications forming part of the Contract Documents.

The SEMP shall be submitted within 15 working days of the Contractor receiving the Notice to Proceed With the Works, and shall include the set of management plan listed as part of the EMP (e.g. waste management plan, dust management plan, noise management plan, surface water management plan, emergency management plan, health and safety management plan, or any other management plan as stated in the EMP). Training shall be provided to workers about the appropriate implementation of the SEMP. Construction or rehabilitation works at the sites cannot start until the SEMP is approved by the EA.

Where stipulated in the Particular Specifications or Technical Specifications forming part of the Contract Documents, and provision has been made in the Bill of Quantities; payment for the implementation of the SEMP will be made in accordance with the Unit Rates, Lump Sum or Provisional Sum Items included in the Priced Bill of Quantities.
Project Number: {XXXXX}
{Reporting period: Month Year}

{Full Country Name}: {Project Title}
{(Financed by the <source of funding>>)}

Prepared by {author(s)}
{Firm name}
{City, country}

For {Executing agency}
{Implementing agency}

Endorsed by: (staff name of IA/PIU) and signature, submission date
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6. Introduction

a. Preamble
1. This report represents the Semi-Annual Environmental Monitoring Review (SAEMR) for [INSERT PROJECT NAME].
2. This report is the (insert number of report, i.e. 1st, 2nd etc) EMR for the project.

b. Headline Information
3. Include a brief summary of significant outcomes of the project construction process and any specific areas of concern of which ADB should be informed.

7. Project Description and Current Activities

c. Project Description
4. Provide a brief description of the project. – this should not vary from one report to the next.

d. Project Contracts and Management
5. Provide a list or table of main organisations involved in the project and relating to Environmental Safeguards. This should include lender, borrower, PIU, Main Contractor/s and significant sub-contractors, environmental staff of various organisations should be named, and contact details provided.
6. Provide a description of how the contracts are being managed and names of key personnel.

e. Project Activities During Current Reporting Period
7. Provide an outline of major activities which have been carried out during the current reporting period. Provide adequate information so the reader can understand what has been taking place on site. Include photographs (with date stamp) of activities where possible and relevant. Place bulk photographs into an annex to the main report or a separate photographic record.
8. Where multiple work sites are involved provide information on which work sites have been active during the current reporting period. Provide map of work site areas if relevant.
9. Provide details (chart) of worker numbers (maximum, Minimum) in the current reporting period and anticipated changes in staff in following period

26 March 2021
10. Highlight any significant new activities commenced during the current reporting period.

11. For the above make maximum use of charts, images and tables.

f. **Description of Any Changes to Project Design**

12. Describe any changes to the project design from that which was assessed in the Impact Assessment phase of the project and is set out in the Initial Environmental Examination/Environmental Impact Assessment. If none have taken place, please state – No changes.

13. Note if significant changes have occurred the PIU should have already informed ADB of this and made a decision on the need for updates to the EIA/IEE and/or Environmental Management Plans

g. **Description of Any Changes to Agreed Construction methods**

14. Provide a description and reason for changes to any construction processes, for example, blasting of rock rather than excavation, open channel rather than thrust boring at road crossings.

8. **Environmental Safeguard activities**

h. **General Description of Environmental Safeguard Activities**

15. Please provide a summary of the routine activities undertaken by environmental safeguard staff during the current reporting period. This should include the work undertaken by the contractor’s environmental manager, the Environmental Supervisor and any informal visits by the PIU environmental staff.

i. **Site Audits**

16. Please provide details (table form preferred) of any formal audits undertaken by environmental safeguard process staff during the current reporting period. This would include Contractors Environmental Manager, Environmental Supervisor, PIU Staff and ADB staff during review missions.

17. Information required includes:

   - Date of Visit
   - Auditors Name
   - Purpose of Audit
   - Summary of any Significant Findings
   - Cross reference to Audit Report which should be included as an annex.
18. Summarise Findings of Audits under taken in the current period, compare with previous periods and identify any trends or common issues.

j. **Issues Tracking (Based on Non-Conformance Notices)**

19. Provide an overview and description of issues tracked during the current period.

20. Provide commentary on key statistics based on graphs and tables which can be copied from the Environmental Safeguards Issues Tracing Workbook. For example

**Table 8-1 Summary of Issues Tracking Activity for Current Period**

<table>
<thead>
<tr>
<th>Summary Table</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Issues for Project</td>
<td>6</td>
</tr>
<tr>
<td>Number of Open Issues</td>
<td>1</td>
</tr>
<tr>
<td>Number of Closed Issues</td>
<td>5</td>
</tr>
<tr>
<td>Percentage Closed</td>
<td>17%</td>
</tr>
<tr>
<td>Issues Opened This Reporting Period</td>
<td>5</td>
</tr>
<tr>
<td>Issues Closed This Reporting Period</td>
<td>4</td>
</tr>
</tbody>
</table>

**Figure 8-1 – Summary of Issues by Non-Conformance**

Non-conformance Level

- N/A, 1
- Major, 2
- Minor, 3

21. Use data from workbook as required.

k. **Trends**
22. Use information from previous period reports and the current period information to identify trends in issues. For example -

<table>
<thead>
<tr>
<th>Quarterly Report No</th>
<th>Total No of Issues</th>
<th>% issues Closed</th>
<th>% issues closed late</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>87</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>56</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>59</td>
<td>23</td>
<td>26</td>
</tr>
</tbody>
</table>

23. Provide a commentary on the trends, explain why they may be occurring and in the case of negative trends explain what steps have been taken to make corrections.

24. Provide a copy of all NCN’s for all major Non-Conformances in an annex. If none state this.

1. **Unanticipated Environmental Impacts or Risks**

25. Document any unanticipated environmental impacts and risks which have been identified in the current period (as a reminder, these are impacts or risks which were not identified in the Impact Assessment process). State what actions were taken to mitigate the impacts and risks, were these successful.

9. **results of environmental monitoring**

m. **Overview of Monitoring Conducted during Current Period**

26. Provide a commentary on what environmental measurements have been undertaken during the current reporting period. Highlight any areas where agreed monitoring has not taken place.

27. Include sub sections for the report on those environmental media which have been measured, for example

- Noise
- Air Quality
- Water Quality

28. The sections should present highlights of the outcomes of the monitoring focusing on a comparison of the results with the agreed standards as set out in the Specific Environmental Management Plan and/or Monitoring Plan.

29. In particular make clear where exceedances in the standards have occurred and provide reasons and actions which have been implemented to correct – refer to relevant NCN as appropriate.

26 March 2021
30. Detailed monitoring results should be presented as an annex.

n. Trends
31. Based on the current and past periods of monitoring identify and discuss any trends which may be developing.

o. Summary of Monitoring Outcomes
32. Provide any recommendations on the need for additional monitoring, or requests for ceasing/altering monitoring if activities have been completed or monitoring is showing no significant effects over long period.

p. Material Resources Utilisation
   Current Period
33. Provide values (tables, graphs etc) for current reporting period of utilisation of electricity, water and any other materials which have been include in the SEMP for monitoring.

   Cumulative Resource Utilisation
34. Provide values (tables, graphs etc) for cumulative resource utilisation of power water etc, for whole project life. Identify trends or significant changes and provide reasons for any such changes.

q. Waste Management
35. Provide summary of waste management activities during the current period. Provide waste contractors/s names and location of waste sites.

   Current Period
36. Provide breakdown using graphs, table etc, of waste streams during current reporting period. This information should include
   
   • Type of Waste (description and classification – e.g. hazardous – non-hazardous;
   • Waste Source – what activity generated the waste and where;
   • Quantity of waste generated;
   • Treatment/disposal route – provide information on quantities of waste reused, recycled and sent to landfill or incineration; and
   • Final disposal sites for waste.

37. Provide commentary on results.

   Cumulative Waste Generation
38. Using the above bullet points for waste develop cumulative waste generation results.
39. Discuss trends and provide suggestions for waste reduction, increase in reuse and recycling if possible.

   o **Health and Safety**
     - Community Health and Safety

40. Provide information on any incidents which have occurred during the reporting period which resulted in or could have resulted in Community Health and Safety issues. Include within this section traffic accidents.

   - **Worker Safety and Health**

41. Provide detailed statistics on accident rates, including Lost Time Incidents, Accidents and near misses.

42. Provide information on safety campaigns conducted during the reporting period.

43. Provide detailed statistics on accident rates, including Lost Time Incidents, Accidents and near misses.

44. Provide detailed statistics on accident rates, including Lost Time Incidents, Accidents and near misses.

45. Provide a commentary on the SEMP in terms of the ability of the contractor to implement fully the requirements set out. Highlight any areas where the contractor has not been able to implement mitigation or monitoring measures.

46. Is the SEMP effective, are mitigation measures set out still appropriate and are they working as intended – do they need changing?

47. Are there better alternative mitigation measures?

48. Can some mitigation measures be reduced or removed as the specific risk identified in the IEE/EIA and/or SEMP has not materialised?

49. Provide a table of requests for changes to the current mitigation measures for consideration by ADB. Note you can send these at any time during the project, there is no need to wait until the quarterly reporting period to be completed. If PIU has supplied requests to ADB, these should be listed along with ADB response. Where changes
(additions/deletions and modifications) of mitigation or monitoring measures have been approved, the PIU shall ensure that the SEMP is updated to reflect these changes.

11. good practice and opportunity for improvement

t. Good Practice
50. Provide an overview with charts, images etc of examples of continuing good practice for the project. State why these have been implemented and how they are reducing environmental impacts or risks.

u. Opportunities for Improvement
51. Identify any areas which may be outside of the formal NCN process, but which changes to construction techniques, mitigation etc would result in an improvement in environmental, health and safety performance of the project.

12. summary and recommendations

v. Summary
52. Provide a summary of the effective implementation of Environmental Safeguards during the reporting period and for the overall project construction period to date.

w. Recommendations
53. Provide any recommendations for consideration by the ADB for changes to the Environmental Safeguarding process for the project.
A. Format for the List of all Public Consultation Meetings

*Instructions:* Enter meeting information, one row per meeting. Add rows as needed.

**Table H.1: List of Public Consultation Meetings**

<table>
<thead>
<tr>
<th>N</th>
<th>Date</th>
<th>Meeting description</th>
<th>Conducted by</th>
<th>Stakeholders participating</th>
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</thead>
<tbody>
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<td>Location</td>
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<td>District</td>
<td>Province</td>
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</table>
B. Format for Public Consultation Meeting Notes

**Instructions**: Enter meeting information, one table per meeting. Add tables as needed.

Table <n>: Meeting <meeting number> – <Subproject name> <location within Subproject>, <men or women>

<table>
<thead>
<tr>
<th>Meeting date &amp; time:</th>
<th>&lt;enter date and time&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place:</td>
<td>&lt;enter meeting place village, district, province, and GPS coordinates if available&gt;</td>
</tr>
<tr>
<td>Topics:</td>
<td>See agenda and questionnaire, Table &lt;m&gt;</td>
</tr>
<tr>
<td>Attending:</td>
<td>Proponents: &lt;list of consultants, ministry/department staff, district government representatives and staff&gt; Stakeholders: per sign-in sheet above</td>
</tr>
</tbody>
</table>

**Concerns raised by stakeholders**

<table>
<thead>
<tr>
<th>&lt;summary phrase for concern #1&gt;</th>
<th>1. &lt;Description of concern as stated by stakeholder(s)&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;summary phrase for concern #2&gt;</td>
<td>2. &lt;Description of concern as stated by stakeholder(s)&gt;</td>
</tr>
<tr>
<td>&lt;summary phrase for concern #3&gt;</td>
<td>3. &lt;Description of concern as stated by stakeholder(s)&gt;</td>
</tr>
</tbody>
</table>

<Add as many rows as needed to list all concerns raised by stakeholders>

**Outcomes & conclusions**

<All stakeholder concerns, or Stakeholder concerns numbered (list of concern numbers)> will be accommodated by the Project.<If some concerns cannot be accommodated, complete the following section>

Stakeholder concern <number> <describe Project response or inability to respond.>

**Action items for proponents**

1. <List proponent action item for concern #1>  
2. <List proponent action item for concern #2>  
3. <List proponent action item for concern #3>  
4. <List proponent actions for each concern>

**Reported by:** <name of proponent’s representative who facilitated the meeting and took or checked the final notes>