Khyber Pakhtunkhwa Rural Accessibility Project (KPRAP)

Environmental and Social Management Framework

April 19, 2022

List of Abbreviations

AP	Affected Person/Affected Party
CNIC	Computerized National Identity Card
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
CWD	Communications and Works Department
E&S	Environmental and Social
E&SED	Elementary and Secondary Education Department
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMMP	Environmental and Social Mitigation and Monitoring Plan
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FGD	Focus group discussion
FMS	Financial management specialist
GBV	Gender-based violence
GDP	Gross domestic product
GoKP	Government of Khyber Pakhtunkhwa
GoP	Government of Pakistan
GRC	Grievance redress committee
GRM	Grievance redress mechanism
HDI	Human Development Index
IC	Implementation Committee
IDP	Internally displaced person
IEE	Initial Environmental Examination
ILO	International Labor Organization
IPF	Investment Project Financing
KP	Khyber Pakhtunkhwa
KPRAP	Khyber Pakhtunkhwa Rural Accessibility Project
LAA	Land Acquisition Act
LMP	Labor Management Procedures
MPI	Multi-dimensional Poverty Index
NCS	National Conservation Strategy
NEP	National Environmental Policy
NEQS	National Environmental Quality Standards
NGO	Non-governmental organization
NMD	Newly Merged District
OHS	Occupational Health and Safety
OIP	Other Interested Party
OOS	Out-of-school

OOSC	Out-of-school children
PD	Project Director
PDO	Project Development Objective
PEPA	Pakistan Environmental Protection Act
PIU	Project Implementation Unit
PTC	Parent teacher council
RAP	Resettlement Action Plan
RF	Resettlement Framework
SEA	Sexual exploitation and abuse
SEP	Stakeholder Engagement Plan
SH	Sexual harassment
SRSP	Sarhad Rural Support Programme
SWMP	Solid waste management plan
TA	Technical Assistance
TCF	The Children's Foundation
TMP	Traffic management plan
UID	Unique identifier
WB	World Bank
WHO	World Health Organization

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Executive Summary

Project Background

Khyber Pakhtunkhwa is the second poorest and least urbanized province of Pakistan, with significant urban-rural disparities that have impacted access to education, health and markets. Poverty is concentrated in the Northern and Southern districts of the province and in the NMDs, which have a high presence of Afghan refugees. The improvement of access to these services is a priority for the GoP and the GoKP.

The proposed project will improve access to education, health, and market in district centers of KP and create synergies to improve intra-inter village connectivity. It will improve rural roads including farm to markets and will increase economic opportunities, increase in human development due to access to education, health, etc., for the unattended/deprived districts of KP: Chitral Lower and Upper, Dir Lower and Upper, Kohistan, Torghar, Shangla, Hangu, Bannu, Karak, Lakki Marwat, Tank, D.I. Khan and the Newly Merged Districts (Bajaur, Khyber, Kurram, North Waziristan, South Waziristan, Mohmand and Orakzai).

Project Development Objective

The Project Development Objective is to improve rural accessibility to schools, health facilities and markets in Khyber Pakhtunkhwa

Project Components

Component 1: Safe and Climate Resilient Access - This component will include the financing, upgradation, and rehabilitation of selected rural roads in priority districts across the province, including the Newly Merged Districts. It will ensure the provision of climate resilient roads providing improved all-weather accessibility to basic services. Road improvement under this component will also consider climate resilience measures, including but not limited to raising the embankments (if need be), provision of side drains, improvement of culverts, bridges, enhanced slope protection, adopting design standards for pavements that reflects a higher level of climate resilience, a decision to seal previously gravel roads, and geometric improvement of roads to enhance road safety.

Component 2: Safe Girls' Journey to Schools - The project activities for this component will focus on 5 priority districts of KP, with the major enrolment and attendance gaps of girls. This component will integrate road access (financed by Component 1) and improvement of school transport services to improve access to schools for girls in 5 priority districts**.** Under this Component, Parent-teacher councils (PTCs) will sign contracts with local private service providers to arrange transport for selected female students and teachers. The project will fund the development of contracts with key performance indicators and service standards, for use by PTCs. The project will also provide per capita grants to PTCs, based on the actual number of students and teachers identified by PTCs as being eligible for subsidized transport.

Component 3: Project Management and Institutional Strengthening – This component will finance, inter alia, the administrative and operational costs related to implementation and monitoring of Component 1 and 2, technical assistance (TA), the core staff of the project implementation unit (PIU), auditing costs, capacity building for the PIU staff, education

department and implementation and monitoring of the environmental and social safeguards standards (E&S). It will also finance a comprehensive road sector reforms to improve policies for road sustainability, road funding, financing and the capacity of CWD to select, prepare, allocate efficient resources, procure and manage road works contracts including emergency works.

Project Beneficiaries

The project will provide better roads and access to services for around 5 million inhabitants in the target districts, of which 2.4 million are women. Improved access through better, more resilient roads will: improve opportunities for children (particularly girls) to gain education: provide access to the market labor force with a higher potential income in the long-term that will support the reduction of gender poverty; improve quality of life, particularly with regards to health. School-age girls and female teachers will also benefit from the provision of subsidized transport services.

Purpose of the ESMF

The Khyber Pakhtunkhwa Rural Accessibility Project (KPRAP) project is supported by the World Bank through Investment Project Financing (IPF) for which compliance with the Environmental and Social Framework (ESF) is required.

The ESMF is an instrument that examines the potential risks and impacts of planned activities of a project where the detailed activities of subprojects have not yet been finalized. Since the exact extent and precise location/footprints of individual interventions are yet to be decided the KPRAP is adopting a framework approach to E&S risk mitigation through this ESMF, and sets out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts of the project. It also contains measures and plans to mitigate the environmental and social risks and impacts, provisions for estimating and budgeting the costs of these measures, and information on the agencies responsible for mitigation, including on their capacity to manage these risks.

The KPRAP PIU will use this ESMF during the planning, design, construction, and operational phases of the project to prepare site specific Environmental and Social Management Plans (ESMPs) to ensure E&S compliance at every subproject location.

Legislation and World Bank Standards

To ensure the compliance with national and provincial legislations and World Bank Environmental and Social Framework (ESF), a detailed analysis of applicable environmental policies, laws, guidelines, acts and legislations of Government of Pakistan and Government of KP has been done. KPRAP will follow KP Environmental Protection (Amendment) Act and National Environmental Quality Standards (NEQS), as well as World Bank's Environmental and Social Standards (ESSs) and guidelines, and other relevant regulations described in this ESMF.

Environmental and Social Baseline

Khyber Pakhtunkhwa spans six climactic regions: semi-arid lowland, semi-arid highland, sub-humid, humid, and arid. The terrain of Khyber Pakhtunkhwa is dominated by mountains, with

the Hindu-Kush range in the north-west, the Himalayas in the north-east, and the Safed Koh-Charat range in the south. There are also plains irrigated by multiple rivers.

Compared to other provinces, KP is especially vulnerable to climate change given its terrain and topography. Between 1970 and 2020, 20 extreme weather events including floods, landslides, and avalanches impacted KP. Climate change is a direct cause. Significant increasing trends (1960-2020) in annual rainfall and temperature patterns have been observed in some KP districts. which have impacted mainly agriculture production and the access to basic services in the Northern, Newly Merged Districts (NMDs) and Southern KP districts.

Khyber Pakhtunkhwa hosts approximately 4500 species of plants, 100 mammals, 466 birds, 66 reptiles, and 118 fish species across various ecosystems including forests, meadows, rangelands, and wetlands. The province is home to a diverse array of fauna, particularly in its northernmost regions.

The number of Protected Areas notified in Khyber Pakhtunkhwa includes 6 national parks, 3 wildlife sanctuaries, 38 game reserves, 90 community game reserves, 16 private game reserves, 2 wildlife refuges and 8 wildlife parks. The combined area of all the Protected Areas is 666,340.368 hectare (ha).

KP has the second highest instances of poverty, and major gaps in human capital development. shows a breakdown of human development indicators for each province. The income index shows that KP (including the NMDs) are the second poorest regions in the country. Poverty is concentrated in the northern (Upper Dir, Kohistan, Shangla and Buner) and southern districts (Tank and Dera Ismail Khan), and in the NMDs, which have a high presence of Afghan refugees.

Large home-to-school distances and difficult commuting conditions disproportionately affect girls' participation in education. Safety on route to school is a key concern for parents. Safety was the third most important reason why phone survey participants cited the commute to school as being difficult. Poor network conditions and the lack of all-weather access to roads heighten risk perceptions. Gaps in climate resilience of road infrastructure were discussed above. The lack of all-weather access to roads disrupts regular attendance of children in school.

Accessibility and affordability of health services, especially in the northern and southern districts of the province, is a major issue, and considerable time is spent waiting for transportation and traveling to health facilities. The inability to travel to healthcare facilities, for instance, has been associated with increased mortality and morbidity from treatable conditions.

Poor market integration can hurt smallholder farmers in the province. The agriculture sector provides livelihoods to 85 percent of the KP population, accounts for 20 percent of the provincial GDP and employs 40 percent of the labor force. Geospatial analyses show big gaps in access to markets, particularly in the northern and southern districts of the province. This, coupled with inadequate storage facilities, leads to significant post-harvest losses and an overall grim outlook for the province's agriculture output - less than 10 percent of the total production of fruits and vegetables is processed in KP.

Low climate resilience of rural roads has impacted economic activity during summers. Extreme climate causes road damage and transport disruptions due to embankment failures, flooding of carriageways, slope failures and land sliding. Such events are more intense between May and August and disrupt accessibility to basic services and have a recurrent cost in terms of lives, livelihood, and sustainability of the infrastructure.

Stakeholder Engagement and Disclosure

A stakeholder engagement plan (SEP) has been prepared for the project. It focuses on the identification of, and engagement with project stakeholders, and provides guidance on inclusive and meaningful consultation and information disclosure approaches. It is a 'live' document and will be updated through the life of the project, as required, to include newly identified stakeholders, engagement methods, and the changing needs of the project. Institutional stakeholders consulted during project preparation included representatives from related government departments, including district level staff, NGOs, CSOs, private sector companies, and think-tanks. Several rounds of consultations were carried out, with distance from schools and quality of conveyance infrastructure as primary reasons for poor girls' school attendance.

Environmental and Social Impacts

The environmental risk of the project is assessed to be substantial. The project will improve access to education, health, and markets in selected districts of KP by rehabilitating selected roads (Component 1) and facilitating school transportation for girl's and female teachers (Component 2). Construction activities in Component 1 will primarily involve rehabilitation of rural roads, with a minimal amount of widening on existing rights-of-way. These activities may have negative impacts including soil erosion and pollution due to excavation of borrow areas, land leveling, and land clearing; generation of construction related solid waste which may contaminate soil and nearby water resources, and cause blockages in drainage channels; noise and air pollution generated from construction vehicles and machinery; and disturbance to important ecosystems and biological resources. The environmental risks for Component 2 will be minimal and are mostly related to the efficiency and control of emissions of the private school transport vehicles. Natural hazards such as floods and earthquakes are cross cutting risks that will apply to all components and remain relevant throughout the duration of the project. Flood risks are assessed to be high in around 6% of the long-list roads, with roads in Tank district likely to be most affected. Subprojects that are likely to impact protected areas, endangered/protected species, or sensitive/valued natural habitats and eco-systems will not be supported by the project.

The project is anticipated to have a substantial social risk rating. Risks related to Component 1 include: noise pollution and traffic congestion/safety issues due to construction equipment and increased traffic; social exclusion of vulnerable groups in project employment, particularly women and indigenous peoples; temporary or permanent involuntary resettlement and economic displacement of roadside vendors and minor encroachments along the existing rights-of-way, particularly on roads that will be widened; occupational health and safety impacts on project workers engaged in construction work; security risks to project workers and staff, especially in NMDs where security concerns are particularly salient; exacerbation of existing social conflicts; labor influx related impacts; forced labor and child labor used for construction work by contractors; and chance findings of important physical and cultural resources. Risks related to Component 2 include: misappropriation of grant funds provided to PTCs for subsidizing school transport; road safety related risks that may impact users of the school transport services; and GBV/SEA/SH risks described below. Cross-component risks include: exclusion or other adverse impacts on the Kalash, which are Pakistan's only recognized Indigenous Peoples; lack of meaningful stakeholder engagement, particularly with beneficiary and vulnerable communities/individuals; COVID-19 risks for both project labor in Component 1, and road transport users in Component 2; and community health and safety risks related to construction work and the potential for increased, higher speed traffic on the rehabilitated roads.

The SEA/SH risk assessment tool for projects with major civil works was applied to the proposed project and resulted in a Moderate SEA/SH risk rating. However, since the project also involves an education component, which will increase the likelihood of interactions between women and girls and the male operators of transport services, a Substantial rating is proposed. A GBV/ SEA/SH action plan is needed for the project to prevent risk in construction activities, and risks related to the provision of transport services to women and girls. The GBV/SEA/SH Action Plan will be prepared before project activities begin. To address safety concerns, contacts for GBV service providers, police, emergency services and helplines can be displayed in project-supported transport vehicles. The project GRM will also include necessary provisions for receiving and handling GBV/SEA/SH related concerns and grievances with applicable sensitivity and confidentiality requirements.

ESMF Implementation

Since the exact extent and precise location/footprints of individual interventions are yet to be decided, a framework approach has been adopted for the present E&S assessment. Under this approach, each subproject will be screened for the severity and extent of E&S impacts. The outcomes of the screening process will guide the selection and preparation of relevant E&S instruments.

Environmental and social management of the project will follow the procedures below:

1. Preliminary environmental and social information collection, including physical, biological, and socioeconomic baseline data for each subproject.
2. E&S screening and categorization of each subproject using the E&S Screening Checklist provided in Annex A: Environmental and Social Screening Checklist.
3. Information disclosure and stakeholder consultations.
4. Preparation of Environmental and Social Impact Assessment (ESIA) or Environmental and Social Management Plan (ESMP) for each subproject, including risks, mitigation measures, other E&S instruments, indicative budget for E&S management.
5. Clearance/approval of ESIA or ESMP from World Bank.
6. Inclusion of ESIA or ESMP and other E&S instruments in bidding documents and agreements with contractors.
7. Implementation of ESIA or ESMP and other E&S instruments by implementing agencies/contractors.
8. Monitoring the compliance with E&S instruments.

Institutional and Monitoring Arrangements

The project will be implemented by the KP Communication and Works Department (CWD). A dedicated Project Implementation Unit (PIU) will be created and housed in CWD. The PIU will be led by the Project Director (PD), who will be a senior CWD official. The PD will appoint the remaining members of the PIU, which will include specialists in procurement, environmental and social management, gender, security, communications, education, and financial management. The PIU will be supported on technical matters by a Design and Supervision (D&S) consulting firm, as well as by individual consultants to provide technical backstopping as and

when necessary, particularly in the interim period between the formation of the PIU and onboarding of its staff. The PIU will also be responsible for conducting the initial screening of subproject locations based on the checklist provided in the ESMF, and for the preparation of the Indigenous Peoples Plan as part of the ESMP where required.

Contractors will be required to prepare E&S instruments as directed by this ESMF prior to the initiation of construction activities. These will include:

- Solid Waste Management Plans
- Security Management Plans
- Traffic Management Plans
- Occupational Health and Safety Plans (as describe in the LMP)
- Physical Cultural Resources Management Plans
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The PIU through its specialists and CWD field staff will be responsible for regular monitoring on the implementation of the ESMF. This will include compliance monitoring to check whether the recommendations in this ESMF have been implemented, and effects monitoring to identify the presence and degree of any environmental and social impacts.

Monitoring will be carried out at the subproject level, with CWD field staff responsible for visiting subproject sites. A separate monitoring checklist will be developed by CWD based on the generic ESMMPs which will be used by field monitors. Subproject monitoring will be conducted as specified in the generic ESMMPs in Table 8 and Table 9.

Field monitoring data will be compiled as specified in Table 8 and Table 9 and submitted to the relevant environmental and social specialists at the PIU on a monthly basis. The PIU shall use this data to prepare ESMF implementation progress reports on a quarterly and annual basis. These reports will include progress on the implementation of activities proposed in the relevant site-specific ESMP and highlight issues and challenges that were encountered.

Grievance Redress Mechanism

The project will have a dedicated three-tier GRM for the implementing agency to receive and facilitate resolution of concerns and grievances of project affected parties, particularly with regard to the project's environmental, social, and gender performance. Such a mechanism allows for trust-building between the implementers and beneficiaries, and could help prevent discontent, conflicts, and unrest arising from the project. The GRM is designed to be accessible, culturally appropriate, and understandable to all project stakeholders.

1. Introduction

1.1. Project Background

Khyber Pakhtunkhwa is the second poorest province and least urbanized province of Pakistan, with significant urban-rural disparities that have impacted access to education, health and markets. About 80 percent of the population resides in rural areas, where forestry and agriculture are the major economic activities. The poverty is concentrated in the North (Upper Dir, Kohistan, Shangla and Buner), the South (Tank and Dera Ismail Khan) districts of the province and in the NMDs, which have a high presence of Afghan refugees. The human capital conditions (based on education, health and income indexes) reflect that the province is below the national mean and only above the Balochistan province located in the south of Pakistan. The education and income indexes of KP show big gaps compared to other provinces, which have been exacerbated by the rural conditions of the province, the migrants and the refugee influx. In this context, the improvement of access to these services is a priority for the GoP and the GoKP. Almost 40 percent of the rural population in the province must travel more than one hour to access a health facility (2nd highest in the country), 80 percent of the rural population in the KP province require more than 30 minutes of driving distance to primary schools, and 90 percent of the population of the province lives within two hours distance from an urban center. Low accessibility has a direct effect on the mortality rate, student enrollment and on the quality of agri-produce reaching markets. Further accessibility analysis shows that accessibility gaps are more pronounced in the northern and southern district of the province.

The proposed project will improve access to education, health and market in district centers of KP and create synergies to improve intra-inter village connectivity. It will improve rural roads including farm to markets and will increase economic opportunities, increase in human development due to access to education, health, etc. for the unattended/deprived districts of KP, mainly Northern region (Chitral Lower and Upper, Dir Lower and Upper, Kohistan, Torghar, Shangla), Southern region (Hangu, Bannu, Karak, Lakki Marwat, Tank, D.I. Khan) and Newly Merged Districts (Bajaur, Khyber, Kurram, North Waziristan, South Waziristan, Mohmand and Orakzai).

The proposed project is aligned with the World Bank Group's Country Partnership Framework (CPF, FY22-26) and its objectives to strengthen Pakistan's Human Capital Base and Grow Sustainably and Inclusively.

The proposed project will improve access to schools, healthcare facilities, and markets in KP. Boosting access to schools and healthcare facilities will contribute to human capital development in KP, and support CPF Focus Area 1 (Girls and Boys Education) and 2 (Growing healthy). Increasing the resilience of road infrastructure against climate change and extreme weather events, reducing pollution, promoting the use of sustainable resources, and mainstreaming climate resilience practices in infrastructure planning and investments, will contribute to achieving Focus Area 3 of the CPF PLR, which aims to promote green and clean Pakistan. The proposed project also supports the 2019-2023 Sustainable Development Strategy of KP, the Tribal Decade Strategy 2020-2030, and Coping Strategy for COVID-19, which include institutional reforms, priority allocation of resources to support the rehabilitation and maintenance of rural roads in selected areas, and income generation through employment opportunities.

1.2. Purpose of the ESMF

The KPRAP project is supported by the World Bank through Investment Project Financing (IPF) for which compliance with the Environmental and Social Framework (ESF) is required.

The ESMF is an instrument that examines the potential risks and impacts of planned activities of a project where the detailed activities of subprojects have not yet been finalized. Since the exact extent and precise location/footprints of individual interventions are yet to be decided, KPRAP adopts a framework approach through this ESMF, and sets out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts of the project. It also contains measures and plans to mitigate the environmental and social risks and impacts, provisions for estimating and budgeting the costs of these measures, and information on the agencies responsible for mitigation, including on their capacity to manage these risks.

The KPRAP PIU will use this ESMF during the planning, design, construction, and operational phases of the project to prepare site specific Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) to ensure E&S compliance at every subproject location.

2. Project Description

2.1. Project Development Objective (PDO)

The Project Development Objective is to improve rural accessibility to schools, health facilities and markets in Khyber Pakhtunkhwa

2.2. Project Locations

The project will be implemented in 18 priority districts in Khyber Pakhtunkhwa, including the Newly Merged Districts (NMDs). The priority districts are:

- **Northern region** – Chitral Lower and Upper, Dir Lower and Upper, Kohistan, Torghar, Shangla
- **Southern region** – Hangu, Bannu, Karak, Lakki Marwat, Tank, D.I. Khan
- **Newly Merged Districts** - Bajaur, Khyber, Kurram, North Waziristan, South Waziristan, Mohmand and Orakzai

2.3. Project Components

2.3.1 Component 1: Safe and Climate Resilient Access

This component will include the financing, upgradation, and rehabilitation[1] of selected rural roads in priority districts across the province, including the Newly Merged Districts. It will ensure the provision of climate resilient roads providing improved all-weather accessibility to basic services. Road improvement under this component will also consider climate resilience measures, including but not limited to raising the embankments (if need be), provision of side drains, improvement of culverts, bridges, enhanced slope protection, adopting design standards for pavements that reflects a higher level of climate resilience, a decision to seal previously gravel roads, and geometric improvement of roads to enhance road safety. Drainage design will take the effects of more frequent and increased precipitation. In addition, the component will include green techniques to mitigate effects of rainfall and high temperatures. This component will also improve infrastructure in the vicinity of education, health facilities and marketplaces to ensure safety of pedestrians and cyclists to and from these facilities. These improvements will include, but not limited to, provision of sidewalks, bike lanes (if need be), road markings, signage, traffic calming measures i.e., rumble strips, marking of reduced speed zones, delineators, and guard rails etc.

2.3.2 Component 2: Safe Girls' Journey to Schools

The project activities for this component will focus on 5 priority districts of KP, with the major enrolment and attendance gaps of girls. The specific short list of schools and beneficiary girls (primary, middle and high schools) will be selected by the Department of Education of the GoKP in the first year of the project implementation during the rehabilitation of roads. In the second year the component will be fully implemented in the 5 districts and the results will be assessed from the beginning of the third year of project implementation. This component will integrate road access (financed by Component 1) and improvement of school transport services to improve access to schools for girls in 5 priority districts.

[1] Most subprojects will consist of rehabilitation of existing roads only. In some cases, roads will be widened, but this is expected to be minimal at preparation stage. No new roads will be constructed.

This sub-component would address the issue by providing subsidized transport between home and school for girls and female teachers. Road upgrading improves access to all-season roads for the entire population. Whether this translates to improved accessibility to points of interest depends on the availability of motorized transport means.

Under this Component, Parent-teacher councils (PTCs) will sign contracts with local private service providers to arrange transport for selected female students and teachers. The project will fund the development of contracts with key performance indicators and service standards, for use by PTCs. The project will also provide per capita grants to PTCs, based on the actual number of students and teachers identified by PTCs as being eligible for subsidized transport. Parents of female students, and female teachers will be expected to bear a portion of transport costs, for greater sustainability and to avoid dependency. Transportation arrangements will leverage existing private transport service providers in the targeted districts. Inclusion of female teachers will support the goal of increasing their proportion among the teaching force in rural KP. Girls' safety will be prioritized through contracts, monitoring, and supervision.

2.3.3 Component 3: Project Management and Institutional Strengthening

This component will cover two subcomponents:

Subcomponent 3.1 Project Management. The loan resources will finance, inter alia, the administrative and operational costs related to implementation and monitoring of Component 1 and 2, technical assistance (TA), the core staff of the project implementation unit (PIU), auditing costs, capacity building for the PIU staff, education department and implementation and monitoring of the environmental and social safeguards standards (E&S)

Subcomponent 3.2 Institutional Strengthening Program. The loan will finance a comprehensive road sector reforms to improve policies for road sustainability, road funding, financing and the capacity of CWD to select, prepare, allocate efficient resources, procure and manage road works contracts including emergency works

2.4. Project Beneficiaries

2.4.1 Inhabitants of Project Districts

The project will provide better roads and access to services for around 5 million inhabitants in the target districts, of which 2.4 million are women. Improved access through better, more resilient roads will: improve opportunities for children (particularly girls) to gain education: provide access to the market labor force with a higher potential income in the long-term that will support the reduction of gender poverty; improve quality of life, particularly with regards to health. The project will also generate employment opportunities for inhabitants, particularly women, during the construction and post construction phases. Small scale farmers in the project districts will benefit through lower transportation costs, and efficient movement of time and temperature sensitive produce.

2.4.2 School-age Girls in Priority Districts

School-age girls will be supported by the improved roads, and also by the strengthening of school-transport services which will increase their access to education.

2.4.3 Female Teachers in Priority Districts

Female Teachers will benefit from improved roads, and from the provision of subsidized transportation services.

3. Regulatory Framework

This chapter provides an overview of the policy framework and legislation that applies to control possible negative environmental and social consequences of the project.

3.1. Relevant National Policies and Regulations

3.1.1 National Conservation Strategy

Pakistan National Conservation Strategy (NCS) that was approved by the federal cabinet in March 1992 is the principal policy document on environmental issues in the country (EUAD/IUCN, 1992). The NCS outlines the country's primary approach towards encouraging sustainable development, conserving natural resources, and improving efficiency in the use and management of resources. The NCS has 68 specific programs in 14 core areas in which policy intervention is considered crucial for the preservation of Pakistan's natural and physical environment. The core areas that are relevant in the context of the proposed project are pollution prevention and abatement, restoration of rangelands, increasing energy efficiency, conserving biodiversity, supporting forestry and plantations, and the preservation of cultural heritage.

3.1.2 Pakistan Environmental Protection Act, 1997

Pakistan Environmental Protection Act, 1997 (PEPA) is the basic legislative tool empowering the Government of Pakistan to frame and enforce regulations for the protection of environment. The PEPA 1997 is broadly applicable to air, water, soil, marine and noise pollution, and handling of hazardous wastes. However, after the 18th amendment, environment has become a provincial subject, therefore, the KP law will govern the proposed project.

3.1.3 Guidelines for Environmental Assessment, Pakistan EPA

The Pak-EPA has published a set of environmental guidelines for conducting environmental assessments and the environmental management of different types of development projects. The guidelines that are relevant to the proposed project are listed below:

- Guidelines for the Preparation and Review of Environmental Reports, Pakistan, EPA 1997;
- Guidelines for critical areas;
- Guidelines for Public Consultations; Pakistan EPA May 1997

3.1.4 Review of IEE and EIA Regulations, 2000

These regulations set out:

- Key policy and procedural requirements for filing an EIA;
- The purpose of environmental assessment;
- The goals of sustainable development;
- The requirement that environmental assessment be integrated with feasibility studies;
- The jurisdiction of the Federal and Provincial EPA's and Planning & Development (P&D) Departments;
- The responsibilities of proponents;
- Duties of responsible authorities;
- Provides schedules of proposals that the project requires either IEE or an EIA;
- The environmental screening process of the projects under schedule I, II and III; and

- The procedure for the environmental approval for filing the case with the concerned EPA for the granting of the NOC.

3.1.5 National Environmental Policy, 2005

NEP is the primary policy of Government of Pakistan addressing environmental issues. The broad Goal of NEP is, "to protect, conserve and restore Pakistan's environment in order to improve the quality of life of the citizens through sustainable development". The NEP identifies a set of sectoral and cross-sectoral guidelines to achieve its goal of sustainable development. Section 5 of the policy commits for integration of environment into development planning as instrument for achieving the objectives of National Environmental Policy.

Management of proposed project will ensure that the project will not add to the aggravation of the environmental issues identified in NEP and mitigation measures would be adopted to minimize or avoid any contribution of the project in these areas.

3.1.6 National Environmental Quality Standards (NEQS), 2010

In pursuance of the statutory requirement under clause (e) of sub-section (1) of section (6) of the Pakistan Environmental Protection Act, 1997(XXXIV of 1997), Pakistan Environmental Protection Agency with prior approval of the Pakistan Environmental Protection Council, has published the NEQS in 2010.

The NEQS 2000 specify the following standards:

- Maximum allowable concentration of pollutants (32 parameters) in municipal and liquid industrial effluents discharged to inland waters, sewage treatment facilities, and the sea (three separate sets of numbers);
- Maximum allowable concentration of pollutants (16 parameters) in gaseous emissions from industrial sources;
- Maximum allowable concentration of pollutants (two parameters) in gaseous emissions from vehicle exhaust and noise emission from vehicles; and
- Maximum allowable noise levels.

3.1.7 Land Acquisition Act, 1894, Including Later Amendments

The Land Acquisition Act, 1894, is a "law for the acquisition of land needed for public purposes and for companies and for determining the amount of compensation to be paid on account of such acquisition". The exercise of the power of acquisition has been limited to public purposes. This law is applicable in resettlement of the community and will ensure provision of adequate compensation of land to the affected persons.

3.1.8 Protection of Trees and Brushwood Act, 1949

This Act prohibits cutting or lopping of trees and brushwood without permission of the Forest Department. The Forest Department will be approached for permission to cut trees (if required) in or around the proposed project site.

3.1.9 Antiquities Act, 1975

The protection of cultural resources in Pakistan is ensured by the Antiquities Act of 1975. Antiquities have been defined in the Act as ancient products of human activity, historical sites, or sites of anthropological or cultural interest, national monuments etc. The act is designed to

protect antiquities from destruction, theft, negligence, unlawful excavation, trade and export. The law prohibits new construction in the proximity of a protected antiquity and empowers the Government of Pakistan to prohibit excavation in any area, which may contain articles of archaeological significance. NOC would be requested from DG Archeological Department for construction within 200 feet of cultural heritage sites.

3.1.10 Guidelines for Solid Waste Management, 2005

Guidelines for Solid Waste Management have been issued as a draft by the Pakistan Environmental Protection Agency. These guidelines explain the waste generation, discharge and composition. These guidelines should strictly be followed for safe handling and disposal of waste generated during construction and operational stages of the project.

3.1.11 Building Code of Pakistan, 1986

The provision of Building Code of Pakistan shall apply for engineering design of building like structure and related components. The construction in violation of the building code shall be deemed as violation of professional engineering work. Moreover, a certificate for the proposed action will be obtained from Provincial Building Control Authority. Seismic provisions were later added in 2007.

3.1.12 National Forest Policy, 2015

Historically, Forestry remained a provincial subject even after independence of Pakistan. In the Constitution of Islamic Republic of Pakistan 1973, Forestry is purely a provincial subject and not impacted by the eighteenth amendments in the Constitution (2010). However, the federal support to federating units for meeting international obligations and filling their financial gaps is widely acknowledged. Climate mitigation and adaptation measures are the focus of National Forest Policy in view of Pakistan's high vulnerability to adverse impacts of climate change, in particular to extreme events.

3.1.13 The Forest Act, 1927

The Forest Act 1927 is designed to protect forest areas. The law prohibits grazing hunting, quarrying, clearing for the purpose of cultivation, removing forest produce, and felling or looping trees in forest or protected areas. Section 26 of the act prohibits the clearing of land, felling trees, cultivation, grazing livestock, trespassing, mining and collecting forest reserves along with setting traps or snares and poisoning of water. Any person who contravenes shall be liable with punishment set by the law. However, after Forest Ordinance Amendment (2016) in sec 27 and 34-A of the Forest Act 1927 a subsection (3) is inserted according to which the government after approval from the provincial cabinet declares reserved forest as no more reserved and can acquire the forest land for purpose of projects of national importance. The forest act also allows the concerned authorities to regulate privately owned forests and land under certain conditions such as protection from floods or landslides, safeguarding roads, bridges and railways and preservation of public health (Sec 55).

3.1.14 Employment of Child Act, 1991

This act prohibits the employment of children in certain occupations and regulates the conditions of work of children. According to the definition in the act, a child is one who has not completed his 14th year of education. According to Section 3 of the Act, 'No child shall be employed or permitted to work in any of the occupations set forth in Part I of the Schedule or in any workshop wherein any of the processes set forth in Part II of that Schedule is carried on:

Provided that nothing in this section shall apply to any establishment wherein such process is carried on by the occupier with the help of his family or to any school establishment, assisted or recognized by Government'.

3.1.15 Occupational Health and Safety Laws

In Pakistan, the OHS in different sectors is covered in various laws. There is no single comprehensive law covering OHS. The following pieces of legislation could be relevant to the project in terms of OHS aspects:

- Factories Act 1934
- North-West Frontier Province Factories Rules 1975
- West Pakistan Hazardous Occupations Rules 1963
- Provincial Employees Social Security (Occupational Diseases) Regulation 1967
- Workmen Compensation Act 1923 and Rules 1961

However, the exact applicability of the above laws to the proposed project is subject to discussion and legal opinion.

3.1.16 The Protection against Harassment of Women at the Workplace Amendment Bill 2022

The bill was amended in 2022 to expand the definition of workplace, and to include all forms and categories of labor, including those working on short term contracts. It provides mechanisms for addressing harassment of Women at workplaces.

3.2. Relevant Provincial Policies and Regulations

3.2.1 KP Environmental Protection Act, 2014

Post the adoption of the 18th Constitutional Amendment in 2011, the subject of environment was devolved, and the provinces have been empowered for environmental protection and conservation. Subsequently, the KP Government amended PEPA 1997 as KP Environmental Protection Act 2014, and KP EPA is responsible for ensuring the implementation of provisions of the Act in KP's territorial jurisdiction. KP EPA is also required to ensure compliance with the NEQS and establish monitoring and evaluation systems. In case any project falls under Schedule I or II of this Act, the relevant IEE (or EIA where required) will be developed and submitted to EPA KP for issuing NOC before commencing any physical work.

3.2.2 KP Wildlife and Biodiversity Act, 2015

This Act provides for the protection, preservation, conservation and management of wildlife in Khyber Pakhtunkhwa. This Act is relevant because the proposed project interventions are located in areas that are rich in biodiversity and wildlife habitats. This Act describes that "any wild animal which is found dead or dying or which has been killed, caught or acquired ---- and any meat of animal, or article, product or trophy thereof, shall be the property of Government. The person in possession of such property shall be bound to hand over the possession of such property to the officer authorized". Furthermore, this Act prohibits logging and felling or removing any plant or tree; and clearing or breaking up any land for quarrying of stones or for any other purpose in a National Park.

3.2.3 KP Forest Ordinance, 2002

This Ordinance is relevant because the proposed projects are located in or around forested areas. Especially, during construction, the contractors will need to strictly abide by its provisions. This Ordinance prohibits construction of any building or shed, road or enclosure, or any infrastructure, or altering or enlarging any existing road or infrastructure in a reserved forest. It also bans any cutting, felling or uprooting any tree or brushwood listed in Schedule –I. Furthermore, it also disallows to quarry stone from reserved forests. Due to the close proximity with a number of reserved forests, the mentioned provisions of this law will need to be taken into account.

3.2.4 KP Climate Change Policy, 2016

The government of KP formulated a Provincial Climate Change Policy in June, 2016, to the specific needs of the Province. The sectors highlighted in the Policy that are also relevant to the project (Activity 2.2) include wastes, and urban planning etc. It also gives emphasis, to streamline Climate Change in different sectors of the economy and developmental projects in the Province to make a sustainable development and create resilience to natural disasters.

3.2.5 KP Commission on the Status of Women

The Khyber Pakhtunkhwa Commission on the Status of Women is a statutory advisory body established under the Khyber Pakhtunkhwa Act XIX of 2009 which was amended by the Khyber Pakhtunkhwa Assembly under the new Act XXVIII of 2016. The Commission in Khyber Pakhtunkhwa is the first ever Provincial Level Commission in the country, established with functions to oversee implementation of laws, policies and programs related to women and propose new measures where gaps exist.

3.2.6 KP Antiquities Act, 2016

The KP Antiquities Act is adopted from the Pakistan Antiquities Act of 1975 with a few minor changes. The Antiquities Act, 1975 (amended in 1990) states the following:

- "Ancient" is any object that is at least 75 years old;
- All accidental discoveries of artefacts must be reported to the Federal Department of Archaeology;
- The Government is the owner of all buried antiquities discovered on any site, whether protected or otherwise;
- All new construction within a distance of 200 feet from protected antiquities is forbidden;
- No changes or repairs can be made to a protected monument, even if it is owned privately, without approval of the responsible authorities; and
- The cultural heritage laws of Pakistan are uniformly applicable to all categories of sites regardless of their state of preservation and classification as monuments of national or world heritage.

3.3. World Bank Environmental and Social Framework (ESF)

The World Bank has defined specific environmental and social standards, compiled in the Environmental and Social Framework (ESF), which are designed to avoid, minimize, reduce, and/or mitigate the adverse environmental and social risks and impacts of a project. These standards apply to projects supported through Investment Project Financing (IPF). A summary of the environmental and social standards and their relevance to the project is provided in Table 1 below.

Table 1: World Bank Environmental and Social Standards and Relevance to the Project

Environmental and Social Standard	*Description*	*Relevance to the Project*
ESS1 – Assessment and Management of Environmental and Social Risks and Impacts	This standard sets out the Client's responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through IPF, in order to achieve environmental and social outcomes consistent with the ESF.	ESS1 is **relevant**. Potential environmental and social risks are expected and include environmental risks associated construction activities, e.g. hazardous waste generation, environmental pollution; loss of livelihoods and displacement due to project related temporary resettlement; OHS risks for project labor; exclusion of vulnerable and marginalized groups; GBV/SEA/SH risks; and community health and safety risks, including COVID-19 related risks.
ESS2 – Labor and Working Conditions	ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers fairly and providing safe working conditions. This standard applies to project workers, including full-time, part-time, temporary, seasonal, and migrant workers.	**Relevant.** The project is expected to involve direct and contracted workers, as well as third party contracted workers. The project may create some labor related risks and impacts which include lack of compliance with relevant laws and regulations, unsafe working conditions, and GBV/SEA/SH risks.
ESS3 – Resource Efficiency and Pollution Prevention and Management	ESS3 establishes the requirements for resource efficiency and pollution management and prevention during the entire project lifecycle. The objectives of this standard are to enhance the sustainable use of resources, including energy, water, and raw materials. It also aims to promote favorable conditions for human health and the environment by minimizing pollution from project activities and minimize project related emissions and avoid or minimize generation of hazardous and non-hazardous waste.	**Relevant.** Construction works under the project may generate air, water, noise, soil, and groundwater pollution. Activities may also generate solid and hazardous waste. Transportation activities supported by the project may also pose pollution risks.
ESS4 – Community Health and Safety	This standard recognizes that project activities, equipment, and infrastructure can increase community exposure to adverse risks and impacts. The objectives of ESS4 are to avoid or mitigate these adverse impacts on project-affected communities.	**Relevant**. Planned civil works may cause temporary disturbances to local communities due to traffic disruption, waste, noise, dust, etc. Road safety risks may also be introduced by the construction activities, as well as GBV/SEA/SH risks.
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on project-affected communities and individuals. Project related land acquisition may cause physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets leading to loss of livelihoods), or both. It aims to minimize or altogether avoid involuntary resettlement and provides guidance for responsible and equitable land acquisition.	**Relevant**. The project will finance civil works for the construction and rehabilitation/ upgradation of rural roads. For new roads, land acquisition may be required if suitable public land is not available. For upgraded roads, construction activities may require the temporary removal of minor encroachments and may also result in the temporary economic displacement of road-side stalls and vendors.
ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources	This standard recognizes biodiversity conservation and protection, and sustainable management of living natural resources. It gives importance to maintaining the core ecological functions of habitats and wildlife and promotes the	**Relevant.** Khyber Pakhtunkhwa contains a number of protected areas, areas with high biodiversity, and important natural resources. Project construction activities under Component 1 may have the potential to adversely impact these areas.

	sustainable management of primary production and harvesting of living natural resources. The objectives of this standard are to protect and conserve biodiversity and habitats and avoid adverse impacts on biodiversity and habitats as a result of project activities.	
ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	This standard applies to distinct social and cultural groups identified in accordance with descriptions provided in ESS10. The objectives of the standard are to ensure that the development process adopts full respect for the rights, dignity, aspirations, identity, culture of traditional local communities, and to avoid adverse impacts on Indigenous Peoples while providing them with sustainable development benefits and opportunities in an accessible, culturally appropriate, and inclusive manner.	**Relevant.** Pakistan's only recognized Indigenous Peoples, the Kalash, live in three valleys in the Chitral district of Khyber Pakhtunkhwa, where the project may be implemented.
ESS8 – Cultural Heritage	ESS8 recognizes the importance of cultural heritage as a valuable source of scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity. This standard sets out measures to protect cultural heritage throughout the lifecycle of the project.	**Relevant.** Khyber Pakhtunkhwa is rich in cultural assets, and there is a possibility for the project to be implemented in areas near these assets.
ESS9 – Financial Intermediaries	ESS9 recognizes that strong domestic capital and financial markets, and access to finance are important for economic development, growth, and poverty reduction. The objectives of ESS9 are to set out how to assess and manage the environmental and social risks and impacts associated with the project, and to promote good environmental and social management practices in the project's finances.	**Not relevant.**
ESS10 – Stakeholder Engagement and Disclosure	This standard recognizes the importance of open and transparent engagement between the Client and project stakeholders as an essential element of good international practice. The objectives of ESS10 are to establish a systematic approach to stakeholder engagement that will build and maintain constructive relationships, assess the level of stakeholder interest and support for the project, and to enable stakeholders' views to be taken into account in project design and E&S performance. It also provides guidance on promoting and providing means for effective and inclusive stakeholder engagement throughout the life of the project.	ESS10 is **relevant** as effective stakeholder engagement and information disclosure will be crucial to the project.

3.4. Gap Analysis of Relevant ESS and Local Regulations

The table below summarizes the gaps identified between the World Bank's ESF, and the relevant national and provincial laws and regulations.

Table 2: Gap Analysis of ESF and Local Regulations

Environmental and Social Standard	*Relevant Local Regulations*	*Gaps Identified*
ESS1 – Assessment and Management of Environmental and Social Risks and Impacts	KP Environmental Protection Act, 2014 Guidelines for Environmental Assessment, Pakistan EPA Review of IEE and EIA Regulations, 2000	The criteria mentioned in the Acts for classifying environmental and social risk is different than in the ESF. Review of IEE and EIA Regulations, 2000 mainly focus on environmental assessment and management through Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) whereas social assessment is cursory. The different methods and tools (ESIA, environmental and social audit, commutative impact assessment, ESMP, ESMF, regional and sectoral ESIA, SESA etc.) for environmental and social impact assessments, referenced in the ESF, are not part of the National and Provincial legislation.
ESS2 – Labor and Working Conditions	Employment of Child Act 1991 Factories Act 1934 North-West Frontier Province Factories Rules 1975 West Pakistan Hazardous Occupations Rules 1963 Workmen Compensation Act 1923 and Rules 1961 Protection against Harassment of Women at the Workplace Amendment Bill 2022 KP Commission on the Status of Women	National and Provincial laws address most of the requirements of the ESS2. However, the implementation of these laws and the management of certain issues addressed under ESS-2, such as OHS, GBV/SEA and Violence Against Children (VAC), prohibition of children in hazardous work and child labor in general and protection against discrimination of religious minorities (many formal sector workers belong to religious minority groups) are not done effectively as detailed coverage of certain requirements is partial. There is no specific requirement for employers to establish a workers' grievance mechanism.
ESS3 – Resource Efficiency and Pollution Prevention and Management	National Energy Efficiency and Conservation Act, 2015 KP Environmental Protection Act, 2014	National and provincial laws address most of the requirements of ESS3, particularly on pollution prevention
ESS4 – Community Health and Safety	Pakistan Penal Code, 1860 National Disaster Management Act, 2010	ESS4 recommends borrower to take measures to avoid or minimize the transmission of communicable diseases due to the influx of the temporary or permanent project labor. However, there is no law (national and/or provincial) dealing with transmission of water-borne, water based, water-related, and vector-borne diseases, communicable and non-communicable diseases that could result from project activities.
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Land Acquisition Act 1894 KP Land Acquisition (Amendment) Act, 2020	Screening is limited to physical survey of land, there is no consideration of social risks in the LAA No formal stakeholder consultations required by the LAA, or in host communities in case of resettlement No provisions are made for vulnerable groups in the LAA

		No provisions for livelihood restoration and improvement, and no additional assistance beyond compensation for land acquired and loss of livelihood in the LAA Land assets and structures are valued at market value in the LAA, instead of replacement cost in the ESS No compensation for non-titleholders in the LAA, while ESS5 requires all parties affected by land acquisition to be compensated.
ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources	National Forest Policy, 2015 The Forest Act, 1927 KP Wildlife and Biodiversity Act, 2015 KP Forest Ordinance, 2002	Forest Ordinance does not provide regulatory basis enabling to meet social needs of forest-dependent communities while preserving forest ecosystems, preventing forest degradation and depletion of its resources. Ecosystem services are not referred in the provincial legislation. Forest conservation practices do not meet with the international principles and criteria of sustainable forest management.
ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	N/A	A significant gap is represented here—there is no law, national or provincial, dealing with the rights and protection of Indigenous Peoples
ESS8 – Cultural Heritage	Antiquities Act, 1975 KP Antiquities Act, 2016	The provincial legislation is silent regarding Development of Physical Cultural Resource Management Plan. There is no provision related to tangible and intangible cultural properties. The provincial legislation is silent about the disclosure of information regarding cultural heritage due to the safety or integrity of the cultural heritage or would endanger sources of sensitive information from public disclosure.
ESS10 – Stakeholder Engagement and Disclosure	KP Environmental Protection Act, 2014 Guidelines for Environmental Assessment, Pakistan EPA Review of IEE and EIA Regulations, 2000	Stakeholder engagement in public sector development projects is not done effectively. It is also not carried out throughout the project lifecycle on issues that could potentially affect relevant parties. Also, there is no proper mechanism to record the grievances.

4. Environmental and Social Baseline

4.1. Physical Environment

This climactically diverse province spans six climactic regions: semi-arid lowland, semi-arid highland, sub-humid, humid, and arid. The mountainous northern region is marked by temperate summers (not climbing above 38C) and very cold winters, while the southern region experiences maximum temperatures ranging between 47C and 50C. Khyber Pakhtunkhwa has two wet seasons, the summer monsoon from June to September, and the winter from October to November. Annual precipitation varies throughout the province, exceeding 1000 mm in northern areas and dropping below 250 mm in the south.

The terrain of Khyber Pakhtunkhwa is dominated by mountains, with the Hindu-Kush range in the north-west, the Himalayas in the north-east, and the Safed Koh-Charat range in the south. There are also plains irrigated by multiple rivers.

Khyber Pakhtunkhwa's water resources and availability vary from a shortage in the south to an abundance in the north. The province relies on three sources of water: precipitation, streams and rivers, and groundwater.

Surface water comes primarily from the Kabul, Swat, Chitral, Kunar, Siran, Panjkora, Bara, Kurram, Dor, Haroo, Gomal, and Zhob rivers. The southern part of the province contains some rivers too, but many dry up in the winter, causing shortages and the need to tap into ground water supplies[2].

There is no province-wide assessment of groundwater available for Khyber Pakhtunkhwa, but regional studies indicate ground water depletion for drinking water as well as agricultural purposes. The depletion is more severe in the south. Studies also reveal significant biological contamination in 55% of samples[3].

Compared to other provinces, KP is especially vulnerable to climate change given its terrain and topography. Between 1970 and 2020, 20 extreme weather events including floods, landslides, and avalanches impacted KP.[4] Climate change is a direct cause. Significant increasing trends (1960-2020) in annual rainfall and temperature patterns have been observed in some KP districts.[5] which have impacted mainly agriculture production and the access to basic services in the Northern, Newly Merged Districts (NMDs) and Southern KP districts. Due to the lack of resilient infrastructure, these natural calamities have also impacted lives, livelihoods and disrupt access and connectivity between districts and rural communities. For instance, heavy flooding in 2010 severely damaged the road network in KP, resulting in loss of connectivity, increasing transport costs, unemployment and negatively impacting farmers' income.

Air pollution is a growing problem in Khyber Pakhtunkhwa, particularly in urban areas. The primary causes for this are: increasing dependence on coal, rapid growth in vehicle population,

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[2] ESMF for Khyber Pakhtunkhwa Irrigated Agriculture Improvement Project. World Bank, 2019. Accessed from: http://kp.gov.pk/uploads/2019/04/ESMF_Pub_Disclosure.pdf

[3] ESMF for Khyber Pakhtunkhwa Irrigated Agriculture Improvement Project. World Bank, 2019. Accessed from: http://kp.gov.pk/uploads/2019/04/ESMF_Pub_Disclosure.pdf

[4] https://www.pmd.gov.pk/rmc/rmcpesh/htmlpages/KP-disasterevents.html

[5] Rainfall trend analysis and weather forecast accuracy in selected parts of Khyber Pakhtunkhwa, Pakistan, SN Applied Sciences, article 575, 2021. https://link.springer.com/article/10.1007/s42452-021-04457-z. February 2022.

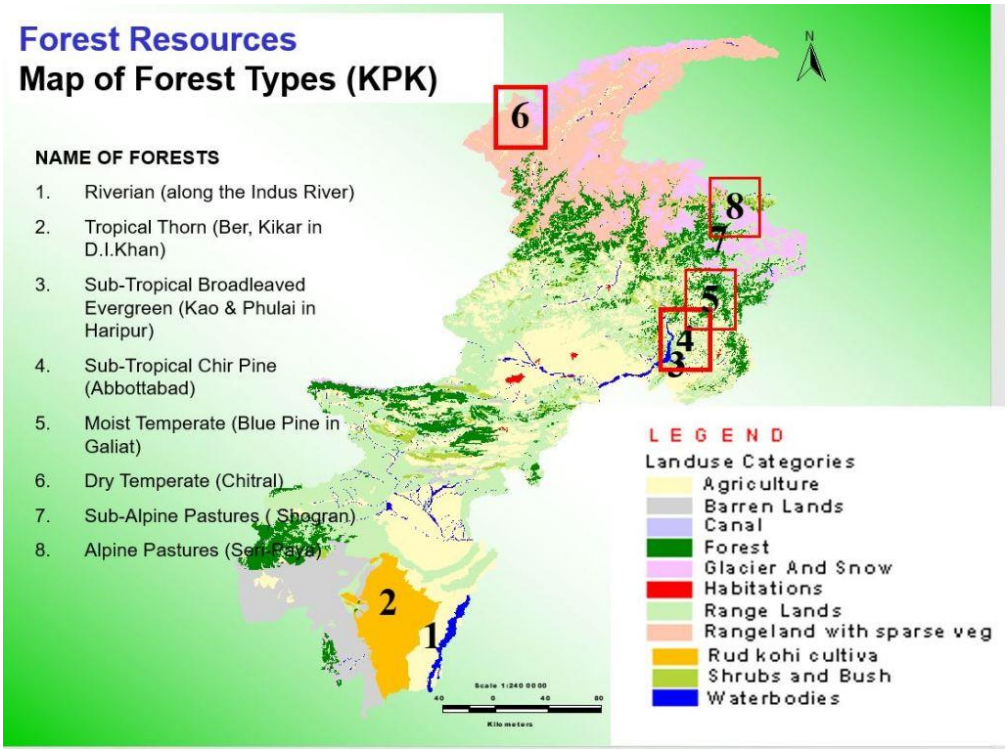
solid waste burning, and increasing industrial output.[6] Noise pollution is increasing in the province as well, causing health problems such as insomnia, heart disease, and cognitive distress. Vehicle horns and auto rickshaw silencers are two main contributors to growing noise pollution. There is no data available outside of urban centers, but lack of commercial activity and decreased vehicle use likely keeps these areas safe from noise pollution.[7]

4.2. Biological Resources

Khyber Pakhtunkhwa hosts approximately 4500 species of plants, 100 mammals, 466 birds, 66 reptiles, and 118 fish species across various ecosystems including forests, meadows, rangelands, and wetlands. The province is home to a diverse array of fauna, particularly in its northernmost regions. Some species found in Khyber Pakhtunkhwa include the Himalayan ibex, markhor, and snow leopard. The most vulnerable species in the region include the Himalayan brown bear, vole, Demoiselle cranes, cinereous vulture, and snow leopard. Some reasons for their vulnerability are political instability, increasing human population in their ecosystems, and climate change.

Over 20% of the province is covered in forest. Khyber Pakhtunkhwa has designated over 650,000 hectares of land as protected.

Figure 1: Land Cover Map of KP



The country's most significant tract of west Himalayan temperate forests is located in Palas Valley of the province, which belongs to a Himalayan moist temperate coniferous forest ecosystem, extending over Abbottabad, Mansehra and Swat. The plant species in this region

[6] ESMF for Khyber Pakhtunkhwa Irrigated Agriculture Improvement Project. World Bank, 2019. Accessed from: http://kp.gov.pk/uploads/2019/04/ESMF_Pub_Disclosure.pdf

[7] ESMF for Khyber Pakhtunkhwa Irrigated Agriculture Improvement Project. World Bank, 2019. Accessed from: http://kp.gov.pk/uploads/2019/04/ESMF_Pub_Disclosure.pdf

include the conifers, such as blue pine, spruce, yew, fir, birch and rhododendron. Mammals include the endangered snow leopard and blue sheep.

Other forest ecosystems of the province are: forest ecosystem of cold desert and snowfields in Hindu Kush Mountain region of Chitral; steppe pine forest ecosystem in the lower valleys of Chitral, Kohistan, and high elevation parts of Dir; alpine meadows of Kaghan Valley and eastern Hindu Kush Mountain Ranges in Swat and Kohistan; sub-Alpine scrub and birch ecosystem in upper Swat and Kaghan valleys; dry temperate coniferous forest ecosystem of upper Kaghan in Mansehra district, Kalam in upper Swat and Dir district; subtropical pine forest ecosystem in Haripur, Abbottabad, Mansehra, Buner and Swat; dry subtropical semi evergreen scrub ecosystem on the foothills of Hindu Kush and Himalayan mountains in the districts of Haripur, Abbottabad, Mansehra, Buner, and Swat; and tropical thorn ecosystem in the southern districts.

There are four types of rangelands or pastures in the province: alpine pastures lying above 3,000 meters altitude and below the snowline, with forage productivity of 1,500 kg/ha; trans-Himalayan grazing lands at 2,300-3,300 m elevation, with forage productivity of 300-1,200 kg/ha; Himalayan Forest grazing lands in 1,000-2,000 m altitude, with forage productivity of 200-3,000 kg/ha; and arid/semi-arid grasslands at around 250 m elevation and having forage productivity of 400-500 kg/ha.

Khyber Pakhtunkhwa province has the richest diversity of flora and fauna in the country, owning to variety of its climatic zones. The tree species include conifer, Himalayan spruce, Indian pine, silver fir, cedar, pine nut, birch, Himalayan pistachio, horse chestnut, maple, Himalayan poplar, ash, walnut, oak, gum, babul, Indian olive, black locust, Indian rosewood, mulberry, Indian plum, and chinaberry. In addition to the timber tree species, there are various economic, medicinal and aromatic non-timber species, which produce wild fruits and vegetables, mushrooms, resins, gum, fibres, silk cocoons.

The high-altitude northern parts are home to: Himalayan ibex; markhor; snow leopard; Himalayan bear; Himalayan snowcock; and snow partridge. The alpine and sub-alpine regions of the province host species, such as Himalayan ibex, markhor, Western Tragopan and Monal pheasants. The moist and dry temperate forests in the districts of Chitral, Dir, Swat, Mansehra and Abbottabad provide habitats to species, such as Himalayan black bear, common leopard, grey goral, Koklass pheasant and Kalij pheasant. The lower reaches of Himalaya and Hindu Kush, where the sub-tropical scrub forests exist, provide habitat to rhesus macaque, urial, common leopard and birds like Chir pheasant, black partridge, Chukar partridge and See-see partridge. Notable species in the desert and thorn forests of the province include chinkara, cape hare, Afghan urial, grey wolf, sandgrouse and houbara bustard. Khyber Pakhtunkhwa holds the world's largest populations of Kashmir Markhor and western Tragopan pheasant and contains Endemic Birds Areas, as designated by the Birdlife International. The wetlands host numerous species of migratory water birds, including swans, geese, ducks, waders, falcons and cranes. demoiselle crane, Eurasian cranes, houbara bustard, Saker falcon, peregrine falcon, bar-headed goose, and red-crested pochard[8].

The number of Protected Areas[9] notified in Khyber Pakhtunkhwa includes 6 national parks, 3 wildlife sanctuaries, 38 game reserves, 90 community game reserves, 16 private game reserves,

[8] ESMF, KP Irrigated Agriculture Improvement Project,2019

[9] http://kpwildlife.com.pk/pa.html

2 wildlife refuges and 8 wildlife parks. The combined area of all the Protected Areas is 666,340.368 hectare (ha).

4.3. Poverty, Social, and Gender Assessment

KP has the second highest instance of poverty, and major gaps in human capital development. shows a breakdown of human development indicators for each province. The income index shows that KP (including the NMDs) are the second poorest regions in the country. The province also has big urban-rural disparities: the 2014/15 Multidimensional Poverty Index (MPI) for instance, is 0.042 and 0.295 for urban and rural areas, respectively. The KP province is the least urbanized in Pakistan. Poverty is concentrated in the northern (Upper Dir, Kohistan, Shangla and Buner) and southern districts (Tank and Dera Ismail Khan), and in the NMDs, which have a high presence of Afghan refugees. Education and health indices for KP and the NMDs are also among the lowest in the country, and below the national mean - only Balochistan ranks below.

Table 3: HDI for Pakistan Provinces and Areas

Areas and Provinces	*Sub-national HDI*	*Health*	*Educational*	*Income*
National	0.56	0.73	0.40	0.59
Islamabad (ICT)	0.68	0.79	0.59	0.67
Khyber Pakhtunkhwa (KPK)	**0.53**	**0.76**	**0.34**	**0.56**
Balochistan	0.48	0.73	0.26	0.57
Punjab	0.56	0.71	0.42	0.60
Sindh	0.53	0.73	0.36	0.57
Azad Jammu and Kashmir	0.61	0.73	0.52	0.61
NMDs	**0.47**	**0.83**	**0.25**	**0.48**
Gilgit Baltistan	0.59	0.70	0.47	0.63

Source: Global Data Lab, https://globaldatalab.org/shdi/2019/human-development/PAK/?levels=1%2B4&interpolation=1&extrapolation=0&nearest_real=0

KP has a large gender disparity in terms of access to education. In the NMDs, more than 70 percent of girls from primary to high school are out-of-school. KP has lower rates of OOSC (34 percent overall), but gender disparities are large (49 percent of girls are OOS, compared to 21 percent of boys). The low enrollment is compounded by high dropout rates, with NMDs once again performing the worst and KP having the widest gender gaps.

Large home-to-school distances and difficult commuting conditions disproportionately affect girls' participation in education. In a 2021 phone survey,[10] among children that have never enrolled in school, 27% was due to accessibility reasons – (i) "commute to school is difficult", and (ii) "no school in village". Accessibility issues were second only to affordability ("school is too expensive" - 32%). Among those that cited "commute to school is difficult": (i) distance to school, (ii) cost of transportation, and (iii) transport safety were the top three reasons cited. These points were corroborated by focus group discussions (FGDs) involving rural stakeholders

[10] A phone survey was undertaken by Gallup, on behalf of the World Bank Education and Transport GPs in November 2021. The survey targeted 5,201 families with school-going children across Pakistan, 3,551 of which were in KPK. 38 percent of these families were those with female children. 4,782 families (around 92 percent) had children were currently attending school, and 419 (around 8 percent) families of children that were out of school. Families were asked detailed questions on reasons behind participation and regular attendance, or lack thereof, in schools, with a particular focus on transport and accessibility issues.

in Peshawar and Swat.[11] Large distances make walking to school difficult. Estimates of home-to-school walking distances based on household surveys show that nearly 40 percent of rural middle schools and 50 percent of rural secondary schools are more than 2 km away in KP. These proportions are much worse than the national averages for the same metrics - 20 percent for middle schools and 35 percent for secondary schools. Large distances have been shown to significantly impact enrollment and regular attendance, particularly of girls.[12]

Safety on route to school is a key concern for parents**.** Safety was the third most important reason why phone survey participants cited the commute to school as being difficult. FGD participants generally preferred schools to be located within their villages and had safety concerns with children attending schools outside their villages. Parents generally did not prefer their girls to walk to school unaccompanied but did not always have the time to accompany their children, posing issues for regular attendance, or even enrollment. For schools that are further away, parents were generally comfortable with their children taking transport options, such as vans or rickshaws, operated by private service providers that were known to the community. However, they preferred to know the name, contact details and Computerized National Identity Card (CNIC) numbers of drivers for added assurance. Parents also cited the possibility of security/safety incidents or harassment along the way, as a cause for concern. Parents preferred gender-segregated transport means, possibly due to a combination of social norms and concerns over safety.

Poor network conditions and the lack of all-weather access to roads heighten risk perceptions**.** Gaps in climate resilience of road infrastructure were discussed above. The lack of all-weather access to roads disrupts regular attendance of children in school. FGD participants mentioned how road access is sometimes blocked during winter. Rural areas are often served by narrow and run-down roads, which, coupled with non-signalized junctions and generally poor infrastructure, present serious challenges to road traffic safety. Roads in rural areas also lack adequate pavements and crossover points, raising the likelihood of vehicular-pedestrian accidents.[13] Rural areas also have problems associated with rural provincial roads. The Mardan-Swabi road for instance, runs through 53.9 km of agricultural land and serves many surrounding villages and rural localities. However, local use of this road, predominantly by means of motorcycles and rickshaws, results in blend of fast and slow-paced traffic, increasing the risk of collisions.[14] Lastly, the road safety situation is worsened by the high frequency of unlicensed

11 Two FGDs were conducted by the Transport and Education GPs in Peshawar and Swat in November 2021. Participants of FGDs included: parents, parent teacher committee members, Benazir Income Support Program beneficiaries, teachers, education officials, and NGO representatives. The Peshawar FGD had 37 participants (20 female), and the Swat FGD had 41 participants (26 female). The objectives were to understand and map stakeholders' perceptions and experiences on the barriers to girls' participation in education, and also understand education accessibility gaps for girls, particularly from a transport angle.

12 Theunynck & Rabakoson, 2017.

13 In the rural circles of Peshawar for instance, between 2003 to 2012, there were around 40 fatal and 75 non-fatal road crashes each year. On average, 26 pedestrian deaths occurred each year in the rural northern and southern parts of the city, while 52 pedestrians were injured annually. Shah, S. A. A., Ahmad, N. & Ha, A. B., 2018. Pedestrians' Exposure To Road Traffic Crashes In Urban Environment: A Case Study Of Peshawar, Pakistan. Journal of the Pakistan Medical Association, 68(4).

14 ADB, 2018. Proposed Loan for Additional Financing Islamic Republic of Pakistan: Khyber Pakhtunkhwa Provincial Roads Improvement Project, s.l.: Asian Development Bank.

drivers across the country, including in KP. Unlicensed drivers exhibit poor compliance with traffic rules, increasing road casualties.[15]

Poor school accessibility is also partly due to construction decisions being driven by subjective considerations. The KP education department is divided into Elementary and Secondary Education (E&SED) and Higher Education. Both departments prepare a list of schools and colleges to be constructed, which are reflected in the Provincial Annual Development Program, and approved by the Provincial Assembly as part of the Budget process. Once the projects are approved, the concerned education department then seeks the services of CWD for their design, costing, tendering and construction. Once construction is complete, the facilities are handed over to the concerned education department for operation. There is currently no data-driven process that optimizes site selection, based on accessibility to population centers. In the absence of such processes, prioritization of facilities to be constructed and site selection is often politically driven.

Accessibility and affordability of health services, especially in the northern and southern districts of the province, is a major issue, and considerable time is spent waiting for transportation and traveling to health facilities. The inability to travel to healthcare facilities, for instance, has been associated with increased mortality and morbidity from treatable conditions. Conversely, improved access is often synonymous with improved development outcomes. For example, women with access to roads in Pakistan are twice more likely (14% vs 28%) to go to pre-natal consultations. The coverage of Antenatal Care (ANC) by skilled providers is 80 percent, while the proportion of women receiving a postnatal check-up within two days of delivery is only 43 percent. Low accessibility has a direct effect on the mortality rate due to low prenatal and postnatal care, low immunization, informal births, and lack of paternal care. KP's maternal mortality rate is 158 per 100,000 live births while infant mortality rate is 33 per 1000 live births. Analyses of existing and new household data suggest that transport availability and distances that must be traveled rank among the main constraints for people, including specifically women of child-bearing age, to travel to healthcare facilities. Poor rural road conditions also lead to increased vulnerability in the face of public health emergencies (such as the COVID-19 pandemic), hindering access to essential medical services and preventive measures such as vaccines.

Poor market integration can hurt smallholder farmers in the province. The agriculture sector provides livelihoods to 85 percent of the KP population, accounts for 20 percent of the provincial GDP and employs 40 percent of the labor force. Geospatial analyses show big gaps in access to markets, particularly in the northern and southern districts of the province. This, coupled with inadequate storage facilities, leads to significant post-harvest losses and an overall grim outlook for the province's agriculture output - less than 10 percent of the total production of fruits and vegetables is processed in KP.[16] Factors such as poor road conditions, great distances from farms to major urban centers and markets, as well as high transportation costs for southern districts are also attributed to these losses. A well-connected rural road network is critical to enhancing the income opportunities of farmers. Sustainable and all-weathered roads can aid in linking farmers to markets and buyers, thereby ensuring the efficient distribution of their produce. As a result, strengthening rural road infrastructure can raise agricultural productivity and output, boost the economic activities and livelihoods of farming communities, and alleviate rural

15 GOP, 2019. National Guidelines For Driver Licensing, Islamabad: Government of Pakistan, Ministry of Communications.

16 Based on data from Planning Commission and the World Bank's estimates.

poverty[17] In Punjab, for instance, the construction of approximately 8104 km of rural roads in several districts, carried out under a rural road development program, is estimated to have generated Rs. 5559 million in annual monetary benefits for wheat farmers in those districts.

Low climate resilience of rural roads has impacted economic activity during summers. Extreme climate causes road damage and transport disruptions due to embankment failures, flooding of carriageways, slope failures and land sliding. Such events are more intense between May and August and disrupt accessibility to basic services and have a recurrent cost in terms of lives, livelihood, and sustainability of the infrastructure. For example, only in the district of Chitral (North KP) the damage to roads and bridges due to the 2015 floods and landslides was PKR 4,289.26 million (US$42 million)[18]. In addition, the transport service was interrupted during the flooding, affecting the poorest rural villages of Chitral.

[17] Chaudhry, A., Mazher, U., Khan, M. H. & Tahir, M. A., 2020. How Rural Roads Affect the Farmers? An Empirical Analysis of Farm- Gate Prices in Punjab, Pakistan, Lahore: Punjab Economic Research Institute (PERI).

[18] Chitral Floods 2015: Recovery Needs Assessment and Action Framework Provincial Disaster Management Authority Khyber Pakhtunkhwa, December 8, 2021. https://www.pdma.gov.pk/sub/uploads/Chitral%20Floods%20-%20Recovery%20Needs%20Assessment.pdf

5. Stakeholder Engagement and Disclosure

5.1. Objectives of Stakeholder Engagement

KPRAP has been prepared under the World Bank's Environmental and Social Framework (ESF). Through the Environmental and Social Standard 10 (ESS10: Stakeholder Engagement and Information Disclosure), the ESF requires the timely, relevant, understandable, and accessible disclosure of project information in a way that is free of manipulation, interference, coercion, discrimination, and intimidation.

The requirements of ESS10 are addressed through the Stakeholder Engagement Plan (SEP) which outlines the ways in which the project team will communicate with stakeholders and includes a mechanism by which stakeholders can raise concerns, provide feedback, and make grievances related to project activities. It does this by:

- Establishing a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build a constructive relationship with them, particularly with project affected parties (APs)
- Assessing the level of stakeholder interest and support for the project, and to enable stakeholder views to be taken into account in project design and environment and social performance
- Promoting and providing means for effective, inclusive engagement with project APs throughout the project lifecycle
- Ensuring that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible, and appropriate manner

The SEP focuses on the identification of, and engagement with project stakeholders, and provides guidance on inclusive and meaningful engagement. It is a 'live' document and is updated through the life of the project as required to include newly identified stakeholders, engagement methods, and changing needs of the project.

5.2. Stakeholder Identification

5.2.1 Affected Parties (APs)

Affected Parties are the stakeholders that are likely to be affected by the project because of actual impacts or potential risks to their physical environment, health, security, cultural practices, well-being, or livelihoods. The APs identified for this project are provided below.

- CWD Provincial Headquarters
- CWD District Offices
- Elementary and Secondary Education Department
- School bus drivers
- Small farmers
- Female teachers
- Female Students
- Parent Teacher Councils
- Communities adjacent to targeted roads

5.2.2 Other Interested Parties (OIPs)

Other interested parties are those stakeholders (individuals, groups, or organizations) with an interest in the project, which may be because of the project location, its characteristics, its impacts, or matters related to public interest. For example, these may include regulators, government officials, the private sector, the scientific community, academics, unions, women's organizations, other civil society organizations, and cultural groups.

In the context of the project, OIPs include provincial government departments, universities and academia, and local and international NGOs. Though these stakeholders are not directly involved in the project activities, they may have sector specific experience and knowledge that can assist informed decision making for the project.

The following OIPs have been identified for this project:

- KP Planning and Development Department
- Office of the District Administration (Deputy Commissioner)
- Pakistan Poverty Alleviation Fund
- Right to Information Commission, KP
- Right to Public Services Commission, KP
- Provincial Environmental Protection Agency
- Labor department
- Agriculture Department
- Health Department
- Environment Conservation Organization
- KP Archaeological Department
- Forest, Fisheries and Wildlife Departments
- Peshawar Electric Supply Company (PESCO)
- Pakistan Institute of Labor Education and Research
- Pakhtunkhwa Highways Authority
- Department of Finance
- Private transport providers in target districts
- The Children's Foundation (TCF)
- Provincial Commission on the Status of Women
- Workers Welfare Board
- KP NGOs like Sarhad Rural Support Programme (SRSP), Kalam Development Foundation (KDF), Khwendo Kor (KK), HomeNet Pakistan
- Organizations with outreach to the Kalash Community like Kalash Peoples Development Network (KPDN), Aga Khan Rural Support Program (AKRSP)
- Village organizations in target areas of districts
- Community Organizations in target areas of district
- Peoples Commission for Minorities Rights
- International Labour Organization (ILO)
- Academia such as University of Peshawar, Sarhad University and Institute of Management Sciences (IMS)
- Media such as journalists reporting on roads, infrastructure, economy and employment in KP

5.2.3 Disadvantaged/Vulnerable Individuals and Groups

This category includes stakeholders who may be more likely to be adversely affected by the project impacts and may be more limited than others in their ability to take advantage of a project's benefits. Such stakeholders are usually amongst the lowest income groups or those often excluded and likely to face difficulties accessing technology. The project will promote active citizen engagement to identify project-relevant gaps and monitor outcomes. Extensive consultations will be undertaken with disadvantaged communities during project design and implementation, including focus groups, field visits and round table discussions. Feedback mechanisms, such as regular consultation on project implementation and satisfaction surveys on the accessibility and safety of rehabilitated roads and improved transport to school will also be in place. These vulnerable groups can offer insights on barriers and bottlenecks to services in terms of access and otherwise. Consultations with them would be critical to inform program design and implementation.

Their vulnerability may stem from ethnic or religious backgrounds, gender, age, health, disability, economic deficiency/financial insecurity, disadvantaged status in the community (e.g. ethnic and religious minority groups, indigenous peoples, women and girls, etc.) and dependence on other individuals or natural resources.

It is important to ensure that these stakeholders are able to safely and openly participate in the consultation process, and care must be taken to consider their sensitivities and cultural differences to ensure that they fully understand the project activities, risks, and benefits.

The following disadvantaged/vulnerable individuals and groups have been identified for the project:

- Women and girls in beneficiary households
- Female staff from implementing departments
- Religious and ethnic minorities
- Elderly people
- Differently abled citizens
- Transgender people
- Indigenous People of Kalash (living in 3 valleys of Chitral District in KP province)
- IDPs
- Refugees (for example Afghans)
- Female-headed households, especially within IDPs

5.3. Stakeholder Engagement Plan

The standalone Stakeholder Engagement Plan (SEP) prepared and disclosed for the project provides a detailed list of stakeholders consulted and to be consulted during project design and implementation, the mode of consultations, frequency and responsibilities. The SEP, being a live document is to be updated throughout the life of the project to ensure effective, robust and transparent stakeholder engagement.

5.4. Key Findings from Stakeholder Engagement

Program preparation included a detailed mapping of the stakeholders. Individuals and groups likely to be affected (direct beneficiaries) were identified. Initial mapping of other interested parties such as other relevant Government agencies, national organizations and private sector organizations has also been completed. Following initial disclosure and with the commencement

of implementation of the program, the SEP will be updated based upon subsequent consultations with various stakeholder groups. These will include key informant interviews and in-depth discussions to learn about their expectations and concerns.

The SEP initially prepared by the client and disclosed publicly (website of the implementing agency CWD) will be updated during the early implementation phase. CWD will also strengthen its existing GRM to enable stakeholders to air their concerns/ provide feedback/ suggestions.

Preliminary discussions were held during the preparation stage of the program in March 2022. Since the CWD has South, North and East Divisions and directorates, the consultations were arranged based on the location of directorates of the CWD, having the best infrastructure and availability of conducive meeting point. With regard to the public consultations, the community members were notified in advance to assemble in common/designated places. Mainly key informants were consulted for these meetings which were carried out in an open and frank atmosphere conducive to appreciation of the basic elements of the project. Information on positive and negative impacts associated with the construction and operational stages and mitigation of adverse impacts was also shared at these consultations.

Two community consultations were held, one in Hazara Division (representing Buner, Chagharzai, Gagra, Gadazai, Dagar, Maidar, Khadukhel tehsils) and the other in Khyber Division representing Bara, Jamrud, Landi Kotal and Mula Gori). A total of 188 people were engaged with through these two focus group discussions. The feedback obtained is presented below in Table 4.

Table 4: Stakeholder Consultations at Preparation Stage

Stakeholder	*Date*	*Venue*	*Number of Participants*	*Key Aspects Discussed*
Communities in Hazara Division	11 March 2022	Govt Centennial High School Buner	Males - 69 Females - 23 Total - 92	The participants informed that tehsil Chargarzai is the most remote are in the district and it lacks basic infrastructure like girl schools. There is only one girl's primary school in this tehsil which is very far away and the villages don't have proper access roads to the school which is why the attendance is very low. This tehsil is also a snow bound area and in winters it becomes very difficult for everyone to mobilize and reach the markets and hospitals. The Community raised concerns that most small villages are on top of the mountains and the nearest schools are almost 10kms away with no proper roads or any access which makes it very difficult for them to send their children to schools. They were also concerned about the fact that the districts lack schools. especially secondary and high schools. There is no proper school for girls after primary and the ones that exist are very far away and they are not able to send their girls to school every day which is why most of them drop out. The community assured the CWD representatives that if proper infrastructure is provided, they will ensure that their girls get the necessary education needed for their welfare. One of their grave concerns was that because of no access to roads, their females face a lot of difficulty when they are pregnant and some mostly don't reach the hospitals in time. This lack of roads has also resulted in mothers dying on route to the hospitals while being carried on beds. A member of the minority Sikh community was also present and mentioned that they have a Gurdwara in the area which has no access road at all. While talking about the current situation of the roads, the community stated that almost all the roads are in a very bad condition with no maintenance at all. Most of the roads were left incomplete and have now worsened. The quality of the roads built

				is very poor. There are no proper drains and during rains, pot holes emerge and they further ruin the road condition. The fugitive dust emission is common due to the lack of a paved road, the improved road structure will improve the air quality and will reduce the dust emissions. Currently there is no bus service in the area and they welcomed the idea that if proper access roads are made and a bus service is provided for the children to go to schools, then they assured that the attendance of children will improve without a doubt.
Communities in Khyber Division	15 March 2022	Khyber (Bara)	Males - 72 Females - 24 Total - 96	Due to military operations in the area, the roads network is deteriorated causing inconvenience to the local community, school going children and medical patients. The communities demanded that the project should create jobs for local communities. The infrastructure of schools for boys and girls is not in a good condition and thus requires substantial improvement. Sparse facilities for female medical treatment are available in the area. Improved medical facilities for both men and women are required.

In both FDGs, specific concerns voiced by the women in the sessions are outlined below.

- Community females were not aware of any forum to raise grievances regard the road quality.
- The condition of the roads is very bad and there are breakers potholes in some places which makes it difficult to travel.
- Some roads are broken from place to place as a result some children slip and get injured and absent from school for many days.
- In some areas there are no roads at all, which making it very difficult to travel school, market and hospitals.
- According to a female that she was harassed by a man on the way to NADRA office.
- Due to Pakhtun culture if a man sees women on the way, then the women are not allowed to go out of their homes. This is why some girls dropped out of school or do not get admission in school at all. 30% of the girls from all population enrol in schools but 70% of girls are unable to continue their education due to poor condition of roads, long distances to school from home and poverty because they cannot afford vehicles.

The CWD team also held some meetings with relevant Government departments in Peshawar on March 22, 2022. The team met with the Environment Protection Agency (EPA), officials and their only concern was that the construction of roads should be done by adhering to the environmental safety standards set by the department and demanded that NOC should be obtained for all the projects.

The CWD also had a meeting with the officials of the forest department who asked for compensatory trees to be planted, for the improvement of the area and the environment.

In addition, two FGDs were conducted by the Transport and Education GPs of World Bank in Peshawar and Swat in November 2021. Participants of FGDs included: parents, parent teacher committee members, Benazir Income Support Program beneficiaries, teachers, education officials, and NGO representatives. The Peshawar FGD had 37 participants (20 female), and the Swat FGD had 41 participants (26 female). The Institute of Social and Policy Sciences ((I-SAPS) facilitated the World Bank in holding these sessions.

The specific objectives for conducting the FGDs were:

1. Engagement with relevant education stakeholders and participants including but not limited to parents, education officials, education leaders, representatives of civil society, etc. from the select districts in Khyber Pakhtunkhwa.
2. To understand and map stakeholders' perceptions and experiences on the barriers to girls' participation in education.
3. To understand education accessibility gaps for girls, particularly from the transport angle and
4. To capture the contextual nuances of why girls prefer to stay at homes rather than attending schools.

A mix of districts with moderate to high level of educational challenges were selected based on gaps in accessibility and girls' participation in education so that a good coverage of voices is ensured. In addition, logistical considerations were also kept in mind, such as distance and travel time to the FGD venues. Participants from rural areas of the identified districts were prioritized for these FGDs.

The following districts were selected for conducting FGDs in Peshawar and Swat:

a) Peshawar FGD (Charsadda, Mardan, Nowshera, Peshawar, and Swabi)
b) Swat FGD (Buner, Lower Dir, Malakand, Shangla, and Swat)

Key findings[19] from these focus group discussions are as follows:

- The issue of access to school is a major challenge, especially in rural areas of the province. In many cases, post-primary schools are situated far away from the child's residence. This results in a significant drop out of girls after completing primary level education. More girls can be enrolled in elementary or high school if they are provided transportation support.
- Parents cannot afford the cost of education, especially transportation related costs. Therefore, if the families are provided some financial support for transportation, girls' enrolment will increase in higher grades.
- The drivers and vendors for transportation service are available in all target locations, however the drivers and vendor should be local so that they are well known by parents, and they can trust them. The mode of transport can vary according to the topography of the area.
- PTCs should be given responsibility of supervision of transport facility arrangements. Similarly, the financial support or grant should be deposited in PTC account so that both parents and teachers are involved in decisions to arrange transport for the school.
- The distance to school prevents girls from reaching school on foot without a chaperone. Severe weather conditions are also a reason for absenteeism from schools.
- Access to schools can be resolved through safe and affordable transport facility and parents can rethink about sending out of schoolgirls back to schools.

[19] The detailed findings outlining attitudes and barriers to girls' education are available in the Aide Memoire Focus Group Discussions on Transport Barriers and Solutions to Girls' Participation in Education

- If teachers can accompany boys and girls, there will no need for a chaperone and the same teacher would also benefit.
- The PTCs should also be trained on how to utilize and raise additional funds from the community for transportation purposes
- Since early marriage is one of the major reasons for school dropout, there is a dire need for awareness raising in parent for continuation of education for their girl child.
- Some of the schools do not have boundary walls, toilets and safe drinking

5.5. Proposed Strategy for Information Disclosure

Information disclosure will follow the World Bank disclosure protocol. The table below provides an initial outline of the information to be disclosed during design and implementation of the project. This list is likely to grow as the SEP is updated during project implementation.

Table 5: Methods for Information Disclosure

Project stage	*Target stakeholders*	*Information to be disclosed*	*Methods proposed*
Preparation	CWD, affected parties, interested groups, public at large, vulnerable groups, Government entities	Appraisal stage SEP, Appraisal stage ESCP.	Website of CWD before project effectiveness One-on-one meetings, Consultation meetings
Implementation	CWD, and other relevant Government ministries and entities	PAD, E&S principles and obligations, Consultation process/SEP, ESCP, project information	Website of CWD One-on-one meetings Consultation meetings
	Local communities and Vulnerable groups (including minorities, women, people with disabilities)	Regular updates on project activities and specific interventions for vulnerable groups (through KP RAP), SEP and GRM procedures.	Outreach through local community organizations Public notices Press releases in the local media and on the project website Airing of key messages through programs on local FM radio, television and text messages Dissemination of information through social media
	Other ministries and relevant public agencies	Project overview, Progress reports, SEP and GRM procedures.	Consultation meetings Electronic publications Information leaflets and brochures
	NGOs, Academics,	Scope of Project, social protection interventions, opportunities for collaboration, ESMP,	Information Resource portal on project website Bi-Annual Project Dissemination Workshops

		updated SEP and GRM procedures.	Press releases and announcements in the media, notifications of the disclosed materials to local, regional, and national NGOs
	General public	FAQs, Updated SEP and GRM procedures	Website of CWD Print, electronic, broadcast, and social media Brochures, leaflets, posters, nontechnical summary documents and reports Mosque announcements in rural areas Local influential people (councilors, community workers etc.)

6. Environmental and Social Impacts and Mitigation

This chapter identifies the initial assessment of potential adverse environmental and social risks and impacts expected during the construction and implementation phases of the project. The appropriate generic mitigation measures for each impact are also proposed. The risks identified and generic mitigations proposed will guide the preparation of and be elaborated in site specific ESMPs.

6.1. Design and Construction Phase Impacts and Mitigation

6.1.1 Soil Erosion and Pollution

The proposed interventions and associated activities will potentially involve some excavation, quarrying/creation of borrow areas, land clearing, and land leveling. These activities can disturb and destabilize the surrounding soil, making it more susceptible to erosion due to wind or rain, and degrading its quality, as well as increasing the chance of landslides which can put road users, project labor, and down-slope communities at risk of serious injury or death. Erosion can also lead to silt runoff which can accumulate in nearby water bodies and cause blockages in rainwater and municipal drainage systems.

These impacts are expected to be limited to the immediate vicinities of subprojects.

Mitigation:

- Sites for construction camps will be selected to avoid or minimize vegetation removal/clearing.
- Access roads at each subproject site will be selected to minimize soil erosion and impact on landscapes.
- Sites disturbed by construction activities will be restored to their original conditions.
- Landslide risks to down-slope communities will be mitigated by the installation of safety barriers at construction sites, and monitoring and informing down-slope communities of weather events that might exacerbate this risk
- Slope protection measures are included in the project design as part of the road rehabilitation/improvement activities in Component 1. These will be implemented based on the level of landslide risk which will be assessed by the contractor prior to construction.

6.1.2 Solid Waste Generation

The civil works anticipated under Component 2 are likely to generate construction waste such as waste concrete and asphalt, empty containers (e.g. cement bags, asphalt drums), excavated material, and municipal waste from construction camps. Construction waste, if not properly managed and disposed of, can have negative impacts on the surrounding area including causing blockages in drainage channels, contamination of nearby water bodies, soil contamination. Discarded materials and equipment may also pose traffic safety risks if left on or near transport routes.

Mitigation:

- Construction waste will be routinely collected and safely disposed of in clearly demarcated waste disposal sites located near each subproject site following international best practices.

- Waste disposal will be carried out following international best practices, and will ensure that there are no negative impacts on soil, water bodies, existing waste management systems, transport routes, and aesthetic value of the area.
- Waste construction materials should be reused at other subproject sites if possible.
- The labor workforce will be trained on the handling, storage, and disposal of construction waste.
- Site specific Solid Waste Management Plans (SWMPs) will be developed and implemented by contractors.

6.1.3 Traffic and Road Safety

The rehabilitation/upgradation activities carried out under Component 2 are likely to cause traffic disruptions due to road closures and movement of construction machinery. These disruptions may cause an inconvenience to local communities and other road users. Traffic congestion and road closures may also increase the traffic load on alternative routes, causing disturbances beyond the subproject locations. Increased traffic can also pose a community and occupational health and safety risk, which can be exacerbated by poor traffic management.

Mitigation:

- Contractors will prepare a comprehensive Traffic Management Plan (TMP) for each sub-project site. The indicative contents and objectives of the TMP are provided in Annex B: Traffic Management Plan (TMP).
- Movement of vehicles carrying construction materials and heavy equipment will be restricted to the nighttime to distribute traffic load and reduce inconvenience to local communities and other road users.
- At construction sites, vehicles and other machinery will be parked at designated areas to minimize congestion.
- Operators of construction vehicles will be trained on safe driving and will be required to strictly adhere to local traffic laws.
- Damage to roads as a result of construction works will be repaired immediately upon conclusion of the works.
- Clear signage will be provided within and around construction sites notifying drivers of alternative routes, construction schedules, road closures, and any other relevant information.
- Residents living adjacent to construction sites will be directly notified about construction schedules, road closures, safety precautions, etc.

6.1.4 Noise Pollution

An increase in ambient noise and vibration is expected due to the operation of heavy construction machinery such as bulldozers, excavators, pneumatic machinery, etc. Noise pollution generated by the activities are likely to have impacts on sensitive receptors located within 500 meters of the construction area. High ambient noise can have adverse psychological and physiological effects (increased blood pressure, sleep disturbance, etc.) on communities near construction sites, and can also cause significant disturbance to local wildlife.

While noise pollution impacts are expected during the construction phase of the project, these will likely be short-term in nature and are unlikely to have any lasting effects once the construction has completed.

Mitigation:

- Construction vehicles and machinery will be kept in good working condition and be properly tuned and maintained throughout the duration of construction work with the objective of minimizing excessive noise/vibration.
- Noisy construction work will be limited to normal working hours to minimize disturbance to nearby communities.
- When possible, noisy construction activities (e.g. concrete mixing) will be displaced from the construction sites to a distance of at least 2 kilometers from the nearest sensitive receptors.
- Construction schedules will be disclosed to communities in a 2-kilometer vicinity of subproject sites prior to beginning construction work.
- Ambient noise will be regularly measured to ensure that the thresholds set in the NEQS are not exceeded.

6.1.5 Air Pollution

Ambient air quality in the subproject areas is expected to deteriorate during the construction phase due to the emission of carbon monoxide (CO), sulfur oxides (SO_x), nitrogen oxides (NO_x), and other greenhouse gases as well as fine particulate matter from machinery and construction activities, including quarrying and stone crushing activities. Emissions may also be carried over longer distances depending on atmospheric conditions. These emissions can have potentially adverse impacts on human and animal life.

The overall impact on air quality will be short-term in nature and will be unlikely to have lasting impacts after the conclusion of the construction phase.

Mitigation:

- Construction machinery and vehicles will be kept in good working condition. Maintenance schedules will be developed and will be followed throughout the duration of construction to minimize excessive emissions.
- Construction sites and access roads will be regularly sprinkled with water to suppress excessive dust emissions.
- Air quality monitoring will be regularly carried out to ensure that the thresholds set in the NEQS are not exceeded.

6.1.6 Contamination of Water Resources

The project may operate in areas containing important local water resources which may be at risk of contamination from construction site runoff. Runoff is likely to contain oil and other automotive/mechanical fluids, as well as chemicals and materials used in the construction process. Contamination of local water resources can have adverse impacts on their productivity (as fisheries, for example), and can also pose health and livelihood risks to communities that depend on them for household and agricultural use.

Mitigation:

- Construction machinery will be kept in good working condition and be properly tuned and maintained throughout the duration of construction to avoid spills and leaks.
- Wastewater from construction sites will be disposed of at designated sites selected to avoid impact on surface or groundwater. Wastewater will be tested against NEQS and WHO guidelines before discharge/disposal.
- Leakages/spills at construction sites will be immediately cleaned up using the appropriate international best practices to avoid runoff.
- Water quality monitoring of water resources near subproject sites will be conducted before, during, and after the construction activities to quantify and characterize any impacts.

6.1.7 Exclusion of Vulnerable Groups in Project Employment

The project is likely to generate some additional employment opportunities during the construction phase. Vulnerable groups and historically underserved communities may fail to benefit from employment opportunities due to discrimination and exclusion. This risk can be compounded by elite capture and selection bias in the hiring process.

Mitigation:

- All project related employment, including employment by third-party contractors, will adhere to federal and provincial labor laws and regulations.
- All project staff with functions related to recruitment will be trained on social inclusion and the relevant government and Bank regulations.
- All project workers will be trained on the Grievance Redress Mechanism and will be encouraged to use it in case of complaints related to employment.

6.1.8 Land Acquisition and Involuntary Resettlement

The construction of new roads will not be supported by the project; therefore, land acquisition is not expected. However, construction activities along existing roads may require the temporary removal of minor encroachments and may also result in the temporary economic displacement of road-side stalls and vendors. This displacement could potentially be permanent in the case of road-widening activities.

Mitigation:

- A Resettlement Framework has been prepared. The RF provides guidance on the preparation of site-specific Resettlement Plans (RPs) that will be prepared for all subprojects. The RF also describes the eligibility requirements and compensations for parties that are economically displaced by the construction activities.

6.1.9 Occupational Health and Safety (OHS)

Occupational health and safety impacts may arise as a result of construction activities. Project workers may be at risk of injury from accidents, overexertion, exposure to hazardous materials, etc. However, these risks are expected to be easily mitigated through the preparation and implementation of site-specific OHS plans.

Mitigation:

- Contractors will be required to prepare site-specific OHS Management Plans (OHSMPs). The OHSMPs will be prepared in accordance with the World Bank EHS Guidelines and local laws and regulations. Guidance for the OHS Management Plans is provided in the Labor Management Procedures (LMP) that have been prepared for the proposed Project.
- Contractors will also prepare SWMPs, which will include guidance on safe handling of hazardous materials encountered during construction activities.
- Workers will be provided with all necessary safety equipment such as hard-hats, gloves, googles, respirators, boots, etc.
- Workers will be trained on the handling, storage, and disposal of hazardous materials user for or encountered during the construction activities.
- Basic medical facilities will be provided on-site by the contractors, and designated staff will be trained on workplace first-aid.

6.1.10 Disturbance to Ecosystems

Khyber Pakhtunkhwa contains a number of protected areas, areas with high biodiversity, and important natural resources. Project construction activities (including the establishment of labor camps, quarries, and borrow areas) under Component 1 may have the potential to adversely impact these areas, particularly due to vegetation removal (and associated impacts such as soil erosion), environmental pollution, and disturbance to wildlife.

Additionally, the influx of labor, increased activity, and improved accessibility due to subproject activities may increase incidents of poaching and illegal harvesting of forest products.

Mitigation:

- Subprojects will not be implemented inside protected areas, national parks and any ecologically important habitats.
- While working close to protected areas and national parks, their management plans will be followed.
- Sites for construction camps and storage areas will be chosen to minimize vegetation removal and land clearing.
- Any vegetation removal or land clearing will be cleared by the appropriate bodies, as specified in Table 6: Approvals and Permits Required during Project Implementation.
- All relevant national and provincial regulations will be followed.
- Compensatory plantation of 10 trees of the same species for each tree removed.

6.1.11 Security Issues

A portion of the project will be implemented in the Newly Merged Districts (NMDs) where security issues are an ongoing concern, particularly in the more remote regions. Acts of vandalism, intimidation, violence, and kidnapping are potential risks for project staff involved in the implementation of subproject activities. Existing social conflicts may also be exacerbated by the project (e.g. due to grievances or perceived inequity in project benefits) which may put project staff at risk. While security incidents have reduced in the region over the last five years, the close proximity of the NMDs to the Afghanistan border has renewed security concerns in the last several months.

Mitigation:

- Subproject construction sites and labor camps will be properly fenced, with tight access restrictions in place.
- Contractors will be responsible for ensuring that adequate security arrangements are made at construction sites and labor camps (e.g. security personnel deployed at entrances, security patrols, CCTV cameras, etc.)
- A comprehensive security plan will be prepared

6.1.12 Natural Hazards

Khyber Pakhtunkhwa is prone to natural disasters, primarily earthquakes and floods. These disasters tend to compound the problems faced by the province's vulnerable communities, who are already contending with poverty, food insecurity, and limited supply of health, education, and other essential services. The effects of climate change and environmental degradation (such as deforestation) also increase the risk of severe adverse impacts due to natural hazards. The provincial capacity to respond to natural disasters is also limited, particularly in the more remote regions. Road users and project workers could potentially be impacted by natural disasters during the course of the project.

Mitigation:

- An Emergency Response Plan will be prepared and implemented
- Project activity design will take disaster risk reduction into consideration and will employ approaches to improve disaster resilience where possible.

6.1.13 Improper Targeting of Beneficiaries

The project will involve the construction and rehabilitation of rural roads, as well as supporting activities aimed to improve girls' school attendance in the province. The targeting for roads/beneficiaries in both components will be guided by on-ground data. It is crucial that the targeting mechanisms are robust and provide a complete enough picture to allow for maximally beneficial coverage of roads/beneficiaries. Failure to do so could result in further marginalization of economically underprivileged individuals and communities.

This risk can be compounded by elite capture in the targeting process.

Mitigation:

- Roads and beneficiaries for Components 1 and 2 will be selected following robust analysis and ground-truthing.
- Decisions on roads and beneficiaries will be taken following comprehensive and inclusive stakeholder consultation. The SEP will provide guidance for this.

6.1.14 COVID-19

The project, through Component 2, will involve direct contact of project staff with beneficiaries, which puts both parties at risk of contracting COVID-19 and further spreading it within their respective communities. Additionally, project staff may be at a higher risk of contracting COVID-19 as they are likely to be in contact with many individual beneficiaries over the course of the project.

The COVID-19 risk is also present at labor camps, which will be located at or near subproject sites. COVID-19 outbreaks in labor camps may cause significant delays and other operational issues.

Mitigation:

- Contractors and project labor will follow the guidance provided in the MoNH's guidelines for health and safety of building and construction workers.
- Project staff will be trained on identifying the symptoms of COVID-19 and on necessary self-protection measures. Additional trainings will be provided in personal hygiene for disease avoidance, PPE use, and COVID-19 SOPs.
- Contact details and attendance registers will be maintained to allow project management staff to trace and manage COVID-19 incidences.
- Social distancing measures will be implemented, especially in labor camps.
- Project staff will be provided with hand-wash facilities and alcohol-based hand sanitizers.
- Project staff will be screened for COVID-19 by routine temperature checks.
- Lunch/tea breaks of project workers will be staggered to avoid large gatherings.

6.1.15 Lack of Meaningful Community Engagement

Comprehensive and inclusive stakeholder engagement is a key feature of the ESF. The presence of poor and marginalized communities, and indigenous peoples in the project area, as well as the remote nature of several KP districts, will require careful attention to be paid to stakeholder engagement. There is a risk that vulnerable groups and communities may be excluded from stakeholder consultations, limiting their ability to provide feedback on project design and impacts, and potentially preventing them from fully benefiting from the project. This risk is proportionate to their degree of disadvantage/vulnerability and is additionally relevant for communities living in remote or historically underserved areas.

Mitigation:

- A comprehensive Stakeholder Engagement Plan (SEP) has been developed to provide guidance on stakeholder identification, modes of engagement, disclosure requirements, implementation arrangements, and other relevant information.
- The PIU will have dedicated staff responsible for the implementation of the SEP.
- Project staff will be trained on social inclusion and stakeholder engagement.

6.1.16 Labor Influx

Construction works related to Component 1, particularly in remote and sparsely populated areas, are likely to require the use of labor from outside the subproject locale. This labor influx can have several potentially adverse impacts, including conflicts between local communities and outside labor, increased illicit behavior and crime, increased burden on local public services and utilities, spread of communicable diseases, and GBV and SEA/SH.

Mitigation:

- Labor management procedures (LMP) have been prepared for the project. The LMP contain guidance on assessing labor risks and propose detailed mitigation measures and implementation arrangements.
- A project GRM will be established for communities in and around the subproject areas to raise concerns and make complaints, including on labor influx related grievances.

- Communities local to the subproject areas will be given preference in hiring where possible, for both skilled and unskilled labor.
- Contractors and their employees will be required to respect local cultural norms and will receive training on cultural sensitivity and conduct.

6.1.17 GBV and SEA/SH

Gender-based violence, sexual exploitation and abuse, and sexual harassment risks are expected throughout the duration of the project. These may stem from contact between local communities and project workers for the implementation of Components 1 and 2. This is of particular concern in Component 2, where girls and female teachers will be in close contact with operators of school transport services who may be hired by the project. Labor influx may also trigger and exacerbate these risks.

Increased worker wages in the project areas as a result of employment opportunities generated by the project may lead to an increase in transactional sex and sexual exploitation of vulnerable individuals in the community.

Female project staff may also be at risk of GBV and SEA/SH, especially those working on field assignments in remote and hard to reach areas.

Mitigation:

- A GBV Action Plan will be developed and implemented, and systems will be set up to work with the project GRM to address any GBV, SEA/SH related complaints. Guidance for this is provided in Annex F: GBV/SEA/SH Action Framework.
- GBV, SEA/SH related complaints received through the GRM will be redirected to dedicated staff who are trained on the GBV Action Plan
- Background checks and screening will be carried out for all project workers under Component 2 who may be in direct contact with female students.

6.1.18 Forced Labor and Child Labor

Project activities, particularly in the case of third-party contractors, may involve the use of forced labor, which is defined as any work or service that is obtained from an individual under threat of force or penalty. This includes indentured labor, bonded labor, and trafficked persons. There is also a risk that child labor may be used by third-party contractors. These risks are likely to be higher in economically disadvantaged and remote areas of the province.

Mitigation:

- Follow guidance in the LMP which includes details on mitigating the risk of child labor and forced labor.
- Contractors will be prohibited from hiring children below the age of 15 for any type of labor, and below the age of 18 for hazardous work.
- Project staff will monitor sites to check for child labor

6.1.19 Chance Findings of Important Physical and Cultural Resources

During the course of construction activities, the Project may encounter the chance finding of important physical cultural resources. These are defined as: “movable or immovable objects, sites, structures or groups of structures having archaeological, paleontological, historical,

architectural, religious, aesthetic, or other cultural significance". These may be at risk of damage during construction activities, which can result in community unrest and dissatisfaction.

Mitigation:

- Subprojects will be screened for the presence of physical cultural resources prior to commencement of construction work.
- If a risk of damaging physical cultural resources is determined, the contractor shall prepare a detailed Physical Cultural Resources Management Plan (PCRMP). Guidance for this plan, including chance find procedures to be followed is provided in Annex E: Physical Cultural Resources Management Framework (PCRMF).

6.1.20 Adverse Impacts on Indigenous Communities

Project activities are likely to take place in areas where Pakistan's only recognized indigenous group—the Kalash people—are settled. The potential environmental and social impacts identified in this ESMF may more greatly affect the Kalash due to their indigenous status and decreasing population. Impacts that affect agriculture, community health and safety, and physical cultural resources are particularly relevant to the Kalash people.

Mitigation:

- Subproject sites will be screened for the presence of indigenous communities.
- If a subproject is assessed to have potential environmental and/or social impacts on the Kalash, the contractor will be required to prepare an Indigenous Peoples Plan in accordance with ESS7, details of which are provided in Annex D: Indigenous Peoples Planning Framework.

6.1.21 Bridge Construction

Component 1 will involve the construction of bridges as climate resilience measures for rural roads where needed. Depending on the nature of bridge being constructed, this may include: groundbreaking/excavation, soil compaction, placement of beams and girders, as well as other activities that are common with road rehabilitation such as paving, etc. These activities may have additional impacts on top of those related to road rehabilitation related to the degree of civil works necessary to construct the bridge. Since the roads selected for this project are small rural roads, any bridge construction is expected to be of a small scale, and additional impacts are expected to be minor. The primary additional risk is associated with the soil compaction and introduction of pylons/girders, which may destabilize the underlying earth, potentially increasing the risks of landslide and erosion. Poorly designed bridges or designs not suitable to the physical context may also put road users at risk.

Mitigation:

- Landslide risks to down-slope communities will be mitigated by the installation of safety barriers at construction sites, and monitoring and informing down-slope communities of weather events that might exacerbate this risk
- Slope protection measures are included in the project design as part of the road rehabilitation/improvement activities in Component 1. These will be implemented based on the level of landslide risk which will be assessed by the contractor prior to construction.
- Bridge designs will be confirmed by the D&S firm prior to commencement of civil works.

6.2. Implementation Phase Impacts and Mitigation

6.2.1 Misappropriation of Grant Funds

Component 2 of the project will involve the provision of per-capita grants to parent teacher councils (PTCs) for subsidizing school transport for girls. Eligibility and grant size will be determined based on the actual number of students and teachers identified as being eligible for subsidized transport. The direct transfer of funds to multiple beneficiaries over the course of the project implementation phase carries an ongoing risk of misappropriation of funds by PTCs or other intermediaries. This may arise due to fabrication of student/teacher data, or collusion between PTCs and private transport service providers. This can impact project effectiveness and value for money, and is likely to result in the exclusion of vulnerable and marginalized groups from the project. This risk can be magnified by elite capture during project implementation.

Mitigation:

- Beneficiaries identified by each PTC will be verified and vetted by principals/head teachers of schools.
- Local transport providers engaged by PTCs will be screened by the implementing agency.
- A dedicated Financial Management Specialist (FMS) will be engaged for the duration of the project.
- PTCs will be trained in financial management by the FMS.
- Biannual Interim Unaudited Financial Reports will be submitted to the Bank.

6.2.2 Institutional Capacity Limitations

Due to a lack of previous experience working with the ESF, there is a risk that the implementing agency will not have sufficient capacity to mitigate environmental and social risks by implementing this ESMF. Without adequate capacity, many of the risks in this document may go unmitigated, potentially reducing project effectiveness significantly.

Mitigation:

- Component 3 involves project management institutional capacity strengthening activities. These activities will include the hiring of dedicated staff for the implementation of the ESMF (including at minimum a gender specialist, environmental specialist, and a social specialist) as well as training of all E&S staff hired by the project, including those that will be involved in implementing the ESMF at the field level.

6.2.3 Sustainability of Interventions

The school transport subsidization activities under Component 2 are at risk of being unsustainable once the project has concluded and funds are no longer available. Disruptions in these activities will have adverse impacts on the long-term benefits of the project.

Construction works under Component 1 may also lack long term sustainability. New and rehabilitated roads may fall into disarray if they are not regularly maintained according to industry best practices. This risk may be particularly relevant in remote areas, where access and routine maintenance may be challenging.

Mitigation:

- Female teachers and parents of female students will be required to take up a portion of transportation costs to avoid dependency.

- Continued maintenance of project roads after project closure will be included in the Environmental and Social Commitment Plan (ESCP).
- New and rehabilitated roads will be built using industry accepted green techniques and climate resilient approaches (including raising embankments, improving drainage, enhanced slope protection, adopting climate resilient standards) to minimize deterioration caused by climate impacts.

6.2.4 GBV and SEA/SH

Gender-based violence, sexual exploitation and abuse, and sexual harassment risks are expected throughout the duration of the project. During project implementation, this is of particular concern in Component 2, where girls and female teachers will be in close contact with operators of school transport services who may be hired by the project/PTCs.

Mitigation:

- A GBV Action Plan will be developed and implemented, and systems will be set up to work with the project GRM to address any GBV, SEA/SH related complaints.
- GBV, SEA/SH related complaints received through the GRM will be redirected to dedicated staff who are trained on handling those complaints with the required sensitivities and confidentiality.
- Background checks and screening will be carried out for all project workers under Component 2 who may be in direct contact with female students.
- Private sector transportation service providers will be required to complete GBV/SEA/SH sensitivity training and will sign a code of conduct that is guided by the GBV action plan.

6.2.5 Efficiency of School Transport Vehicles

As Component 2 is expected to involve the procurement of private transport services by PTCs, implementation of the project will involve a significant logistical effort. There is a risk that the vehicles used for this component will be in sub-standard conditions, particularly in poorer and more remote areas. Poorly maintained vehicles can result in cost inefficiencies, and can potentially cause undesirable halts in transport services, impacting the girls and teachers who depend on them. This can also have indirect impacts such as increased air pollution, and road safety issues.

Mitigation:

- PTCs will be trained on screening transport service providers to assess quality and upkeep of vehicles used in Component 2. Only well-maintained road-worthy vehicles will be used.
- Vehicle operators will be required to provide proof of biannual maintenance.

6.2.6 Road Safety

Road safety poses an ongoing risk throughout the implementation of the project, particularly for activities under Component 2 that will provide subsidized transport for girls and female teachers. This is expected to lead to an increase in the proportion of girls and teachers that use motorized public transport to reach schools. This will increase their exposure to potential road safety risks including accidents, landslides, and security risks. These risks may be exacerbated

by climatic conditions (e.g. extreme rainfall), remoteness, poor maintenance of transport vehicles, unsafe driving practices, etc.

Mitigation:

- Drivers hired by the PTCs will be trained on safe-driving, particularly with respect to climate conditions, and will be required to adhere to local traffic safety laws.
- Vehicle operators/drivers will be required to provide proof of biannual maintenance of vehicles.

7. ESMF Implementation

7.1. Steps for Environmental and Social Management

Environmental and social management of the project will follow the procedures below:

1. Preliminary environmental and social information collection, including physical, biological, and socioeconomic baseline data for each subproject.
2. E&S screening and categorization of each subproject using the E&S Screening Checklist provided in Annex A: Environmental and Social Screening Checklist.
3. Information disclosure and stakeholder consultations.
4. Preparation of Environmental and Social Management Plan (ESMP) for each subproject, including risks, mitigation measures, other E&S instruments, indicative budget for E&S management.
5. Clearance/approval of ESMP from World Bank.
6. Inclusion of ESMP and other E&S instruments in bidding documents and agreements with contractors.
7. Implementation of ESMP and other E&S instruments by implementing agencies/contractors.
8. Monitoring the compliance with E&S instruments.

7.2. Subproject Screening

Subprojects will be classified using the Bank's risk categories: high, substantial, moderate, and low. For all subprojects, the appropriate risk classification will be determined and shall take into account relevant issues such as the type, location, sensitivity, and scale of the subproject; the nature and magnitude of the potential environmental and social impacts; and the capacity of the implementing agency to manage environmental and social risks in a manner consistent with the ESF. The KPRAP project has received an overall rating of **substantial** based on its potential environmental and social impacts.

In order to determine subproject risk classification, all subprojects will be screened for E&S impacts using the screening checklist provided in Annex A: Environmental and Social Screening Checklist.

After subprojects have been screened and the risk classification identified, the preparation of additional E&S instruments may be required, depending on the classification:

High risk subprojects which have the potential for severe adverse environmental and social impacts will be excluded from KPRAP.

Substantial risk subprojects may have the potential for adverse environmental and social impacts, but which are less adverse than those of high-risk subprojects. These subprojects will require the preparation and approval of an Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) prior to commencement. The ESIA or ESMP shall identify site- and subproject-specific risks and propose mitigation measures for all, as well as detailed implementation arrangements (if required) at the field level.

Moderate risk subprojects will have moderate level environmental and social impacts. These impacts are likely to be temporary and reversible and are not expected to have lasting effects on

the subproject areas. For these subprojects, the preparation and submission of a checklist with mitigation measures will be required. An ESMP may also be prepared if needed.

Low risk subprojects will have negligible to no negative impacts, and no further environmental assessment will be needed following the initial screening process.

7.3. Information Disclosure and Stakeholder Consultations

Stakeholder consultations will be carried out during all phases of the project in accordance with ESS10 and the project SEP. These consultations are aimed at identifying additional opportunities and risks for the project, improving subproject design and implementation, and increasing stakeholder ownership in the project.

The SEP has identified stakeholders in three categories:

- Affected Parties: which are likely to be affected by the project because of its actual impacts, or potential risks to their physical environment, health, security, cultural practices, well-being, or livelihoods.
- Other Interested Parties: those stakeholders which are likely to have an interest in the project and may be able to assist informed decision making for the project, or otherwise influence the outcomes of the project.
- Disadvantaged/Vulnerable Individuals and Groups: who may be more likely to be adversely affected by project impacts and may be more limited than others in their ability to take advantage of the project's benefits.

Stakeholder consultations will be carried out during the preparation of the E&S instruments to obtain feedback and address concerns.

The ESMF and other associate documents at preparation stage (LMP, RF, SEP) will be disclosed on the CWD website, and shall also be available in World Bank repositories. ESMPs and other site-specific E&S instruments (such as RPs) will also be disclosed through the same channels. Executive summaries of each instrument will be translated into Urdu and Pashto and will also be made available.

7.4. Preparation of ESIAs, ESMPs and Other Site-specific Instruments

Site specific ESMPs, IPPs, PCRMPs, SWMPs, TMPs, and RPs will be prepared for each subproject, as directed by this ESMF and the RF. These instruments will be submitted to the World Bank for clearance and approval before initiating any construction works. The ESIAs and ESMPs will also be shared with the KP EPA for environmental approval of construction works.

Additionally, the proposed subprojects will require various approvals from relevant government departments during implementation, summarized in Table 6 below.

Table 6: Approvals and Permits Required during Project Implementation

Approval Required	*Issuing Authority*	*Requirements*	*Responsible Agency*	*Schedule*
Clearance of ESIAs, ESMPs, RPs, and other required instruments as described in the ESMF	World Bank	Submission of site-specific E&S instruments	CWD	Prior to initiation of subproject construction works
Environmental approval for the construction works	EPA KP	Submission of ESMP	CWD	Prior to initiation of subproject construction works

Approval for clearing of trees	KP Forest Department	Submission of request with detailed subproject layout/plans	Contractor	During construction phase
Approval for the use of quarry and excavated material	KP Minerals Development Department	Submission of request with location map of the quarry area	Contractor	During construction phase
Approval for asphalt batching plant	EPA KP	Submission of request with detailed subproject layout, location map of batching plant/s, and SWMP	Contractor	During construction phase

7.5. Environmental and Social Requirements in Bidding Documents

CWD will include the following Environmental, Social, Health and Safety (ESHS) conditions in the bidding documents to ensure all mitigation measures proposed in the ESMPs are effectively implemented.

Table 7: E&S Requirements in Bidding Documents

Condition	*Rationale*	*Specifications to be Included in Bidding Documents*
Past performance of the Contractor on ESHS	The contractor's past performance on compliance with ESHS is an indicator of the contractor's commitment and capability for implementation of the ESMP	Record of past ESHS performance
The Contractor shall propose E&S Specialists in its team	The Contractor's staff should include E&S specialists who will be responsible for the implementation of the mitigation measures in compliance with the ESMP	The bidder will include CVs of the proposed, suitably qualified E&S Specialists
Contractor shall obtain performance bond for compliance with E&S obligations	The Contractor should have a financial implication if it fails to comply with E&S requirements.	The Contractor will obtain a performance bond
Contractor shall implement construction related mitigation measures provided in the ESMP	Mitigation measures from site specific ESMPs will be included on the tender/ RFP documents.	Tender documents will contain site-specific construction related mitigation measures
Code of Conduct for all site personnel	All workers hired by the Contractor should sign a Code of Conduct to ensure compliance with E&S requirements	The Contractor will submit a Code of Conduct with the bidding documents

7.6. Institutional Arrangements for Implementing the ESMF/ESMPs

The project will be implemented by the KP Communication and Works Department (CWD). A dedicated Project Implementation Unit (PIU) will be created and housed in CWD. The PIU will be led by the Project Director (PD), who will be a senior CWD official. The PD will appoint the remaining members of the PIU, which will include specialists in procurement, environmental and social management, gender, security, communications, education, and financial management. The PIU will be supported on technical matters by a Design and Supervision (D&S) consulting firm, as well as by individual consultants to provide technical backstopping as and when necessary, particularly in the interim period between the formation of the PIU and onboarding of its staff.

An Implementation Committee (IC) will also be formed for the implementation of Component 2. The IC will be responsible for organization and coordination of project activities in this component and will also facilitate communication and cooperation between the departments

involved in the works. The IC will be led by CWD and will include representation from project-associated departments such as the education, health, and agriculture departments. Each department in the IC shall be obliged to provide CWD with the necessary technical and institutional support for the timely preparation and implementation of the project.

Contractors will be required to prepare E&S instruments as directed by this ESMF prior to the initiation of construction activities. These will include:

- Solid Waste Management Plans
- Security Management Plans
- Traffic Management Plans
- Occupational Health and Safety Plans (as describe in the LMP)
- Physical Cultural Resources Management Plans

7.7. ESMF Monitoring and Reporting

The PIU through its specialists and CWD field staff will be responsible for regular monitoring on the implementation of the ESMF. This will include compliance monitoring to check whether the recommendations in this ESMF have been implemented, and effects monitoring to identify the presence and degree of any environmental and social impacts.

Monitoring will be carried out at the subproject level, with CWD field staff responsible for visiting subproject sites. A separate monitoring checklist will be developed by CWD based on the generic ESMMPs which will be used by field monitors. Subproject monitoring will be conducted as specified in the generic ESMMPs in Table 8 and Table 9.

Field monitoring data will be compiled as specified in Table 8 and Table 9, and shall be passed up to the relevant environmental and social specialists at the PIU monthly. The PIU shall use this data to prepare ESMF implementation progress reports on a quarterly and annual basis. These reports will include progress on the implementation of activities proposed in the relevant site-specific ESMP and highlight issues and challenges that were encountered.

8. Generic Environmental and Social Mitigation and Monitoring Plan

8.1. Generic Design and Construction Phase Mitigation and Monitoring Plan

The table below provides a list of potential environmental and social impacts during the design and construction phases of the project, and provides an overview of mitigation measures, indicators to be monitored, and responsibility for implementation.

Table 8: Generic Design and Construction Phase Mitigation and Monitoring Plan

Impact	*Mitigation measures*	*Mitigation responsibility*	*Monitoring indicators*	*Monitoring frequency*	*Monitoring responsibility*
Soil erosion and pollution	Sites for construction camps will be selected to avoid or minimize vegetation removal/clearing	D&S consultants	Survey reports, environmental and social baseline reports	Once before finalization of construction camp sites	PIU environmental specialist, infrastructure specialist
	Access roads at each subproject site will be selected to minimize soil erosion and impact on landscapes.	D&S consultants	Transport route maps	Once before finalization of subproject sites	PIU environmental specialist, infrastructure specialist
	Sites disturbed by construction activities will be restored to their original conditions.	Contractors	Physical inspections	Once upon completion of subproject construction work	PIU environmental and social specialists
	Landslide risks to down-slope communities will be mitigated by the installation of safety barriers at construction sites, and monitoring and informing down-slope communities of weather events that might exacerbate this risk	Contractors	Physical inspections	Weekly throughout construction phase	PIU environmental and social specialists
Solid waste generation	Construction waste will be routinely collected and safely disposed of in clearly demarcated waste disposal sites located near each subproject site following international best practices.	Contractors	Physical inspections	Weekly throughout the construction phase	PIU environmental and social specialists
	Site specific Solid Waste Management Plans (SWMPs) will be developed and implemented by contractors.	Contractors	Solid waste management plan Physical inspections	Before commencement of construction work Weekly throughout the construction phase	PIU environmental and social specialists
	Waste disposal will be carried out following international best practices and will ensure that	Contractors	Solid waste management plan	Before commencement of construction work	PIU environmental

	there are no negative impacts on soil, water bodies, existing waste management systems, transport routes, and aesthetic value of the area.		Physical inspections	Weekly throughout the construction phase	and social specialists
	The labor workforce will be trained on the handling, storage, and disposal of construction waste.	Contractors, PIU environmental and social specialists	Training plans, training attendance registers	Before commencement of construction work	PIU environmental specialist
Traffic and road safety	Contractors will prepare a comprehensive Traffic Management Plan (TMP) for each sub-project site	Contractors	Traffic management plans	Before commencement of construction work	PIU environmental and social specialists
	Movement of vehicles carrying construction materials and heavy equipment will be restricted to the nighttime to distribute traffic load and reduce inconvenience to local communities and other road users.	Contractors	Traffic management plans	Before commencement of construction work	PIU environmental and social specialists
	At construction sites, vehicles and other machinery will be parked at designated areas to minimize congestion.	Contractors	Construction site plans	Before commencement of construction work	PIU environmental, social, and infrastructure specialists
	Operators of construction vehicles will be trained on safe driving and will be required to strictly adhere to local traffic laws	Contractors, PIU environmental and social specialists	Training plans, training attendance registers	Before commencement of construction work	PIU environmental and social specialists
	Damage to roads as a result of construction works will be repaired immediately upon conclusion of the works.	Contractors	Physical inspections	At conclusion of construction work	PIU environmental, social, and infrastructure specialists
	Clear signage will be provided within and around construction sites notifying drivers of alternative routes, construction schedules, road closures, and any other relevant information.	Contractors	Design files for signage Physical inspections	Upon finalization of construction traffic plans	PIU environmental, social, and infrastructure specialists
	Residents living adjacent to construction sites will be directly notified about construction schedules, road closures, safety precautions, etc.	PIU social specialist	List of residents identified Details of notifications	Before commencement of construction work	PIU social specialist
Noise pollution	Construction vehicles and machinery will be kept in good working condition and be properly tuned and maintained throughout the duration of	Contractors	Maintenance records of all construction vehicles Physical inspections	Monthly throughout construction work	PIU environmental specialist

	construction work with the objective of minimizing excessive noise/vibration.				
	Noisy construction work will be limited to normal working hours to minimize disturbance to nearby communities.	Contractors	Construction schedules	Before commencement of construction work	PIU social specialist
	When possible, noisy construction activities (e.g. concrete mixing) will be displaced from the construction sites to a distance of at least 2 kilometers from the nearest sensitive receptors.	Contractors	Construction site plans	Before commencement of construction work	PIU environmental and social specialists
	Construction schedules will be disclosed to communities in a 2-kilometer vicinity of subproject sites prior to beginning construction work.	PIU social specialist	Construction schedules List of communities to notify	Before commencement of construction work	PIU social specialist
	Ambient noise will be regularly measured to ensure that the thresholds set in the NEQS are not exceeded.	Contractors	Noise monitoring records	Weekly, throughout the construction phase	PIU environmental specialist
Air pollution	Construction machinery and vehicles will be kept in good working condition. Maintenance schedules will be developed and will be followed throughout the duration of construction to minimize excessive emissions.	Contractors	Maintenance records of all construction vehicles Physical inspections	Monthly throughout construction work	PIU environmental specialist
	Construction sites and access roads will be regularly sprinkled with water to suppress excessive dust emissions.	Contractors	Physical inspection	Monthly throughout construction work	PIU environmental specialist
	Air quality monitoring will be regularly carried out to ensure that the thresholds set in the NEQS are not exceeded.	Contractors	Air quality monitoring records	Weekly, throughout the construction phase	PIU environmental specialist
Contamination of water resources	Construction machinery will be kept in good working condition and be properly tuned and maintained throughout the duration of construction to avoid spills and leaks.	Contractors	Maintenance records of all construction vehicles Physical inspections	Monthly throughout construction work	PIU environmental specialist
	Wastewater from construction sites will be disposed of at designated sites selected to avoid impact on surface or groundwater. Wastewater will be tested against NEQS and WHO guidelines before discharge/disposal.	Contractors	Water quality testing records Physical inspections	Weekly throughout construction phase	PIU environmental specialist
	Leakages/spills at construction sites will be immediately cleaned up using the appropriate international best practices to avoid runoff.	Contractors	Physical inspections	Weekly throughout construction phase	PIU environmental specialist

	Water quality monitoring of water resources near subproject sites will be conducted before, during, and after the construction activities to quantify and characterize any impacts.	Contractors	Site impact reports Water quality testing records	Once before commencement of construction phase Weekly throughout construction phase Once after completion of construction phase	PIU environmental specialist
Exclusion of vulnerable groups in project employment	All project related employment, including employment by third-party contractors, will adhere to federal and provincial labor laws and regulations.	Contractors, PIU	Employment agreements	Prior to commencement of project activities	PIU social specialist
	All project staff with functions related to recruitment will be trained on social inclusion and the relevant government and Bank regulations.	Contractors, PIU	Training plans Attendance records of trainings	Prior to commencement of project activities	PIU social specialist
	All project workers will be trained on the Grievance Redress Mechanism and will be encouraged to use it in case of complaints related to employment.	PIU social specialist	Training plans Grievance redress mechanism	Prior to commencement of project activities	PIU social specialist
Land acquisition and involuntary resettlement	A Resettlement Framework (RF) prepared will provide guidance on the preparation of site-specific Resettlement Plans (RPs) that will be prepared for all subprojects. The RF also describes the eligibility requirements and compensations for parties that are economically displaced by the construction activities.	PIU social specialist	RF document	Prior to project appraisal	PIU social specialist
	The project will aim to minimize private land acquisition by screening all potential sites for road construction and rehabilitation	PIU social specialist	RF document	Prior to subproject site selection	PIU social specialist
Occupational health and safety of project workers	Contractors will be required to prepare site-specific OHS plans. The OHS plans will be prepared in accordance with the World Bank EHS Guidelines and local laws and regulations.	Contractors	Site-specific OHS plans	Prior to commencement of construction work	PIU social and environmental specialists
	Contractors will also prepare site-specific SWMPs, which will include guidance on safe handling of hazardous materials encountered during construction activities.	Contractors	Site-specific SWMPs	Prior to commencement of construction work	PIU social and environmental specialists

	Workers will be provided with all necessary safety equipment such as hard-hats, gloves, googles, respirators, boots, etc.	Contractors	Physical inspections	Monthly throughout construction phase	PIU environmental and social specialists
	Workers will be trained on the handling, storage, and disposal of hazardous materials user for or encountered during the construction activities.	PIU environmental and social specialists	Training plans/reports Attendance records for trainings	Prior to commencement of construction work	PIU environmental and social specialists
	Basic medical facilities will be provided on-site by the contractors, and designated staff will be trained on workplace first-aid.	Contractors	Training plans/reports and attendance records for trainings held Physical inspections	Prior to commencement of construction work Monthly throughout construction phase	PIU environmental and social specialists
Disturbance to ecosystems	Following the guidance in the ESF, subprojects will not be implemented inside protected areas or national parks.	D&S consultants	Survey reports, environmental and social baseline reports	Before finalization subproject sites	PIU environmental specialist, infrastructure specialist
	Sites for construction camps and storage areas will be chosen to minimize vegetation removal and land clearing.	D&S consultants	Survey reports, environmental and social baseline reports	Once before finalization of construction camp sites and storage areas	PIU environmental specialist, infrastructure specialist
	Compensatory plantation of 10 trees of the same species for each tree removed.	Contractors	Environmental and social monitoring reports	Immediately after completion of construction work	PIU environmental specialist
Security issues	Subproject construction sites and labor camps will be properly fenced, with tight access restrictions in place.	Contractors	Construction site and labor camp plans Physical inspections	Before finalization of subproject construction and labor camp sites Monthly throughout construction phase	PIU social specialist, security specialist
	Contractors will be responsible for ensuring that adequate security arrangements are made at construction sites and labor camps (e.g. security personnel deployed at entrances, security patrols, CCTV cameras, etc.)	Contractors	Contracts/agreements with private security providers Physical inspections	Before commencement of construction work	PIU social specialist
	Comprehensive site-specific security plans will be prepared.	Contractors	Site-specific security plans	Before commencement of construction work	PIU social specialist

Natural hazards	An Emergency Response Plan will be prepared and implemented.	PIU environmental specialist	Emergency response plan document	Before commencement of construction work	PIU environmental specialist
	Project activity design will take disaster risk reduction into consideration, and will employ approaches to improve disaster resilience where possible.	D&S consultants, PIU environmental specialist	Project design documents	During project design and as necessary during project implementation	PIU
Improper targeting of beneficiaries	Roads and beneficiaries for Components 1 and 2 will be selected following robust analysis and ground-truthing.	D&S consultants, PIU	Project design documents	Prior to circulation of tender documents	PIU
	Decisions on roads and beneficiaries will be taken following comprehensive and inclusive stakeholder consultation. The SEP provides guidance for this.	PIU environmental and social specialists	Records of consultations	Prior to finalizing roads and beneficiaries for each subproject	PIU environmental and social specialists
COVID-19	Contractors and project labor will follow the guidance provided in the MoNH's guidelines for health and safety of building and construction workers. This will be included on all project contracts for construction work.	Contractors	Contracts/agreements signed with the project	Prior to engaging contractors	PIU environmental and social specialists
	Project staff will be trained on identifying the symptoms of COVID-19 and on necessary self-protection measures. Additional trainings will be provided in personal hygiene for disease avoidance, PPE use, and COVID-19 SOPs.	PIU environmental and social specialists	Training plans and attendance records for trainings held	Prior to beginning each subproject activity as required	PIU environmental and social specialists
	Project staff will be provided with hand-wash facilities and alcohol-based hand sanitizers.	Contractors	Physical inspections	Monthly throughout construction phase	PIU environmental and social specialists
	Project staff will be screened for COVID-19 by routine temperature checks.	Contractors	Records of COVID screening	Monthly throughout construction phase	PIU environmental and social specialists
	Lunch/tea breaks of project workers will be staggered to avoid large gatherings.	Contractors	Physical inspections	Monthly throughout construction phase	PIU environmental and social specialists
Lack of meaningful community engagement	A comprehensive Stakeholder Engagement Plan (SEP) has been developed to provide guidance on stakeholder identification, modes of engagement, disclosure requirements, implementation arrangements, and other relevant information.	PIU social specialist	SEP document	Before appraisal	PIU social specialist

	The PIU will have dedicated staff responsible for the implementation of the SEP.	PIU	Hiring of relevant staff	Before project commencement	PIU Project Director
	Project staff will be trained on social inclusion and stakeholder engagement.	PIU social specialist	Training plans Records of training attendance	Before project commencement	PIU social specialist
Labor influx	Labor management procedures (LMP) are prepared for the project. This document contains guidance on assessing labor risks, and propose detailed mitigation measures and implementation arrangements.	PIU social specialist	LMP document	Before appraisal	PIU social specialist
	A project GRM will be established for communities in and around the subproject areas to raise concerns and make complaints, including on labor influx related grievances.	PIU social specialist	Project GRM	Before project commencement	PIU social specialist
	Communities local to the subproject areas will be given preference in hiring where possible, for both skilled and unskilled labor.	Contractors	Hiring records of project labor	Before subproject commencement	PIU social and procurement specialists
	Contractors and their employees will be required to respect local cultural norms and will receive training on cultural sensitivity and conduct.	PIU social specialist	Training plans Records of training attendance	Before subproject commencement	PIU social specialist
GBV and SEA/SH	A GBV Action Plan will be developed and implemented, and systems will be set up to work with the project GRM to address any GBV, SEA/SH related complaints.	PIU gender specialist	GBV Action Plan document	Prior to project effectiveness	PIU gender specialist
	GBV, SEA/SH related complaints received through the GRM will be redirected to dedicated staff who are trained on the GBV Action Plan.	PIU gender specialist	GRM	Throughout project construction and implementation phases	PIU gender specialist
	Background checks and screening will be carried out for all project workers under Component 2 who may be in direct contact with female students.	Contractors	Results of background checks. Records of relevant workers	Prior to commencement of subproject activities	PIU social specialist
Forced labor/child labor	The LMP includes details on mitigating the risk of child labor and forced labor.	PIU social specialist	LMP document	Prior to commencement of subproject activities	PIU social specialist
	Contractors will be prohibited from hiring children below the age of 15 for any type of labor, and below the age of 18 for hazardous work.	PIU procurement specialist	Contract agreements with contractors	Prior to commencement of subproject activities	PIU social specialist

	Project staff will monitor sites to check for child labor	PIU social specialist	Physical inspections	Monthly throughout construction phase	PIU social specialist
Adverse impacts on indigenous communities	Subproject sites will be screened for the presence of indigenous communities	Contractors	Subproject screening checklist	Prior to commencement of construction work	PIU social specialist
	If the subproject is assessed to have potential environmental and/or social impacts on indigenous communities, the contractor will be required to prepare an Indigenous Peoples Plan	Contractors	Indigenous Peoples Plan	Prior to commencement of construction work	PIU social specialist
Chance findings of important physical and cultural resources	Subprojects will be screened for the presence of physical cultural resources prior to commencement of construction work	PIU social specialist	Subproject screening checklist	Prior to commencement of subproject activities	PIU social specialist
	If a risk of damaging physical cultural resources is determined, the contractor shall prepare a detailed Physical Cultural Resources Management Plan (PCRMP) which will include chance-find procedures.	Contractor	Physical Cultural Resources Management Plan	Prior to commencement of subproject activities	PIU social specialist
Bridge construction	Landslide risks to down-slope communities will be mitigated by the installation of safety barriers at construction sites and monitoring and informing down-slope communities of weather events that might exacerbate this risk.	Contractors	Physical inspections	Weekly throughout construction phase	PIU environmental and social specialists
	Bridge designs will be confirmed by the D&S firm prior to commencement of civil works.	D&S Firm	Review of bridge design	Prior to commencement of bridge related civil works	PIU infrastructure specialist

8.2. Generic Implementation Phase Mitigation and Monitoring Plan

The table below provides a list of potential environmental and social impacts during the implementation phase of the project, and provides an overview of mitigation measures, indicators to be monitored, and responsibility for implementation.

Table 9: Generic Implementation Phase Mitigation and Monitoring Plan

Impact	*Mitigation measures*	*Responsibility*	*Monitoring indicators*	*Monitoring frequency*	*Responsibility*
Misappropriation of grant funds	Beneficiaries identified by each PTC will be verified and vetted by principals/head teachers of schools.	E&SED staff	List of beneficiaries identified	Before commencement of activity	PIU social specialist
	Local transport providers engaged by PTCs will be screened by the implementing agency.	PIU	Screening results of transport providers	Before entering agreements with transport providers	PIU
	A dedicated Financial Management Specialist (FMS) will be engaged for the duration of the project.	PIU Project Director	Hiring of financial specialist	Before project commencement	PIU Project Director

	PTCs will be trained in financial management by the FMS.	PIU financial specialist	Training plans Attendance records of trainings held	Before entering agreement with each PTC	PIU financial specialist
Institutional capacity limitations	Component 3 involves project management institutional capacity strengthening activities. These activities will include the hiring of dedicated staff for the implementation of the ESMF (including at minimum a gender specialist, environmental specialist, and a social specialist) as well as training of all E&S staff hired by the project, including those that will be involved in implementing the ESMF at the field level.	PIU Project Director	Hiring of gender, environmental, and social specialists Training plans and training attendance records	Before project commencement	PIU
Sustainability of interventions	Female teachers and parents of female students will be required to take up a portion of transportation costs to avoid dependency.	PIU financial specialist	Cost sharing agreements	Before subproject commencement	PIU
	Continued maintenance of project roads after project closure will be included in the Environmental and Social Commitment Plan (ESCP).	PIU, CWD Department	ESCP	Before project contract signing	PIU
	New and rehabilitated roads will be built using industry accepted green techniques and climate resilient approaches (including raising embankments, improving drainage, enhanced slope protection, adopting climate resilient standards) to minimize deterioration caused by climate impacts.	D&S consultants	Project design documents	Before implementation of each discrete construction activity	PIU environmental specialist
GBV and SEA/SH	A GBV Action Plan will be developed and implemented, and systems will be set up to work with the project GRM to address any GBV, SEA/SH related complaints.	PIU gender specialist	GBV Action Plan document	Prior to project effectiveness	PIU gender specialist
	GBV, SEA/SH related complaints received through the GRM will be redirected to dedicated staff who are trained on the GBV Action Plan	CWD Department	GRM records	Throughout project implementation	PIU environmental, social, and gender specialists
	Background checks and screening will be carried out for all project workers under Component 2 who may be in direct contact with female students.	Contractors	Results of background checks. Records of relevant workers	Prior to commencement of subproject activities	PIU social specialist

Efficiency of school transport vehicles	PTCs will be trained on screening transport service providers to assess quality and upkeep of vehicles used in Component 2. Only well-maintained road-worthy vehicles will be used.	PIU environmental and social specialists	Training plans Attendance records of trainings held	Prior to entering agreement with each PTC	PIU environmental and social specialists
	Vehicle operators will be required to provide proof of biannual maintenance.	PIU with PTCs	Proof of maintenance/ roadworthiness	Prior to entering agreement with each transport service provider	PIU environmental and social specialists
Road safety	Drivers hired by the PTCs will be trained on safe-driving, particularly with respect to climate conditions, and will be required to adhere to local traffic safety laws.	PIU environmental and social specialists	Training plans Attendance records of trainings held	Prior to entering agreement with each transport service provider	PIU environmental and social specialists

9. Grievance Redress Mechanism (GRM)

The project will have a dedicated GRM for the implementing agency to receive and facilitate resolution of concerns and grievances of project affected parties, particularly with regard to the project's environmental, social, and gender performance. Such a mechanism allows for trust-building between the implementers and beneficiaries, and could help prevent discontent, conflicts, and unrest arising from the project. The GRM is designed to be accessible, culturally appropriate, and understandable for all project stakeholders.

9.1. Objectives and Scope of the GRM

The GRM is a tool for early identification, assessment, and resolution of complains or disputes related to the project activities. The overall objective of the grievance resolution procedure is to ensure that complaints and grievances from local stakeholders are handled in a systematic and transparent manner in order to promote mutual confidence and trust during all stages of the project.

The specific objectives of the GRM are:

- To allow stakeholders the opportunity and means to raise concerns and lodge complaints.
- To ensure that comments, responses, and grievances are handled in a fair and transparent manner.
- To mitigated or prevent adverse impacts on communities caused by project activities.
- To serve as an early-alert system to project management for significant or recurring issues that might signal systematic issues in implementation.

9.2. Review of Existing Grievance Redress Systems

A number of existing grievance redress mechanisms are available within relevant government departments for citizens to lodge complaints. The KPRAP GRM may leverage these existing mechanisms, which may be supplemented as needed with project-specific arrangements. However, considering the substantial environmental and social risks associate with the project, the dedicated project GRM will be the primary avenue for grievance resolution, with existing systems being leveraged as and when required.

An overview of existing grievance redress mechanisms is provided in the table below.

Table 10: Existing Grievance Redress Mechanisms

Department/Scope	*Mechanism*	*Mode*
National	Pakistan Citizen's Portal	Mobile application
Khyber Pakhtunkhwa	KP Citizen's Portal	Mobile application

Further details on the existing grievance redress mechanisms are provided in the SEP.

9.3. GRM Framework

The GRM framework for KPRAP will provide mechanisms for project beneficiaries, citizens, and project staff (including contractor staff) to lodge their concerns and complaints. Given that the nature of complaints and resolution mechanisms for different stakeholders may vary, the KPRAP project GRM will house the following sub-GRMs:

- Community GRM – to handle grievances from local communities and beneficiaries as directed by the SEP

- Project staff GRM – for handling grievances raised by project workers, including direct and indirect workers, as directed by the LMP
- GBV and SEA/SH GRM – as per the requirements of the GBV Action Plan

Use of audio-visuals including photos, video materials with captions and edutainment materials will be encouraged for outreach and dissemination of information on the project and the GRM, and the step-by-step GRM submissions for the illiterate or undereducated people or people with disabilities. Toll-free call centers and automated voice systems will be provided as uptake channels for digitally illiterate people and people who do not own or have access to internet or smart phones. For grievances related to Gender-Based Violence, all levels of GRM should have a female officer who will be specially trained in the handling of GBV and SEA/SH related grievances.

The GRM will be disclosed to the stakeholders through written and verbal communication. The modes of engagement for different stakeholders are specific in the SEP.

9.4. GRM Structure

The GRM will function as a multi-tier system with designated staff at the PIU, district, and field levels. Formal Grievance Redress Committees (GRCs) with members nominated by the Project Director will be set up at each level. An electronic database of grievances will be maintained at the PIU, with data fed in by the field and district level GRCs. Field level GRCs may choose to maintain electronic, or written registers for grievances received. District GRCs will—in addition to directly receiving grievances—compile and digitize (if field GRCs maintain written registers) field level grievances and share those with the PIU GRC. The GRCs will also be responsible for tracking and recording the status of all grievances received.

To address GBV and SEA/SH related complaints, the project will ensure the availability of specially trained female staff at each GRM level. The PIU gender specialist will be responsible for managing GBV and SEA/SH related complaints at the project/PIU level. The PIU will develop specific procedures to ensure complainants to register their grievances anonymously, and in a discreet manner.

9.5. Complaint Process

9.5.1 Step 1: Receive the Complaint/Grievance

Grievances from stakeholders or their representatives may be lodged at the project, district, or field level. Stakeholders will be able to raise their grievances verbally (in person, or through a dedicated phone number), or in written form. All grievances will be recorded at the level they are received. Field level grievances may be recorded in written registers and will be shared with the district level GRC on a monthly basis, while district and project level grievances should be immediately entered into a digital grievance register. All grievances will have unique identifiers (UIDs) to allow for easy tracking.

Grievances related to GBV and SEA/SH will be forwarded to the staff specifically trained to handle these types of complaints.

Once a grievance is recorded, the UID will be shared with the complainant, as well as a tentative timeline for its resolution. This should take place on the same day the grievance is received.

9.5.2 Step 2: Initial Review of Grievance

The Grievance Officer (who will be a member of the relevant GRC) will identify the party responsible for resolving the grievance. The responsible party and the Grievance Officer will then conduct an inquiry into the grievance to identify its root cause, and subsequent resolution measures.

At this stage, grievances related to GBV and SEA/SH will be supervised by the PIU's gender specialist.

9.5.3 Step 3: Resolution or Escalation of Grievances

At this stage the relevant GRC, in consultation with the responsible party, will identify a suitable resolution to the issue. In case the issue is unresolvable at the level it is received, the GRC shall elevate it to the higher tier GRC, the complainant shall be notified of its elevation, and an updated resolution timeline shall be communicated.

For grievances that are resolved, the details of the resolution should be entered into the register/database, and the decision will be communicated to the complainant within 3 days. The resolved grievance shall also be flagged for follow-up, and the relevant GRC will check in on the complainant's level of satisfaction with the resolution within 14 days. This feedback from the complainant shall also be added to the register/database.

9.5.4 Step 4: Monitoring and Follow-up

The Grievance Officers at the district and field levels will update the Complaint/Grievance Register on a weekly basis to indicate resolved (closed-out) and unresolved cases, those pending with the GRC or with courts. The Grievance Officer will ensure that the status of all complaints/grievances is kept current and will brief the Project Director on a weekly basis on the status of all current complaints/grievances. On a monthly basis, the district and field Grievance Officers will produce a summary status report and share with the PIU. An annual sex-disaggregated qualitative review of a sample of complaints processed (ensuring variation such as along type of complaint, resolution status etc.) will also be undertaken to analyze the efficacy of the system. Regular monitoring of the grievance mechanism and its outcomes, particularly of trends and patterns, will be critical to ensuring to identify systemic problems and adapt practices accordingly.

10. Budget for ESMF Implementation

The table below presents the cost of ESMF implementation that includes E&S training to be conducted by PIU and various E&S studies to be commissioned by CWD during the project implementation.

Table 11: Indicative Budget

Item	*Estimated Cost (PKR)*	*Remarks*
Director ESHS		
Deputy Director Social		
Deputy Director Environment		
Deputy Director OHS		
Assistant Director Social		
Assistant Director Environment		
Assistant Director OHS		
Gender Specialist	15,000,000	250,000 PKR per month for 5 years
Development of trainings	5,000,000	Lump sum, development of necessary trainings for project staff and contractors
Trainings for project staff and contractor's staff	20,000,000	100 trainings at 200,000 PKR per training, including all setup costs
Monitoring	TBD	100,000 PKR per month for field monitoring staff
ESMP preparation	TBD	1,000,000 PKR per ESMP
Miscellaneous expenses	10,000,000	Additional expenses related to implementation
TOTAL	**TBD**	

Annex A: Environmental and Social Screening Checklist

Subproject Details			
Name of subproject			
ID of subproject			
Proposing agency			
Subproject location			
Subproject objective			
Roads to be rehabilitated			
Roads to be widened			
Estimated cost			
Proposed date of commencement of civil work			
Status of review of technical drawings and specifications			
Screening Question	***Yes***	***No***	***Remarks***
Physical Environment			
Will the subproject pose the risk of clearance of vegetation (due to road construction, or related activities such as labor camp, storage site construction) that may result in an increase in level of suspended solids washing into nearby water bodies?			
Will the subproject pose a risk of contaminating drinking water sources due to construction activities?			
Will the subproject deplete groundwater as a result of water used during road construction activities?			
Will the subproject result in an increase in ambient air pollution, including chemical and particulate matter due to construction and operation of related machinery?			
Will the subproject result in an increase in ambient noise levels and vibrations due to operation of construction machinery/vehicles?			
Will these ambient noise levels be beyond the specifications in the NEQS?			
Will the proposed subproject interventions lead to landslide hazards for users of the roads?			
Will the proposed subproject interventions be implemented in an area with high landslide risk?			
Will the proposed subproject interventions lead to increased soil erosion?			
Will the proposed subproject interventions result in the generation of hazardous and/or non-hazardous waste?			
Will the proposed subproject result in potential increased health risks for project workers and communities (e.g. COVID-19)?			

Is the proposed subproject being implemented in an area with high natural hazard risk? (e.g. floods, earthquakes, landslides)			
Ecological Environment			
Will the proposed subproject interventions potentially cause any adverse impacts to habitats, ecosystems, and/or ecosystem services?			
Will any new roads or rehabilitated roads be located in areas that would promote the conversion of natural habitats?			
Will any subprojects be located on or near sensitive environmental areas, including parks and protected areas?			
Are the subproject activities likely to pose risks to any endangered species?			
Will the proposed roads for the subproject be located in the path of known migratory routes of wildlife?			
Social Environment			
Will the proposed subproject involve land acquisition for the construction of new roads, or rehabilitation of existing roads?			
Are there any forced labor or child labor risks associated with contractors or other third-parties involved in implementing this subproject?			
Is labor influx expected during the implementation of the subproject? Please estimate strength of anticipated outside labor force.			
Will local labor be used for the subproject activities? Please estimate the strength of anticipated local labor force.			
Will there be any temporary or permanent displacement as a result of the subproject activities?			
Are there expected to be any traffic related issues as a result of the subproject activities, particularly during the construction phase?			
Are there any recognized Indigenous Peoples present in the subproject area, and are they likely to be impacted by the project, either positively or negatively?			
Are the proposed subproject interventions likely to have impacts on important religious/cultural heritage sites?			
Have there been any past security related issues at the subproject site?			
Has stakeholder engagement taken place in the proposed subproject area?			
Were vulnerable and indigenous groups involved in stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)			

RISK CLASSIFICATION

Step	**Recommendations/Findings**
Risk category identification	
Recommendation on type of E&S instruments required	

Recommendations to design engineer	
Summary of screening findings	
Name of person conducting screening	
Name of person endorsing screening findings	

Annex B: Traffic Management Plan (TMP)

Following the mandates in the Environmental and Social Framework: ESS1, ESS2 and ESS4, and taken into consideration each project phase and that all the location of the project activities will have different landscape configuration, roads, access, etc., this plan will provide specific measures to be implemented to ensure a proper traffic management while minimizing security risks and impacts to the affected communities. This plan must consider the following: amount of vehicular traffic, pedestrian, the universal principle of open access to sites, the uses of signs, and control mechanisms to allow the free and orderly movement, safe and predictable, guided and a warning to school, hospitals, neighbors and stakeholders nearby the project installations during construction and operational hours. The basic content of a traffic management plan should include:

1. Objective of TMP
2. Legal framework
3. Institutional framework
4. Site and surroundings diagnostics and characteristics
5. Possible environmental and social impacts
6. Evaluation of the environmental and social impacts
7. Measurements for traffic management during construction and operational phase of the project
8. Implementation plan
9. Budget and costs
10. Stakeholders Consultation plan
11. Grievance Redressal Mechanism
12. Follow up and evaluation
13. Adaptive management arrangements

These objectives are based on the guidelines of the Environmental and Social Framework of the WB: ESS1, ESS2 and ESS4, and determine the responsibilities in relation of the evaluation, management and follow-up of the environmental and social impacts associated to the project implementation phases. In the case of the TMP, this must include the predesign, construction and operational phases, with recommended actions to avoid, reduce and minimize those potential impacts generated by traffic and increase traffic in and around the project site, during construction and operation. This plan will avoid all major disturbance of existing traffic, prevent blockages, and permits free flow of vehicles in the communities where the subprojects are implemented.

Annex C: Solid Waste Management Plan (SWMP)

Construction activities for the project may generate various types of waste depending on the nature of rehabilitation work involved—road widening works, for example, may generate more waste than road rehabilitation activities. To mitigate the risks associated with the generation of construction waste, site-specific SWMPs will be prepared.

The SWMP shall:

- Identify all potential waste generation activities implemented by the project, and characterize the types waste products, the specific sources of those products, and the quantities of each that are likely to be produced.
- Describe all applicable international (treaties/conventions/resolutions), national, and provincial laws and regulations regarding solid waste management and disposal.
- Provide detailed, site-specific mitigation measures for all identified risks.

For each sub-project, the SWMP shall be prepared prior to the commencement of construction activities. The SWMP will be prepared by the contractor and finalized and approved by the PIU.

An indicative outline of the SWMP is provided below:

1. **Introduction and context –** This section will provide an introduction to the subproject area and the specific activities of the subproject, and should also include a brief rationale for the preparation of the SWMP.
2. **Identification of waste with quantity and source** – This section should document all potential waste generation with the expected quantities and characteristics of each type of waste.
3. **Handling and disposal guidelines for waste** – This section will provide specific guidance and methodologies for the handling and disposal of solid waste generated by the subproject, identified in the previous section. This may include:
    a. *Excavated soil* – including measures to preserve topsoil, usage/disposal of excavated soil, etc.
    b. *Construction debris* – including guidance on separating recyclable and non-recyclable construction waste, storage and sale of recyclables, disposal of non-recyclables, etc.
    c. *Solid waste (including municipal and other waste generated from labor camps)* – including measures for separation of recyclables, non-recyclables, and biodegradables at source, introduction of the "reduce, reuse, recycle" concept, trainings, etc.
    d. *Other waste products identified in the preparation of section 2*
4. **Selection of waste disposal sites –** This section should identify the location and nature of waste disposal sites, based on the types and quantities of waste expected, and the site screening criteria provided in the ESMF. The site selection process should focus on locating sites a suitable distance away from sensitive locations (settlements, water resources, protected or biologically important areas), and ensuring that disposal sites do not have any adverse social or environmental impacts. Stakeholder/community consultation and community approval must be obtained before finalizing the location/s of the waste disposal site/s. This section should also contain a summary of consultations

carried out for this purpose, and provide specific information on how stakeholder views were incorporated into site selection.

5. **Implementation, Monitoring and Reporting –** This section will assign responsibilities for the implementation of the SWMP. It will also provide details on compliance monitoring of the implementation of the SWMP. Specifically, it will include a list of monitoring indicators (including actual amounts and types of wastes generated, records of disposal, etc.) and assign responsibilities for monitoring. Finally, this section will include an indicative outline of monitoring reports, and a schedule for reporting on SWMP compliance to the PMU.

Annex D: Indigenous Peoples Planning Framework

This framework describes and provides guidance for the preparation of Indigenous Peoples Plans (IPPs) which will be required for any subprojects with the potential to impact (either positively or negatively) recognized indigenous peoples.

IPPs will establish the measures through which the implementing agency will ensure that: (i) indigenous people affected by the subproject receive culturally appropriate social and economic benefits; and (ii) if potential adverse effects on indigenous peoples are identified, those effects will be comprehensively and appropriately mitigated. The IPP should be prepared with a pragmatic approach, with a level-of-detail that reflects the nature and degree of the potential affects.

An indicative outline of the IPP is provided below:

1. **Introduction and Context** – which shall include an introduction of the proposed project and activities, as well as a clear description of the rationale for preparing the IPP
2. **Legal and Institutional Framework** – this section will describe all applicable international, national, and provincial (if applicable) laws and regulations pertaining to IPs. This should also include any international treaties/conventions to which Pakistan is party.
3. **Socioeconomic Baseline –** Including a description of the IPs likely to be encountered at the subproject site, their available economic resources, infrastructure, livelihoods, and other data that may be relevant to the project (e.g. education statistics, social protection, etc.). This section should also provide an overview of any social assessments carried out during the identification of IPs.
4. **Free, Prior, and Informed Consent –** which shall summarize the process undertaken to obtain free, prior, and informed consent during subproject preparation, and also provide a framework to do the same during subproject implementation.
5. **Summary of Potential Impacts –** This section should provide detail on the potential impacts on IPs during the course of the subproject
6. **Indigenous Peoples Action Plan –** This will describe in detail the measures that will be implemented to ensure that the IPs in the subproject area receive culturally appropriate socioeconomic benefits from the project
7. **Mitigation and Monitoring Plan –** analogous to the EMMP provided in the ESMF, this section will assign implementation responsibilities for the mitigation measures proposed in the previous section, and describe the mechanisms and benchmarks for M&E of the implementation of the IPP. It will also assign responsibilities for monitoring and oversight within the implementing agencies.
8. **IPP Budget –** will provide a breakdown of costs expected for implementing the IPP
9. **Annexes –** which will include summaries of any consultations carried out with IP stakeholders, and any other auxiliary information deemed necessary for the implementation of the IP.

Annex E: Physical Cultural Resources Management Framework (PCRMF)

Due to the potential presence of physical and cultural resources in and around the proposed project area, a standalone Physical & Cultural Resource Management Framework (PCRMF) has been prepared in accordance with ESS8.

Physical Cultural Resources will be managed under Antiquities Act 1975, Cultural Policy of KP, ESS8 and Pak- EPA Guidelines for Sensitive and Critical Areas 1997

The anticipated direct impacts on physical cultural resources include impact upon sub-surface archaeology, effect of the works on any historic buildings or landscapes and visual impact on the property and its surrounding landscape. Indirect impacts include local cultural deterioration, resource use conflicts and loss of local identity and values.

It is the responsibility of the implementing agency to protect and safeguard the physical cultural resources by adopting proper heritage site management practices. CWD will ensure that construction contractors prepare a Physical and Cultural Resource Management Plan before the commencement of construction works in/around the heritage sites. The significance of cultural heritage in a project area shall be evaluated and then potential impacts of the project, including the extent and economic costs of any damage will be assessed.

The following mitigation measures should be adopted to avoid the impacts on physical cultural resources:

- The most important single strategy for heritage protection is site avoidance: redirecting activities so that they do not endanger a site;
- If the site cannot be avoided, the assessment should consider design and construction alternatives for the project facilities as well as alternative methods and approaches for protection and mitigation;
- The alternatives should be ranked according to effectiveness, cost, difficulty, length of time required, and monitoring needs. Decisions should be made by weighing these rankings against the cultural significance and economic value of the site; furthermore
- Alternative and mitigation measures should be considered in Project Site-Specific ESMP

In case of any chance find, the Contractor will immediately report to the PIU who will notify the Directorate General (DG) of Archaeological Department, Government of Pakistan to take further suitable action to preserve those antique or sensitive remains. A representative of the DG will visit the subproject site and observe the significance of the antique, artefact and Cultural (religious) properties and significance of the find. The report will be prepared by the representative and will be given to the DG. If required suitable action will be taken to preserve those antiques and sensitive remains.

Annex F: GBV/SEA/SH Action Framework

A comprehensive GBV/SEA/SH Action Plan shall be prepared by CWD for the project, prior to implementation. An indicative outline for the plan is provided below:

1. Executive Summary
2. Description of the Project (Objectives, Components, and Beneficiaries)
3. Assessment Approach, Methodology, and Sources of Information
4. KPRAP Gender Dimensions
5. GBV/SEA/SH Risk Assessment and Mitigations
6. Action Plan Implementation
7. Monitoring and Reporting
8. Budget for Implementation

The Plan shall include the following mitigation measures/actions:

- Development of stand-alone gender and GBV, SH, SEA training material or adaptation of existing material by qualified and experienced trainers to orient GRM response teams as well as project staff and implementing partners on reporting mechanisms and response protocols related to cases; cyclically, take such trainings down to the lowest levels of governance and project management.
- Hire of a qualified gender trainer on contract to impart intermittent gender sensitization trainings to government officials, project partners, and beneficiaries and train Master Trainers for community replication sessions.
- Ensure GBV provisions within the project GRM. This should be able to route complainants towards relevant GBV counselors and authorities in a discreet manner, while providing compliant registration and legal counseling. Establish a system of confidential user satisfaction assessments with a tracking system for onward referrals and follow-up after the GRM has been set up.
- Ensure the GRM dedicates trained female staff to handle all cases of GBV, SH, and SEA. Train GBV response teams on standards and guidelines developed under the United Nations Joint Global Programme on Essential Services Package for Women and Girls Subject to Violence: Core Elements and Quality Guidelines.
- CWD in each district/division to notify local Sexual Harassment Inquiry Committees in their offices and appoint three trained officer bearers as permanent Committee members, including at least one woman, after adequate training from the provincial office.
- Enhance the visibility of information and systems regarding designated Sexual Harassment Inquiry Committees and their members who could be approached by all project staff and beneficiaries for assistance in cases of SH and SEA.
- Mandate visible display of Anti Sexual Harassment Code of Conduct by project all partners at all project sites along with information on the GRM.
- Ensure gender inclusive, safe and well-lit WASH facilities for women workers in the project; use civil works budgets to financially support recurring repair and maintenance budgets for the same.

- Introduce localized referral directories and train GRM response teams on GBV, SH and SEA, related laws, reporting procedures, and referral systems. Develop a system for linking up with other concerned departments and GBV service providers to strengthen institutionalized response to criminal and civil offences that may be reported.
- Share GBV/SH/SEA referral directories with project partners, beneficiaries, and community resource persons (male and female)
- Mandate Departmental reporting of detected cases of GBV, SH and SEA to the GRM as well as recording of response provided thereof, with due attention to privacy and confidentiality (for example, case numbers can be used for identification rather than real names), for further analysis, action, and follow-up.
- Popularize the use of GBV and violence against women and girls (VAW/G) reporting mechanisms including software applications such as Humqadam (by Shirkat Gah – Women's Resource Center) and ZAARA (Citizen Police Liaison Committee, National Ministry of Human Rights) amongst project implementation partners, community groups, project beneficiaries and others.