



ISLAMIC REPUBLIC OF AFGHANISTAN
MINISTRY OF PUBLIC WORKS



Environmental and Social Management Framework



Trans-Hindukush Road Connectivity Project

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1 Background of the Project

Trans Hindukush road connectivity is very crucial for not only economic development of Afghanistan but also its national integration. Salang Highway, built almost half a century before carries almost all the traffic from North to South and vice-versa. It connects the Baghlan-Kunduz region to Jalalabad-Kabul region with almost ten thousand vehicles transporting goods and passengers every day, the Salang highway is one of the highest motor-able roads and gets frequently affected by heavy snowfall and landslides etc. The traffic disruptions cause huge economic costs and losses. Only alternative route to Salang highway is the unpaved Bamyan to Baghlan highway, which due to its limitations only is used by smaller vehicles. The Government of Islamic Republic of Afghanistan (GoIRA) has identified the Bamyan to Baghlan Corridor also called the Bamyan-Dushi Road, located within the Provinces of Bamyan and Baghlan, as a national highway requiring significant construction maintenance because of its strategic importance in providing an alternate route for Salang highway.

1.1 Project Description

The World Bank has decided to provide funds for developing the Hindukush road connectivity project having the following two sub projects:

- Upgrading the Bamyan to Baghlan highway (152 Kms.) as an alternative route when Salang highway is closed due to weather related disruptions and maintenance works. There are settlements along the road and social impacts in terms of land acquisition are thus unavoidable.
- Long term rehabilitation of Salang highway including repairs to the tunnels and construction of a new reinforced heavy duty concrete pavement for about 30 Kms. length, located between 2,500 and 3,400 meters altitude above sea level. There are no settlements nor privately owned land along the road segment addressed, and hence no social issues involved

2 Purpose of Environmental and Social Management Framework (ESMF)

Given that the exact works on some of the segments on the B2B highway and on Salang Highway will only be identified and confirmed during implementation of the proposed project, the World Bank's Operational Policy on Environmental Assessments OP4.01 requires that an Environmental and Social Management Framework (ESMF, this document) be prepared to guide the process during implementation of the proposed project for environmental and social screening of impacts along these segments and for the appropriate Environmental and Social Management Plans (ESMP) to be prepared.

The ESMF provides guidance on the approach to be taken during survey and implementation of Salang Highway and Bamyan to Baghlan Highway segments and ensures the effective application of the World Bank's safeguard policies, IFC/World Bank Group's General EHS (Environment, Health and Safety) Guidelines and relevant national laws and regulation which have been reflected in the ESIA. The Framework guides the contractors to prepare the site-specific environmental and social management plans of project's segments.

2.1 Objectives of ESMF

The specific objectives of this ESMF are as under:

- To guide the screening process of identifying the Environmental and Social Impacts of the segments of the B2B highway and Salang Highway once the exact works on the alignment are determined.
- To provide guidelines for preparing the Site-Specific Environmental and Social Management Plans to address the adverse impacts and enhance positive environmental and social outcomes.
- To describe the implementation arrangements to ensure compliance with World Bank safeguard policies and Afghanistan environmental law and EIA regulation.
- To act as a framework in order to ensure that the project impact mitigation measures are properly implemented and monitored.

2.2 ESMF General Guidelines

This ESMF provides for guidelines and procedures for screening to ensure that the environmental and social risks are adequately and appropriately addressed. This ESMF comprises the following three principal safeguard instruments: (i) Environmental and Social Checklist for screening of project segments (ii) Environmental and Social Mitigation Measures Plan (ESMMP) and (iii) Monitoring Arrangement and Plan.

3 Policies, Legal and Administrative Framework

A desk study was carried out to assess and prepare the most applicable legal and administrative framework for the proposed project. The assessment has taken into consideration, both relevant Afghanistan laws and the World Bank policies and procedures.

3.1 Afghanistan Environmental and Social Safeguard Policies and Procedures

Afghanistan's National Environmental Protection Agency (NEPA) was established in the year 2005. In the same year, the Afghanistan Environmental Law was issued by Government of Afghanistan. The law defines the Agency's function and role of NEPA for environmental protection at country level. As per the law, NEPA serves as Afghanistan Environmental policy-making and regulatory institution.

Legislative Framework - The Environmental Management Act (EMA) prepared by NEPA focuses on several areas including:

1. Integrated Environmental Management
 - Environmental Impact Assessment
 - Integration of Environmental Issues into Development Planning
2. Integrated Pollution Control
 - Pollution Prevention Control (including licensing)
 - Waste Management (duty of care, waste management licenses etc)
3. Water Resource Conservation and Management
4. Biodiversity and Natural Resource Conservation and Management
 - National Biodiversity Strategy
 - Protected Areas Management
 - Sustainable Use and Conservation of Species
 - Species Trade
 - Access to Genetic Resources
5. Compliance and Enforcement

In addition to the EMA several other environmental related laws currently exist are illustrated below.

Table 1: Afghanistan Environmental and Social laws and regulations

Afghanistan Environmental laws and regulations	Date
Environmental Law	Jan-2007

Afghanistan Environmental laws and regulations	Date
Environmental Impact Assessment	March-2008
Forest Law	2000
Law on Managing Land Affairs	2008
Law on Land Expropriation	2005 (Amended)
Nature Protection Law	1986/2000
Hunting and Wildlife Protection Law	2000

3.1.1 The Environmental Law of Afghanistan (2007)

Afghanistan enacted an updated Environment Law on January 25, 2007. The Environment Law has five main purposes: 1) improve livelihoods and protect the health of humans, fauna and flora; 2) maintain ecological functions and evolutionary processes; 3) secure the needs and interests of present and future generations; 4) conserve natural and cultural heritage; and 5) facilitate the reconstruction and sustainable development of the national economy. The implementing agency for the Environment Law is the Afghan National Environmental Protection Agency (ANEPA), which acts as an independent institutional entity, and is responsible for coordinating and monitoring conservation and rehabilitation of the environment. The Environment law contains a supremacy clause which states: “where there is inconsistency between the provisions of this Act and any other law that affects the environment, other than the Constitution of Afghanistan, this Act shall prevail.” This addition makes the Environment Law a very powerful law when planning projects and activities that could impact the environment.

The Environment Law contains a blanket prohibition on two types of activities. The first is that “no person may undertake an activity or implement a project, plan or policy that is likely to have a significant adverse effect on the environment” unless the provisions of Article 16 are followed. The second is that “no ministry or national authority may grant an authorization for the execution or implementation of a project, plan or policy that is likely to have a significant adverse effect on the environment” unless the provisions of Article 16 are followed. The language in the Afghan Environment Law is substantially similar to that of the National Environmental Policy Act (hereafter U.S.-NEPA) in the United States and the standard of “significantly affecting the quality of the human environment.” Also similar to the U.S.-NEPA process, the Afghan Environment Law requires that the person or agency make an informed choice regarding the proposed action, rather than requiring a specific course of action or no action. The Afghan Environment Law, again similar to U.S.-NEPA, requires that environmental issues be integrated into all national and local land use plans and natural resource management plans developed by relevant ministries and national institutions.

One of the requirements of the process under the Afghan Environment Law is the submission of a preliminary assessment. The preliminary assessment should contain accurate information to allow ANEPA to determine the potential adverse effects and positive impacts of the project, plan, policy or activity. ANEPA will review the brief and solicit advice from the EIA Board of Experts (see below) before making a decision to authorize the project, plan, policy or activity. ANEPA can also place conditions on the proposed project, plan, policy or activity, without requiring further action by the proposing party. However, if ANEPA considers the adverse effects likely to be significant, it can require the proposing party to submit an Environmental Impact Statement or a Comprehensive Mitigation Plan under the Law. If ANEPA chooses to require a comprehensive mitigation plan, it must include the following: 1) a description of the mitigation measures that will be implemented in order to prevent, reduce or otherwise manage the environmental impacts of a project, plan, policy or activity; 2) how these measures will be implemented; and 3) any other information prescribed by ANEPA. The costs incurred in preparing the preliminary assessment, an environmental impact statement, a final record of opinion or a comprehensive mitigation plan are the responsibility of the applicant proposing the project, plan, policy or activity.

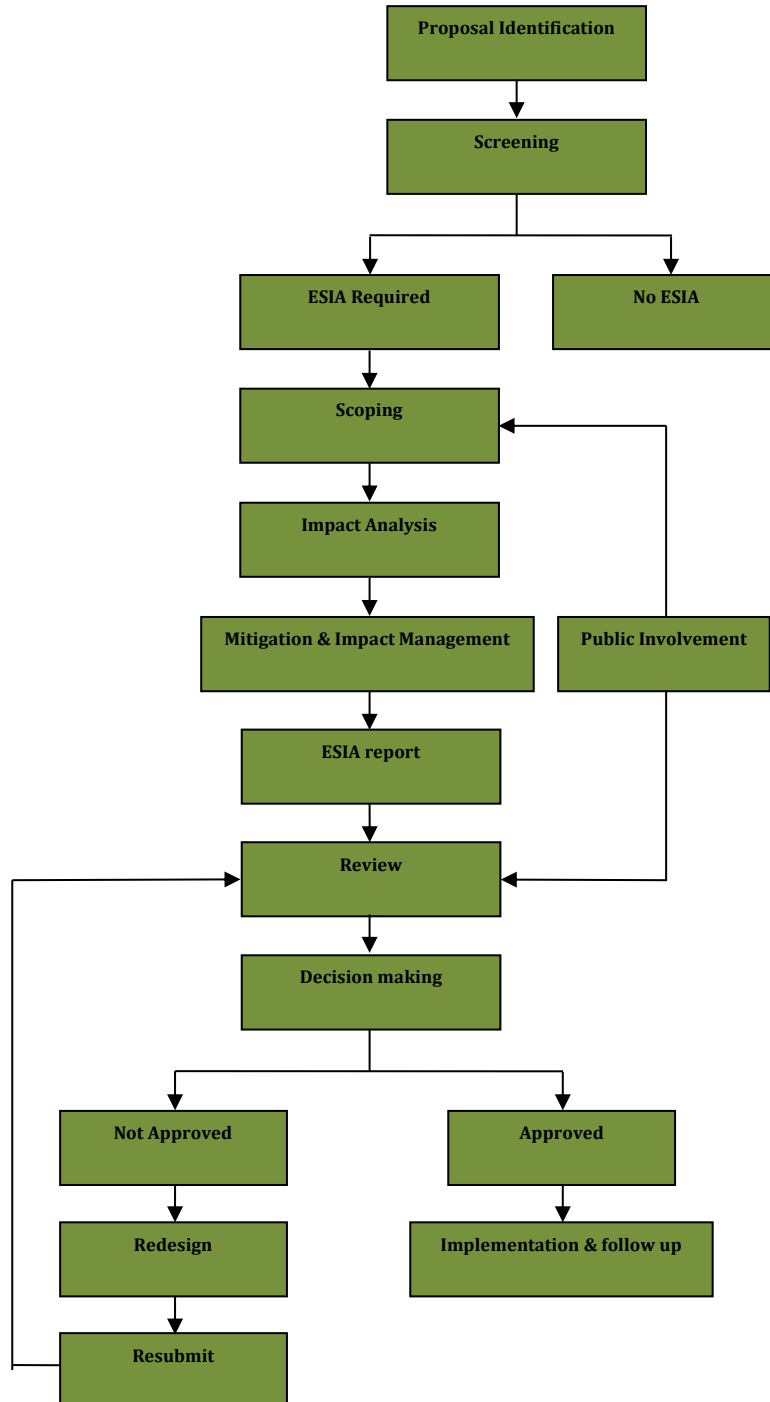
On the basis of the preliminary assessment and any required follow-up documentation, such as an Environmental Impact Statement or Comprehensive Mitigation Plan, ANEPA can choose to either grant or refuse to grant the permit for the project, plan, policy or activity. If ANEPA, acting on the advice of the EIA Board of Experts, finds that the environmental impacts and concerns are adequately addressed by the environmental impact statement/preliminary assessment it can grant the permit subject to any conditions recommended by the EIA Board of Experts. If ANEPA, acting on the advice of the EIA Board of Experts, finds that the implementation of the project would bring about unacceptable significant adverse effects or that the proposed mitigation measures would be inadequate, it can reject the proposed project, plan, policy or activity, and the reasons for rejection must be provided in writing. A permit may also be withdrawn if the applicant fails to comply with any of the terms and conditions of the permit. Permits will lapse if the applicant fails to implement the project, plan or policy or undertake the activity within three years from the date of issuance.

The Environment Law requires that affected persons be given the opportunity to comment on the proposed project, plan, policy or activity, as well as the preliminary assessment, the environmental impact statement, the final record of opinion and a comprehensive mitigation plan (if one was required) before ANEPA approves the permit. The applicant must also demonstrate to ANEPA that there has been an appropriate time and meaningful opportunity, in both individual consultations and public hearings, for affected persons to comment on the proposed project, plan, policy or activity. If the proposed project is likely to have “highly significant adverse effects on the environment”, affected persons must have the opportunity to participate in each of the phases of approval by ANEPA.

3.1.2 Afghan Environmental Assessment Procedures

Prior to 2005 no formal EA process has been practiced in Afghanistan. As a result many projects, such as deep well drilling or large-scale irrigation projects were conducted without considering the environmental consequences of such activities. Additionally, there wasn't, and in some circumstances, still isn't any consistent application of EA amongst donor agencies and international organizations currently working in the country.

Figure 1: Environmental Impact Assessment Procedure at NEPA



Specific guidelines have now been produced as part of the Environmental Management Act to deal with Environmental Impact Assessment. In theory there are several key stages in the assessment procedure as follows:

1. Any project, plan or policy of significant size or scope (no screening list defined as yet) shall submit to NEPA a brief containing enough information to enable NEPA to determine the potential adverse effects and positive impacts of the project, plan or policy.
2. After reviewing the brief and acting on behalf of the EIA Board of Experts (yet to be established) NEPA will either:
 - a. Recommend the project proceeds without further environmental assessment; or
 - b. Submit an environmental assessment / comprehensive mitigation plan
- 3 The outline of the EA is roughly similar to that contained herewith, however, alternatives should also be considered, e.g. alternative design, technologies, routes etc.
- 4 Once the EA has been approved by the Executive Secretary General (acting on the advice of the EA Board of Experts) a permit is granted allowing continuation of the proposed project, plan or policy. If the permit is refused for whatever reason an appeal can be submitted within 60 days of the refusal.

The regulations also state that Public Participation should also be part of the EA process. Public participation in this sense includes distributing copies of the EA to affected persons and undertaking public hearings.

3.1.3 The Land Expropriation Law (2005) and its Amendments (2009)

The Law sets out the provisions for governing the expropriation or acquisition of land for public interest purposes, such as the establishment of public infrastructure or for the acquisition of land with cultural or scientific values, land of higher agricultural productivity and large gardens. It declares, inter alia, that:

- a) The acquisition of a plot or a portion of plot, for public interest is decided by the Council of Ministers and will be compensated at fair value based on the current market rates (Article 2).
- b) The acquisition of a plot or part of it should not prevent the owner from using the rest of the property or hamper its use. If this difficulty arises, the whole property will be acquired (Article 4).
- c) The right of the owner or land user will be terminated three months prior to start of civil works on the project and after the proper reimbursement to the owner or person using the land has been made. The termination of the right of the landlord or the person using the land would not affect their rights on collecting their last harvest from the land, except when there is emergency evacuation (Article 6).

- d) In case of land acquisition, the following factors shall be considered for compensation: value of land; value of houses, buildings and the land; values of trees, orchards and other assets on land (Article 8).
- e) The value of land depends on the category and its geographic location (Article 11).
- f) In accordance with the provisions of the law residential land plots shall be distributed to individuals whose lands or houses have been expropriated against a fixed project price. It can be arranged with the owner if he wishes to exchange his property subject to acquisition with government land. The difference on the values of land will be calculated (Article 15).
- g) Where the State-owned lands is being used by State and mixed departments are possessed by the municipality, local chief or other departments, in that case only constructional materials shall belong to the former possessors, and they shall not be paid the land and building prices. (Article 16)

The Law however, is silent on resettlement. It makes no special provision for a resettlement plan or indeed and arrangements for resettlement. In addition, the current law does not permit squatters and occupiers of land under customary deeds to receive compensation for the loss of their land. Given these identified shortcomings, MoPW will follow the World Bank's Operational Policy 4.12 for Involuntary Resettlement which is considered an international best practice for such issues.

3.1.4 Law on the Preservation of Afghanistan's Cultural and Historical Artefacts (2004)

According to the Law on the Preservation of Afghanistan Historical and Cultural Artifacts, an operation which causes destruction or harm to the recorded historical and cultural sites or artifacts is prohibited. The law provides for:

- a) No one can build or perform construction on the recorded historical and cultural site unless approved or granted permission or agreement is issued from the Archaeology Institute (Article 7).
- b) If a construction project harms a historical or cultural artifact, the project will be stopped until proper measures are taken to preclude such harm (Article 11).
- c) Digging wells, ditches, rock blasting, driving over and any other operations which cause destructions of the recorded historical and cultural sites is prohibited without coordination and permission of Archaeology Institute (Article 16).

3.1.5 National Waste Management Policy

A Draft National Waste Management Policy was prepared in 2008. The policy makes recommendations for the management of medical waste, hazardous waste and municipal solid waste. Although still in draft format, the ESIA will seek to adhere to the requirements of the

policy where practical, e.g. the requirement to reduce, reuse and recycle waste and to dispose of hazardous waste as per international standards.

3.1.6 Air Quality Standards

Afghanistan has drafted National Ambient Air Quality Standards. The primary objective of Air Quality Standards is to ensure that all citizens should have access to outdoor air without significant risk to their health, where this is economically and technically feasible. The secondary objectives of Air Quality Standards are:

- To provide the basis for assessing the quality of air;
- To act as the foundation for setting control programs;
- To assess the new sources of air pollution; and
- To create awareness and alert the public

3.1.7 Forest Law

The Forest Law was approved in 2012. The main purpose of the Law is to manage forest resources in a sustainable manner with a participatory approach involving forest restoration, protection, development, exploitation and improvement and to protect and increase forest productivity and maintaining a balance between growing and exploitation of forests. In addition the Law aims to:

- Slow down winds and to prevent their undesirable impacts;
- Prevent soil erosion caused by floods and winds;
- Control risks of floods;
- Increase underground water levels;
- Manage surface water flows;
- Restore and protect public parks, for tourism development;
- Protect animal species and wild birds and their living environment;
- Conserve biodiversity, ecosystems and natural habitats;
- Control desertification; and
- Encourage the active participation of all member of society in management and protection of forest resources

3.1.8 Other Plans and Strategies

In addition to the above laws, Afghanistan is also preparing plans and strategies important to the Project including the Draft National Plan for Sustainable Rangeland Management in

Afghanistan. The plan forms the basis for the establishment of a Rangeland Law which will update the Pasture Law from the 1970's.

3.1.9 Multi-lateral Environmental Agreements (MEA)

According to the UNEP, Afghanistan is signatory to a number of multi-lateral environmental agreements. Table 2 provides a summary of these agreements. B&B will not be affected by any of these agreements, nor will B&B affect any of these agreements.

Table 2: Afghanistan MEAs

#	Title
1	Convention on Biological Diversity
2	Desertification Convention UNCCD
3	United Nations Framework Convention on Climate Change
4	Convention on International Trade in Endangered Species of Fauna and Flora
5	Vienna Convention for the Protection of the Ozone Layer

3.2 World Bank Policy on Environmental and Social Assessment

The World Bank's Operational Policy OP4.01 on Environmental Assessments requires Environmental and Social Impacts Assessments (ESIA) of the project proposed for Bank financing to help ensure that they are environmentally sound and sustainable in order to improve decision making of the Bank on the project. Therefore, the ESIA has been prepared which provides guidance on the approach to be taken during planning and implementation of projects and ensures the effective application of the World Bank's safeguard policies, IFC/World Bank Group's General EHS (Environment, Health and Safety) Guidelines.

Table 3: Applicability of World Bank Safeguard Policies

S. No.	World Bank Policy	Applicability	Remarks/Actions
1.	Environmental Assessment OP 4.01	<ul style="list-style-type: none"> Based on conducted studies, the construction of the road have some environmental impacts on water bodies, existing slopes in case of mountainous and hilly areas and on trees along the road 	<ul style="list-style-type: none"> Implementation of Site-Specific Environmental and Social Management Plan (SS-ESMP)
2	Involuntary Resettlement OP 4.12	<ul style="list-style-type: none"> The project will require land acquisition, loss of productive assets etc. and thus negatively impact PAFs. 	<ul style="list-style-type: none"> The Resettlement Policy Framework (RPF) which is annexed within the ESIA, based on which, a RAP will be prepared.
3	Physical Cultural Resources 4.11	<ul style="list-style-type: none"> A structure presumed to be from Buddhist times has been observed at KM 134 of B2B and is the only observed cultural site within the 	<ul style="list-style-type: none"> The structure is approximately at 50 meters from the road. It is recommended that the

S. No.	World Bank Policy	Applicability	Remarks/Actions
		vicinity of the road	site is fenced to prevent any interference during project works. In case of any further unexpected discovery, Chance find procedures will be followed (Appendix A) of ESIA.

World Bank Safeguard Policies which are triggered for this project:

- Environmental Assessment (OP 4.01);
- Involuntary Resettlement (OP 4.12); and
- Physical Cultural Resources (OP 4.11)

3.2.1 Environmental Assessment (OP 4.01)

The OP 4.01 requires among others that screening for potential impacts is carried out early, in order to determine the level of ESIA to assess and mitigate potential adverse impacts. The Bank's project screening criteria group projects into four categories:

1. Category A – A proposed project is classified as Category 'A' if it is likely to have significant adverse environmental impacts that are 'sensitive', diverse or unprecedented. For such project the borrower is responsible for preparing a report, normally an Environmental Impact Assessment (EIA).
2. Category B – A proposed project is classified as Category 'B' if its potential adverse environmental impacts are less adverse than those of Category 'A' project. The scope of Environmental Impact Assessment for Category 'B' may vary from project to project, but it is narrower than that of Category 'A' project.
3. Category C - A proposed project is classified as Category 'C' if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further Environmental Assessment Action is required for a Category 'C' project.
4. Category FI- A proposed project is classified as Category 'FI' if it involves investment of Bank's funds through Financial Intermediaries (FIs), in subprojects that may result in adverse environmental impacts.

The OP 4.01 is applicable to the rehabilitation, maintenance and spot improvement of Bamyan-Baghlan and Salang Highway Rehabilitation project. This project has been classified as Category 'A' project. This ESIA has been conducted that appropriate as part of project design, including public consultation process.

Given that the exact works on some of the segments on the B2B highway and on Salang Highway will only be identified and confirmed during implementation of the proposed project, OP4.01 further requires that an Environmental and Social Management Framework (ESMF, this document) be prepared to guide the process during implementation for environmental and social screening of impacts along these segments and for the appropriate Environmental and Social Management Plans (ESMP) to be prepared.

3.2.2 Involuntary Resettlement (OP 4.12)

This policy deals with the issues and concerns related to land/assets acquisition, their compensation for all categories of affected persons and affected assets, relocation, resettlement, loss of livelihood, access and related issues. If involuntary resettlement is not properly mitigated, it creates severe economic, social and environmental problems in the project area. People face impoverishment when their productive sources are lost, and they are relocated to such environment where their productive skills are not properly utilized, the competition for resources is increased, the community institutions and local networks are weakened. Where it is not feasible to avoid resettlement, these activities should be conceived and executed as a sustainable development program. Displaced persons should be properly consulted and should have opportunities to participate in planning and implementing resettlement programs. The following are the main objectives of Bank's OP 4.12:

- Involuntary resettlement should be avoided up to the possible limit or minimized by exploring other viable alternatives;
- Where it is not feasible to avoid, resettlement, resettlement activities should be conceived and executed as sustainable development program, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits;
- Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least restore to the extent of pre-displacement levels.
- Displaced persons may be classified into:
 - i. Those with formal legal rights to land, including customary and traditional rights recognized under the law of the country;
 - ii. Those who do not have formal legal rights to land at the time the census begins but have a claim to such land or assets—provided that such claims are recognized under the law or become recognized through a process identified in the resettlement plan; and
 - iii. Those who have no recognizable legal right or claim to the land they are occupying.

The Bamyān to Baghlan road upgrading involves displacement of affected persons close to the Right of Way (ROW) and OP 4.12 is therefore triggered to deal with the relocation and resettlement of the persons displaced due to construction of the road. The prescribed responses to

adverse impacts are presented in the Resettlement Policy Framework (RPF), in Annex I, based on the Afghan legal framework and compliant with World Bank Operational Policy 4.12. A Resettlement Action Plan (RAP) has been prepared for this first segment of the road.

3.2.3 Physical Cultural Resources (OP 4.11)

This policy is premised on the need to investigate and take inventory of Physical Cultural Resources (PCR) likely to be affected. Mitigations are provided for in cases of adverse impacts on Physical Cultural Resources. Mitigation measures should be undertaken in conjunction with the appropriate authorities, organizations and institution that are also required to be consulted and involved in the management of cultural property.

The Bank does not support development actions likely to significantly damage non-replicable cultural property, and does assist only those projects sited or designed to prevent such damage. The ESIA identifies that there are no known physical cultural resources within the ZOI, but appendix A provides the chance find procedures (based on existing national law) to be used during implementation, if necessary.

3.2.4 Bank's Policy on Access to Information

The Bank's policy on disclosure requires that all the people residing in the given areas of a project have the right to be informed and consulted regarding the proposed project in the respective areas. In this regard therefore, the summary of the study of the projects actions and other relevant information will be disclosed to public prior to the commencement of the project. The disclosure shall be carried out in-country through the Ministry of Public Works and National Environmental Protection Agency along the project corridors. It shall also be made available at the World Bank Info-shop.

All Project construction activities will be required to follow the World Bank IFCs General Health and Safety Guidelines¹ for Occupational Health and Safety (OHS) and Community Health and Safety. These documents provide guidelines for issues such as water quality and availability, disease prevention, physical hazards, chemical hazards and the use of personal protective equipment (PPE).

¹<http://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES>

4 Potential Environmental and Social Impacts

The rehabilitation of Salang highway will involve repairs of existing pavements, galleries and tunnels and is expected to have only minimal adverse environmental impacts. However, the proposed Bamyān to Baghlan road has extensive cut and fill requirements and unmanaged disposal of cut material can have significant impact to surface hydrology. Borrow pit excavations near the project site and potentially within the agriculture land can cause drainage issues. Similarly requirement of crushed rock for road construction will involve quarry operations and can have potential environmental impacts.

Design interventions shall ensure balancing of cut and fill activities and dumping of cut material safely as well as measures to control the accelerated erosion during exaction period. Mitigation measures to control other potential adverse impact by implementing specific contract provisions for environmental protection are suggested in this report.

Similarly other potential adverse impact on soil and other geological conditions have been identified including on natural and biological resources. Cutting of trees, vegetation clearance and the interruption of existing irrigation canals are the recognized impacts. No major disruption of wildlife migration patterns is indicated.

3.1 Potential Social Impacts

The road improvements are expected to have positive social impacts in the form of improved access to social services, markets and jobs for communities of the areas, and therefore contribute to improving living standards in the project area. The road improvements are also expected to result in improvement in the incomes and result in reduction of poverty in the Zone of Influence (ZOI). According to findings from the follow up socio economic survey about 60% households were found to be ‘Extremely Poor’ with an income of less than US\$1 per capita per day.

However, based on the project’s preliminary design, the Bamyān to Baghlan road will also involve land acquisition and resettlement impacts. The road is expected to be widened to 10 meters; the existing road width is between 5 to 12 meters.

It is essential to note, the Salang highway rehabilitation works are not expected to involve any adverse social impact, as the rehabilitation work does not take place in the area with any potential or usable lands for resettlement.

In order to assess alternatives to avoid acquisition and the financial implications of it an exhaustive Social Impact Assessment (SIA) has been undertaken. This includes development of the project socio economic baseline study, which was commissioned by the USAID in 2009. A follow up survey was conducted during September-October 2014 to establish the validity and reliability of the data in the current context. As per the current assessment estimates, as much as 650-700 affected families will lose a part of their residential, commercial or agricultural properties along the Bamyān to Baghlan road corridor. A detailed 100% household census was carried out by the Project Management Unit (PMU) team to collect socio-economic information

on the status of affected families in the first segment of the road project, where 97 PAFs will be impacted. There has also been a strip plan prepared for the first segment, which includes inventory of impacts land and properties.

3.2 Environmental and Social Impacts Analysis

Environmental and social impact assessment started with the scoping analysis where the key potential impacts were identified and followed by more detailed impact analysis in chapter sixth of this document. The negative environmental and social impacts of the project are expected to be relatively less significant.

Positive Impacts

- The local, regional and national economies would expand
- Road safety and comfort will improve
- Reduction in vehicle operating and transportation costs
- Increased employment and income opportunities
- Improved healthcare delivery
- Better market access for farm produce
- Government agents would be able to collect taxes

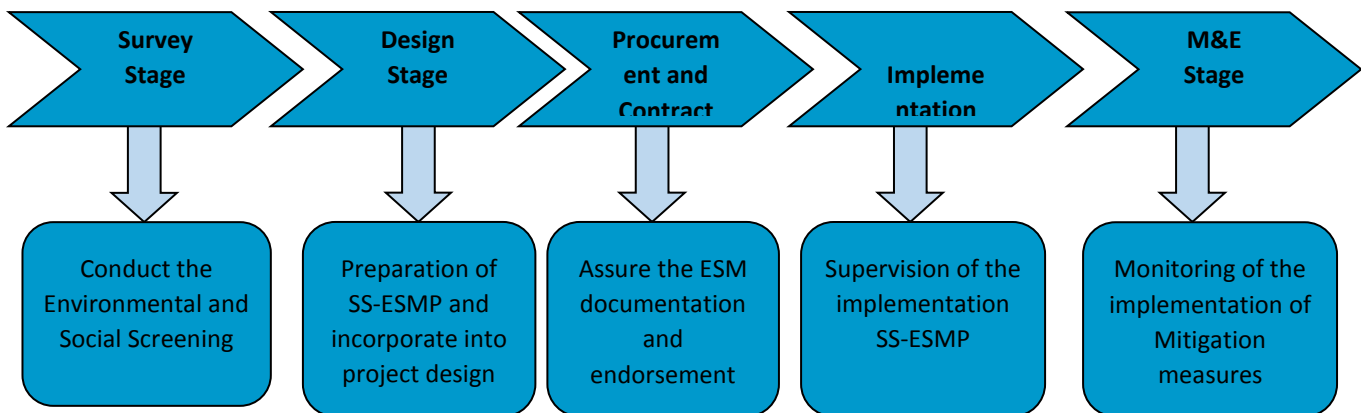
Negative Impacts

- Loss of Land
- Loss of residence other buildings & structures
- Loss of agricultural products
- Loss of livelihood & businesses
- Removal of existing trees, gardens and plantations
- Contamination of water resources
- Dust and Air Pollutions
- Noise Pollution
- Soil Erosion and Sedimentation
- Expropriation of Farmlands
- Impacts on Traffic Diversions
- Wastes generation

5 Environmental and Social Management Procedure

The Environment and Social Management Unit has established the environmental and social management procedure which will be applied to perform overall environment and social requirements, and ensure that the safeguard components are incorporated into planning, design and implementation of the project's segments. It also involves monitoring and reporting mechanisms on the status of the ESMF implementation. The ESM process will be fully mainstreamed into all phases of the overall project planning and implementation cycle as shown in below.

Figure 2: Environmental and Social management procedure



5.1 Survey Stage (Screening)

The Environmental and Social Impact Assessment has been carried out for the Trans Hindukush Road Connectivity Project and potential environmental and social impacts have been identified for Bamyan to Baghlan Highway road. The ESIA report proposed the mitigation measures along with specific contractual environmental condition.

For the Salang corridor, the environmental and social screening and review process for identification of potential impacts will be conducted with respect to environmental/social issues has been laid out in the ESMF. The screening exercise will be used as a tool to identify the severity of impacts of environmental and social issues, and thereby integrate their mitigation measures into the project preparation accordingly. This practice will be carried out together with technical, economical and social screening by the contractor prior to finalizing road design. The screen checklist is attached as annex 1.

5.2 Design Stage: (Preparation of SS-ESMP)

In this stage, based on the result of the screening exercise and identified potential environmental and social impacts, the Site-Specific Environmental and Social Management Plan ESMP should

be prepared. The cost of proposed mitigation measures should be estimated and considered into project design and the SS-ESMP need to be approved by ESMU/PMU and should be attached within the design package.

The approach to mitigation measure includes minimizing impacts looking at alternatives to alignment and design. The contract document shall explicitly mention the site-specific mitigation measure to be performed, the material to be used, labor camp arrangements and waste disposal area as well as other site specific environmental requirements. The proposed mitigation measures of the ESMMP along with contractual environmental condition should be used as guidance for preparation of SS-ESMP. (The ESMMP is attached as annex 2).

5.3 Procurement and Contract Management Stage:

In this stage, the ESMU will make sure that all the Environmental and social management documents and SS-ESMP are included and attached within the procurement package. In addition, during this stage the pre-bid-meeting and pre-start-meetings with contractors should be conducted in order to brief them about Environmental and social considerations and the implementation of SS-ESMP.

5.4 Implementation Stage:

The ESMU will make sure that the proper implementation of proposed mitigation measures and Site-Specific ESMP by the contractors. The regular supervision missions will be arranged to oversee the environmental and social consequences during construction phase. The regional ESM officer will closely work with contractor and supervise the implementation of SS-ESMP.

In addition, the SS-ESMP will be monitored regularly by Regional ESM officers and the contractors will be instructed for any corrections.

5.5 Monitoring Stage:

Regular monitoring of all significant environmental and social parameters is important to ensure compliance of the ESIA and ESMF. Monitoring of the SS-ESMP not only helps in detecting the scale and extent of impact cause by the project overtime, it also informs whether mitigation actions have been properly and timely implemented and are working as envisaged in the safeguard documents.

The site supervision and monitoring of the Site-Specific ESMP implementation will be carried out by regional ESM officers, who will be supported by other technical specialists as necessary. Because it will be important to promote the participation of women in consultations, one female safeguard Officer will also be involved. The regional ESM officers with the support of ESMU will facilitate and coordinate regular stakeholder consultation meetings and community participation with PAPs and also supervision of RAP implementation. The monitoring format is attached with Annex 3.

6 Institutional Arrangement

In the execution of the project, the PMU/MoPW will be responsible for the overall implementation of the Environmental & Social Safeguard measures through their contractors who would be accountable to the MoPW. Therefore, under the PMU/MoPW the Environmental and Social Safeguard Management Unit (ESMU) is established. The ESMU will be working under the close supervision of the PMU/MoPW and reporting to the Executive Director of the PMU. The Environmental and Social Management Unit will be lead by an ESM manager who will be supported by two safeguard specialists at HQ and two regional Safeguard Officers who will be placed in the field. Under the overall guidance and direct supervision of ESM Manager, the ESMU will be responsible for overall environmental and social safeguard issues of the project. The following are the specific duties and responsibilities of ESMU:

- Carry out of Environmental and Social screening for Salang corridor and B2B segments,
- Ensure the preparation of Site-Specific Environmental and Social Management Plans for each sections as per the ESMF and Resettlement Policy Framework
- Review and endorse all project documents and ESMPs to ensure the incorporation of environmental and social issues in project packages
- Ensure that the Program's Environmental and Social Safeguards issues well understood by the key counterparts responsible for project implementation
- Ensure implementation of Site-Specific Environmental and Social Management Plans and RAP implementation
- Ensure monitoring of the deliverables of the services provided by the implementing NGO as outlined in the RPF
- Support the Program Engineers to implement design verifications according to the ESIA requirements and monitor the incorporation of community inputs into sub-project designs
- Carry out the proper consultations with PAPs and stakeholders along the road alignment
- Carry out consultation with female PAPs and women along the project alignment and also assure the gender mainstreaming into project life cycle
- All project staff and counterpart who are involve in project implementation receive both initial and ongoing environmental and social safeguard awareness and training sufficient to ensure they are familiar with their environmental and social safeguard responsibilities under the ESMF.
- Prepare monthly progress reports quarterly and annual report, briefs, periodical reports and statistical data as required for further reporting to MoPW and World Bank.

6.1 Capacity Building and Training

The Environmental and Social Management Unit will make sure that all project staff and counterpart who are involve in project implementation receive both initial and ongoing environmental and social safeguard awareness and training sufficient to ensure they are familiar with their environmental and social safeguard responsibilities under the ESMP. The Environmental and social safeguard induction training will, as a minimum cover:

- The environmental and social management staff will receive an advance ESM trainings
- The civil servant staff will receive technical trainings on ESMP preparation, implementation of mitigation measures and supervision and monitoring
- The ESMU will train the contractors and assure they well understand the environmental and social safeguard issues
- Several Environmental and Social safeguard workshops and seminars will be conducted
- The Environmental and Social Safeguard Guidelines will be translated into local language and will be disseminated to project staff and contractors

6.2 Budget for the Implementation of ESMP

The Trans-Hindukush road connectivity project is expected to have potential social and environmental impacts which should be avoided or minimized with the implementation of proposed mitigation measures as outlined in this document. As per the project technical document, the following tasks are the contractor's responsibility and no cost will be considered under SS-ESMP. A number of management items would be priced by the contractor as preliminary or general items included in the bill of quantities. Among these items would be:

6.2.1 Contractor's Responsibilities

- Waste disposal and fencing
- Discharge of sewage and other fluid waste from construction camps,
- Minimize the working area. Use water spray to wet down and dampen soil. Dispose or reuse the excavated soil in construction debris.
- Cutting and Excavation (Disposal of debris at proper sites or reuse material for construction, Proper restoration of borrow areas excavated soil and construction debris to avoid impacts)
- Restoration of quarries sites. Take soil/rock from approved borrow areas, barren areas, or vendors; store soil and debris to avoid erosion; dispose to existing dumps or reuse excavated soil and construction debris. Proper selection and management of quarry sites, rehabilitation of quarry sites after completion of work.)

- Labor safety (Supplying the required safety equipment's including Helmets, Gloves, Eyeglasses, Boots and Jackets. First Aid Box and other necessary safety equipment's for the workers.)
- Traffic safety and occupational health and safeguard of workers and others.
- Carry out water spray as per the instruction of ESMP
- Considering the provision of waste bins and transportation of waste to the confirmed locations
- Reinstatement of borrow pits
- Transportation and management of fuels & oils
- Induction training for workers
- Ensuring proper sanitary facilities at construction camps and preventing contamination of surface water bodies and groundwater
- Construction of toilets
- Disposal of excrement
- Provision of Traffic wardens
- Creation of diversions and detours
- Provision of community liaison officer

The cost for the following mitigation measures will be considered under the Environment and Social Management Plan and a provisional sum is to be included under BoQ:

- Soil Erosion control, landslide stabilization, construction of protection walls, slope managements and plantation
- Tree plantation
- Rehabilitation activity around water bodies (A stone pitching wall in both side of seasonal canal or displacement of canal. The protection wall should be constructed in the both side of gully and the length of protection wall is parallel to the direction of water flow.)
- Road diversion that may affect people's property and safety.
- Bridge improvement activities (A protection wall should be considered as a safety or defender for its approach road or might be constructed aside of the river closed to the wing wall or technically compatible).
- Rehabilitation of destructed walls of houses, garden and shops

- Restoration/relocation of irrigation channels, Mosques, Graveyards, water bodies, boundary walls of clinic/school, and other community structures, public toilets etc, affected due to construction activities under the contract
- Construction of latrines and tube wells along with road and bridge projects

7 Consultation and Public Disclosure

This Environmental and Social Safeguards Framework reflects consultations with the community (men and women), contractors, development partners and other stakeholders participating in along the road corridors. In this regard, abroad consultations have been already conducted with various stakeholders along all sections of the proposed Bamyan to Baghlan provinces.

A separate consultation was conducted with each individual PAF within the first segment and the summary of the consultation reflects an overwhelming support and appreciation of the project and everyone believe that the road rehabilitation project will bring huge social and economic benefits to the region. Some of the inhabitants raised the issue of resettlement and compensation payment to the affected people.

Since then, the ESM team at the PMU has initiated another process of consultations with the stakeholder agencies and communities. Community consultation for the first segment has already been completed and summary of those consultation meetings are part of RAP for the first segment and community consultation for the remaining segments is currently being undertaken in the project area. This round of public consultations with PAFs, community elders and local officials is being conducted with the following key objectives:

- 1 To inform PAPs about and discuss the nature and scale of adverse impacts of the project on their livelihoods in a more transparent and direct manner and seek their feedback and participation in the project cycle.
- 2 To give affected communities a chance to have a say and express their views in the planning and implementation of the project that affect them directly.
- 3 Explains to the PAPs about project salient features and compensation mechanisms for loss of their lands, trees and properties
- 4 To obtain qualitative as well as quantitative information on viable income generation and livelihood interventions which PAPs could engage themselves in order to restore their income and livelihoods in a self-sustaining manner.
- 5 To inform local authorities of the impacts, agree on a cut-off date, solicit their views on the project and discuss their responsibility for the smooth functioning of the overall project operations.

7.1 Consultations and disclosure for the remaining segments of the B2B Highway and Salang Highway

Consultations will be an ongoing process during project implementation. Specifically, consultations that are both meaningful and participatory will be held as follows;

- During the engineering surveys and investigations as the Detailed Engineering Designs are completed.
- During preparation of the Environmental and Social Management Plans.

- During preparation of Resettlement Action Plans as deemed necessary.

These consultations will be documented and recorded in the ESMP's and RAPs, and will be publically disclosed locally, in the either Pashto and/or Dari as appropriate.

The individual consultation with PAFs and target community will also be continued for other segments and project salient features will be disclosed to the public and the summaries will be reflected in the RAP and SS-ESMPs.

8 Resettlement Policy Framework (RPF)

The MoPW has developed a Resettlement Policy Framework, detailing the principles, procedures, and entitlement matrix and eligibility criteria for the whole project, followed by sequential RAPs for the B2B segments of the road. This option is more manageable and convenient, identifying specific the resettlement impacts in phases and implementing mitigation measures in a phased manner. The objective of this RPF is to outline the principles of resettlement and compensation thereof as and when the project reaches that stage. This will not only ensure consistency in resettlement planning but also develop the capacities of the implementing and supervising agencies gradually and simultaneously. Lessons learnt during the course of implementation can easily be integrated in improving the various issues related to resettlement planning and its monitoring. The RPF is annexed as Appendix I within the ESIA report. Based on the RAP, the following table is the Entitle Matrix to address land acquisition impacts and define entitlements which has been prepared for the first segment of road. The Matrix will guide the development of other entitlement matrixes for remaining road segments.

Table 4: Entitlement Matrix

Type of impacts	Eligibility	Compensation Assistance	Responsibility
Loss of arable land	PAFs losing lands who have ownership title, including customary title.	Cash compensation @ AFN 530,000 per Jerib for Orchard land and AFN 450,000 per Jerib for Non Orchard land is payable to them	PMU/ District/Provincial Governors,
Loss of Residential land	PAFs losing lands who have ownership title, including customary title.	Cash compensation @ AFN 225 per Sq. Mtr. of built-up area is payable to them.	PMU/ District/provincial Governors,
Loss of Assets (1) <ul style="list-style-type: none"> • Residential Structures • Front walls of houses • Gates 	All PAFs losing assets irrespective of ownership of title to land.	Cash compensation @ AFN 550 per Sq. Mtr. of built-up area is payable to them.	PMU/ District/Provincial Governors,
Loss of Assets (2) <ul style="list-style-type: none"> • Shops • Access walls of business places 	PAFs losing assets irrespective of ownership of title to land.	Cash compensation @ AFN 550 per Sq. Mtr. of built-up area is payable to them.	PMU/ District/provincial Governors,

Type of impacts	Eligibility	Compensation Assistance	Responsibility
Loss of Assets (3) <ul style="list-style-type: none"> • Loss of boundary walls 	All PAFs losing assets irrespective of ownership of title to land.	Cash compensation @ AFN 512 per Mtr. of wall length is payable to them.	PMU/ District/provincial Governors,
Compensation for relocation	PAFs losing houses (& require relocation to another location) irrespective of ownership of title to land.	A relocation allowance of AFN 10,000 per family is also payable	PMU/ District/provincial Governors,
Loss of income/livelihood due to severe agricultural land impacts	PAPs losing more than 20% of their total agricultural land holding and are vulnerable to loss of income and livelihood	In addition to compensation for loss of land, these PAPs will be entitled for an additional allowance of AFN 12.5 per sqm of the land lost. Also these PAPs will be provided training and capacity building support and priority	PMU/ District/provincial Governors,
Loss of income/livelihoods due to lost assets (e.g. shops)	PAPs losing their shops and other sources of livelihood	These PAPs will be provided preferential allotment of shops at the shopping arcades to be developed on the highway. These shops will be allotted to them on subsidised rentals.	PMU/ District/provincial Governors, implementing NGO
Any other loss not identified	Owners	Not anticipated impacts, will be compensated at market/replacement value	PMU/ District Governor,

9 Grievance Redress Mechanism

The best efforts will be made in designing the ESMPs aimed at ensuring that all potential impacts of the project are identified and all Project Affected Persons (PAPs) are enlisted to provide mitigation measures to address the potential impacts, and to chart out a mechanism to implement these mitigation measures. However during the project implementation, the stakeholders (mostly PAPs) may still have some grievances with respect to the project activities, their impacts, compensation and other mitigation measures.

A comprehensive grievance redress mechanism has been developed to address the concerns of affected persons and general public related to the project activities. This system will be in place immediately after the project is approved. In the meantime an intermediate system of GRM on similar lines has been put in place. Grievance redress committees have been constituted in the first segment' project area, along the GRCs at Project level and HQ level.

9.1 Grievance Redress Mechanism; objectives and functions

The primary objective of this Grievance Redress Mechanism is to ensure that the views and concerns of those affected by project activities are heard and acted upon in a timely, effective and transparent manner. Further it will be to provide a forum to mediate conflict and cut down on lengthy litigation, which often delays the projects. It will also facilitate people who might have objections or concerns regarding the project activities to raise their objections and through conflict resolution so that these can be addressed adequately. The Grievance Redress Mechanism will be transparent, accessible to all, inclusive, participative and unbiased. PAPs will be made fully aware of their rights and the procedures for making a grievance. All grievances need to be recorded in a database along with outcome of grievance redress and closely monitored and analysed in terms of category of grievances of speed of resolution

The main functions of the Grievance Redress Mechanism will be as follows:

- Provide a mechanism to PAPs to address the concerns arising as a result of project activities, eligibility entitlements provided in RAP and compensation paid,
- Record the grievance of PAPs, to enable tracking and review categorize and prioritize the grievances,
- Determine and implement the mitigation actions to address the grievances,
- Inform PMU, MoPW of serious cases within one week; and
- Report to the aggrieved parties about the developments regarding their grievances and the decision of the project authorities
- Monitoring and analysis of grievances, tracking response time
- Inform communities within the project area of influence to utilize GRM services

9.2 Grievance Redress Committee (GRC)

A multi-stage Grievance Redress Mechanism will be adopted. These Committees will be formed at various levels.

Road Segment Level (GRC): Relevant CDC members, Representative of PAFs, Contractor & Project Staff (PMU).

Project Level (GRC): PMU/MoPW, Arazi, MoJ, District/Provincial Governors, Provincial Director of MoPW, Safeguards officer from ESMU/PMU, AKDN (NSP Facilitating Partner) and Community Representatives.

Head Quarter Level (GRC): Deputy Minister (MoPW), PMU Director and PMU's Social team

9.3 Functions of GRC

1. Ensure that handling of grievances is in accordance with Afghan law and World Bank procedures.
2. Ensure that follow-up actions in response to grievances are taken within an agreed time-frame. Maintain record of all registered grievances in a database, along with details on the nature of the issues raised the case history, and actions taken.
3. Report on resolved/unresolved grievances a weekly basis to the PMU.
4. Coordinate with Government departments, at district, provincial and national level and civil society organizations for resolving the grievances of the local communities.
5. Coordinate with community representatives on the efficacy and usefulness of grievance redress procedures and recommend changes if any required to MoPW.
6. Assign member(s) to undertake site visits to assess issues raised as and when needed.

9.4 Procedure of Dealing with Grievances

Awareness generation-The PMU through ESMU team will ensure awareness generation campaigns about the project related activities to the extent so as to make the citizens aware to claim their rights and entitlements as described under the resettlement plan.

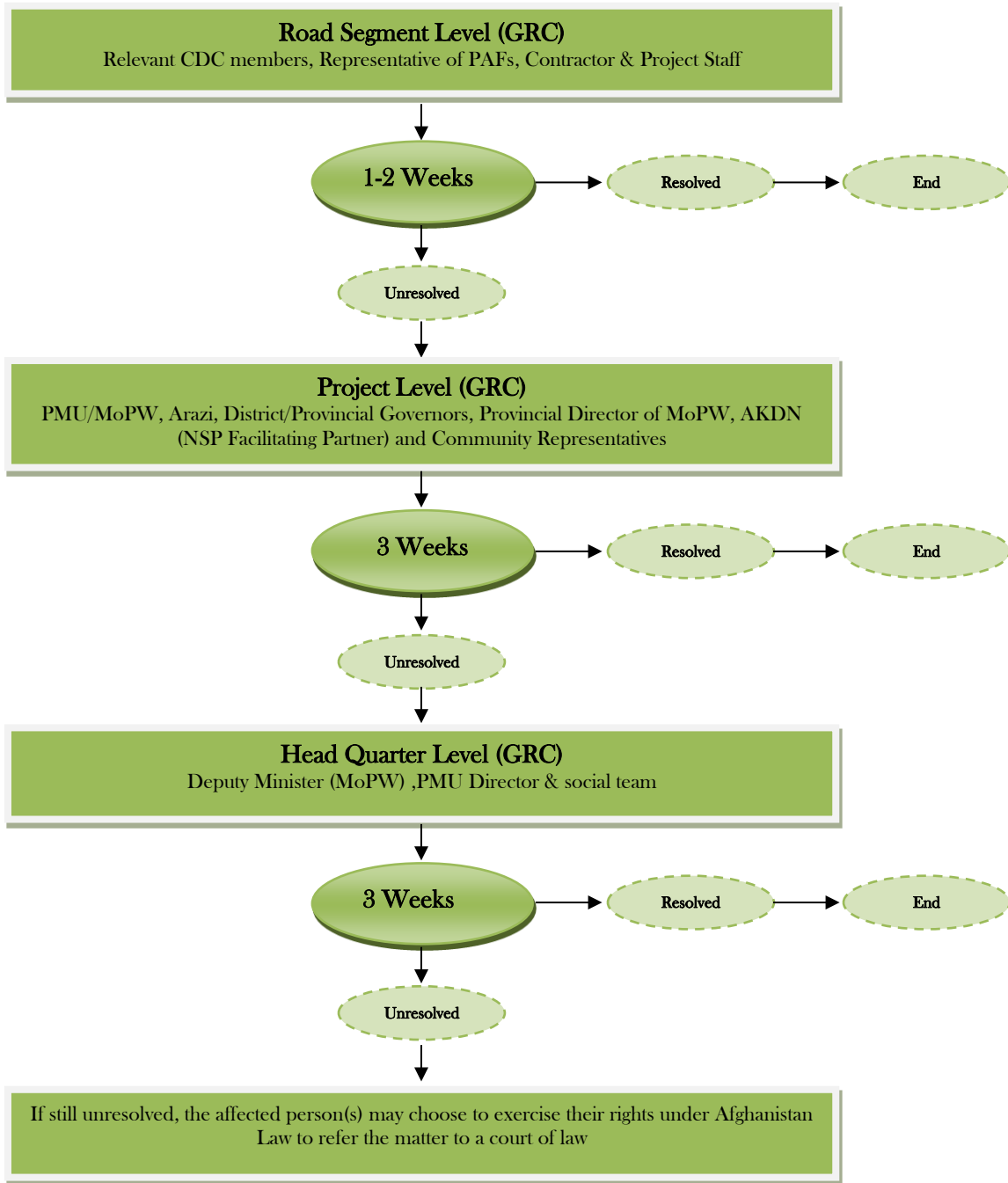
Submitting grievances and recording procedures-Grievances can be submitted to the district governor's office, PMU representative/counterpart at provincial level or to the implementing NGO. Grievances can also be submitted through email, SMS and phone calling. In case the issue is not resolve at the first and second/project levels, it will be brought to the GRC at HQ level in the next meeting. The issues can also be resolved at community level and recorded for all future references.

GRC meetings, proceedings and recommendations- In case an issue raised is not resolved at the local level, a copy of the registered complaint will be forwarded to next level for consideration. The GRC's meetings are to be held every second week to assess grievances, identify action to be taken and assign responsibility for follow-up. Cases put before the GRC will

be assessed according to their urgency, and the social environmental, technical or operational issues that they may raise. Along with the details of each case, recommendations for referral or action will be entered into a database, to which PMU staff will have access. After the GRC meetings, its' minutes and recommendations will be sent to the PMU within a week of the GRC meeting. The same information will also be sent to the relevant applicants. All efforts will be made by PMU to implement the recommendations of GRC as soon as possible. ED, PMU will report to inter-ministerial committee about the disposal of complaints and pending status regularly.

Appeals and legal recourse- Issues not resolved at GRC level will be escalated at the MoPW level, Ministry, if considers necessary will attempt a hearing on the matter in order to resolve it. In case of no resolution, such issues will be referred to the court of law with the approval of H.E. Minister of Public Works. The diagram below presents various levels of GRM committees for trans-Hindukush road connectivity project.

Figure 3: The Chart of GRC



10 Disclosure and Dissemination

This ESMF is developed on the basis of the generic framework for World Bank funded reconstruction operations and a review of the specific requirements of this project. It will be disclosed by MoPW in Afghanistan in both *Dari* and *Pashto* in relevant places in the country.

Annex 1: Environmental & Social Checklist for Screening for Road Segments

Project ID/title:		Village:				
Type of project:		District:				
Involved CDC name:		Province:				
Start date of:		End date of:				
Nature of Activity						
		Does the project fall in the below category				Remarks
No	Environnemental Conséquences	N & P Impact (1)	Low impact (2)	Medium Impact (3)	High Impact (4)	
1	Is the activity a cause for Air pollution?					
2	Is the activity a cause for sound pollution?					
3	Is the activity a cause the cutting of hill slope and earth removal from borrow areas caused for soil erosion?					
4	Will the activity create solid or liquid wastes that cause potential contamination of surface water and ground water supplies?					
5	Is the project cause for substantial changes to water quality and quantity?					
6	Does the activity cause the alteration of water flow?					
7	Are there environmentally sensitive areas (protect area, forests, national parks or wetlands)?					
8	Is the project cause vegetation and tree removing?					
9	Is the activity threat the endangered and threatened species or hunting or the collection?					
10	Is the activity cause livestock reduction?					
11	Will the excavation and quarry operation effect the environment?					
Social Consequences						
12	Does the activity have human health and safety					

	risks, during construction or later?					
13	Will the activity create the conflict among the people?					
14	Will the activity cause loss of livelihood?					
15	Are there unexploded mines are in the area?					
16	Are there any Important cultural or archeological nearby?					
17	Will the project require the acquisition of land (public or private, temporarily or permanently) for its development?					
18	Will anyone be prevented from using economic resources (e.g. pasture, fishing locations, forests) to which they have had regular access?					
19	Will the project result in the involuntary resettlement of individuals or families?					
20	Might the project adversely affect communities or vulnerable people living in the area?					

Note:

Circle one of the following screening conclusions for Part A:

A1. If all answers to the checklist questions are “No” and significant impacts were not identified then there is no need for further action.

A2. For any issues indicated by “Yes” and significant adverse impacts were identified then there is need for adequate mitigation measures through developing Site-Specific Environment and Social Management Plan (SS-ESMP) and should be part of project design. No further planning action is required. Implementation of the mitigation measures will require supervision by the applicant and the appropriate local authority.

Establishing Extent of Loss:

Extent of loss shall be determined primarily in terms of the portion of the land and / or structure coming within the road project. In order to establish extent of loss, the following category of losses will be considered:

Minor impacts: Less than 10% of the total area

Adverse impacts: Between 10 to 25% of the total area

Severe impacts⁸¹: More than 25% of the total area

(1) **N and P impacts:** Mark (N) for No impacts and (P) for positive impacts

(2) **Low Impacts:** Mark (X) for Low impact. Low impact refers to activities with manageable impact to environment by the community/contractors.

(3) **Medium Impacts:** Mark (X) for medium impacts. Medium impacts refer to activities that involve additional support and planning, implementation and monitoring of mitigation measures and ESMP in order to decrease the poetical impact.

(4) High Impacts: Mark (X) for High impact. The significant adverse impacts that refer to activities that involves additional support and planning, full EIA, implementation and monitoring of mitigation measures. NEPA approval.

Checklist Filled Out by the Environmental and Social Safeguard Specialist

Environment and Social Management Specialist..... Signature: Date:

Head of ESMU/PMU Signature:
Date:

Annex 2: The Environmental and Social Mitigation Measure Plan (ESMMP)

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
Pre-Construction Phase				
Loss of Land and other Assets	Impact on local people's lives	PAPs for the first segment of B2B have already been identified and PAPs for the remaining segments will be identified and the acquisition process for land and properties (Govt. /private) will be carried out, the mitigation & compensation procedures are outlined in the RPF and detailed in the Resettlement Action Plan (RAP).	To be implemented at the design phase	PMU/ MoPW
Loss of Livelihoods	Impact on livelihoods	PAPs, identified or will be identified, who are likely to lose their livelihoods or source(s) of income will be compensated/assisted as detailed in the Resettlement Action Plan (RAP).	To be implemented at the design phase	PMU/ MoPW
Cut and fill Activities	Cutting of hill slope and earth removal from borrow areas caused for soil erosion and landslides	Designs shall ensure that as far as possible all cut and fill activities are balanced	Design Phase	PMU/ MoPW
Borrow Pits	Increased embankment heights and wider roadways may present demands for fill, portions of which are likely to be supplied by area soils	Borrow pit locations should be approved prior to opening by the PMU/MoPW to ensure that as few borrow pits are opened as possible. This process should be undertaken in consultation with local representatives and should form part of a borrow pit action plan.	Design Phase prior to construction activities	The Borrow pit plan Should be prepped by the contractor and will be approved by PMU/MoPW
Erosion	could result increased runoff and/or	To reduce the impacts of erosion, engineering designs shall ensure:	Design Phase	PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
	increased velocities which could lead to additional soil loss	<ul style="list-style-type: none"> • The side slopes of cuttings and embankments will be designed to reflect soil strength and other considerations as included in the project specifications in order to reduce slips or erosion; • To prevent soil erosion in areas of steep mountainous slopes, rock-fall fences, rip-rap, retaining structures and gabion baskets for river bank protection will be included in the engineering design; • For embankments greater than 6m, stepped embankments will be used; and • Ditches shall be designed for the toe of slopes in cut sections with gutters or drainage chutes designed to carry water down-slope to prevent erosion. Interceptor ditches shall be constructed near the top of slopes, or on benches, in cut slopes. For steep slopes drainage will be designed and constructed to intercept longitudinal flow and carry water away from fill slopes. 		
Emergency Response Plan	Producing of hazardous materials, oil spills and work side accidents	An emergency response plan which will cover containment of hazardous materials, oil spills, and work-site accidents shall be prepared. The plan will detail the process for handling, and subsequently reporting, emergencies, and specify the organizational structure (including responsibilities of nominated personnel).	Prior to the start of construction activities	The contractor and will be approved by PMU/MoPW
Hydrology	Impacts to structures	All roadway embankments, bridges and drainage	Implemented at	PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		structures shall be designed to prevent potential impacts from high water levels and flood events. Hydrological studies shall be prepared by Hydrological specialists to make specific recommendations for these structures.	design stage	
Geo /Seismic	Seismic Issues	All structures will have earthquake loading incorporated in their design.	Implemented at design stage	PMU/MoPW
Air Quality	Dust and Emissions that may increase inspiration diseases among the local people	<ul style="list-style-type: none"> • Preparation of a dust suppression program. The plan will detail the action to be taken to minimize dust generation (e.g. spraying un-surfaced roads with water, covering stock-piles, and blasting with use of small charges etc) and will identify the type, age and standard of equipment to be used. • Minimize the working area. • Use water spray to wet down and dampen soil. • Dispose or reuse the excavated soil in construction debris. 	Prior to the start of construction activities	Prepared by the Contractor and approved by the PMU/MoPW
Socio-Economic	Traffic disruptions	The Contractor will prepare a traffic control plan, to be approved by the PMU/ MoPW. The plan will include haulage and work site routes, traffic control devices, temporary fencing, barriers and barricades, detours, traffic signs and speed limits, and safe passage of pedestrians.	Prior to the start of construction activities	Contractor have to prepare the plan and should be approved by PMU/MoPW
Other Infrastructure	Protection of Utilities that may	Before commencing construction work a survey to establish the detailed location of all irrigation	Prior to construction	Contractor with oversight

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
	effected	systems and electricity supply networks affected by the Works shall be undertaken. Survey results shall be recorded in plan form to the satisfaction of the PMU/MoPW.		from PMU/MoPW
Construction Phase				
Loss of Community Assets/Public Utilities	Impact on access to public utilities	Any loss of community structures will be fully replaced or rehabilitated so as to satisfy their pre-project functions.	Throughout construction phase.	Contractor
Topography Cut and Fill	Cutting of hill slope and earth removal from borrow areas caused for soil erosion and landslides	<p>During construction cut and fill will be balanced as far as is possible. However, should excess fill be created in certain areas the following should apply;</p> <ul style="list-style-type: none"> • Where excess fill material cannot be re-used contract provisions shall ensure that none of the excess material is dumped into the Bamyan or Surkhab Rivers (or any of their tributaries). • Any locations identified by the Contractor where excess cut material will be produced shall be reported to the PMU/MoPW and a suitable location identified by both parties for the disposal of this inert waste. • All materials should be confined to government owned land and in no circumstances should be dumped on agricultural or productive lands. Neither should this material impact upon any watercourse including irrigation channels. • In the event of any spoil or debris from 	Throughout construction phase.	Implemented by Contractor (via contract Provisions outlined in Appendix C) with oversight from the PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<p>construction works being deposited in any of the afore mentioned areas or any silt washed down to any area, then all such spoil, debris or material and silt shall be immediately removed and the affected land and areas restored to their natural state by the Sub- Contractor to the satisfaction of the PMU/MoPW.</p>		
<p>Quarry Ops and rock crushing</p>	<p>Quarry operation and its potential effect on instability, landslide, water pollution, damage to farmland, disturbance in natural drainage</p>	<p>Prior to opening of any quarry or rock crushing facility, the Contractor will require approval from the relevant local authorities and the PMU/MoPW to ensure that land owners are adequately compensated for land use and that the sites are not located in an area likely to cause significant detriment to the local environment. To ensure that this is the case contractors should ensure that quarries and crusher plants are:</p> <ul style="list-style-type: none"> • Located at least 500 meters from urban areas to prevent noise and dust impacts. • Located outside of agricultural land. • Where possible located on government owned lands • Quarry shall not be done near surface water sources. • Take soil/rock from approved borrow areas, barren areas, or vendors; store soil and debris to avoid erosion; dispose to existing dumps or reuse excavated soil and construction debris. 	<p>Throughout construction phase.</p>	<p>Implemented by contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW</p>

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<ul style="list-style-type: none"> • Proper selection and management of quarry sites, rehabilitation of quarry sites after completion of work. 		
Spills/leaks	Producing of hazardous materials, oil spills and work side accidents	<p>Contract documents will contain provisions requiring contingency plans for actions in the event of contamination due to spills or hazardous materials. They include the following:</p> <ul style="list-style-type: none"> • All fuel and chemical storage (if any) shall be sited on an impervious base within a bund and secured by fencing. The storage area shall be located away from any watercourse or wetlands. The base and bund walls shall be impermeable and of sufficient capacity to contain 110 percent of the volume of tanks. • Filling and refueling shall be strictly controlled and subject to formal procedures. • All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use. • The contents of any tank or drum shall be clearly marked. Measures shall be taken to ensure that no contaminated discharges enter any soils 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
Erosion	Could result in increased runoff and/or increased velocities which could lead to	<p>The Contractor will be responsible for ensuring:</p> <ul style="list-style-type: none"> • Material that is less susceptible to erosion will be selected for placement around bridges and culverts; and • Re-vegetation of exposed areas including; (i) selection of fast growing and grazing resistant 	Throughout construction phase.	Implemented by Contractor (via contact Provisions

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
	additional soil loss	species of preferably local grasses and shrubs; (ii) immediate re-vegetation of all slopes and embankments if not covered with gabion baskets; (iii) placement of fiber mats to encourage vegetation growth, although due to the arid conditions in most of the road, this may only be feasible where there is regular rainfall or other natural water supply.		outlined in Appendix C) with oversight from the PMU/MoPW
Borrow Pits	Increased embankment heights and wider roadways may present demands for fill, portions of which are likely to be supplied by area soils	<p>The contractors should contain provisions including:</p> <ul style="list-style-type: none"> • Borrow areas will be located outside the RoWs. • The excavation and restoration of the borrow areas and their surroundings, in an environmentally sound manner to the satisfaction of the PMU/MoPW will be required before final acceptance and payment under the terms of contracts. • Borrow pit areas will be graded to ensure drainage and visual uniformity. • Topsoil from borrow pit areas will be saved and reused in re-vegetating the pits to the satisfaction of the PMU/MoPW. • Additional borrow pits will not be opened without the restoration of those areas no longer in use. 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
Hydrology	Impact on surface water	<p>The Contractor shall ensure that no tools or machinery are washed in any water source or areas that shall drain into an existing watercourse, stream, or canal.</p> <ul style="list-style-type: none"> • The Contractor shall ensure that rain runoff from the construction sites is not deposited directly into 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<p>any watercourse, stream, or canal.</p> <ul style="list-style-type: none"> • The Contractor shall check on a weekly basis that all equipment for prevention of oil and or lubrication leaks and ensure that all equipment oil and lubrication replacements are performed only in maintenance and repair areas. • The Contractor shall arrange with the village representatives those works which might interfere with the flow of irrigation waters to be carried out at such times as will cause the least disturbance to irrigation operations. Should any operation being performed by the Contractor interrupt existing irrigation facilities, the Contractor shall restore the irrigation appurtenances to their original working conditions within 24 hours of being notified of the interruption. • The Contractor shall construct, maintain, remove and reinstate as necessary temporary drainage works and take all other precautions necessary for the avoidance of damage by flooding and silt washed down from the Works. The Contractor shall also provide adequate precautions to ensure that no spoiler debris of any kind are allowed to be pushed, washed down, fallen or be deposited on land adjacent to the Site. 		Appendix C) with oversight from the PMU/MoPW
Air Quality	Construction Impacts	<p>Potential air quality impacts in the construction stage of the Project will be mitigated by implementation of the following controls:</p> <ul style="list-style-type: none"> • Construction equipment being maintained to a 	Throughout construction phase.	Implemented by Contractor (via contact

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<p>good standard and fitted with pollution control devices. The equipment (including the pollution control devices) will be checked at regular intervals to ensure they are maintained in working order and the checks will be recorded by the contractor as part of environmental monitoring;</p> <ul style="list-style-type: none"> • Discouraging of the idling of engines; • Prohibition of the use of equipment and machinery that causes excessive pollution (i.e. visible smoke) at project work sites; • Ensuring that all vehicles transporting potentially dust-producing material are not overloaded, are provided with adequate tailboards and sideboards, and are adequately covered with a tarpaulin (covering the entire load and secured at the sides and tail of the vehicle) during transportation; • Not permitting the operation of hot-mix, asphalt, aggregate or concrete plant in close proximity of populated settlements nor within 500m of sensitive uses (such as schools, and hospitals); • During periods of high wind any dust generating activities will not be permitted within 200m of populated settlements located in the direction of prevailing wind; • Material stockpiles being located in sheltered areas and be covered with tarpaulins or other such suitable covering to prevent material becoming airborne; 		<p>Provisions outlined in Appendix C) with oversight from the PMU/MoPW</p>

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<ul style="list-style-type: none"> • Regular watering/spraying of un-surfaced project roads and all un-surfaced roads being used for haulage of materials during the dry season; and • Preparation of a dust suppression program, submitted to the PMU/MoPW prior to commencement of the works. The plan will detail the action to be taken to minimize dust generation (e.g. spraying un-surfaced roads with water, covering stock-piles, and blasting with use of small charges etc) and will identify the type, age and standard of equipment to be used. 		
Flora	Destruction of flora	<p>Contract documents should ensure the following:</p> <ul style="list-style-type: none"> • Vegetation clearance during construction activities, especially of trees and along the road-side, will be minimized; • Trees felled shall be replaced on a three to one basis in consultation with landowners; and • Contractors will be responsible for supplying appropriate and adequate fuel in workers' camps to prevent fuel-wood collection. 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
Land Use (Construction camps and other construction facilities)	Inappropriate location such as proximity to local community drinking water source, shrines Environmentally unsound use of community resources	<p>Contractors shall ensure that:</p> <ul style="list-style-type: none"> • All sewage and waste water discharges shall be collected and treated in an approved system installed on site. • Upon completion of the Contract, all elements of the camp shall be removed and the site, as far as possible, be returned to its original condition unless designated for alternative uses with 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
	such as forestry products by workers	<p>approval of the PMU/MoPW</p> <ul style="list-style-type: none"> • The Contractor will provide medical examinations and emergency medical care for the construction staff and will provide suitable and clean sanitary facilities and necessary safety equipment, including special masks covering nose and mouth, for employees when applicable. The Contractor will also provide clean potable water, food and housing when necessary. • The burning of materials where unavoidable in open air shall be done under strict supervision • The Contractor shall not burn tires, asphaltic materials, oil or any materials that will produce dense smoke, either for the purpose of incineration or to augment the burning power of other matter. • Extreme caution shall be taken to dispose of materials so as to avoid damage or destruction to private property or to cause excessive air pollution. • Location of construction camps at least 500m away from community areas, and away from drinking water sources • Regarding temporary sites, written agreements with local landowners for temporary use of the property will be required and sites must be restored to a level acceptable to the owner within a predetermined time period. 		from the PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
Energy Considerations	Impacts to coalmines	Contract provisions should ensure that commercial activities have adequate access along the project road. This should include provisions that the road is not closed for more than two hours at a time.	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
Health & Safety	Health and Safety Impacts	Contract documents will require Contractors to provide basic emergency health facilities for workers. Adequate PPE will also be provided including hard hats and protective eye and footwear.	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
Socio-economic	Employment	Contract documents will require that at least 50% of the workforces are locally hired.	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
	Traffic disruptions	<p>Regarding temporary impacts to local roads and traffic, contracts should include the following:</p> <ul style="list-style-type: none"> • A clause specifying that care must be taken during the construction period to ensure that disruptions to traffic and road transport are minimized. The Contractor shall ensure that the roads remain open to traffic during construction activities; • The Contractor will prepare a traffic control plan, to be approved by the PMU/MoPW. The plan will include haulage and work site routes, traffic control devices, temporary fencing, barriers and barricades, detours, traffic signs and speed limits, and safe passage of pedestrians; • Prior to construction activities, the contractor will install all signs, barriers and control devices needed to ensure the safe use of the road by traffic and pedestrians, as required by the traffic control plan; • Signs, crossing guards and other appropriate safety features will be incorporated at grade level rail and road crossings; • Local authorities and residents in a working area will be consulted before any detours for construction or diverted public traffic are established; • Disposal sites and haul routes will be identified and coordinated with local officials; and 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<ul style="list-style-type: none"> • Construction vehicles will use temporary roads constructed for that purpose to minimize damage to agricultural land and local access roads. Where local roads are used, they will be maintained and reinstated to their original condition after the completion of work. 		
Historic / Cultural	Unanticipated finds	<p>Contracts will state that the Contractor shall:</p> <ul style="list-style-type: none"> • Adhere to accepted international practice and all applicable historic and cultural preservation requirements of the Government of Afghanistan, including all appropriate local government entities, and • In the event of unanticipated discoveries of cultural or historic artifacts (movable or immovable) in the course of the work, the Sub-Contractor shall take all necessary measures to protect the findings and shall notify the Contractor and provincial-level representatives of the Archaeological Committee and the Ministry of Information and Culture. If continuation of the work would endanger the finding, project work shall be suspended until a solution for preservation of the artifacts is agreed upon. 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
	Existing sites	The structure at Km 134 should be fenced off to prevent any interference during project works.	Throughout construction phase.	Implemented by Contractor

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
				(via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW
Noise	Construction noise	<p>Contract provisions shall ensure:</p> <ul style="list-style-type: none"> • Source Controls, i.e., requirements that all exhaust systems will be maintained in good working order; properly designed engine enclosures and intake silencers will be employed; and regular equipment maintenance will be undertaken; • Site Controls, i.e., requirements that stationary equipment will be placed as far from sensitive land uses as practical; selected to minimize objectionable noise impacts; and provided with shielding mechanisms where possible; • Work near Sensitive Receptors shall be limited to short term activities. No asphalt plants, rock crushing plants or any long term generators of significant noise shall be allowed within 500 meters of sensitive receptors; • Time and Activity Constraints, i.e., operations will be scheduled to coincide with periods when people would least likely be affected; work hours and work days will be limited to less noise-sensitive times. Hours-of-work will be approved by the site engineer having due regard for possible noise disturbance to the local residents or 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<p>other activities. Construction activities will be strictly prohibited between 10 PM and 6 AM in the residential areas. When operating close to sensitive areas such as residential, nursery, or medical facilities, the Contractor’s hours of working shall be limited to 8 AM to 6 PM;</p> <ul style="list-style-type: none"> • Community Awareness, i.e., public notification of construction operations will incorporate noise considerations; methods to handle complaints will be specified. Sensitive receptors will be avoided as possible (i.e., aggregate crushers, operators, etc.). Disposal sites and haul routes will be coordinated with local officials; • Blasting will only be carried out during the day and according to a pre- established schedule, the adjacent communities will be notified of the blasting times well in advance; • Use of blasting mats to reduce noise during blasting operations; • Use of low volume charges will reduce the potential for vibration induced damage to structures; • In the event of damage proven to be due to the contractor’s activities, owners of structures will be fully compensated. • People of the vicinity area will be informed about the blasting time and its possible hazard. • Each public organization and individuals having structure in proximity to the site of the work will be notified in advance (with sufficient time) for using the explosives so that the organization and individuals could take necessary step. • Danger zone will be created and ensured that all 		

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<p>personnel, vehicles and livestock are cleared from the zone before and during the blast. In the settlement area, necessary steps (it might be evacuation in the area) will be taken to avoid damage to the property from the flying rock.</p> <ul style="list-style-type: none"> • Danger red flag will be displayed prominently in all direction during the blasting. The flag will be kept 200m far from the blasting site in radial direction. • Not more than 10 charges will be prepared and fired at a time. The site in charge will blow a siren for cautioning the local people. • Provide adequate compensation to land and property damaged by the blasting • Permission shall be obtained from the Chief of police/District Governor in order to use of explosive material, storage, application and transportation of explosives. • The blasting site shall be restored after the completion of blasting, and left in stable condition without steep slopes. 		
Other Infrastructure	Protection of Utilities that may effected	<ul style="list-style-type: none"> • Contractors are required to coordinate with all relevant officials to avoid significant adverse impact to irrigation and electricity networks. Before commencing construction work a survey to establish the detailed location of all irrigation/electricity networks affected by the Works shall be undertaken. Survey results shall be recorded in plan form to the satisfaction of the PMU/MoPW. Any temporary changes to 	Throughout construction phase.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Authority Responsible
		<p>irrigation/electricity networks should be re-instated to their original state on completion of works using the baseline survey. Local farmers should be consulted throughout the process to ensure adequate flows through any altered channels</p> <ul style="list-style-type: none"> • All CPRs (common property resources) such as stand posts, bore wells, graves, ponds, water supply lines, sewage lines, drainage systems and telephone cables together with electric power supply lines shall have to be removed and relocated outside the corridor before commencement of the road improvement activity. • The relocation sites for CPRs shall be done in consultation with the local administrative authorities and people. 		PMU/MoPW

Annex 3: The Monitoring Plan during Construction

Parameters To Be Monitored	Proposed Mitigation Measure	Location	Measurements	Frequency of Measurement	Responsibilities
Social Issues	<ul style="list-style-type: none"> • Avoid any disturbance to local communities and provision of fair compensation and disbursement on time 	-	<ul style="list-style-type: none"> • Records and resettlement plan 	Continuous	Contractor/ESMU, PMU
Air Quality	<ul style="list-style-type: none"> • Apply (spray) water to the construction surface and other piled materials such as sand as much as needed. • Perform periodical check and maintenance for the construction machinery • Monitor/measure concentrations of particulate matter 	Along the Road, especially near intersections with population centres	<ul style="list-style-type: none"> • Site inspection • Measuring concentrations of air pollutants using monitoring equipment and appropriate monitoring methods 	Weekly	Contractor
Noise Level	<ul style="list-style-type: none"> • Reduce working night shifts as much as possible in populated areas. • Apply the Regulations for ambient noise levels during this phase as a major tool in designing the construction activities schedule. 	Along the Road, especially near intersections with population centres	<ul style="list-style-type: none"> • Site inspection • Measuring of noise levels using monitoring equipment and appropriate monitoring methods 	Daily	Contractor

Parameters To Be Monitored	Proposed Mitigation Measure	Location	Measurements	Frequency of Measurement	Responsibilities
Biodiversity	Good site management practices to be observed to ensure minimal disturbance of habitats and sites	Along the Road especially near intersections with population centres, base camps and borrow sites	Site inspection	During construction	Contractor
Waterways	Maintenance of well-kept construction site and no discharge of effluents into waterways	Waterways/water bodies close to work sites and base camps	Visual inspection	During construction	Contractor
Drainage System	<ul style="list-style-type: none"> • Periodic cleaning and maintenance of ditches and culverts • Periodic inspection for solid waste disposal in culverts 	Culverts across the road	<ul style="list-style-type: none"> • Site inspection • Enforcing waste disposal regulations 	During construction	Contractor
Public and Occupational Health and Safety	<ul style="list-style-type: none"> • Ensure proper safety measure, personal protective equipments and implementation of health and safety plan and procedures 	Construction Sites	<ul style="list-style-type: none"> • Records of accidents and safety hazard incidents. 	Continuous	Contractor
Archaeological Resources and Cultural Heritage	<ul style="list-style-type: none"> • Protection techniques to any exposed archaeological element. Implementation of Chance find procedure 	Construction Sites	<ul style="list-style-type: none"> • Visual • Inspection 	Continuous or immediately after chance find	Contractor/ESMU, PMU