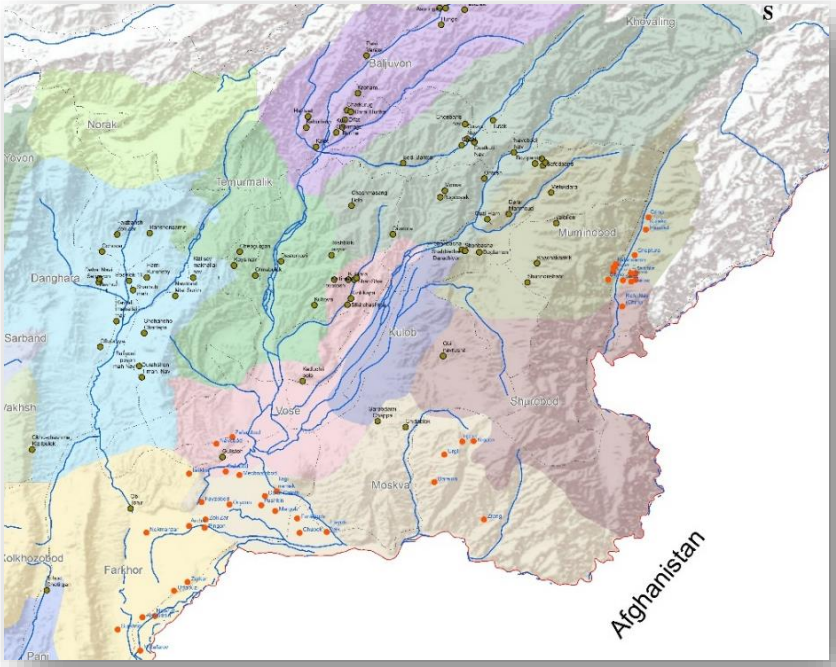


Environmental and Social Management Framework (ESMF)

For Off-Grid Renewable Energy Solutions in Khatlon Region, Tajikistan

OSHC "Barqi Tojik"

Contents

Figures

Tables

LIST OF ABBREVIATIONS & ACRONYMS

ACM	Asbestos-containing materials
BP	Bank Procedures (World Bank)
BT	Barqi Tojik
CEP	Committee for Environmental Protection
CDD	Community-Driven Development
DEP	Department on Environmental Protection
DRS	Districts under Republican Subbordination
EE	Ecological Expertise
EHS	Environmental, Health and Safety issues
ESIA	Environmental & Social Impact Assessment
EA	Environmental Assessment
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
FCV	Fragility, conflict, and violence
FI	Financial Institution
GP	Good Practice (World Bank)
GOT	Government of Tajikistan
GFP	Grievance Focal Point
GRM	Grievance Redress Mechanism
IDA	International Development Association / World Bank
IP	Indigenous Peoples
IR	Involuntary Resettlement
JPC	Jamoat Project Commission
M&E	Monitoring and Evaluation
MIS	Management information system
NGO	Non-Governmental Organization
NSIFT	National Social Investment Fund of Tajikistan
OP	Operational Policies (World Bank)
O&M	Operations & Maintenance
PAP	Project Affected Person
PCR	Physical Cultural Resources
PDO	Project Development Objective
PMC	Project Management Consultants (same as Supervision Consultants)
PMU	Project Management Unit
PIU	Project Implementation Unit (same as PMU)
PFI	Participating Financial Institution
RPF	Resettlement Policy Framework
RAP	Resettlement Action Plan
RMR	Risk Mitigation Regime
PCBs	Polychlorinated biphenyls (in power transformer oil)
SEE	State Ecological Expertise
PSC	Project Supervision Consultants
TA	Technical Assistance
VPC	Village Project Committee
WB	World Bank

WUA	Water User Association

1. Project Context

The World Bank is supporting the preparation of the **Tajikistan Rural Electrification Project (TREP)** (US$ 70.0 million total with US$ 20.0 million WB financing) as part of the Risk Mitigation Regime (RMR) included in the upcoming World Bank CPF for the Republic of Tajikistan for the period FY19-23. The IDA 18 allocation for the RMR allocation is US$87 million to finance policy reforms and interventions for preventive support aimed at addressing fragility, conflict, and violence (FCV) risks that have constrained development progress in Tajikistan. TREP project will contribute to RMR objectives by strengthening resilience through the expansion of the availability of electricity in rural Tajikistan to mitigate fragility risks.

The TREP's Project Development Objective (PDO) Objective is to provide electricity access to unconnected target settlements in Khatlon and the Gorno-Badakhshan Autonomous Oblast (GBAO) of Tajikistan. Khatlon and GBAO are the regions with the highest levels of absolute and relative poverty measures, respectively, and which face fragility risks due to the proximity to unstable parts of Afghanistan, large youth populations, disparities in service delivery outcomes, and legacies of violent conflict.

The TREP is being prepared under the World Bank's new Environment and Social Framework (ESF), which came into effect on October 1, 2018, replacing the Bank's Environmental and Social Safeguard Policies. Under the ESF, all World Bank clients have agreed to comply with ten Environmental and Social Standards (ESS)[1] in investment project lending financed by the Bank.

2. Project Summary

In Khatlon Province, over 28,000 people in 5,633 households in 136 villages currently are not served by electricity (Figure 2-1). This subproject will include so-called "last-mile connections" for households in selected villages. It will finance household connections and basic wiring costs to alleviate consumer affordability barriers. Household consumers whose connection and internal wiring costs are prefunded by the project may be required to repay the full cost over time.

At present, the World Bank intends to provide financing for connecting at least 44 of the unserved villages (Table 2-1), including over 12,000 people in 2,436 households, to the national grid, specifically including

[1] The ten ESSs are: ESS 1) Assessment and Management of Environmental and Social Risks and Impacts; ESS 2) Labor & Working Conditions; ESS 3) Resource Efficiency and Pollution Prevention and Management; ESS 4) Community Health and Safety; ESS 5) Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS 6) Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 7) Indigenous Peoples / Sub-Saharan African Historically Underserved Traditional Local Communities; ESS 8) Cultural Heritage; ESS 9 Financial Intermediaries; and ESS 10) Stakeholder Engagement and Information Disclosure. Detailed information on the ESF and ten ESSs can be found at https://www.worldbank.org/en/projects-operations/environmental-and-social-framework.

those villages in Shamsiddin Shohin, Fahror, and Hamadoni Regions, which all border Afghanistan. The subproject may also finance last-mile connection costs for social and public facilities (e.g. hospitals, schools, kindergartens), but will not finance such costs for commercial and industrial users. The subproject will be implemented by Barqi Tojik, the state-owned company responsible for power generation and transmission in other provinces of Tajikistan.

In general, these last-mile connections will include construction of 10kV and 4kV distribution lines from the existing grid to the villages of concern and then to houses in the villages. The work will involve digging holes for single wooden or concrete poles and then placing the poles in the holes and stringing wires between poles and between the last pole and the house. Poles will be 5-7 meters high and all work except stringing wires will be done manually, with little or no mechanized equipment. Barqi Tojik will appoint a contractor to design the connections and a construction contractor to install poles and lines. It is possible that Barqi Tojik will allow households to provide labor for the project in lieu of future payments for the connection; that will be determined at a later date.

Altogether, there will be about 65 kilometers of 10kV line and the same of 4kV line. Planning is not yet sufficiently advanced to know the number of poles, but it is likely they will be an average of about 100 meters apart, so the project will include erection of about 1,300 poles (650 for 10kV and 650 for 4kV). The only land that will be required will be for the poles themselves. Pole locations, except for house connections, will be selected so the line does not pass over or within two meters (horizontal distance) of any houses, schools, or other occupied buildings. No land will be needed for permanent use except of the poles themselves, which will occupy an area somewhat less than one square meter and will not restrict any activities or future land use. The contractor will require some small amounts of land for temporary use for storage and preparation. Work crews would come predominantly from the local communities, with only a few supervisory and technical personnel coming from outside; construction in any community would not last more than a few days or weeks.

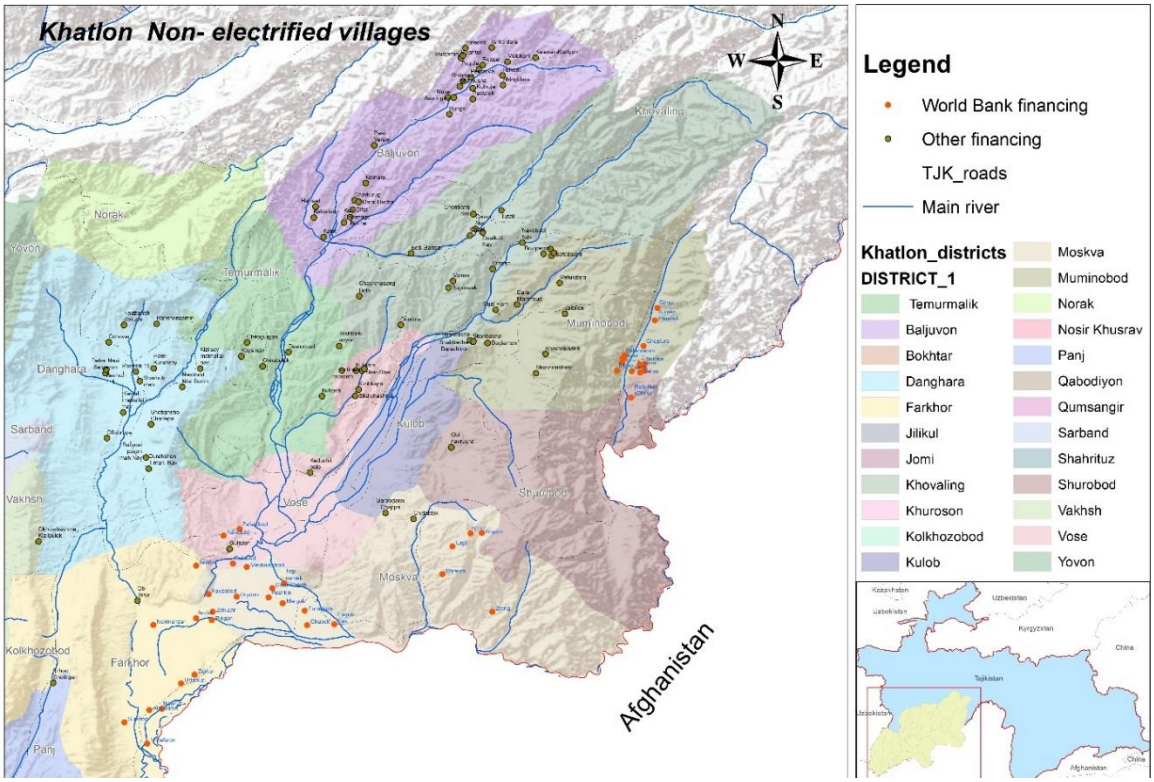


Figure 2-1 Non-electrified villages in Khatlon Province

Table 2-1 Villages to be electrified in selected regions

№	*Village*	*Number of households*	*Population*
Shamsiddin Shohin Region			
1	Gring	13	80
2	Kavluch	28	227
3	Diyho	20	186
4	Rohi Nav (Chirk)	12	103
5	Kumrog	22	188
6	Shahriston	10	91
7	Kulako Hambel	12	88
8	Urgli	14	97

№	Village	Number of households	Population
9	Korgaron	2	15
10	Safedob	25	192
11	Sheli bolo	6	47
12	Bogi Mullo	2	15
13	Sari reg	9	61
14	Hami mahlab	6	68
15	Kalandaron	5	26
16	Darelon	6	38
17	Zrang	2	10
18	Irgailuk	11	68
19	Cheptura	1	10
	Region total: 19 villages	206	1,610
			Farhor Region
1	Zarkor	30	200
2	Pingon	60	480
3	Archa	35	185
4	N.Safarov	38	300
5	Alovuddin	35	210
6	Surkhob	40	320
7	Nowruz	35	210
8	Zoli Zar	10	70
9	Nekmanzar	40	300
10	Istiklol	70	250
11	Mavzei Urtabuzi chamoati Dehot Farhor	150	1200
Region totals		543	3,725
			Hamadoni Region
1	Tojikiston	242	968
2	Chubek	136	544
3	Margob	180	730
4	Pushkin	136	560
5	Zafarobod	50	217

№	Village	Number of households	Population
6	Hayoti Nav	70	305
7	Oryono	140	571
8	Tagi namak	64	266
9	Darai Caloth	104	427
10	Mechnatobod	162	661
11	Navobod	160	666
12	Gulobod	156	637
13	Fayzobod	48	201
14	Furudgoh	40	127
Region totals		1,688	6,880
Totals for 44 villages		***2437***	***12215***
Grand totals for all non-electrified villages		***5,633***	***28,872***

3. Objectives of ESMF

The purpose of this Environmental and Social Management Framework (ESMF) is to provide a procedure/guideline for environmental and social appraisal of individual last-mile power connection projects. It describes the procedure how Barqi Tojik will develop site-specific and/or project specific Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) in order to ensure that potentially significant environmental and social impacts are properly managed in accordance with World Bank requirements and Tajikistan law.

4. Applicable Legal Requirements

This chapter describes the national and international legal framework that will apply to the prospective project(s).

4.1. *National Legal and Regulatory Framework*

The "framework environment law" or ***Law on Environment Protection*** was adopted in 2011 (21 July, 2011, № 208). The previous Law on Nature protection was adopted in 1993 and amended in 1996, 2002, 2004 and 2007, then replaced by this new law in in 2011. The new Law stipulates that Tajikistan's environmental policy should give priority to environmental actions based on scientifically proven principles to combine economic and other activities that have an impact on the environment with nature

preservation and the sustainable use of resources. The Law defines the applicable legal principles, the protected objects, the competencies and roles of the Government, the State Committee for Environment, the local authorities, public organizations and individuals. The Law stipulates also measures to secure public and individual rights to a safe and healthy environment and requires a combined system of ecological expertise and environmental impact assessment of any decision on an activity that could have a negative impact on the environment. The Law also defines environmental emergencies and ecological disasters and prescribes the order of actions in such situations, defines the obligations of officials and enterprises to prevent and eliminate the consequences, as well as the liabilities of the persons or organizations that caused damage to the environment or otherwise violated the Law. The Law establishes several types of controls over compliance with environmental legislation: State control, ministerial control, enterprise control and public control. State control is affected by the Committee for Environment Protection, the Sanitary Inspectorate of the Ministry of Health, and the Inspectorate for Industrial Safety. Public control is carried out by public organizations or trade unions and can be exercised with respect to any governmental body, enterprise, entity or individual.

4.1.1. Environmental and social impact assessment in Tajikistan

Two laws establish requirements for impact assessment: the ***Law on Environment Protection*** introduced above and the ***Law on Ecological Expertise***. Chapter V, Articles 35-39 of the Law on Environment Protection (2012), introduces the concept of state ecological review (literally, "state ecological expertise" – SEE), the purpose of which is to examine the compliance of proposed activities and projects with the requirements of environmental legislation and standards and with ecological security of society. These laws emphasize the cross-sectoral nature of SEE, which must be scientifically justified, comprehensive, and objective and which should lead to conclusions in accordance with the law. SEE precedes decision-making about activities that may have a negative impact on the environment. Financing of programs and projects is allowed only after a positive SEE finding has been issued. Among activities and projects subject to state ecological review are construction and reconstruction of various types of facilities irrespective of their ownership.

The laws require that all types of economic and other activities be implemented in accordance with existing environmental standards and norms and have sufficient environmental protection and mitigation measures to prevent and avoid pollution and enhance environmental quality. Environmental impact studies analyzing the short- and long-term environmental, genetic, economic, and demographic impacts and consequences have to be evaluated prior to making decisions on the sitting, construction, or reconstruction of facilities, irrespective of their ownership.

An Environmental Impact Assessment (EIA) study is a component of the State Ecological Expertise, as set out in the 2011 amendments to the Environmental Protection Law and in the Law on the State Ecological

Expertise (2012). The EIA is the responsibility of the project proponent. The State Ecological Expertise for all investment projects is the responsibility of the Committee for Environmental Protection under the Government of Tajikistan (CEP) and its regional offices. Also, the 2012 Law on the State Ecological Expertise requires that all civil works to be assessed for their environmental impacts and the proposed mitigation measures reviewed and monitored by the Committee on Environmental Protection.

The legal and regulatory system for EIAs also include:

- Procedure of Environmental Impact Assessment, adopted by the Resolution of the Government of the Republic of Tajikistan No. 509 as of 01.08.2014
- Procedure to implement State Ecological Expertise, approved by the Resolution of the Government of the Republic of Tajikistan No. 697 as of December 3, 2012
- Guidelines on the composition and order of development of content and structure of documentation to be submitted for review as part of SEE
- List of objects and types of activity for which preparation of documentation on Environment Impact Assessment is mandatory, adopted by the Resolution of the Government of the Republic of Tajikistan No. 253 as of June 3, 2013.

4.1.2. Other relevant legislation on environmental and social issues

The ***Law on Environmental Information*** (2011) is underpinned by Article 25 of the Constitution, which states that governmental agencies, social associations, and officials are required to provide each person with the possibility of receiving and becoming acquainted with documents that affect her or his rights and interests, except in cases anticipated by law. The Law defines the legal, organizational, economic, and social bases for providing environmental information and establishes the right of individuals and legal entities to receive complete, reliable, and timely environmental information. Article 4 provides the right of access to environmental information and Article 8 defines the conditions for restricting access to environmental information (none of which should be relevant here).

The ***Water Code*** (2000, last amended 2012) stipulates the policies on water management, permitting, dispute resolution, usage planning and cadaster. It promotes rational use and protection of water resources exercised by all beneficiaries and defines the types of water use rights, authority and roles of regional and local governments for water allocations among various users, collection of fees, water use planning, water use rights and dispute resolution. The Code provides Water User Associations with the mandate to operate and maintain on-farm irrigation and drainage infrastructure.

The Constitution of the Republic of Tajikistan establishes exclusive state ownership of land. The ***Land Code*** (1996, last amended 2016) establishes the rules that control the assignment and termination of the rights

to use (or lease) land. Rights to use land can be primary or secondary. Primary use rights include perpetual use, limited or fixed-term use up to 20 years, life-long inheritable tenure. The only secondary use/right is the right to lease, again up to 20 years. The Land Code establishes seven categories of land uses, including agricultural, urban/populated, industrial and other infrastructure, conservation and other protected land, national forest/wood reserves, water reserves, and state land reserves. Of most concern here are the first three, plus water reserves. In GBAO, most issues of land relations are under the jurisdiction of the region itself. Districts (jamoats) and cities have authority to provide land allotments for agricultural land and to withdraw land for nonagricultural uses (Land Code, Article 7). They are also responsible for protecting users' rights, terminating rights to use land, registering the rights to use land plots, and generally controlling land use and protection. They specifically approve land tenure documents dealing with works of regional importance.

Article 48 of the Land Code outlines the rules for state "confiscation" of land plots for state and public needs. Requirements include assignment of an equivalent land plot ("if desired"), construction of equivalent house and structures, and "full compensation for all other losses, including loss of profits…." These provisions apply only to those who have the legal right to use the land by virtue of possession of a "certificate on the legal right to use the land." The Regulation concerning compensation of land users' losses and losses of agricultural production was approved by Resolution of the Government of the Republic of Tajikistan # 641 (30 December 2011). It establishes the detailed order of reimbursement of land users' losses. The amount of compensation is determined by an interdepartmental commission established at the district level where the acquisition is to take place (that is, at the GBAO level). If the land user does not agree with the amount or type of compensation for losses and damages, the land user can apply to the court with a request for additional compensation, or may appeal the decision to terminate the rights.

This law is directly relevant since it will control the termination of rights of current users and issuance of certificates of rights to Barqi Tojik to use the land for the hydropower and transmission line project.

The Law on Land Administration (2008, last amended 2016) obliges the authorities to map and monitor the quality of land, including soil contamination, erosion, and water logging.

The ***Law on Land Administration*** (2008, last amended 2016) obliges the authorities to map and monitor the quality of land, including soil contamination, erosion and water logging.

The ***Law on Sanitary and Epidemiological Safety of the Population*** (2003, amended in 2011) introduced the concept of sanitary and epidemiological expertise that establishes the compliance of project documentation and economic activities with the state sanitary and epidemiological norms and rules, as well as strengthened provisions on sanitary-hygienic, anti-epidemic and information measures.

The ***Law on Pastures*** (2013) defines the basic principles of pasture use, including protection of pastures and the environment, and attraction of investments for more effective use and protection of pastures. The Law specifies the powers of local administrations to control environmental safety and pasture use in accordance with state regulations and standards. The law prohibits the implementation of a number of activities in pastures, such as cutting down trees or bushes, building roads, misuse of grazing land, pollution of the environment with waste, and grazing of livestock beyond the established rate. The law requires users to ensure effective use of pastures, including protection of pastures against degradation and pollution. It provides geobotanical research on pastures to assess the potential productivity of natural forage land.

The ***Law on Dekhkan Farms*** (2016) provides the legislative basis for the establishment and operation of private dehkan farms. While, according to the Law of 2009, dehkan farms were subjects of economic activities that carry out activities without the formation of a legal entity, the new Law allows dekhkan farms to obtain the status of legal entities. It also clarifies and fixes the rights of members of dehkan farms as land users. The law improves the management of dehkan farms and defines the rights and duties of their members. It allows farmers to legally erect field camps on land as temporary buildings, which makes it possible to significantly improve productivity at the agricultural season. The law requires dehkan farms to take measures to improve soil fertility and improve the ecological status of lands, make timely payments for water and electricity, and provide statistical information to government agencies.

The ***Law on Environmental Information*** (2011) is underpinned by Article 25 of the Constitution, which states that governmental agencies, social associations, and officials are required to provide each person with the possibility of receiving and becoming acquainted with documents that affect her or his rights and interests, except in cases anticipated by law. The Law defines the legal, organizational, economic, and social bases for providing environmental information and establishes the right of individuals and legal entities to receive complete, reliable, and timely environmental information. Article 4 provides the right of access to environmental information and Article 8 defines the conditions for restricting access to environmental information (none of which should be relevant here).

The ***Forest Code*** (2011) regulates forest relations and is aimed at creating conditions for the rational use of forests, including their conservation and protection. The Forest Code requires coordination with the Forestry Agency for construction sites that will affect forests, which are defined as forested areas which have environmental, social and economic interest for the state and that cover at least 0.5 hectares and are at least 10 meters wide. Projects must take measures to protect forests from sewage, waste, emissions, etc. The project is not likely to affect any area large enough to be considered a “forest” within the meaning of the law.

Protection of cultural heritage is grounded in paragraph 44 of the Constitution, which requires all citizens to respect and protect historical and cultural monuments. The ***Law about Culture*** (1997) establishes rights concerning cultural activities, including non-material cultural heritage, and requires protection, management, and monitoring of historical and cultural monuments. Material heritage is found in archaeological sites, sites of ancient settlement, tumuli, remnants of ancient settlements, castles, industries, channels, roads, ancient burial places, stone sculptures, graven images, antiquity items, and places of ancient settlements. The Ministry of Culture and its local representative offices are primarily responsible for protecting cultural heritage. The ***Law of Tajikistan on Regulating Traditions, Celebrations, and Rituals*** (2007, last amended 2018) limits expenditures and activities related to religious and family observances and festivities.

The ***Labor Code*** prohibits forced labor and child labor. Article 8 of the 1997 Labor Code prohibits forced labor. The Labor Code also sets the minimum age at which a child can be employed as well as the conditions under which children can work (Articles 113, 67, and 174). The minimum employment age is 15, however, in certain cases of vocational training, mild work may be allowed for 14-year-olds (Article 174). In addition, there are some restrictions on what type of work can be done by workers under the age of 18, and what hours of work are permissible. Examples of labor restrictions include that those between 14 and 15 cannot work more than 24 hours per week while those under 18 cannot work more than 35 hours per week; during the academic year, the maximum number of hours is half of this, 12 and 17.5 hours, respectively.

The ***Law on Occupational Safety*** (No. 517, 19 May 2009, as amended) establishes the right of workers to work in places that are protected from exposure to dangerous and harmful factors. Employers are required to specify in the labor agreement (contract) indicators and characteristics of working conditions, benefits and compensation for hazardous and harmful working conditions, personal protective equipment, the possibility of occupational disease, and measures of responsibility for noncompliance (by employer and employee) with the requirements in the labor contract. Employers are required to provide compulsory social insurance against accidents, disease, or injuries associated with their jobs. The law gives workers the right to refuse to undertake work that violates labor protection requirements. In addition, workers engaged in hazardous working conditions are entitled to free medical and preventative care, additional paid leave and other benefits and compensation. In case of disability or death, employers must provide compensation in multiples of average annual earnings. Employers must train workers in performing their work safety and must provide for collective and personal protection of workers. Accidents must be investigated. Finally, there must be a “labor protection service” if there are more than 100 employees.

Under the ***Law on Public Associations*** (2007, last amended 2019), a public association may be formed in one of the following organizational and legal forms: public organization, public movement, or a body of

public initiative. Article 4 of this law establishes the right of citizens to found associations for the protection of common interests and the achievement of common goals. It outlines the voluntary nature of associations and defines citizens' rights to restrain from joining and withdrawing from an organization. This legislation require NGOs to notify the Ministry of Justice about all funds received from international sources prior to using the funds and to post financial information on their websites.

The 2014 ***Law on Public Meetings, Demonstrations and Rallies*** (Article 10) bans persons with a record of administrative offenses (i.e. non-criminal infractions) under Articles 106, 460, 479 and 480 of the Code for Administrative Offences from organizing gatherings. Article 12 of the law establishes that organizers must obtain permission fifteen days prior to organizing a mass gathering.

The ***Law on Self-Government Bodies in Towns and Villages*** (1994) and the ***Law on Local Public Administration*** provide the legal basis for local government. The former law assigns to Jamoats a broad range of competencies and the mandate to support community efforts to address local socioeconomic needs. The 2009 amendment aims to strengthen local self-governance and accountability by delegating budget authority to Jamoat councils, and introducing a system of direct election for Jamoat council members. A 2017 amendment allows Jamoat councils to retain non-tax revenues earned through the provision of administrative services and a percentage of local property taxes.

Other Tajikistan legislation that could apply to project-related activities are listed in Table 4-1.

Table 4-1 Other Potentially Relevant Legislation

Law on Protection of Atmospheric Air (will require permit for emissions)
Law on Hydrometeorological Activity (no specific requirements)
Law on Land Administration
Law on Land Valuation
Law on Environmental Audit (may be required by Environmental Protection Committee)
Law on Securing Sanitary and Epidemiological Safety of the Population
Law on Radiation Safety
Law on Production and Consumption of Waste (permit will be required)
The Law on Environmental Education
The Law on Environmental Monitoring
The Law on Specially Protected Natural Areas (none could be affected)
Law on Protection of Fauna (will require permission if take fauna)
Law on Protection of Flora (will require permission if cut flora)

Water Codex (permission for water usage required)

4.1.3. National Administrative Framework

A number of central government organizations have roles and environmental and social responsibilities, including:

- Ministry of Health: responsible for development and implementation of policy, regulations, and norms related to public health
- Ministry of Labor, Migration, and Employment: responsible for developing and implementing policies relating to employment, labor issues, and migration practices
- Committee of Women and Family Affairs: responsible for gender issues and realization of family-oriented policy
- Architecture and Construction Committee: responsible for technical advice in relation to water supply and sewage systems, including construction and design standards, contract standards and rules, and regulation of project and construction activities
- Agency of Standardization, Metrology, Certification and Trade Inspection: responsible for drinking water quality and other standards
- State Statistical Committee: responsible for collecting, filing and delivering environmental information and drinking water supply and sanitation data
- Committee for Environment Protection (CEP): executive body responsible for environmental protection, sustainable use of resources, forestry and hydrometeorology responsible for decision-making related to environmental issues e.g. unsustainable land use, deterioration of soil fertility, excessive use of water for irrigation, flooding problems, and obsolete/banned pesticides. Also responsible for, *inter alia*:
  - Defining the main strategies for the protection, study, conservation and sustainable use of natural resources, and mitigation of the effects of climate change;
  - Drafting laws and other regulatory documents, including environmental standards, instructions and methodologies for the use of resources;
  - Issuing individual permits for the use of specific resources and withdraw these if the user violates their terms
  - Setting quotas for the hunting and collection of certain species of animals and the importation of ozone-depleting substances;
  - Carrying out ecological assessments of planned activities

- Defining the system of specially protected territories and maintaining State cadastres of such territories and of forests, factories, water bodies, and hazardous waste
- Regulating the use and protection of waters and the issuance of permits (licenses) for special water usage.

Two levels of local governments also have environmental responsibilities:

- *Khukumat*: municipality or local state administration. A chairperson appointed as a local representative of the President in the implementation national policy and administration of State services and regulations heads each khukumat. This includes what are called Districts in this document (specifically, Roshtkala, Ishkashim, Rushnan khukumats)
- *Jamoat*: local self-government. A jamoat covers a smaller administrative area than a khukumat and may include one or more settlements/villages. The jamoat is responsible for organizing community-based delivery of some basic public services. Jamoats have no budgeting authority and have a very limited independent role. The do have important roles under the land code, being responsible for allocating land and also for terminating rights to land and assigning new land.

4.2. *International obligations*

In addition to national legislation and regulations on environmental issues, Tajikistan is also party to several international treaties focused on environmental issues:

- Vienna Convention for the Protection of the Ozone Layer, 1996, as updated
- UN Convention to Combat Desertification, 1997
- UN Convention on Biological Diversity (CBD), 1997, as updated by Cartagena and Nagoya protocols
- Ramsar Convention (joined 2000)
- Bonn Convention on the Conservation of Migratory Species of Wild Animals (joined 2001), as updated by Bukhara Deer Memorandum, 2002
- UN Framework Convention on Climate Change, 1998, with related update Kyoto Protocol, accessed on December 29, 2008, and entered into force on March 29, 2009
- Stockholm Convention on Persistent Organic Pollutants (ratified 2007), as updated
- Aarhus Convention (UNECE Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters) (joined 2001), as updated by Kiev Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, on May 21, 2003
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, 2016

- UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (joined 1992)
- Rotterdam Convention on Prior Informed Consent (PIC) procedure on September 28, 1998, ratification pending
- The United Nations Convention to Combat Desertification (1997)
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (2016)

In addition, Tajikistan has ratified a number of core labor standards of the International Labour Organisation, including the following:

- Forced Labor (C029) and Abolition of Forced Labor (C105)
- Minimum Age (C138) and Worst Forms of Child Labour (C182)
- Discrimination (C111)
- Freedom of Association and the Right to Organize (C087)
- Right to OrgaSubnize and Collective Bargaining (C098)
- Equal Remuneration (C100)

4.3. *World Bank Environmental and Social Standards*

4.3.1. Environmental and Social Framework

Barqi Tojik is seeking financing for the project from the World Bank, which requires that the project(s) to meet the Bank's environmental and social standards, as well as relevant Tajikistan legislation if it is more stringent. The World Bank's Environmental and Social Framework (ESF) includes the Environmental and Social Policy for Investment Project Financing, which describes the requirements the Bank must follow for projects it supports through Investment Project Financing. The ESF also includes 10 Environmental and Social Standards (ESSs), which establish requirements for Borrowers and grantees such as Barqi Tojik to identify, assess, and control the environmental and social risks and impacts of Bank-supported projects.

Applicable ESSs include:

- ESS1- Assessment and Management of Environmental and Social Risks and Impacts: identification, control, and monitoring of risks and impacts, including identification of applicable requirements and monitoring outcomes.
- ESS2- Labor and Working Conditions: labor relations, rules of employment, occupational health and safety, workforce protection, worker grievance mechanism, with specific requirements for contractor and subcontractor employees.

- ESS3- Resource Efficiency and Pollution Prevention and Management: conservation of resources and control/prevention of wastes and pollution.
- ESS4- Community Health and Safety: avoidance and control of risks and impacts on communities from project activities and workers, emergencies, security, and other factors.
- ESS5- Land Acquisition, Restrictions on Land Use and Involuntary Resettlement identification, planning, avoidance/response to the need for physical and/or economic displacement due to project activities, including information disclosure and consultation.
- ESS6- Biodiversity Conservation and Sustainable Management of Living Natural Resources: protection and conservation of biodiversity and habitats, support livelihood of local communities.
- ESS8- Cultural Heritage: protection of tangible and intangible cultural heritage.
- ESS10- Stakeholder Engagement and Information Disclosure: identification and engagement of local and other stakeholders throughout the project life cycle, disclosure of project information, grievance redress mechanism for external stakeholders.

ESS7 (*Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities*) does not apply since no such communities or people could be affected by the project. Similarly, ESS9 (*Financial Intermediaries)* does not apply since Bank funding is not being provided to financial institutions for further on-lending.

The Bank classifies proposed projects into one of four risk categories, and has classified both environmental and social risks of the Rural Electrification Project (TREP) as substantial. Social risks are deemed substantial due to contextual risks - diverse regions, common fragility, remoteness & extremely difficult access, border vulnerability, absence of sustainable job opportunities and income-generating activities and consequent unemployment and poverty, migration & remittances and associated increased female headed households -- as well as client capacity risks. If the Bank determines that risks are actually higher or lower than substantial, it may change the classification as appropriate.

Table 4-2 provides a high-level summary of key gaps between the Bank's requirements and Tajikistan's requirements. As noted, the more stringent of the requirements will apply.

4.3.2. World Bank Group environmental, health, and safety guidelines

The World Bank Group has promulgated a number of Environmental, Health, and Safety Guidelines (EHS Guidelines), with the following being applicable to the project:

- *General EHS Guidelines* (April 30, 2007) includes guidelines for environmental controls during facility operation (air and water emissions, hazardous materials management,

noise, contaminated land, etc.) and occupational and community health and safety during operation. This guideline also covers the same topics for construction.

- *EHS Guidelines for Electric Power Transmission and Distribution* (April 20, 2007) cover many of the same topics (environmental controls, occupational and community health and safety) during construction and operation, with a focus on activities involved in constructing and operating electricity transmission and distribution lines.

Table 4-2 Summary of World Bank Requirements and Key Gaps with Tajikistan Legal Requirements

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts		
Scope of application	ESSs apply to Associated Facilities to extent of Borrower's control/influence	Associated facilities not covered by Tajikistan law as such, except to the extent that all activities in Tajikistan are subject to laws
Borrower's E&S Framework	May use Borrower's framework if can meet objectives of ESSs	No provision for alternative requirements except that international standards take precedence if agreements are in place
A. E&S Assessment	- Conduct E&S assessment, including stakeholder engagement - Retain international expert(s) for high-risk projects - Apply national framework, ESSs, EHSGs/GIIP - Apply mitigation hierarchy - Offset significant residual impacts - Differential measures for vulnerable or disadvantaged people - Consider primary suppliers	- ESIA law has much less emphasis on social conditions and impacts, but other laws partly fill gaps, but with less specificity concerning community impacts - No distinction between international and Tajikistan experts - No reference to EHSGs or GIIP - No equivalent provision for offsets - No equivalent provisions for vulnerable and disadvantaged people - No coverage of primary suppliers
B. ESCP	ESCP for compliance in a specified time	No provision in permits/approvals for delayed compliance
C. project monitoring & reporting	- Monitor proportionate to nature of project, risks and impacts, and compliance requirements - Reports to World Bank	Monitoring required but less emphasis
D. Stakeholder engagement and information disclosure	Engage stakeholders through life cycle	Generally consistent but no requirement for project-specific stakeholder engagement plan
ESS2: Labor and Working Conditions		

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
A. Scope of application	ESS2 applies to workers employed by Barqi Tojik who work on the project and to contracted workers, primary supply workers, and community workers	- Labor Code applies to all workers in Tajikistan, including foreign workers - Requirements apply to employer but do not extend to prime contractor
B. Working conditions and management of labor relations	- Written labor management procedures - Terms and conditions of employment - Nondiscrimination and equal opportunity - Worker's organizations	Generally consistent
C. Protecting the work force	- Child labor - Forced labor	- Minimum employment age is 14, with other limits consistent with ILO, but no work that could "cause health or moral damage" if under 18 - Forced labor prohibited
D. Grievance mechanism	- Grievance mechanism has to be provided for all direct and contracted workers	No specific requirement for grievance mechanism for workers
E. Occupational Health and Safety (OHS)	Measures relating to occupational health and safety will be applied to the project: - Apply World Bank Group General and sector-specific EHS Guidelines - Requirements to protect workers, train workers, document incidents, emergency preparation, addressing issues - Provide safe working environment - Workers allowed to report safety issues and refuse to work under certain circumstances - Provide appropriate facilities (canteens, toilets, etc.) and ensure accommodations meet needs of workers - All employers to collaborate on applying OSH requirements - Monitor OSH performance	- Generally consistent but less detailed - No requirements for accommodations
F. Contracted workers	- Reasonable efforts to verify contractors have labor management	Safety requirements apply to all employers, including contractors, but

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
	procedures to meet requirements of ESS2 (except those that apply to community and primary supply workers) - Procedures for managing and monitoring performance - Access to grievance mechanism	no obligation for developers to verify compliance
G. Community workers	Requirements for working conditions and OHS applied to community labor	Labor Code applies to employers and employees, not volunteers
H. Primary supply workers	Depending on level of Barqi Tojik/contractor control/influence, assess risk of child labor, forced labor, and safety issues and require suppliers to address significant risks	- Tajikistan law applies if work is done in Tajikistan - No obligation on employers in other countries - No requirements for prime contractor
ESS3: Resource Efficiency and Pollution Prevention and Management		
Resource Efficiency		
Scope of application	Borrowers must apply feasible resource efficiency and pollution prevention measures in accordance with mitigation hierarchy	Some requirements
A. Energy use	Adopt measures in EHSGs if project is significant energy use	No specific limits. No significant energy usage.
B. Water use	Assess water use and impacts and communities and adopt mitigation measures as needed	Permits required for water usage
C. Raw material use	Use GIIP to reduce significant resource usage	Resource usage requires permits
Pollution prevention and management		
General requirements	- Avoid, minimize, and control release of pollutants, apply the more stringent of EHSGs and national law - Historic pollution and non-degradation requirements	Specific numeric requirements
A. Management of air pollution	Requires assessment of potential air emissions and implementation of technically and financially feasible and cost-effective options to minimize emissions	Emissions limits. Project will have only minor emissions.

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
B. Management of hazardous and nonhazardous wastes	- Apply mitigation hierarchy to waste management - National and international conventions for hazardous waste management and movement - Verify hazardous waste management contractors are licensed and disposal sites operate to meet standards	- Detailed requirements for hazardous and other wastes - Signatory to international conventions - No requirements to verify haulers/contractors
C. Management of chemicals and hazardous materials	- Minimize use of hazardous materials - Avoid use of internationally controlled materials	- Regulations on hazardous materials - Signatory to international conventions
D. Management of pesticides	Requirements for pesticide use	Not applicable to this project
ESS4: Community Health and Safety		
Community health and safety		
A. Community health and safety	- Evaluate risks to community health and safety and apply mitigation hierarchy and GIIP to reduce risks - Consider third-party safety risks in designing infrastructure and equipment, with regard to high-risk locations - Ensure safety of services provided to communities - Identify traffic/road risks, assess risks if needed, consider safety in fleet decisions, take measures to protect public - Assess and avoid impacts on provisioning and regulating ecosystem services as appropriate - Avoid or minimize potential for disease transmission and communication, considering vulnerable groups - Address risks to community of hazardous materials management - Prepare of and respond to emergencies, consider in EIAs, prepare response plans	General requirements to minimize risk, no specific requirements for services, ecosystem services, emergencies, etc.

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
B. Security personnel	- Assess and address risks of security arrangements - Apply principles of proportionality, GIIP, and law - Verify contracted workers are not implicated in past abuses and are trained - Investigate incidents, report unlawful acts to authorities	No specific requirements
Annex 1. Safety of Dams	- Design and construction of new dams to be supervised by experienced professionals - Dam safety measures to be adopted and implemented during design, tendering, construction, operation, and maintenance - Dam does not fall into categories of paragraph 2, thus most of annex does not apply - Safety measures designed by qualified engineers to be adopted in accordance with GIIP (paragraph 5) - Confirmation of no or negligible risks to communities due to failure of dam (footnote 123)	No equivalent requirements
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement		
Applicability	- Assess need during ESIA process - Applies to permanent and temporary displacement, listing types of infringements - Limitations on applicability - Applies to land users and owners	- All land in state ownership - Rights to use land granted with legal certificates - May be used only as authorized - Legal users may lease land for authorized uses
A. General	- Affected people: land owners, users with legal claims, and users with no legal claims - Design project to avoid/minimize displacement - Provide replacement cost and assistance, disclose standards, offer land-for-land where possible, pay compensation before displacing people where possible	- Only those with legal rights eligible for replacement land or compensation - Replacement land preferred option - No requirement for assistance - Detailed requirements for committee memberships and actions - Compensation based on established rates for trees or other items lost

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
	- Engaged with affected communities, including women - Grievance mechanism - Census, cut-off dates, notices; detailed plan and monitoring required; require audit if significant displacement	
B. Displacement	- Detailed requirements for physical displacement - Detailed requirements for economic displacement, including livelihood restoration	- Replacement with equivalent land and houses preferred over compensation - Compensation for lost profits required, but not livelihood restoration
C. Collaboration with other responsible agencies or subnational jurisdiction	Collaborate with other involved agencies, provide support as needed; include arrangements in Plan	Committee membership and responsibilities defined in Land Code
D. Technical and Financial Assistance	World Bank may provide support to resettlement planning	
Annex 1: Involuntary resettlement instruments	Detailed requirements for resettlement plans, resettlement frameworks, and process frameworks	No detailed requirements
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources		
A. General	- Consider direct, indirect, & cumulative impacts in ESS1 EIA - Characterize baseline conditions - Manage risks with mitigation hierarchy and GIIP, including adaptive management - Differentiated habitats, ESS applies to all, provides for offsets - ESS applies to modified habitat with significant biodiversity value - Avoid natural habitats unless no feasible alternative; if affected achieve no net loss of biodiversity Critical habitat - Requirements if a project will affect legally protected and international recognized areas of high biodiversity value	Requires protection of biodiversity but less detailed requirements

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
	- Strict conditions on affecting critical habitats, requires BMP - No introduction of spreading of invasive species - Requirements for projects involving primary production and harvesting	
B. Primary suppliers	Requirements when Borrower purchases natural resource commodities	No equivalent requirements
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities		
	Not applicable for the project	
ESS8: Cultural Heritage		
Application	Covers tangible and intangible (limited) cultural heritage, whether legally protected or not and whether previously identified or not	- Law covers non-material (language, customs, ceremonies and celebrations, knowledge and skills, traditional crafts, dancing, music, art, etc.) and material cultural heritage - Some legal limits on weddings, funerals, and other activities
A. General	- Assess and avoid impacts on cultural heritage - Follow chance find procedure if a find is encountered - Involve experts if needed	General requirements to protect cultural heritage and not to disturb sites of interest No specific requirement for chance find procedure
B. Stakeholder consultation and identification of cultural heritage	- Identify and consult with affected and interested stakeholders - Maintain confidentiality if needed - Allow continued access to affected sites	No requirement for consultations except with Ministry of Culture representatives Must provide access
C. Legally protected cultural heritage areas	Comply with regulations and plans, consult with sponsors	Generally consistent
D. Provisions for specific types of cultural heritage	- Desk-based and expert consultation to identify archaeological sites and specify protections - Mitigate impacts on built heritage, preserve physical and visual context of structures - Identify and protect treasured natural features - Identify and protect movable cultural heritage	Less detailed requirements but generally consistent

ESS &Topic	*Major requirements*	*Key requirements/gaps in Tajikistan legal framework*
E. Commercial use of cultural heritage	Not relevant for this project	n/a
ESS9: Financial Intermediaries		
Not applicable for the project		
ESS10: Stakeholder Engagement and Information Disclosure		
Requirements	- Engage stakeholders throughout project life cycle, determine how they wish to be engaged - Provide stakeholders with information, - Maintain documented record of engagements	Generally consistent but less detailed
A. Engagement during project preparation	- Identify and analyze stakeholders, including disadvantaged or vulnerable - Stakeholder Engagement Plan (SEP) required, with detailed requirements for disclosure, timing of consultations, measures for disadvantaged or vulnerable, etc. - Disclosure of information early to allow consultation on design - Consultation to allow ongoing two-way communication throughout project life cycle	- No requirement to analyze stakeholders - No formal plan required - Early disclosure required
B. Engagement during project implementation and external reporting	Engagement and disclosure of information to continue throughout implementation, following Plan	No specific requirement for continuing engagement
C. Grievance mechanism	- Establish and implement prompt, effective, culturally appropriate, and discreet grievance mechanism - No limit on legal remedies	
D. Organizational capacity and commitment	Define roles & responsibilities, assign personnel to implement stakeholder engagement activities	No specific requirement for assigning roles and responsibilities
Annex 1: Grievance mechanism	Options for managing mechanism: ways of submission, log, advertised procedures, appeals process, mediation	

5. Overview of Baseline conditions

Tajikistan is a landlocked country in the mountainous part of Central Asia; in the north and west, Tajikistan borders with Uzbekistan and Kyrgyzstan, in the south it borders with Afghanistan and in the east with China (Figure 5-1). The perimeter borders of the country extend to 3,000 km. The total area of Tajikistan is 143,100 km^2.

Figure 5-1 Regions of Tajikistan

Khatlon Region, one of the four provinces of Tajikistan is the most populous of the four first level administrative regions. It is situated in the southwest of the country, between the Hisor Range in the north and the Panj River in the south and borders on Afghanistan in the southeast and on Uzbekistan in the west. Khatlon cover almost 24,800 km^2 of the country's area and consists of 24 districts – 14 in Western Khatlon and 10 in Eastern Khatlon. The total population of Khatlon region is 3,198,500 residents (as of 2017). The district's capital is the city of Qurghonteppa (population of 101,600 inhabitants as of 2014).

Climate. The climate of the region is characterized as arid, semi-arid climate with relatively cool winters and very hot summers. Precipitation is quite low with maximum peaks occurring in spring, while summers are very dry. The amount of annual precipitation varies from 400 to 600 mm per year. Average air temperature in July is + 30-32^{0}C, the maximum is up to +48^{0}C. Average month temperature in January is positive. The frost-free period lasts here about 250-260 days per year.

Topography and geomorphology. The relief is mostly characterized by planes, undulating lands and foothills with moderate slopes and a weak inclination on the southwest side. Overall, the geomorphology of the area is suitable for transmission line construction..

Water resources. There are several river basins in the Khatlon region, the main of them are Vakhsh river basin and Pyanj river basin. Vakhsh river water-collecting area is 39,100 km^2. Its length is 690 km, and water discharge can be more than 3,600 m^3/sec. The average annual runoff is 22.1 км^3. Water resources quality in Khatlon region is regularly and considerably affected by floods, mudslides and slope denudation processes (soil erosion). The total volume of water resources used in Khatlon region was 5,513 mln.m^3/year (2005), the 4,035 mln. m^3/year - for agriculture purposes. Actually there were used 4,052 mln.m^3/year on Vakhsh river basin, and 1,461 mln.m^3/year – on Pyandj river basin.

Ecosystems. Khatlon region is predominantly presented by the following main ecosystem types (Figure 5-2):

- Agroecosystems, mostly presented by irrigable pastures
- Mid-mountain Xerophytic Light Forest Ecosystems (high grass, shrubs, pistachio)
- Mid Mountain Mesophyllic Forest Ecosystems (broad leaf forests, light forest, mesophyllic shrubs).

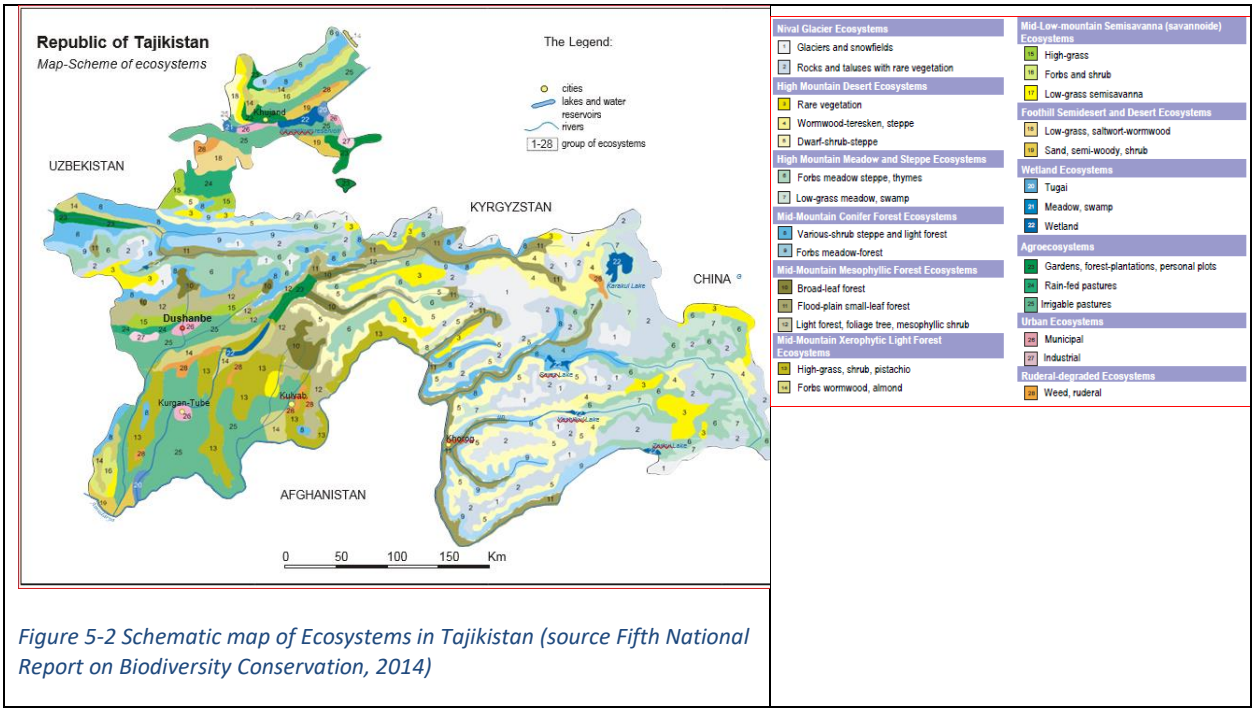


Figure 5-2 Schematic map of Ecosystems in Tajikistan (source Fifth National Report on Biodiversity Conservation, 2014)

Soils and Land use. Total area of Khatlon region is 24.8 thousand km^2. Soils are presented mainly by grey-brown serozems (gray soils), typical serozems and salted soils. The soils across Khatlon province have typically poorly developed profiles with thin topsoil layers and mainly presented by mountain light brown soils (alluvial meadow soils), which are typical for river valleys, mountain desert steppe soils, high mountain desert steppe soils and underdeveloped skeletal soils (Figure 5-3). Where upper profile is developed to about 30-50 cm, it is susceptible to erosion, especially if high deforestation rates are present in particular area.

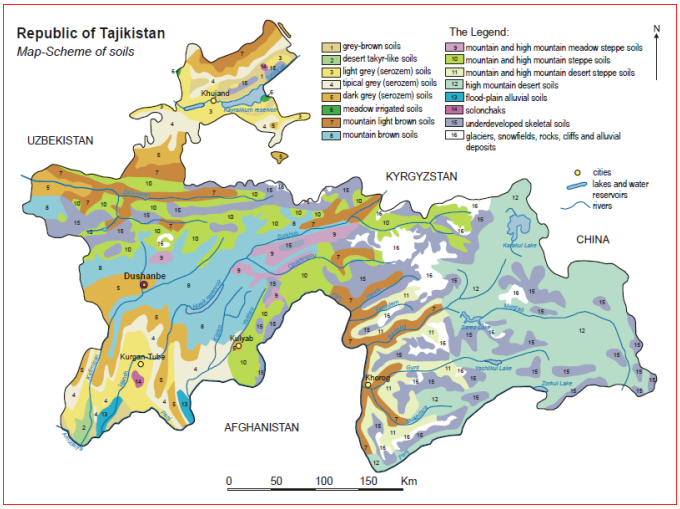


Figure 5-3 Soil cover map of Tajikistan (Source: National Strategy and Action Plan on Preservation of Biodiversity of the Republic of Tajikistan, 2003)

This is the prime cotton area of Tajikistan, producing a third of its production as highly valued long fiber cotton. Horticultural crops include a large variety of garden vegetables, okra pumpkin, maize, tomato, potato, onions, beans, peas, persimmon, lemon, date, and pomegranate trees, as well as some pear and apple trees in the higher elevations. Livestock is prevalent throughout the area, in the form of ruminants (mostly cows and sheep) and small-scale poultry. There is no real fodder production, animals graze randomly along canals, roads, and meadows and live off crop residues in late fall/winter/early spring. Total area of irrigated lands in Khatlon oblast is 13,582 ha and the cotton area is 9,983 ha.

Land degradation. Due to deforestation, improper irrigation and excessive use of agricultural lands combined with unregulated chemical inputs the region's land resources are affected by several environmental problems.

- Salinization. One of the biggest problems in Khatlon region is exhaustion and degradation of irrigated lands due to poor water and other management practices in agriculture. In Khatlon, about 50 percent of the area is gravity-fed and the remaining areas are dependent upon lift irrigation systems (pumping water up to 200 m high). These areas depend upon water which is pumped from weirs off the Kumsangir, Vaksh and Yavansu rivers. Most of the principal irrigation and drainage infrastructure is in danger of collapse. The system now manifests a rapid deterioration in operating efficiency of pumping stations, increased losses in the main canals and low water use efficiency at the field level. The lack of adequate drainage has exacerbated the problem of rising water table and secondary salinization necessitating expensive emergency interventions. According to the 2004 data of the Ministry of agriculture, in Khatlon region in some 3,546 ha of arable land (including 2,358 ha of irrigated land) were abandoned because of increased salinization, water logging and reduced soil fertility.

- Water erosion. Large areas of agricultural lands in the region are affected by soil erosion. Because of strong winds Khatlon region belongs to areas with a high degree of wind erosion (especially in Shaartuz, Kumsangir districts) and, water erosion. Inappropriate irrigation ditches, poor techniques of water distribution, application of too much water resulting in filtration losses and land slips are among the observed outcomes.

Environmental pollution. The region suffers from inadequate industrial and domestic solid waste collection and dumping infrastructure, and contaminated drinking water. The results of water quality analysis (available in public domains) show an alarming level of chemical and bacteriological contaminants (47.3 percent and 54.7 percent, respectively) in samples of water used for drinking and irrigation. The heavy dependence on agriculture in Khatlon, and the subsequent exposure to chemicals involved in farming, has a negative impact on health in the region. In addition, the incidence of disease is significantly higher in areas of irrigated agriculture where water consumption for the local population comes primarily from ditches in the village.

Natural protected areas. The are 4 state nature reserves, 13 state reserves and 3 natural parks located in Tajikistan. The total area of all natural protected areas is 3.1 million hectares. The Tajik National Park ((also known as Pamersky, Pamirsky or Tajik National Park) is the largest in the country - its area is 26,000 km^2 or 2.6 mln. ha.

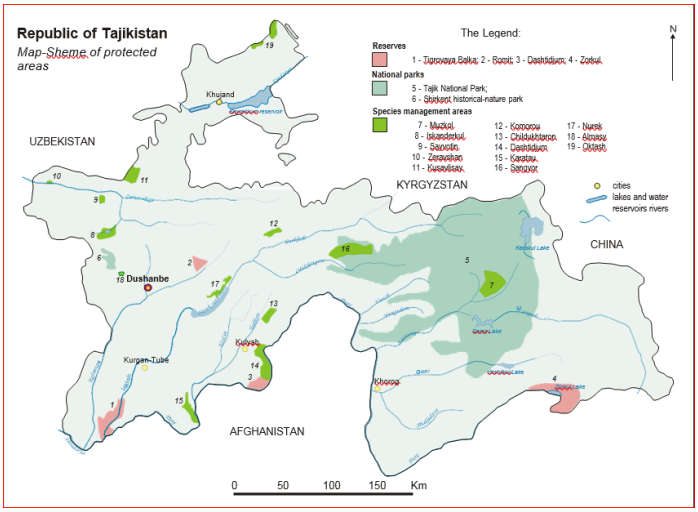


Figure 5-4 Natural Protected Areas of Tajikistan (Source: National Strategy and Action Plan on Preservation of Biodiversity of the Republic of Tajikistan, 2003)

Population and socio-economic conditions. Khatlon region has a population of 2.3 million people, or about one third of the national total. The vast majority of its residents live in rural areas, about 1.9 million people versus about 400 thousand urban settlers. Even if one excludes the capital city Dushanbe, population density is the highest in the country, 92.5 people/km^2. The region also has the largest portion

of irrigated lands in the country, approximately 45 percent, of which 34 percent are located in the area surrounding the regional administrative capital of Kurgan Tube, and 11 percent are in the Kulyab zone.

The region's industry is presented by 165 enterprises. The district's production ratio is 25.8% of the total industrial production of the republic. The Khatlon region hosts a few large industrial complexes: the Vakhsh Azot Fertilizer factory, the Yavan chemical enterprise, as well as a complex for chemical herbicide entombment.

District-specific social and economic baseline

As shown on Figure 2-1, the majority of proposed for electrification villages and which are planned to be supported by the World Bank are situated in the southern and southeastern parts of the Khatlon region:

- District Fakhror
- District Muminibod

The text below provides summary descriptions of social and economic conditions for each of these districts.

District Farkhor

Farkhor district is located in the south-eastern part of the Republic of Tajikistan near the border with Afghanistan. he total area of the district is 12,000 km^2; the district's capital (administrative center) is the town of Farkhor. Table 5-1 below shows the main villages located within the district and the total population and number of households for each town (as of 2015).

Table 5-1 Administrative structure of district based on number of households and population to 01.01.2015

№	Name of Town and Village	Households	Population
	Darkad	1507	14039
	20-years of Independence of Tajikistan	1702	14736
	Farkhor	1389	12057
	Vatan	2500	22515
	Gairat	1688	16143
	Zafar	1452	13834

№	Name of Town and Village	Households	Population
	Dehqonarik	1475	12648
	Gulshan	1527	12418
	Galaba	1277	9278
	Farkhor town	3277	23903
	Total for district	17794	151571

Demography. As of 01.01.2015, the total population of Farkhor is 151,800 persons, with about 49.9% of them being females. Ethnically, almost 98% of them are Tajiks. Table 5-2 below demonstrates basic demographic indicators for the district.

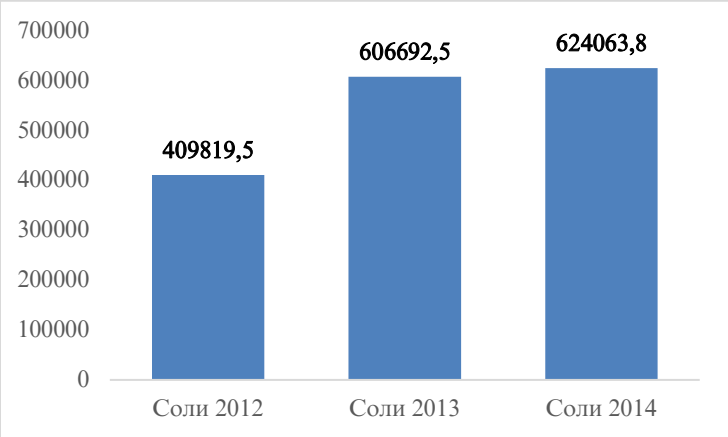
Table 5-2 Basic Demographic Indicators

Years	Number of born	Number of deaths	Number of marriages	Number of divorces	Natural population growth
2012	4068	586	2082	71	1,02 %
2013	4233	466	2136	89	1,02%
2014	5055	575	2138	94	1,02%

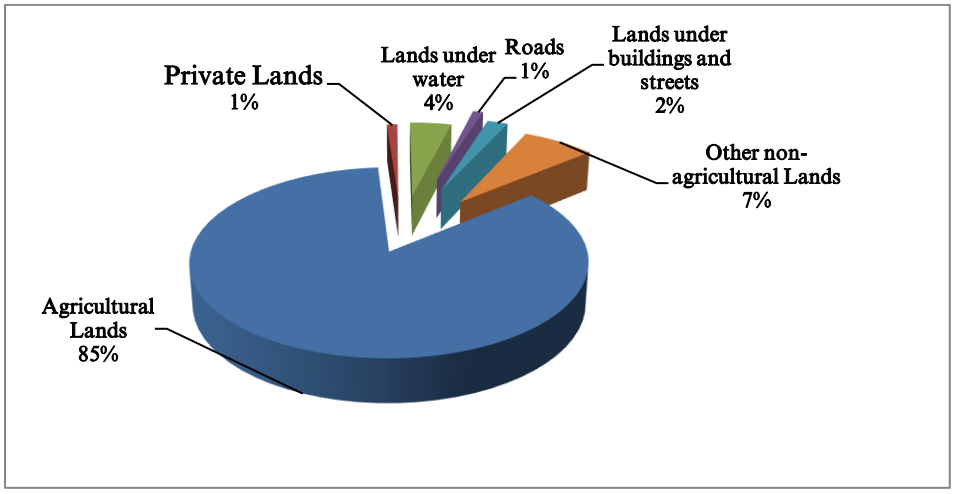
Agriculture. Farkhor district is one of known agrarian areas across Tajikistan and agriculture plays a considerable role in district's economy. The transition to the market economy and new economic, social and political conditions has led to the need to change existing collective farms in Farkhor into new forms of ownership and economic. There is the total of 3,967 dehkan farms and production cooperatives in the district. In recent years, following the implementation of the agricultural sector reform, the trend towards the transition from dehkan farms and cooperatives to the smallest households (individual and household) is taking place. In January 1, 2015 more than 150 dekhkan households and cooperatives have been restored, based on 525 individual farms. Local experts argue that small farms or private farms and

households are economically efficient and can achieve good financial results. Currently, these households need to be integrated into the branches of dekhkan households.

The total volume of agricultural production (thousand tons) for 2012-2014 is shown on the histogram below:



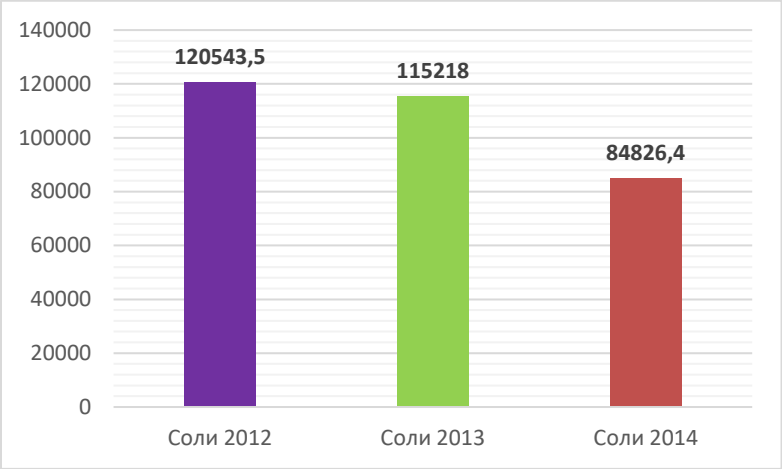
Land use. The total land of the district constitutes 118,311 ha, of which 88.1% (104,280 ha) are agricultural land. From the total area of agricultural land the cultivated lands constitute about 25,000 ha; the district's total area is 3,170 ha, which constitutes 2,7% of the land of the district. Private farms occupy about 899 hectares or 0,76% of land. Land use by type in Farkhor District is shown in the following figure:



Industry. In 2014 in Farkhor district, industrial production accounted for 85.8 mln TJS, which is more for 29.6% in comparison with the indicators of 2012, and in comparison with the indicators of 2013 is less

than 26,4%. The overall decline in the industrial production rate in the district could be as a result of reduced price of cotton in the world market.

The total volume of industrial products production in the district for 2012-2014 (thousands TJS) is shown below*:*



Education. The education sector is one of the most important social areas in Farkhor district, and its main goal is to improve the coverage of students to educational institutions in the district and to improve the quality of education.

Pre-school Education. In Farkhor district, the quantity of pre-school children has exceeded 20,000 persons, and only 1 percent is covered by preschools. Analyzes showed that in the district there is only one infant garden # 1 named Sharaf, visited by 180 children (including 79 girls). The number of inflated workers is 20 people, of which 17 are women. Of the total number of employees, 8 students with tertiary education, and 4 others have higher education.

Schools. According to statistical data in the Farkhor district, the total number of schools is 67, including 14 primary schools, 1 general school, 50 secondary schools and 2 lyceums.

Special professional and higher education. In the year 2013 in total 2041 persons graduated from secondary education, of which 761 were girls. In 2014, the total number of graduates of general secondary schools the 458 entered higher and specialized vocational colleges, including 48 girls.

The target group of medical schools in Farkhor district was established in 2007 in accordance with the Decree of the President of the Republic of Tajikistan and adopted the 2012 admissions policy. The training is a branch office of Dangara district, where 25 teachers and 4 instructors are studying. Of the 24 men, 20 students have higher education, and 4 students with special secondary education.

Healthcare. Health is a key aspect of the social sector in Farkhor district, its main goal is to provide access to the population with good health care services. By January 1, 2015, 35,720 women are registered in the district.

Statistics on number of births in medical facilities and at home is summarized in the table as below:

Indicator	2012	2013	2014
Total birth	4425	4972	5493
Birth in medical facilities	3737	4200	5121
%	84,4	84,4	93,2
Birth at home	688	772	372
%	15,5	15,6	6,8
Maternity death	22,5	40,2	-

Table below demonstrates statistics on infant mortality during 2012-2015 (persons):

Indicator	2012	2013	2014
Infant mortality 0 - 5 years age	114	126	142
Infant mortality up to 1 year age	83	88	107

Employment/Unemployment. Issues associated with employment and unemployment are controlled by the Department of Labor and Employment. Provision of workplaces to the population in Farkhor district is one of the most important issues. Currently, the number of unemployed people is about 33.2% of the able-bodied population. Unemployemnt rates for 2012-2014 are shown in the table below:

Indicator	Years		
	2012	2013	2014
Able-bodied Population (person)	48299	48763	48016
Registered Unemployed (persons)	642	813	1084

Labor migration. Labor migration in the district plays an important role in supplying the population with jobs and enhancing the family budget.

Year	Employed Population	Labor Migrants	% of Employed Population
2013	48299	9909 (201)	20,51%
2014	48763	9212 (191)	18,89%
2015	48016	8250 (204)	17,18%

Pensions and social protection. Social and pension insurance is implemented in the Farkhor district by the Department of Social Insurance and Pensions. According to the information department, the number of pensioners in January 2015 was 11454, 5% (593 persons) due to the low rate of retirement, they continue their work. Average pensions in the district amounted to 202.00 somoni.

Cultural aspects. The cultural sector is one of the major socio-strategic areas and has a significant role in the formation of spiritual education of the population of the district. The activity of the executive branch of the state executive body is aimed at timely and effective implementation of the cultural and spiritual policy of the state. According to the official data, in 2014, 43 cultural and recreational facilities, 40 historic sites were registered. There are also 86 mosques, including 11 junior mosques, 3 bathrooms and 3 hotels.

Sports and tourism. In Farkhor district, most of young people are engaged in sports and events are organized on a variety of sports, football, national wool, dancing, sambo, volleyball and light athletics. The district has 205 football fields, 58 football baskets, 50 playgrounds, 54 gymnastics, 11 sports gyms, 25 playgrounds, 7 sports and 25 gyms, where 508 children and teenagers are trained. There are 17 rugs in sports facilities on all types of sports. Currently young population is 79,905 persons in the district, of which 40,734 persons are boys and 39,171 are girls.

Drinking water supply. One of the main problems is the low accessibility of the district to high quality drinking water in Farkhor district infrastructure. According to recent data, over 8000 people (8%) have access to good quality drinking water, mainly population of Farkhor and part of the population of the Gafur. Approximately 96% of the population uses drinking water by water pumps, vertical and wells, where water quality does not meet sanitary and hygiene requirements, and the risk of infectious diseases among the population increases.

Housing and utilities services. The sewage system of Farkhor settlements was constructed in the former Soviet Union and was carried out by tube pipes (diameter 300), with a length of 3.5 km. Also, the sewage

system has a water pump and water purification facilities. Due to uninterrupted water supply and disinfection of emissions into the sewerage pipes the system of sewage treatment in Farkhor is not fully operational and functional.

One of the major problems in this sector is the lack of cleaning equipment and accessories, especially in the areas of social sciences, the rural and rural communities and enterprises.

Power Supply. Population and entities in Farkhor district are fully equipped with electricity. It should be noted that, due to high rates of natural growth, creation of industrial enterprises, the absence of alternative energy system, the demand for electricity is increasing day by day. The existing electricity utilization capacity of the district is not resistant to electricity shortages (especially in the winter), which is due to an increase in the risk of the deficiencies of the electricity equipment.

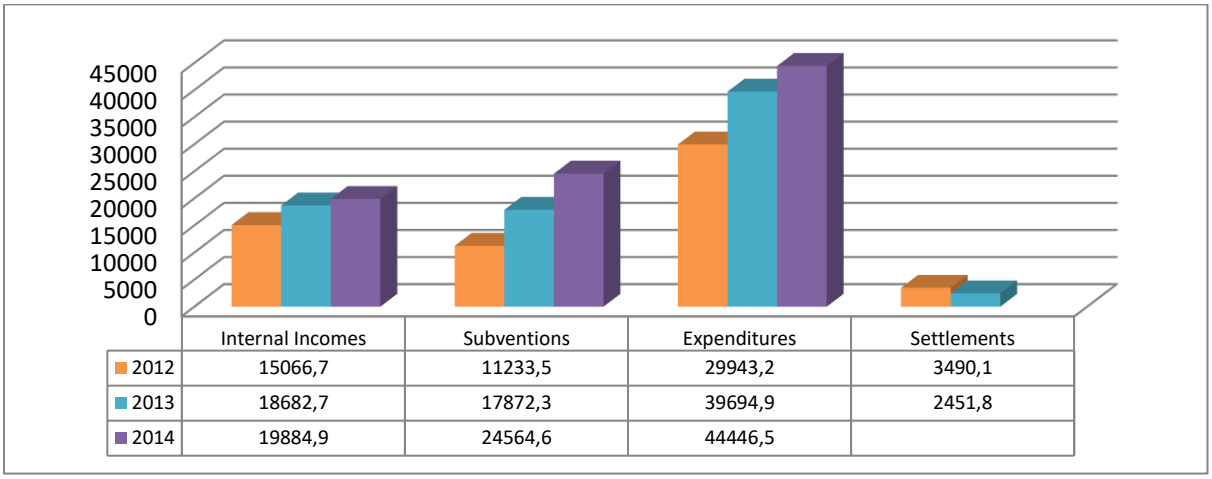
Transport and road management. Maintenance of the roads of Farkhor district is in the competence of the State Automobile Reserve of the highway, which is subordinate to the Ministry of Transport of the Republic of Tajikistan. In 2014, the total budget of the institution has made 896,8 thousand somoni for road maintenance. The number of employees of this enterprise is made up of 68 people, of whom 7 are women. In 2014 the average salary of employees was 480 TJS. From the total number of employees of the enterprise, there are 5 students, 5 specialists, and the rest of the secondary education.

At the balance of the current 8-year ex-EIA-3311, 1 bulldozer of WG 75, 2-speed motor GAZ 99 and RZ 135, 3-axle car and 2-tractor T 28. This facility serves 409.8 km of roads, including 56.4 km of international roads, 39 km of republic roads, 314.4 km of local roads. At the balance of the company there are 69 banks with a length of 964 meters. It should be noted that in the existing roads, 60% of them require major repairs, and 40% of them need modern repair. Available currencies are in technical condition and require major repairs.

Communication and Internet. The branch office of "Tojiktelecom" JSC, which is one of the state-funded entities provides communications service to the enterprises, as well as the population on the telephone and Internet connection. In this enterprise 16 people work, 7 of which are women. Of the total number of employees 2 persons have higher education. The communication network of the district is fully integrated into the digital system, with the light strips connected to the regional magnetic field (30 km). The regional and international inter-district dialogue works in the district center

Budget and Financial Supply. The budget of Farkhor district is formed by donations and receives financial assistance from the republican budget annually. However, the local budget's main source of funding is DDP. In 2014, more than 24.5 million somoni was allocated from the republican budget as financial assistance. Currently, the basic part of the district budget (55.2%) constitutes state subsidies.

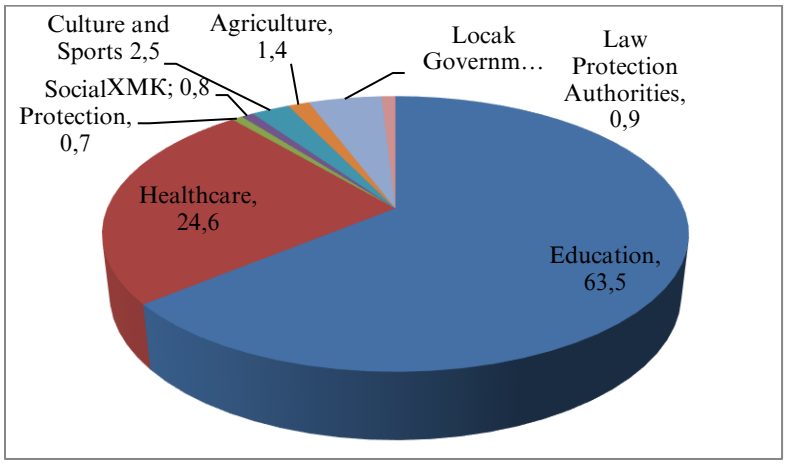
The analysis shows that the revenue part of the local budget is growing annually, which is more than 132% in 2014 compared to 2012. Revenue and expenditures of budget of Farkhor district during 2012-2014 (thousand TJS) are shown in the figure below:



	Internal Incomes	Subventions	Expenditures	Settlements
2012	15066,7	11233,5	29943,2	3490,1
2013	18682,7	17872,3	39694,9	2451,8
2014	19884,9	24564,6	44446,5	

Although the overall growth of budget deficits still exists, in 2014 there is an increase in the share of unified tax revenues, as well as a decline in the share of other non-taxable revenues. It is worth noting that the tax revenue of individuals is growing annually, with an increase of 58.2% in 2012 compared to 2012 and this growth is primarily linked to the increase in wages. Local budget expenditures are primarily target financing of budgetary sectors, with a significant share of social expenditure of 90.6%, while the remaining 9.4% used for other sectors, mainly for wages.

Local Budget Expenditures (2013-2014) by sector are demonstrated in the following figure:



District Muminobod

Demography. Muminabad district occupies 0.06% of the total territory of Republic of Tajikistan. Muminabad district is located in a mountainous area in the south-western part of Tajikistan. The total area of the district is 880.6 km^2. Muminabad district borders in the north with Khovaling and Tavildara districts, and from the east with Shuraabad district, and in the south by the city of Kulyab.

The total number of the population of Muminabad district as of January 1, 2015 is 84,300 people, of which men are 41,725, and women are 42,575 people. The average annual population growth rate is 1.73 %. From the economic point of view, Muminabad district is agrarian, where the population mostly lives in rural areas. The population density of the area per 1 square kilometer is 95 people. The composition of nationalities of Muminabad district population is 98.1% - Tajiks and 1.9% - other nationalities. Basic demographic data for the district is show in Table 5-3.

Table 5-3 Demographic data for Muminabad district (2012-2014)

#	Indicator	Measurement unit	Total population as of 01.01.2015		
			2012	2013	2014
1	Households	Unit	10461	10690	10831
2	Population	Person	81100	82600	84300
3	Men	Person	40348	42125	41725
4	Women	Person	40752	40475	42575
5	14-year-old child	Person	8317	8472	8647
6	Mid-age population from 15 to 62 years (57 years old for women)	Person	32384	32984	34146
7	Including population of 15 – 18 years age	Person	36738	37417	38187
8	Elders 63 and older (58 years old for women)	Person	45101	46547	47275
9	Labor migrants (from the sources of local authorities)	Person	3888	4015	4078
10	Able-bodied population	Person	2361	2193	2193

#	Indicator	Measurement unit	Total population as of 01.01.2015		
			2012	2013	2014
11	Unemployed population	Person	45101	46547	47275
12	Population engaged in organizations and enterprises	Person	1102	1122	1233
13	Population engaged in the economics	Person	5993	3785	3808
14	Population engaged in the entrepreneurship	Person	8368	8585	8772

The distance from the center of the Muminabad district to the capital, Dushanbe city, is 252 km to the center of Khatlon region -200 km to the city of Bokhtar, and 42 km to Kulyab city. Muminabad district consists of 7 jamoats, including the village of Moomin namoat, the rural jamoats N.Nazarova, Childuhtaron, Dehibaland, Boggai, Sh. Shokhin and Balkhobi. During 2012-2014 the number of resident population increased by 3.9 %, external labor migration (according to jamoat information) decreased by 0.9 %.

Demographic growth of population of Muminabad district (to 01.01.2015):

Years	Number of born	Number of divorced	Number of talaq2	Number of deaths	Number of migrants	Natural population growth	Natural population growth in %age	Total number of population
2012	1738	234	1504	1,7	81,1	1738	234	1504
2013	1781	211	1570	1,8	82,6	1781	211	1570
2014	1748	224	1524	1,7	84,3	1748	224	1524

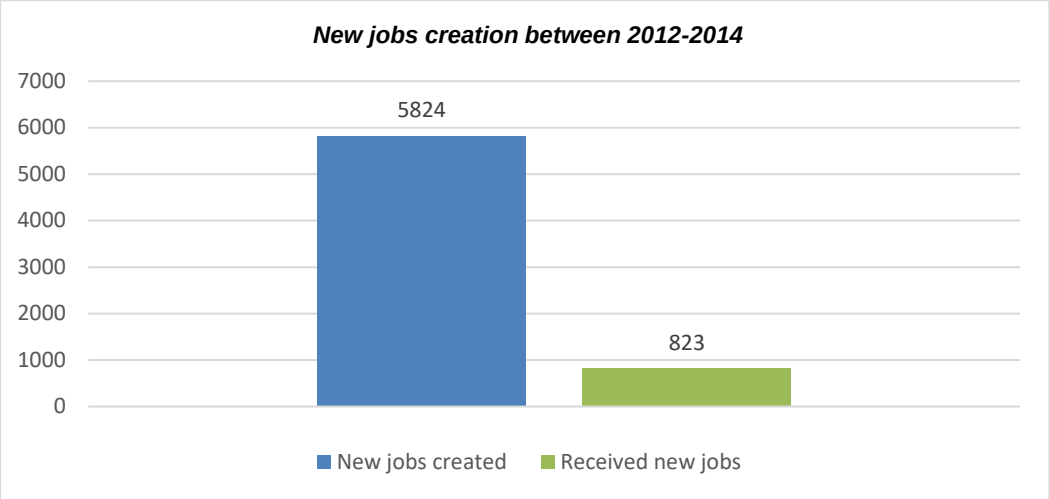
[2]"Talaq" in classical Islamic law refers to the husband's right to dissolve the marriage by simply announcing to his wife that he repudiates her.

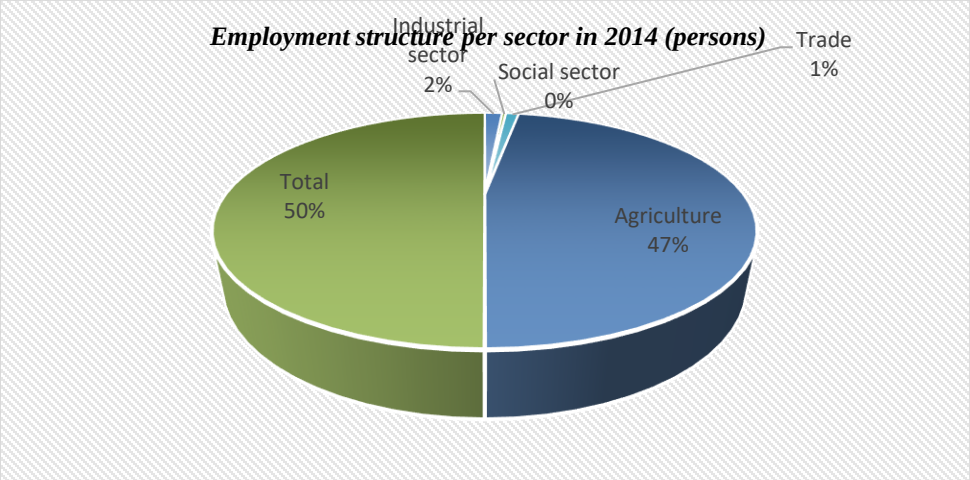
Agriculture. Agriculture is the primary sector of Muminabad's economy, which employs more than 85% of the working population. The main areas of agriculture are crop, livestock and horticulture. In Muminabad district, the main producers of agricultural products are collective dekhkan farms (8%), individual farms (30%), population (62%). The share of these farms is huge in the total agricultural production, in particular in the production of potatoes and vegetables, and individual farms in the production of wool, meat, milk, eggs, honey, cereals and fruits. The population of the Muminabad region is engaged in the cultivation of grain crops (wheat, beans and barley), vegetables, potatoes, fruits, animal feed (clover and sainfoin) and animal husbandry. Most of the population of villages receives income through the sale of agricultural and livestock products.

Land use. According to official data, as of January 1, 2015, the total land area of the district is 121,479 hectares, and the number of registered land users is 14,716 people. Of the total land area of 67 thousand 555 hectares - agricultural land, 2 thousand 576 hectares - personal plots (413 hectares irrigated), 1 thousand 189 hectares - personal auxiliary lands (50 hectares irrigated), 18 hectares - reserve fund, 8 thousand 451 hectares forests and groves, 14 thousand 19 hectares - shrubs, 1 thousand 423 hectares - land under water, 715 hectares - lands for roads and cattle ramps, 717 hectares - land for buildings and objects, streets and squares and 24 thousand 834 hectares - other lands. The area of land suitable for use by agricultural enterprises is 102 thousand 377 hectares (of which 4 thousand 687 hectares are irrigated).

Occupation. The total number of able-bodied population of Muminabad district as of December 31, 2014 has reached 47,275 people. The total number of officially registered unemployed is 943 people, or 2.3% of the labor force. However, according to local experts, the unemployment rate in the region is approximately 30-35%. Most of the unemployed are mainly women, who are housewives.

Employment. Between 2012-2014, in Muminabad district 5,824 new jobs were created together with the relevant structures (including 2,752 new jobs in 2014), during this period 823 people were provided with permanent jobs, which represents 14.1 percent of the jobs created. The reason for this trend is that the jobs created do not cover the working-age population due to low wages. Nearly 55% of the total population is employed within agricultural sector.





Income. In the Muminabad district during 2012-2014 the amount income among population in the form of wages constantly increased. The average salary of employees in the sphere of education and health care is steadily increasing; this trend has a positive effect on the level of quality services in these industries. Despite this, wages remain low in agriculture, industry and construction.

Average salary in Muminabad district per sectors between 2011-2014 is shown in the table below:

Industry	Years				2014/2011 (in %)
	2011	2012	2013	2014	
Agriculture	296	268	305	335	13,1
Industry	216	270	270	276	28
Building	380	395	460	487	28,2
Finance and loans, banks	650	681	710	799	23
Culture	288	310	384	473	64,2
Health care	356	396	482	680	91
Education	540	550	600	615	13,8
Other structures of the public sector	410	470	570	590	44
Total in the area (by average)	392	418	473	532	35,7

Labour migration. Since 2014, a department of the Labor and Employment Agency of the Muminabad district has been involved in issues of employment and labor, environmental and internal migration of the population in the district. Labor migration plays an important role in providing the population with jobs and is one of the main sources of income for the population of the Muminabad district. According to official statistical reports in 2014, the total number of migrants was 1,401. The district has a high level of labor migration, the degree of qualification of labor migrants of the district, in particular young ones, is not competitive in the labor market. In 2014, at the expense of labor migrants of the district, 1.87 million US dollars and 21.3 million Russian rubles were received through the banks of the district.

Industry. There are 8 industrial enterprises, 90 mills and 4 oil mills in the district, where production is established using local raw materials. Currently, the share of industry in the formation of the total production of products in the area and the revenue part of the district budget is insignificant.

The growth of the nominal volume of industrial production in current prices in 2014 compared with 2012 and 2013 increased by 4.6 times and by 1.4%.

Opportunities. Muminabad is a mountainous area in which there are various natural resources, including: gold placers reserves, reserves of building materials, limestone, on the basis of which it is possible to create enterprises in the future to process gold and building materials. In addition, products produced in the field of plant growing, wine-making and animal husbandry can be used as local raw materials and the basis for the creation of small industrial enterprises for the processing of agricultural products. Efficient use of existing resources and thus the creation of small and medium-sized enterprises will also be able to lay a stable basis for creating new jobs, ensuring the well-being of the population of the district, replenishing the revenue part of the district budget.

Access to Infrastructure facilities/Safe Drinking Water. The water supply system is maintained and regulated by Subsidiary State Water Supply Enterprise (SSWSE) of Muminabad district. The Enterprise was built in 1980 and employs 16 people, 2 of them have higher education, 2 have professional technical education, the rest of workers have secondary education. The SSWSE owns 2 pumps, 5 vertical wells, a reservoir for collecting water of 1500 m3 and 16.5 km of water supply lines. It operates on a contractual basis. The drinking water supply of Muminabad district is not able to fully meet the needs of the population. Currently, water pipes are worn out and deteriorated as a result of operation for many years and an increase in the number of subscribers.

Health facilities. Ensuring public health is an important direction in the social sphere of the Muminabad district, and covers the health status of the population, providing access and providing quality medical services to vulnerable groups, including women and children. The population in the district is provided with 1 central hospital (for 187 beds), 1 numbered hospital (Sh. Shokhin rural jamoat (for 25 beds)), 1 regional health center, 20 rural health centers, 25 medical points, 1 emergency department, 6 specialized centers in which 57 doctors with higher education and 392 nurses work. There are 6.5 doctors per 10 thousand people, of the existing work units 77.9% are employed.

Sports and recreation facilities. Muminabad district has 1 youth sports school with 15 coaches teaching 32 groups in 10 types of sports, including athletics, volleyball, table tennis, judo, taekwon-do, hockey, and drafts. Coverage is 283 teenagers, out of which 34 are girls. In addition, there are 8 gyms and 1 sports club, 1 stadium and 62 athletic fields, which are effectively used by athletes. The Department of Youth and Sports of Muminabad district plans to open sports sections for the training of young people in all sports in the villages of the region in the future.

Objects of housing and communal services. The subsidiary state enterprise “Housing and communal services of the Muminabad district” was created in 1975 and is subordinate to the State unitary enterprise

"Hochagii Manziliyu communali" of the Republic of Tajikistan. The enterprise employs only 50 people, who are mainly engaged in landscaping, lighting, sanitation and maintenance of the housing stock. The enterprise owes 15 two-storey communal houses, the total area of which is 5100 m2. The company provides services to 180 residents. Utilities and maintenance of the housing stock include the repair of roofs of houses, the repair of doors and windows, the repair and lighting of entrances. There are more than 13,447 people live in the district center or in the territory covered by public utilities.

Communication systems. To improve public access to telecommunications services, the region has a branch of OJSC "Tochiktelekom", on the basis of which 1 digital station is connected with 2,000 long-distance dialing numbers (the length of long-distance telephone channels is 45 km and the number of fixed telephones is 730). The population of the Muminabad district uses the services of mobile operators Tcell, Megafon, Beeline and Babilon-M. In addition, it is envisaged to connect a fiber-optic line of jamoats with the district and regional centers for a total of 198 thousand TJK in the coming years.

Four television and radio programs of the republic are broadcast in the district (the television coverage of the First Channel is 99.7%, Safina – 81%, Bahoriston – 52%, Jahonnamo - 79% and the coverage of republican programs radio – 37%). A newspaper "Subhi mehnat" is published once a month in an edition of 600 copies.

Gender and Social Divisions (Status of Women and their role in local development). In order to ensure the wide participation of women in public life and government, improve the social status of women and improve the national gene pool, enhance the role of women in strengthening moral principles, peace and unity, guided by Articles 64, 69 and 79 of the Constitution (Fundamental Law) of the Republic of Tajikistan of Peace and National Unity - Leader of the Nation of the President of the Republic of Tajikistan, Emomali Rahmon, dated December 3, 1999, for No. 5, the state program "On measures to improve the status of women in ETS ". Thanks to this program, for 2018 the number of women in the public service is over 23%.

In 2011, the Government of the Republic of Tajikistan approved the National Strategy for enhancing the role of women in the Republic of Tajikistan for 2011–2020. (NARC 2020) The main purpose of the Strategy is to create the prerequisites and necessary conditions for the fullest realization of the natural abilities of women in all spheres of social life in order to ensure the sustainable development of society.

A number of development studies, including the UN Women's Analytical Report and the UNDP's "Women's Representation in Local Government in Tajikistan" dated by July 2017, recognize the special role of women in the socio-economic development of the country. Women are actively involved in the development and resilience of their families and communities against crisis, political and economic changes, the effects of climate change and natural disasters. In particular, raising the literacy of rural women on the possibility of economic development, local methods of hazard prevention, etc., are

recognized as essential assets that can contribute towards the survival of their families in complex social and political contexts.

Nowadays, many men are leaving for labor migration. Thus, remote rural areas are faced with a change in the social context, where women play a more important role in creation and maintenance of their livelihoods, taking care of the family and doing most of the labor-intensive work, including agriculture.

Education. There are 62 educational institutions in the Muminabad district, including 38 schools of secondary education, 13 schools of basic education, 2 gymnasiums and 4 schools of primary education. In addition, on the territory of the district, 1 boarding school for orphans and those left without care is carried out.

Preschool education. The district operates the only pre-school education institution in the village of Muminabad, in which 115 children are enrolled in education and upbringing. In addition, in order to improve the enrollment of children in preschool education, 50 children's development centers (preparatory groups) were organized in the district, in which 700 children were enrolled in 2014. In order to improve the coverage of children in preschool education institutions until 2020, it is planned to open 2 new groups to cover 100 children. In 2014, more than 1,645 preschool children (3-6 years old) were registered in the district, and due to the lack of pre-school institutions, only 7 percent of them are nurtured.

Secondary education. The total number of students in the 2014-2015 school year was 13394 people, of which 6182 people or 46.1 % of the girl. Medical College of Muminabad district (branch of the medical college of Kulyab). The branch of this college was opened in 1998 as a target group at the central hospital of the Muminabad district, which employs 12 teachers with higher education and a category. The total number of students in the last four years is 88 people, 89.8 percent of which are girls.

Road network. The State Road Operational Administration operates in Muminabad district. This enterprise is subordinate to the Ministry of Transport and Communication of the Republic of Tajikistan. The balance of the State Road Operations Department of the Muminabad region contains only 169.2 km of roads, of which 17.7 km have asphalt pavement. The length of the republican roads is 26 km, local roads (on the GDEU balance sheet) - 143.2 kilometers. In recent years, due to the lack of funds on most roads for many years (more than 25 years), current and major repairs have not been carried out, as a result of which the actual condition of roads and bridges in the area is very poor and needs to be built and rebuilt. In most of the settlements and irrigated lands, pipes are not installed along the roads, as a result of which water rises to the level of the road and causes the destruction of the roadway.

More than 15 km of roads of republican significance of the rural jamoat of Dehibaland and the district center, 85 km of local roads, including the roads of the villages of Kulchashma, Gesh, Momandiyen,

Margak, Dehlolo and the roads of the rural jamoat of Childukhtaron need major and current repairs. The current state of the roads creates serious problems for traffic safety.

Local business. Small and medium-sized businesses occupy an important place in the economy of the Muminabad district and should become the main sector of the development of the district economy. The development of small business, the privatization of state property, being the primary sign of the transition to a market economy, is aimed at improving the efficiency of enterprises and their assistance in financial stabilization and providing the population with new jobs and expanding the consumer market.

Number of disabled people/socially vulnerable groups. The vulnerable group of the population includes pensioners, disabled people, disabled children and low-income families (Table 5-4)

Table 5-4 : The number of vulnerable groups by category during 2011-2014

Vulnerable groups	Years			
	2011	2012	2013	2014
Retired by age	3154	3275	3335	3363
Invalids, including	1978	1952	1959	1818
Congenital disabled	511	446	450	431
Including children under the age of 18	379	401	415	410
Persons left without care	1268	1258	1235	1199
Round orphans	18	17	14	13
Poor families receiving compensation payments for utilities (electricity)	1992	2064	2318	2166

In Muminabad district in 2012–2014, an increase in the number of pensioners by age was observed. The main reason is non-compliance with the requirements of regulatory acts on the designation of a disability pension. In 2014, 1199 children deprived of their parents and 13 orphans who lost one of the parents were registered in the region. In this direction, it is necessary that the responsible and specialists of the sphere pay special attention to the current physiological and mental health of the population. To solve

this issue, it is necessary to organize a rest home for the disabled and the construction of a nursing home in the district center in the district. Unfortunately, in the field of social protection, given the limited financial resources, there are problems whose solution requires the support and assistance of humanitarian organizations. During 2014, 12 disabled persons of group 1 (4 disabled persons under the age of 18 years) were provided with means of transportation (disabled persons), 4 pairs of crutches and 20 reeds were provided to people in need. However, the number of wheelchairs, crutches and canes provided is very small. According to official data, more than 200 people need wheelchairs, 50 people need crutches and 140 people need canes. 29 people were provided with crutches, the other 11 people needed wheelchairs. In addition, there are a large number of people with disabilities in need of aids (artificial organs (prostheses) and special glasses, hearing aids).

6. Potential Environmental and Social Risks and Mitigation Measures

This chapter summarizes the risks and impacts that could occur as a result of the implementation of the last-mile connections individual subprojects, which will for the most part include construction of 10kV and 4kV distribution lines from the existing grid to the villages of concern (non-electrified villages) and then to houses in the villages.

The risks and impacts have been screened at high level and summarized based on consideration of the information presented in baseline characterization. Where required, the management measures needed to prevent, minimize, mitigate or optimize the impacts have been given.

Overall, this Environmental and Social Management Framework (ESMF) will serve as the appropriate appraisal instrument to identify and provide guidance on mitigating potential E&S risks.

The text below presents the details of project E&S risks analysis as a result of implementation of last-mile connection projects.

6.1. *Summary of Project Activities that Could Affect E&S Conditions*

The projects will involve a variety of activities, many of which could affect environmental resources and people if they are not carefully designed and implemented. The activities that could cause the most important effects include:

- Construction of transmission lines corridors and towers for 10kV and 4kV lines. In forested or partially vegetated areas, trees would be cut, so they could not touch the line or fall on the line. The construction works would require clearing an area for vehicles and equipment to use for installing foundations. The tower construction will comprise the following activities: land-clearing,

foundation excavation, foundation installation, tower assembly and erection. Land use and potential resettlement aspects could also be triggered and require examination at pre-construction phase.

- Conductoring (placing wires between towers) the entire line. This would involve unrolling conductor wire, raising it to towers and stringing the wires between the towers on either side of the two lines.
- Routine maintenance of the vegetation control zone. Every 6-8 years, trees and other plants will be pruned back as needed to maintain clearance from the line.

6.2. *E&S Impacts and Mitigation Measures*

Results of high level E&S risk and impact analysis and description of mitigation measures to reduce, control, avoid, compensate or otherwise mitigate the adverse E&S effects are provided in the standardized Environmental and Social Management Plan (ESMP) as addressed in Section 7.

The physical, biological and socio-economic conditions that can be potentially affected by the Project are briefly discussed herein.

6.2.1. Potential environmental risks and effects

A summary of potential environmental risks associated with the proposed transmission line projects is provided in Table 6-1 below.

Table 6-1 Potential key environmental effects

Receptor	Issue (Source / Pathway)	Potential Environmental Effects/Risks
Air Quality	Dust and PM_{10} during construction stage arising from activities such as excavations, concrete mixing, transportation of construction materials.	Emissions of air pollutants during construction and operation. Increased dust, PM_{10} during construction leading to reduced air quality and indirect effects on surrounding population and ecosystems.
	Vehicle emissions from construction vehicles and equipment.	Increased SOx, NOx, CO emissions during construction leading to reduced air quality and indirect effects on surrounding population and ecosystems.
Surface water resources	Diversion of flow in the rivers/disturbance of natural flow regime	Potential adverse effect on water quantity, quality and aquatic organisms (spawning, disturbance to habitat)
	Spills of chemicals and hazardous materials during construction	

Receptor	Issue (Source / Pathway)	Potential Environmental Effects/Risks
	activities that reach the streams with surface runoff	
	Sedimentation of streams from erosion due to compaction and soil disturbance	Potential risk of impaired surface water quality
Soils	Excavation and movement of soil	Loss or damage to soils due to compaction or increased erosion during to construction.
	Spills of chemicals and hazardous materials	Accidental fuel and other hazardous materials spills could also contribute to soil contamination and degradation.
Ecosystems, flora and fauna; Natural protected areas	Site clearance and construction in areas of the proposed locations that have not yet experienced development.	Habitat loss. Localized damage to biodiversity, through harm to, or loss of, flora and/ or fauna. Potential impact on migratory bird species.
	Damage to individual plants or communities	Potentially major risk for protected species or endemic species with small ranges. Largest risk from construction; more limited area disturbed, and for shorter periods, during maintenance.
	Death or injury due to collision with wires during spring or autumn migration	Potentially major risks on protected species of raptors, scavengers, or cranes. Entire east-west transmission line corridor is crossed by migrants and presents a hazard.
	Death from electrocution while landing or perching on wires	Potentially moderate risk on protected species of raptors, scavengers, or cranes.
Geohazards	Earthquake, GLOFs, landslides, debris flows, rockfalls	Potential risks of damaging transmission lines and towers
Noise and vibration	Elevated noise levels due to construction and/or operation activities	Temporary disturbance from construction and/or operational activities, impacting upon sensitive receptors (nuisance to nearby villagers) and local fauna
	Increased vibration to sensitive receptors as a result of ground induced vibration from possible blasting works	Intermittent disturbance from blasting, impacting upon sensitive receptors (possibly limited to OHS considerations).
	Residents, visitors and tourists	Risk of nuisance/disturbance as a result of construction noise
Landscape and Visual	Presence of steel towers with wires	Risk of disturbance to natural landscape views. Could affect tourists, local residents, travelers/visitors
Land use	Construction and operational activities on or nearby agricultural lands/pastures	Loss of agricultural land (arable land), pastured or orchards if not properly mitigated

6.2.2. Socio-economic, community and occupational H&S aspects

Key social, economic, community and occupational H&S risks and effects, associated with construction and operation of the proposed last-mile power transmission solutions are detailed in in Table 6-2.

Table 6-2 Potential socio-economic and H&S risks and effects

Receptor	Issue (Source / Pathway)	Potential Socio-economic Effects/Risks
Impacted communities and businesses and project stakeholders	Communications regarding project design, implementation and operations	Inadequate stakeholder engagement during the project design, and possibly during implementation and operations
Economic benefits	Employment opportunities for local residents during construction stage	A risk of not providing priority of hiring locals during construction by construction contractor
Key economic sectors	Providing electricity and generating income	More reliable power supply (positive effect)
	Partial loss of land our or economic use of land (pastures, arable lands, orchards)	Risk of reduced agricultural output by local businesses and risk of losing money
Social infrastructure	Construction activities	Potential risk of damaging existing public/rural/gravel/earth roads
Cultural heritage and heritage	Construction activities, including excavation works, topsoil stripping	Risk of damaging cultural monuments, archaeological artefacts, cemeteries
Community near project areas	Traffic flow during construction	Community health and safety (accidents during construction or by trespassers) at risk by increased traffic during construction
	Community functions	Risk of disrupting community function as a result of generating noise, dust, presence of outsiders during construction stage
	Disruption to infrastructure functioning during all phases	Community health and safety at risk from infrastructure updating and expansion including potential for loss of water, electricity and access to roads throughout the construction phases
	Workers influx	Risk for Community disruption, increased crime, etc.
	Diseases, violent behavior (including GBV), accidents, emergencies	Community health and safety at risk
	Physical and economic displacement	Risk of permanent loss of land; risk of loss of wood resource; risk of being not compensated for physical or economic displacement; risk of loss of use of land

Receptor	Issue (Source / Pathway)	Potential Socio-economic Effects/Risks
Workers for construction and operation	Occupational health and safety during all phases of projects	Potential for occupational hazards during all phases

6.2.3. Summary of Key Risks and Mitigation Measures

A summary of key environmental impacts/risks, relevant WB ESSs and generic mitigation measures is provided in the Table 6-3 as below.

Table 6-3 Summary of key potential environmental risks and impacts and mitigation measures

nn	Receptor	Risk/Impact	Relevant World Bank Standards	Mitigation and/or good management practices
1.	Air Quality	Increased dust and PM_{10} during construction	WB ESS 1,3&4	Require contractor to develop Air quality management plan Minimization of fugitive dust using enclosures, dust collectors, covering of loads, wetting/sprinkling roads and other appropriate measures.
		Increased gaseous emissions during construction	WB ESS 1,3&4	Use of modern, well maintained vehicles; ensuring vehicle emissions are in compliance with Tajik and international emission standards; switching off of machinery when not in use; controls on vehicle movements through populated areas through use of approved access routes.

nn	Receptor	Risk/Impact	Relevant World Bank Standards	Mitigation and/or good management practices
2.	Surface water resources	Spills of chemicals and hazardous materials during construction activities that could reach the streams with surface runoff	WB ESS 1,3&6	Require contractor to develop a Chemicals storage, refuelling and spill response plan To prevent contamination from spills of fuel, oil and chemicals, the liquids have to be stored in designated secure areas. Refueling must be conducted over impervious surfaces. Spill cleanup kits should be available at all areas and in all vehicles. Inspection of construction vehicles to identify and repair leaks or damaged fuel/lubricant lines should be performed on a regular basis.
3.	Groundwater	Spills of chemicals and hazardous materials during construction and operations	WB ESS 1,3&6	Especially for the construction works on streams' floodplains: ensure fuel, oil and chemicals, the liquids have are stored in designated secure areas. Refueling must be conducted over impervious surfaces. Spill cleanup kits should be available at all areas and in all vehicles.
4.	Soils	Accelerated rates of soil erosion and local contamination of soil due to fuel, oil and chemicals spills.	WB ESS 1,3&6	Require contractor to develop a Soil management and erosion control plan Storage of the removed soil in stockpiles and taking the soil away or return it back in. Planting vegetation on the disturbed ground with native plants, compacting and/or stabilizing disturbed surfaces as soon as practicable.

nn	Receptor	Risk/Impact	Relevant World Bank Standards	Mitigation and/or good management practices
				Require contractor to develop a Chemicals storage, refuelling and spill response plan To prevent contamination from spills of fuel, oil and chemicals, the liquids have to be stored in designated secure areas. Refueling must be conducted over impervious surfaces. Spill cleanup kits should be available at all areas and in all vehicles. Inspection of construction vehicles to identify and repair leaks or damaged fuel/lubricant lines should be performed on a regular basis.
5.	Ecosystems, flora and fauna	Site clearance and construction in areas of the proposed locations that have not yet experienced development.	WB ESS 6	Avoid development in areas which currently contain vegetation, in favor of previously developed land; Remove vegetation only as a last resort and protect it where possible during construction; Provide compensatory planting of vegetation for any affected areas.
		Destruction or modification of habitat or loss of critical habitat	WB ESS 6	As required, in consultation with the appropriate authorities Barqi Tojik will design and conduct a survey of flora and fauna within the project area of influence to identify protected or sensitive habitat and species. If critical habitat is present, Barqi Tojik will ensure that Biodiversity Action Plan (BAP) is developed prior to start of construction stage. BAP will specify measures to prevent or reduce impacts during construction and also during future operation and maintenance. During construction ensure minimum biodiversity damage due to land clearing; No damage

nn	Receptor	Risk/Impact	Relevant World Bank Standards	Mitigation and/or good management practices
				outside boundaries; Limited damage to ground surface and root zone.
6.	Land use	Loss of agricultural land (arable land), pastured or orchards if not properly mitigated	WB ESS 1&5,10	Develop and implement Resettlement and Compensation Plan (RACP) based on Resettlement Policy Framework (RPF)
7.	Geohazards: earthquakes, GLOFs, landslides, debris flows, rockfalls	Potential risks of damaging transmission line and towers	WB ESS 1	Prior to commencement of construction activities, complete a detailed Geomorphologic hazard assessment study in order to reduce the risk of selecting project location in high risk zones. Ensure the design of proposed projects can withstand strong earthquakes.
8.	Noise and vibration	Temporary disturbance from construction and/or operational activities, impacting upon sensitive receptors (nuisance to nearby villagers) and local fauna	WB ESS 1&6	Require contractor to develop a Noise Management Plan Ensure construction noise will be limited to restricted times (daylight); During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible.

A summary of key socio-economic, community and H&S risks and effects, relevant World Bank standards and mitigation measures is provided in the Table 6-4 as below.

Table 6-4 Summary of key potentially significant impacts and mitigation measures

Receptor	Impact/Risk	Relevant World Bank Standard	Mitigation and/or good management practices
Impacted communities and businesses and project stakeholders	Inadequate stakeholder engagement	WB ESS 1	Take all required steps in order to ensure that all project stakeholders are informed, consulted and protected through grievance

Receptor	Impact/Risk	Relevant World Bank Standard	Mitigation and/or good management practices
			mechanisms in accordance with WB requirements
*Community near project areas	Community health and safety (accidents during construction or by trespassers) at risk by increased traffic during construction	WB ESS 4	Require contractor to develop a Traffic Management Plan Reduce unnecessary traffic during peak hours and for heavy vehicles select routes with strong infrastructure or pay for upgrading to minimize damages.
	Community functions: Risk of disrupting community function as a result of generating noise, dust, presence of outsiders during construction stage	WB ESS 4 WB ESS 3	Site away from the nearby residential areas as much as possible, and take all dust reduction measures, including watering unpaved roads, and only operating during agreed daylight hours
	Workers influx: Risk for Community disruption, increased crime, etc.	WB ESS 2	- Worker Code of Conduct that will prescribe certain behaviors and require others; - Require contractor to enforce the Code, with penalties leading up to dismissal. - -Appoint a Supervision Consultant - Contractor to consult with local authorities and community leaders, which will ensure they (that is, project managers) are aware of incidents and can take appropriate action if the issue arises.
	Community health and safety at risk: diseases, violent behavior (including GBV), accidents, emergencies	WB ESS 2 WB ESS 4	
	Physical and economic displacement: Risk of permanent loss of land; risk of loss of wood resource; risk of being not	WB ESS 5	Compensation for loss of use of land to be negotiated with owner/farmer, with compensation at a value at least fair market value (for permanent crop loss, not necessarily land, as appropriate).

Receptor	Impact/Risk	Relevant World Bank Standard	Mitigation and/or good management practices
	compensated for physical		Development and implementation of a Resettlement and Compensation Plan (RACP) based on Resettlement Policy Framework (RPF)
Economy	Employment opportunities for local residents during construction stage	WB ESS 2	Ensure local workforce receives priority in hiring for construction
	Providing electricity and generating income	-	Sustain constant electricity generation and supply
	Partial loss of land our or economic use of land (pastures, arable lands, orchards)	WB ESS 5	Compensation for loss of use of land to be negotiated with owner/farmer, with compensation at a value at least fair market value (for permanent crop loss, not necessarily land, as appropriate). Development and implementation of a Resettlement and Compensation Plan (RACP) based on Resettlement Policy Framework (RPF)
Social infrastructure	Potential risk of damaging existing public/rural/gravel/earth roads	WB ESS 4	Require contractor to develop a Traffic Management Plan
Cultural heritage and heritage	Risk of damaging cultural monuments, archaeological artefacts, cemeteries	WB ESS 8	Require contractor to develop and follow a chance find procedure
Workers for construction and operation	Occupational hazards	WB ESS 1 WB ESS 2	Adhere to all international labor OHS (Occupations Health and Safety) standards, including OHS training, during all phases of the Project
Infrastructure to support construction and operations	Increased demand for water, electricity and transportation	WB ESS 1&4 and ESS10	Take all required steps in order to ensure that all impacted stakeholders are informed, consulted and protected through grievance mechanisms in accordance with WB standards.

Receptor	Impact/Risk	Relevant World Bank Standard	Mitigation and/or good management practices
			Consider developing a community development program. In the development include improved services to surrounding communities as appropriate to improve overall service to residents and impacted communities.

7. Standardized Environmental and Social Management Plan (ESMP)

The Environmental and Social Management Plan (ESMP) for the individual last-mile power connection projects should identify the principles, approach, procedures and methods that will be used to control and minimize the environmental and social impacts of all construction activities.

Example of a generic ESMP is provided in **Annex 2**. The example represents a model for development of an ESMP for individual electricity connection projects. It will be applicable for low voltage and high voltage transmission lines. The model divides the project cycle into three phases: construction, operation and decommissioning. For each phase, Barqi Tojik will identify any significant environmental impacts that are anticipated based on the analysis done in the context of preparing an environmental and social assessment. For each impact, mitigation measures are to be identified and listed. The ESMP also provides for the identification of institutional responsibilities for "installation" and operation of mitigation devices and methods.

Description of Environmental and Social Management Plan (ESMP).

Annex 3 provides a set of generic mitigation measures, which would be appropriate for many power transmission lines and substations construction projects. In general, the Environmental Social Management Plan (ESMP) should clearly identify feasible and cost-effective measures that may reduce potentially significant adverse environmental impacts to acceptable levels. The plan should include compensatory measures if mitigation measures are not feasible, or sufficient.

Specifically, the ESMP:

(a) identifies and summarizes all anticipated significant adverse environmental impacts;

(b) describes with technical details each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as

appropriate;
(c) estimates any potential environmental impacts of these measures; and
(d) provides linkage with any other mitigation plans (e.g., for involuntary resettlement, indigenous peoples, or cultural property) required for the project.

Integration of ESMP with projects

The borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP will be executed effectively. Consequently, the Bank expects the plan to be specific in its description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and it must be integrated into the project's overall planning, design, budget, and implementation. Such integration is achieved by establishing the ESMP within the project so that the plan will receive funding and supervision along with the other components.

8. E&S Screening, Supervision, Monitoring and Reporting

As noted earlier, the objective of the ESMF is to ensure that any activities supported by the TREP will not create adverse impacts on the local environment and local communities, and that there is effective application of the World Bank's ESF 2018 and Tajikistan's Environmental Law and Regulations for adequate mitigation of any residual and/or unavoidable impacts.

8.1. *E&S Screening*

The objectives of the screening process are to:

- Determine the potential adverse environmental and social impacts of the proposed transmission line project;
- Determine the appropriate environmental category as per 2018 WB ESF;

Based on the assigned environmental category, determine the appropriate level of environmental work required (i.e. whether an ESIA is required or not). Screening will further ensure that the proposed project (and maybe associated projects) that may have potential adverse impacts are recommended for more detailed studies either through preparation of Project Reports (PR) or full Environmental and Social Impact Assessment (ESIA).

8.2. *E&S Monitoring, Supervision and Reporting*

To keep track of the requirements and responsibilities for monitoring the implementation of environmental and social mitigation identified in the analysis included in an environmental assessment for Category A or B projects, a monitoring plan may be useful. An example of a format and content of a Monitoring Plan is provided in **Annex 4** below.

When a monitoring plan is developed and put in place in the context of project implementation, the PIU will request reports at appropriate intervals and include the findings in its periodic reporting to the World Bank and make the findings available to Bank staff during supervision missions.

The monitoring of the off-grid individual project solutions is intended to provide information about key environmental and social impacts and the effectiveness of mitigation measures, which is required to: (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

Monitoring

Environmental, social and H&S monitoring during project implementation provides information about key E&S aspects of the project and the effectiveness of mitigation measures. Such information enables the borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the E&S appraisal report and the mitigation measures described in the ESMP.

Specifically, the monitoring section of the ESMP provides(a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

Construction contractors selected/appointed by Barqi Tojik will be responsible for implementing mitigation measures and actions items as specified in the standardized for power transmission line construction projects ESMP (**Annex 2**) for their respective activities and ensuring that there is compliance with environmental and social standards (ESSs) regulations throughout the construction period. All contractors will be required to reflect environmental guidelines in their financial bids and contracts for individual subprojects and to use environmentally acceptable technical standards and procedures during construction of works. Payments to contractors will be contingent on the final inspection, with particular attention to the requirement of restoring the site to its original condition upon completion of rehabilitation activities. Additionally, contract clauses shall comply with national regulations on energy efficiency, construction, health protection, and safeguard laws and rules on environmental protection.

As part of E&S monitoring activities, the Supervision Committee (Supervision Consultant and Barqi Tojik) will conduct random inspections of individual project sites to determine the effectiveness of measures taken and the impacts of project-related activities on the surrounding environment. The Supervision Committee are also responsible for processing, addressing and monitoring complaints and other feedback, including that on environmental and social issues.

The Supervision Committee will be responsible for ESMP reporting and will:

- Record and maintain the results of project supervision and monitoring throughout the life of the Project. It will present summary progress reports on ESMF implementation and ESSs of on a semi-annual basis to the World Bank, and as part of this reporting, provide updates on any related grievances/feedback that was received, that has been addressed and that may be pending;
- Prepare semi-annual reports on the progress of implementation of measures proposed by the ESMP for the off-grid solution options and projects;
- Prepare semi-annual reports on the environmental impacts originated during implementation of and analyze the efficiency of mitigation measures applied to minimize negative consequences;
- Prepare outlines and requirements for Contractors' reports on environmental protection and mitigation measures, and review Contractor's monitoring plan and reports
- Present the impact of mitigation and environmental and social protection measures for general public via specific publications or/and by annual public seminars.

Capacity Development and Training

To support timely and effective implementation of environmental project components and mitigation measures, the ESMP draws on the E&S appraisal of the existence, role, and capability of environmental units on site or at the agency and ministry level. If necessary, the ESMP recommēnds the establishment or expansion of such units, and the training of staff, to allow implementation of E&S appraisal recommendations. Specifically, the ESMP provides a specific description of institutional arrangements-who is responsible for carrying out the mitigatory and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most ESMPs could address one or more of the following additional topics: (a) technical assistance programs; (b) procurement of equipment and supplies; and (c) organizational changes.

9. Stakeholder Engagement and Public Consultations

Stakeholder Engagement and Public consultation is a requirement by World Bank ESS10, as well as it is required under Tajik EIA legislation requirements. The main objectives will be improving the efficiency, transparency and public involvement in the proposed projects that will enhance the compliance of the environmental laws and policies in regard to the implementation of the projects. It will involve notification

(to publicize the matter to be consulted on), consultation (a two-way flow of information and opinion exchange) as well as participation involving interest groups. Through public participation, environmental conservation and mitigation of social impacts will be enhanced.

First round of limited stakeholder engagement and consultations (by phone and meetings) on last-mile connection projects have been carried out in March-April, 2019. A draft Stakeholder Engagement Plan (SEP) containing a stakeholder engagement program for last-mile connection projects In Khatlon have been developed. The final version of the ESMF will provide more details on stakeholder consultation process, including list of stakeholders and minutes of meetings and interviews. As per World Bank requirements, ESMF and SEP are required to be disclosed and consulted with all interested parties and the local population.

This ESMF and draft SEP will be disclosed in line with the World Bank requirements through posting on the Barqi Tajik (www.barqitojik.tj/en/).

10. Grievance Redress Mechanism (GRM)

Issues and complaints can arise during the course of the project due to from actions by Barqi Tojik or its contractors and subcontractors. At present, Barqi Tojik operates a “customer hotline” that is used to report power outages and other issues. During construction, Barqi Tojik will establish a separate mechanism to deal with construction-related issues, including issues regarding compensation and resettlement.

The Grievance Resolution Mechanism (GRM) is intended to address issues and complaints from external stakeholders in an efficient, timely, and cost-effective manner. A separate mechanism will be used for worker grievances.

Barqi Tojik will be responsible for managing the stakeholder GRM, but many or most grievances are likely to result from actions of the construction contractors and so will need to be resolved by the contractors themselves, with Barqi Tojik oversight. Typical grievances for transmission line projects could include issues related to:

- Land acquisition and compensation
- Construction damages to property, crops, or animals
- Traffic
- Environmental impacts such as erosion
- Nuisances such as dust or noise
- Worker misbehavior.

The GRM will be in place and operational by the time Barqi Tojik begins construction activities and will function until the completion of all construction activities and beyond, till the contractor's defect liability period ends. People who reside near the line and others who may be affected will be informed, in meetings and with brochures, of the GRM's purpose, functions, procedures, timelines and contact persons.

The project GRM will include three successive tiers of extra-judicial grievance review and resolution:

- The first tier would be the Barqi Tojik E&S team, including the Community Liaison Officer. It is expected they could deal quickly with issues that can be quickly resolved, such as dust or traffic.
- The second tier would be a Grievance Resolution Committee (GRC1) that included representatives of Barqi Tojik, village, and Jamoat. The would deal with issues that could not be resolved in the first tier.
- The third tier would be a Grievance Redress Commission (GRC2) that included one or more senior Barqi Tojik managers and one or more Jamoat and/or village leaders.

Grievances would be handled as described in the following subsection.

10.1. *Grievance resolution*

The grievance resolution process will involve the following steps:

- Receipt of grievances: this would include recording the grievance in a log and acknowledging receipt to the person who made the complaint. Acknowledgement will normally be within one or two days, but in all cases will be within seven days.
- Categorization of grievance by Barqi Tojik E&S team: this would involve separating grievances that are related to construction, land acquisition, and resettlement, or other issues, or if the submission is simply feedback or a question about the project.
- Assignment of responsible person: the E&S team will identify the person within Barqi Tojik who will be primarily responsible for tracking the grievance through to resolution. This person will be the complainant's primary point of contact.
- Investigation by the responsible person and others who may be appointed to assist. This will involve interviews of workers or external stakeholders, review of records, consultation with authorities, and/or other fact-finding activities.
- Determination of proposed resolution or referral to second tier:
  - If resolution is proposed: referral to E&S manager for review and approval (including refinements). Once approved, communicated to complainant and referred to project management for implementation.

- If referred to second tier, GRC1 to consider facts determined by initial review and conduct such other fact-finding as needed, including interviews of complainant if necessary.

- GRC1 recommends resolution or refers to GRC2:
  - If resolution is proposed: referral to Barqi Tojik for implementation, including communication to complainant.
  - If referred to third tier, GRC2 to meet and discuss facts as determined by initial tiers and make determination of proposed resolution.
- GRC2 recommends resolution: resolution referred to Barqi Tojik for communication to complainant and implementation of recommended actions (if any)
- Resolution communicated to complainant, who is asked to acknowledge acceptance (or rejection) of the resolution.
- Barqi Tojik implements actions that are part of the resolution (if any).

If a person who submits a grievance is not satisfied with the resolution at the first or second tiers, he or she may request it be elevated to the next tier. If they are not satisfied with the ultimate resolution, they may pursue legal remedies in court. Throughout the entire process, Barqi Tojik will maintain detailed records of all deliberations, investigations, findings, and actions, and will maintain a summary log that tracks the overall process.

10.2. *Grievance processing*

Anyone from the affected communities or anyone believing they are affected by the Project can submit a grievance:

By completing a written grievance form that will be available - (a) In the Jamoat and in the villages crossed by the line, (b) at Barqi Tojik's offices in Dushanbe and on their website, and (c) from CLOs or other members of the E&S team. An example of a grievance registration form is provided in **Annex 1**.

By contacting Barqi Tojik Community Liaison Officer or other member of the E&S team, either by telephone or in person. In addition, grievances may be communicated to contractor supervisors, who will be briefed on receiving and reporting complaints. Grievances received verbally will be recorded by the Community Liaison Officer on a grievance registration form and logged into the Grievance Register. A copy of the logged grievance will be given to the complainant, giving them the opportunity to alert Barqi Tojik if the grievance has not been noted down correctly.

Barqi Tojik will explain to local communities the possibilities and ways to raise a grievance during consultation meetings organized in each village when this draft SEP and other draft documents are

disclosed and then at quarterly meetings thereafter. The GRM procedures will be disclosed through the Project's website and will also be described in a brochure or pamphlet made available in Jamoat administration buildings.

One member of the Barqi Tojik E&S team will be responsible for logging and tracking grievances. As noted above, one person will be assigned responsibility for investigating and recommending resolution to each grievance, or to recommend referral to GRC1. The status, number, and trends of grievances will be discussed between Barqi Tojik and contractor(s) during monthly and quarterly progress meetings during the construction phase.

Information to be recorded in the grievance log will include name and contact details of the complainant and a summary of the grievance and how and when it was submitted, acknowledged, responded to and closed out. All grievances will be acknowledged within 7 days and resolved as quickly as possible. If there has been no resolution within 30 days, the person assigned responsibility for the grievance will contact the complainant to explain the reason for the delay. A generic flow chart for registering and processing grievances is shown on Figure 10-1 below.

A grievance will be considered "resolved" or "closed" when a resolution satisfactory to both parties has been reached, and after any required corrective measures have been successfully implemented. When a proposed solution is agreed by the complainant, the time needed to implement it will depend on the nature of the solution. Once the solution is being implemented or is implemented to the satisfaction of the complainant, the complaint will be closed out and acknowledged in writing by both the complainant and Barqi Tojik.

In certain situations, it may not be possible to reach a satisfactory resolution. This could occur if a complaint cannot be substantiated or is proved to be speculative or fraudulent. In such situations, Barqi Tojik's efforts to investigate the grievance and to arrive at a conclusion will be well documented and the complainant advised of the situation. It is also possible that a complainant is not satisfied with the proposed resolution. In such cases, if Barqi Tojik cannot do more, the complainant will be asked to acknowledge refusal of the proposed resolution in writing. Barqi Tojik will then decide whether to implement the resolution without the agreement of the complainant and the complainant will decide whether to pursue legal remedies.

10.3. *Barqi Tajik Contact information*

- Mr Habibov Ubaidullo - Head of PRG Energy Loss Reduction OSHC "Barqi Tojik"; elrpbt@gmail.com

- Mr Nazar Nazarzoda - Head of Project Management Unit for energy sector (PMUES) OSHC "Barqi Tojik"; pmu_tj@mail.ru

Information on the proposed last-mile connection projects and future stakeholder engagement programs will available on the Barqi Tajik website and will be posted on information boards in the villages crossed by the line. Information can also be obtained from Barqi Tajik office in Dushanbe.

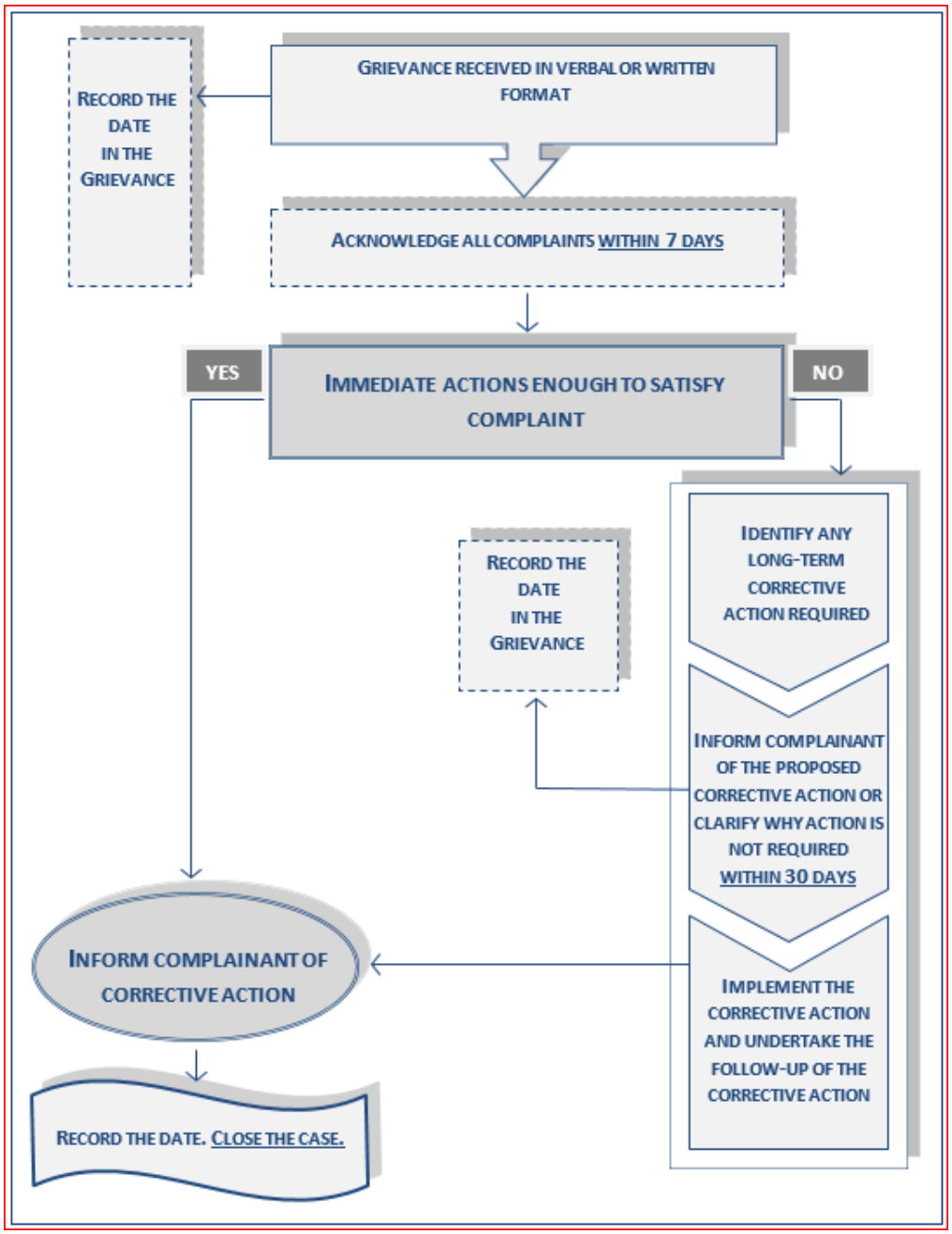


Figure 10-1 Typical grievance resolution process.

Annex 1: Example Grievance Form

Grievance Form			
Grievance reference number (to be completed by Barqi Tojik):			
Contact details (may be submitted anonymously)	Name (s):		
	Address:		
	Telephone:		
	Email:		
How would you prefer to be contacted (check one)	By mail/post: ☐	By phone: ☐	By email ☐
Preferred language	☐ Tajik	☐ Russian	☐ English
Provide details of your grievance. Please describe the problem, who it happened to, when and where it happened, how many times, etc. Describe in as much detail as possible.			
What is your suggested resolution for the grievance, if you have one? Is there something you would like Barqi Tojik or another party/person to do to solve the problem?			
How have you submitted this form to the project?	Website ☐	email ☐	By hand ☐
	In person ☐	By telephone ☐	Other (specify) ☐
Who filled out this form (If not the person named above)?	Name and contact details:		
Signature			
Name of Barqi Tojik person assigned responsibility			
Resolved or referred to GRC1?	☐ Resolved	☐ Referred	If referred, date:
Resolved referred to GRC2?	☐ Resolved	☐ Referred	If referred, date:

Completion			
Final resolution (briefly describe)			
	Short description	Accepted? (Y/N)	Acknowledgement signature
1st proposed solution			
2nd proposed solution			
3rd proposed solution			

Annex 2: Example of standardized ESMP

Example of standardized ESMP applicable for low voltage power transmission lines

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			1.0 Procurement Phase		
1.1	Preparation of bidding documents for design of transmission line	Failure to optimize design to avoid impacts on people and environment	As required by World Bank Standard Procurement Documents, include relevant documentation (ESIA, RPF, SEP) in procurement documents. Include the following in work requirements: – Avoid household plots with occupied houses or buildings – Where feasible, avoid placing towers on arable land used for crops, hay, and orchards – Where feasible, align corridor to avoid the need to cut back trees, including orchards	– Designer understands need to minimize impacts – No physical displacement and minimal economic displacement	Barqi Tojik World Bank (approval)
1.2	Preparation of bidding/ procurement documents for transmission line construction	Failure of bidders to recognize E&S requirements, to plan for E&S management, and to incorporate E&S requirements in proposals and planning	As required by World Bank Standard Procurement Documents, include relevant documentation (ESIA, RPF, SEP, ESCP) in procurement documents, for construction contracts and require proposals to include the following plans as part of Management Strategies and Implementation Plan: – Occupational health and safety plan – Land management and erosion control plan – Worker Code of Conduct and Grievance Redress Mechanism Define key personnel to include, for the project (that is, not corporate-level): – E&S manager – Safety manager – Biodiversity specialist (as required) – Community liaison/social specialist – HR manager	– Bidders understand E&S requirements and prepare responsive proposals – Higher E&S capacity by bidders – Realistic proposals	Barqi Tojik World Bank (approval)
1.3	Preparation of bidding/ procurement documents for substation construction	Failure of bidders to recognize E&S requirements, to plan for E&S management, and to consider E&S	As required by World Bank Standard Procurement Documents, include relevant documentation (ESMF, RPF, SEP, ESCP) in procurement documents, and require proposals to include the following plans as part	– Bidders understand E&S requirements and prepare responsive proposals	Barqi Tojik World Bank (approval)

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
		requirements in cost proposal	of Management Strategies and Implementation Plan: – Community health and safety plan – Occupational health and safety plan – Worker Code of Conduct and Grievance Redress Mechanism Define key personnel to include, for the project (that is, not corporate-level):: – E&S manager – Safety manager – Community liaison/social specialist – HR manager	– Higher E&S capacity by bidders – Realistic proposals	
1.4	Review and evaluation of proposals	Failure to consider bidders' E&S qualifications and experience in scoring proposals	– Inclusion of E&S specialist(s) in proposal review team, with sufficient time provided for evaluation – Awareness by entire evaluation team of key E&S requirements – Scoring includes corporate E&S experience and qualifications, E&S staff experience and qualifications – Recognition of unqualified bidders	– Bidders' E&S qualifications and experience receive full consideration in evaluations – Bidders disqualified for poor safety record, inadequate E&S qualifications and experience, or inadequate MSIP (that is, inadequate understanding of requirements)	Barqi Tojik
1.5	Selection of contractors	Selection of contractor unqualified and/or unprepared to implement ESMP full C-ESMP	– MSIP plans sufficient to avoid or control impacts – Key staff qualified and available – Award only to contractors with E&S qualifications and experience that meet specific criteria	– Award to contractor able to implement this ESMP – Contractor ultimately implements ESMP satisfactorily – Fewer delays in project preparation and construction	Barqi Tojik World Bank (approval)
2.0 Project preparation					

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
2.1	Implementation of Stakeholder Engagement Plan (SEP)	– Uninformed local people and other stakeholders – Unrealistic expectations by local people and others – Long-term distrust of contractors and Barqi Tojik Protests or other disruptions Vandalism	– Outreach to identified stakeholders – Realistic information on employment opportunities – Meetings with community leaders and citizens as appropriate – Implementation of Grievance Redress Mechanism – Train project personnel (Barqi Tojik, contractors, etc.) in relevant requirements of SEP, including receiving and reporting grievances	– Well-informed supportive community – Realistic expectations – Trust of contractor and Barqi Tojik to resolve issues – Timely resolution of grievances	Barqi Tojik manages overall program and deals with high-level grievances Contractor implements on day-to-day basis during construction
2.2	Management of E&S issues	– Failure to hire qualified specialists with sufficient time to manage issues – Excessive E&S impacts due to mismanagement or failure to manage E&S issues	– Assign key E&S personnel defined in items 1.2 (transmission line) and 1.3 (substation) and provide sufficient time to perform duties – Employ and train sufficient safety officers: at least one per work crew and overall ratio of at least 1 per 50 workers – Train managers and supervisors/foremen in key requirements for E&S mitigation (i.e.., this ESMP and monitoring plan) – Develop checklists for use by E&S staff to record findings – Develop templates for monthly E&S reports to Supervisions Consultant – Develop templates for investigating and addressing root cause of serious incidents /injuries/accidents – Develop registers for recording grievances from external stakeholders and from workers	Qualified staff in sufficient numbers to implement/oversee C-ESMP	Contractor
2.3	Complete Contractors' Construction ESMP (C-ESMP) by preparing/ updating; – Materials and Waste Management Plan – Land Management and Erosion Control	– Contractor begins works without programs to avoid or minimize impacts on human and environmental resources: – Unsafe vehicles, accidents – Damage to protected flora	– Plans prepared by qualified E&S specialists and project managers – Supervision Consultant to review and approve all C-ESMP plans and procedures – All plans reviewed and ultimately approved by qualified experts – Code of Conduct adopted, acknowledged and signed by all workers on site	– No activities undertaken without underlying procedure or plan to protect E&S – Comprehensive contractor program for avoiding and minimizing impacts	– Contractor (prepare) – – Supervision Consultant (approve) – Barqi Tojik

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
	– Community Health and Safety Plan – Labor Management Procedure. – Refuelling and Spill Prevention Plan – Worker Occupational Health and Safety Plan – HR Manual – Worker Code of Conduct Develop detailed method statements on: – Traffic management – Emergency response; – Flora, fauna, and habitat survey required for finalization of design; – Working in or near surface water bodies; – Worker accommodation and work camp management	– Subcontractor E&S performance not managed – Noise disturbances to communities – Community disruption, violence, crime, disease due to worker influx – Unsafe and/or unsanitary accommodations	(Contractor, Sub-Contractors, Supervisor, as applicable)	– Subcontractor compliance with plans – All activities in accordance with C-ESMP – No unacceptable or unpredictable impacts	– to review
2.4	Conduct detailed study of geomorphology/geology to identify high-risk locations	Foundations placed on unstable ground Tower collapse Landslides and/or severe erosion	Implement geological study to identify measure to avoid or overcome unsafe/unstable locations results and recommendations to avoid high-risk locations	Stable towers on stable ground	Design contractor
2.5	Prepare and implement biodiversity and cultural heritage survey plans	Unplanned impacts on biodiversity or cultural resources	Appoint qualified consultants to prepare and implement survey plans. Biodiversity survey plan to require, for entire corridor and substation site:	– Minimal impacts on biodiversity, no impact on species of conservation concern	Barqi Tojik

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			– Qualified expert to prepare and implement, during spring or summery – Identification of trees that will need to be cut down or cut back. Location for replacement trees – Identification of trees and buildings with bat roosts, hibernation sites, breeding pairs – Identification of trees with owl or raptor nests – Presence of birds or other fauna of conservation concern and assessment of likelihood of adverse impact – Identification of nesting and breeding birds and other fauna – Plan for planting 2+ trees for every one cut, for placing bat boxes for every bat location affected – Requirement to delay or change activities so there will be no impact on species of conservation concern – Detailed recommendations for the these and other appropriate mitigations as needed – Timeframe for implementation of mitigations Cultural heritage survey plan for entire corridor and substation site, to include: – Qualified expert to prepare and implement – Consultations with village leaders and residents and with regional/national experts to identify locations/items of value to communities or of historic/prehistoric interest – Survey to verify consultations and identify artifacts and historic/prehistoric heritage – Program to avoid impacts on locations with cultural value	– No impacts on cultural heritage	

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
2.6	Develop and implement Resettlement Action Plan (RAP) based on Resettlement Policy Framework (RPF)	– All Project Affected Persons (PAPs) not identified – All physical and economic displacement not compensated or replaced – Inadequate compensation – Violations of Tajikistan law and/or World Bank ESS5 for land take and compensation – Hardships for PAPs prior to compensation – Degradation of PAP livelihoods or living standards – Loss of community support	– Appoint qualified consultant to develop RACP – Based on final design/locations, identify PAPs and impacts, identify vulnerable people, land ownership, land use, valuations, etc. – Consult with PAPs – Consult with authorities on valuation and compensation – Acquire rights to land for towers and substation, provide compensation or like-for-like replacement for physical and/or economic displacement prior to displacement occurring	– Physical and economic displacement compensated at replacement cost or more, or like-for-like compensation – RAP implementation meets requirements of ESS5 – Affected people are fully compensated for losses at replacement value or land-for-land – Compensation paid to all PAPs prior to issuing authorization to proceed to contractor – Participation by authorities and PAPs in process – Community support	Barqi Tojik World Bank (RAP approval)
2.7	Recruit and employ workers and subcontractors	– Unqualified workers and/or subcontractors – Poor labor practices (substandard pay, uninformed workers, unsafe conditions, etc.) – Excessive staff turnover	– Implement Contractor's Labor Management Plan (LMP) – Preference for local hiring, with PAPs given preference (50% local) – Written contracts with workers, per LMP and Tajik law – Other provisions per Labor Code of Tajikistan – Subcontracts include and require compliance with contractor's LMP and law – Subcontracts include and require compliance with C-ESMP – Workers receive full induction training	– Maximum hiring of PAPs and other locals.; At least 50% of workforce from local population – Workers employed in compliance with law (nondiscrimination, equal opportunity, income, etc.) – Low staff turnover	Contractor
2.8	Establishment of construction camps/laydown areas, storage areas,	– Contractor trespasses on land – Placement of construction zones in inappropriate	– No ground disturbance until C-ESMP approved – Implement C-ESMP requirements for noise, fuel and hazardous materials, noise, worker	– Compliance with approved C-ESMP – No unexpected or unacceptable impacts	Contractor

No.	Activities	Potential Adverse Impact	Mitigation Measures/ Best Management Practice	Target outcome of mitigation	Responsible body
	footpaths, quarries/borrow areas, etc. and other land contractor may need for temporary use/possession	locations (excess tree-cutting, too close to residents, etc.) – Impacts outside boundary of designated area – Unrecorded damage to biodiversity – Excess damage to topsoil/subsoil, vegetation cover, erosion, spills and soil/water contamination, impacts on communities	safety, and community safety, etc., including worker training – Reach written agreements with land users prior to undertaking activities on their lands – Implement recommendations from biodiversity and cultural heritage surveys – Train/warn workers to remain within boundaries and penalize for violations – Maximize use of existing paths and disturbed areas – Consult with roads authority concerning Traffic Management Plan and damages to public roads – Prevent/minimize movement of vehicles and equipment on unpaved roads in wet conditions – Plant 2+ trees for every one cut, place bat boxes for bat roosts disturbed, avoid disturbance of breeding/nesting fauna and birds of conservation concern – Minimize cutting of mature trees and trees of conservation concern: maintain log of all trees cut – Maintain photographic and written log of plants of conservation concern that are cut Implement Land Management and Erosion Plan, including at a minimum: – To extent possible, avoid landslide-prone areas and areas with severe erosion potential – Establish and mark boundaries of construction zone – Keep all activities inside boundaries – Strip and store topsoil within boundaries, protect from erosion – Store excavated subsoil separately, protect from erosion – Install drainage control as needed to control erosion that would affect off-site	– All work within marked boundaries – Minimal disruption to breeding fauna – Minimal disruption to bats and owls – Minimal disruption to fauna and flora of conservation concern – Minimal disruption to traffic – Wood and flammable debris material removed before it becomes a fire hazard	

No.	Activities	Potential Adverse Impact	Mitigation Measures/ Best Management Practice	Target outcome of mitigation	Responsible body
			– Place gabions, walls, silt fences or other measures as necessary to prevent erosion from leaving construction areas		
2.9	Establishment of accommodations, kitchens, sanitary facilities	– Worker illness or death – Worker dissatisfaction and lower productivity – Contamination of land and water	– If accommodations are to be provided, comply with ESS2/IFC guidance "Workers' Accommodation: Processes and Standards" – Develop and use operating and maintenance checklists for operation of canteens/kitchens – Appoint persons to be responsible for cleanliness of accommodations, kitchens, canteens, break areas, etc. – Provide toilets at or near all work locations, establish and enforce rules prohibiting workers from using the bush	– Sanitary and compliant facilities and amenities – Healthy workers – Toilets in place where needed	Contractor
			3.0 Construction phase		
3.1	All activities, beginning with fieldwork during preparation phase	– Worker injury or death – Damage to vegetation, land, property outside construction zone	Implement Occupational health and Safety Plan, including: – Medical clearance for workers to perform their tasks – Assessment of risks and identification of mitigation measures for all tasks, with PPE as last resort – Design tasks for maximum safe operations – Workers provided with proper equipment and tools, and PPE, to accomplish tasks safely – Only trained workers allowed to complete tasks – Safety Officers oversee all works (minimum 1 per crew and 1:50 workers overall) – Sufficient First Aiders to provide first-level medical care as needed – Fully supplied first aid kits in all vehicles and equipment and at all workplaces – Communications established with nearest medical facilities and personnel regarding	– Tasks completed with no worker injuries or deaths – Tasks completed with no damage to vegetation, land or property outside construction zone	Contractor

No.	Activities	Potential Adverse Impact	Mitigation Measures/ Best Management Practice	Target outcome of mitigation	Responsible body
			works to be completed, arrange for support as appropriate – Record safety statistics (work hours, near misses, minor & incidents and accidents, fatalities) – Worker transport (passenger vehicles only, no riding on heavy equipment, wear safety belts, etc.) – Work within boundaries, penalize supervisors and workers for violations – Install physical barriers at deep excavations to prevent accidents Implement Traffic Management Plan, to include: – Drivers/operators licensed for vehicles and equipment – Driver trained as needed and tested – Vehicles properly licensed/registered – Vehicles/equipment checked for safety daily by drivers/operators (horns, tires, fire extinguisher, headlights and taillights, safety belts, intact glass, etc.) – Speed limits established and enforced – Require special precautions for sensitive areas (hospitals, schools, etc.) – Keys never left in vehicle/equipment when driver/operator not present – Consultations with roads authorities concerning use of public roads (timing, locations, etc.) – Mark boundaries of construction zone before operations		
3.2	Manage contractor(s)	– In adequate or incomplete implementation of E&S requirements	– Include evaluation of E&S performance in decisions on payment of invoices for work completion= – Pay 100% of milestone completion invoices when E&S requirements have been	Full implementation of E&S requirements	Barqi Tojik

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			implemented as required, reduce payment if requirements are not implemented		
3.3	Manage subcontractors	– Subcontractors not aware of E&S requirements – Poor labor practices and poorly trained workers – Failure to implement C-ESMP – Poor E&S performance, including safety, leading to environmental impacts, impacts on local communities, and worker injury or death	– Include relevant portions of C-ESMP in procurement documents and subcontracts – Require compliance with contractor's LMP safety, and other requirements, or equivalent requirements approved by contractor – Supervision of C-ESMP implementation by contractor and Barqi Tojik (or Supervision Consultant) – Structure milestone payments to include C-ESMP implementation and withhold payments for failure to comply	– Subcontractor implementation of C-ESMP – No unacceptable E&S impacts	Contractor
3.4	Land clearing at tower locations, construction zones (tree & vegetation cutting, land clearing, excavations, earthworks in some places, equipment/building placement, etc.)	– Worker injury or death – Excess damage to surrounding areas, including biodiversity and private land and property – Excessive erosion – Landslides	– Implement chance find procedure if artifacts or heritage discovered – Train workers and implement Occupational Health and Safety Plan, including requirements for working with machinery and tools, working on steep slopes, animal/plant hazards, working in hot or cold environments, etc. – Agree with communities how debris/wood will be managed, with preference for donation to PAPs – To extent possible, micro-locate construction boundaries to minimize cutting/clearing flora of conservation concern Implement Land Management and Erosion Control Plan including at a minimum: – Mark and stay within boundaries of construction zones and paths – Train/warn workers to remain within boundaries, penalize supervisors and workers for violations – Strip and store topsoil and subsoil/spoil in separate piles within construction boundaries, protect from erosion	– Minimum biodiversity damage due to land clearing – No damage outside boundaries – Limited damage to ground surface and root zone – Survey completed, trees and shrubs marked	Contractor

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			– Install drainage control as needed to control erosion that would affect off-site areas – Restore disturbed areas per Plan Implement recommendations from biodiversity surveys (if any)		
3.5	Vegetation clearance under line	– Excessive impact on biodiversity (flora, fauna, habitats) – Excessive erosion – Landslides	– Cut as little of trees as necessary to maintain clearance through maintenance period – Agree with communities or owners (as appropriate) as to disposition of wood, with preference for giving to PAPs – No use of herbicides	– Minimal impact on biodiversity, no excess vegetation cleared – No direct impacts off-site – Minimal erosion, no landslides – Restored land	Contractor
3.6	Excavations of tower foundations and substation footings	– Worker injury or death – Excessive soil and spoil removed	– Train workers and supervisors in Occupational Health and Safety Plan (as above), in particular: - Working in/near excavations/ confined spaces - Workers trained in use of all tools and equipment - Use of harnesses on towers and extremely steep slopes – Implement relevant provisions of Land Management and Erosion Control Plan, including: - Disturb as small an area as possible - Remove and store topsoil and spoil separately on construction site, protect from erosion - Mark and work within boundaries - Replace topsoil, ensure area is stable when complete - Establish/restore vegetative cover – Provide physical barriers around excavations if no active ongoing work	Works completed safely No damage outside boundaries Safe and efficient operations	Contractor
3.7	Excavations and cuts on steep and moderate slopes	– Worker injury or death – Loss or damage to equipment	– Train workers and supervisors on Occupational Health and Safety Plan (see above):	– Works completed safely	Contractor

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
		– Excessive land affected – Landslides – Erosion	- Harnesses, handrails as needed: - Working in steep terrain - Working around heavy equipment – Implement Land Management and Erosion Plan: - Mark construction zone boundaries - Strip and store topsoil (if any) and spoil on site, allowing none escape downhill - Grade surfaces, install gabions, walls, silt fences, etc., as necessary to prevent landslides, slope failure, mass erosion and stabilize slopes - Clear site of all debris and waste when works are complete - Restore land (stable contour, replace topsoil if possible, restore/establish vegetative cover with native species	– No works or damage outside construction zone boundaries – No landslides and no severe erosion – Land restored and stabilized after works completed	
3.8	Erection of towers/poles	Worker injury or death Damage outside construction zone	– Train workers and supervisors in Occupational Health and Safety Plan: lifting, working at heights, electrical safety, general works, steep slopes – Mark and work within boundaries of construction zone, penalize supervisors and workers for violations – Remove all construction debris, restore sites when complete, including restoration of vegetative cover	– Works completed safely – No damage outside boundaries	Contractor
3.9	Restoration of land at construction sites (towers, construction zones/areas, temporary paths, all damaged lands)	– Post-construction against future erosion, landslides – Failure to restore/establish vegetative cover – Reduced production from cropland and grasslands	– Restore all disturbed areas per Land Management and Erosion Control Plan (see items above): – Remove all waste and debris – Establish stable contours – Spread spoil and topsoil (except on rocky barren terrain) – Remove excess spoil/soil for use elsewhere. Donate excess fertile topsoil to PAPs – Plant native species of grasses and shrubs. – On land used by contractor for construction zones: restore land as above unless	Land returned to productive use	Contractor

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			landowner requests modification (for example, no planting on cropland, etc.)		
3.10	Protection of camps, storage areas, equipment, property, substation, etc. (security)	– Abuse of local population or workers, including injury or death – Loss of community support, possibly active opposition – Liability for contractor and Barqi Tojik	– Prepare and implement Security Plan: - No armed security - Subcontractor and guards checked for licenses, past abuses - Guards trained in appropriate use of force - Consultations with local law enforcement authorities	No vandalism, theft, or incidents involving security	Contractor Barqi Tojik to approve
3.11	Placing conductors (stringing wires)	– Worker injury or death – Excess damage to land, crops, and forest	– Train workers and supervisors in Occupational Health and Safety Plan - Work within corridor boundaries - Place notice boards or otherwise notify landowners of upcoming activities - Consult with road/traffic authorities before placing conductors over highways and public roads - Train and place flaggers to control traffic on public roads/highways while conductors are being placed overhead and when work on roadside is in places with limited visibility – Repair damage to land surface immediately after operations are complete at that location – As recommended by the avian expert, install bird diverters on conductors at specific valley crossings	– Works completed safely – Minimal damage to land, crops, etc., within corridor – No damage outside corridor – Losses due to damages compensated per RAP	Contractor
3.12	Protect workers employed by primary suppliers	Child labor, forced labor, and/or serious safety issues at primary suppliers	If Barqi Tojik or contractor has significant control or influence over primary suppliers (specifically, tower and conductor suppliers, contractor to monitor supplier and require improvement in labor safety practices or remedies in case of child or forced labor	No child labor or forced labor or serious safety issues at primary suppliers	Contractor (supported by Barqi Tojik)
3.13	Payment of invoices for completion of milestones	Failure to implement E-CSMP in completion of construction milestones: erosion damage,	– Consider relevant E&S management requirements to be an integral part of each construction milestone	– Proper implementation of C-ESMP	Barqi Tojik for contractor invoices

No.	Activities	Potential Adverse Impact	Mitigation Measures/ Best Management Practice	Target outcome of mitigation	Responsible body
		works/damage outside construction zone boundaries, poor soil/spoil management, poor safety practices, risks to community, etc.	– Penalize initial failures to implement mitigations by withholding partial payment until mitigations are properly implemented – Penalize repeated failures to implement mitigations by considering milestones incomplete and reducing payments permanently	– Minimal impacts on biodiversity, people, and property	Contractor for subcontractor invoices
			4.0 Demobilizatoin		
4.1	Closure of construction areas, camps, accommodations, etc.	– Contaminated soil , waters remain after contactor departs	Implementation of Land Management and Erosion Control Plan prior to departure (site restoration, revegetation, etc.): – Removal of all equipment, storage units/tanks, debris, wastes, etc. – Removal of contaminated soil – Establish stable contours to eliminate standing water and match surrounding terrain as much as possible – Spread spoil and replace topsoil – Plant native species or take final action as requested by private landowners. – Monitor plantings until established and self-sustaining	– Areas used for construction operations restored to pre-construction uses or as agreed with land users – No residual liability or damages	Contractor
4.2	Payment of final invoice	Demobilization incomplete, with residual damage, unrestored land, improper drainage, etc.	Withhold payment until Barqi Tojik confirms demobilization is complete from E&S perspective – Appoint third party to complete restoration activities if contractor fails, at contractor's expense	– No continuing or residual damages or contamination – Land restored to former use as required	Barqi Tojik
			5.0 Operation and maintenance		
5.1	Energizing transmission line and substation	– Electrocution of workers or others – Damage to towers, conductors, substation	– Consult with communities before energizing – Workers trained per Occupational Health and Safety Plan: electrical safety, working at heights, lifting – Follow Barqi Tojik technical protocols/ procedures for energizing lines/components – Keep bystanders/observers away from corridor and substation during procedure	Works completed safely	Contractor and Barqi Tojik

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			– Inspect entire corridor in case of malfunction		
5.2	Updates of Labor Management Plan and Occupational Health and Safety Plans	– Lack of compliance with safety law – Worker injuries and deaths – Poor labor relations	Barqi Tojik Safety Manual updated per World Bank Group EHS General Guidelines and guidelines for Transmission Lines – LMP updated to reflect World Bank ESS2 requirements	– Updated management programs – Safe working environment – Good labor relations	Barqi Tojik
5.3	Routine maintenance and security patrols	– Worker injury or death – Damage to ground surface and cover vegetation, soil erosion – Traffic accident – Damage to private property (trees, crops, etc.)	– Workers trained in requirements of Barqi Tojik Safety Manual specific to their jobs – Workers trained in requirement of Traffic Management Plan – Compensation per RAP	– Works completed safely – Damages compensated promptly per RAP	Barqi Tojik
5.4	Tower repairs or replacement	– Worker injury or death – Excess damage to ground surface, vegetation, drainage, leading to erosion – Longer power outages	– Same as tower construction above	– Works completed safely – Minimal damage in immediate vicinity of tower, no damage outside that area – Damages to land repaired and land restored to previous use – Compensation paid promptly per RAP	Barqi Tojik
5.5	Replacement of conductors	– Worker death or injury – Damage to land from equipment and vehicles – Longer power outages	– Implement Safety Manual – Restore damages to land immediately upon completion (grading, revegetation per Land Management and Erosion Control Plan) – Compensate promptly for losses due to damages to vegetation, crops, property	– Work completed safely – Damages to land repaired and land restored to previous use – Compensation paid per RAP	Barqi Tojik
5.6	Vegetation control in corridor/under line	– Worker death or injury	– Workers trained in risks and mitigations of tasks per Barqi Tojik Safety Manual	– Work completed safely	Barqi Tojik

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
		– Trees cut too close to ground – Excess cutting of trees – Excess compensation paid	– Workers provided proper and safe equipment and tools – Workers knowledgeable of boundaries of vegetation control zone and remain within zone – Wood distributed as agreed with communities/owners – No use of herbicides or pesticides	– Minimal disturbance to ground surface and tree/plant roots – All works within vegetation control zone – Debris removed before becoming a fire hazard	
			6.0 All phases		
6.1	Oversight of E&S performance of project	– Lack of timely knowledge about contractor E&S performance – Unnecessary E&S impacts – Minor issues become major problems	– Appoint qualified professionals to oversee E&S performance on the project – If Barqi Tojik Energy supervises, project management to communicate with corporate management on E&S management on weekly basis, written reports on monthly basis – If Supervision Consultant supervises, Consultant to communicate with to Barqi Tojik on weekly basis, writeup reports on monthly basis – Monthly progress meetings involving contractor, Barqi Tojik, and (if appropriate) supervision Consultant – Project management to provide data for website updates – Barqi Tojik HSE Department (corporate) to: - Schedule and participate in consultation meetings and informal interviews - Periodically consult with municipal and village authorities - Review grievance logs periodically - Maintain communications with important NGOs - Maintain communications with Committee for Environmental Protection	– Barqi Tojik project HSE staff and corporate HSE Department knowledgeable and up to date on E&S performance – Barqi Tojik management well-informed of issues before they become problems	Barqi Tojik (and Supervision Consultant if appropriate)
6.2	Operating passenger and heavy vehicles	– Traffic accidents	Implement Traffic Management Plan – Trained and licensed drivers	– Vehicles and equipment operated	Owner/ Operator of vehicle:

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
		– Injury or death to drivers or passengers – Damage to pedestrians, other drivers and passengers, property – Liability to contractor and project	– Speed limits – Daily safety checklist – Passengers only in seats designed for persons (safety belts, etc.), no standing or riding in back of trucks or on equipment – No giving rides to public – No vehicle/equipment movements off construction zones and roads unless authorized by site supervisor	by authorized personnel – No traffic accidents – No injuries to drivers or passengers, no damage to property	Contractor, Supervision Consultant, Barqi Tojik
6.3	All construction works	Damage to vegetation, land surface, property outside construction zone boundaries	– Implement relevant elements of Land Management and Erosion Control Plan – Implement relevant elements of Occupational Health and Safety Plan – Control dust from soil/spoil piles and construction sites by covering or vegetating, from roads by dampening – Control noise by maintaining equipment and vehicles, training workers	– All work within construction zone boundaries – Minimal damages, compensation per RAP – Work completed safety	Contractor Barqi Tojik (OHS)
6.4	Stakeholder engagement	– Uninformed stakeholders – Distrust of Barqi Tojik – Increased vandalism	– Implement Stakeholder Engagement Plan – Notify local authorities of ongoing maintenance and repair operations – Implement Grievance Redress Mechanism: receive and respond to comments and complaints	– Informed stakeholders – Public support	Barqi Tojik (manage throughout, implement during operation) Contractor (day-to-day) during construction
6.5	Hazardous and nonhazardous waste and materials management	– Spills and contamination of soil and surface water – Extra cost due to wastage	Implement Materials and Wastes Management Plan, including – Minimize use of hazardous materials, using nonhazardous substitutes wherever possible – Store hazardous materials (including fuels) in secure area over impermeable surface – Material Data Safety Sheets to be kept at all locations where hazardous materials (including fuels, paints, lubricants) are stored or used	– Minimal spills and contamination, rapid and proper cleanup as needed – Proper and safe waste management, including third-party management	Contractor

No.	Activities	Potential Adverse Impact	Mitigation Measures/ Best Management Practice	Target outcome of mitigation	Responsible body
			– Allow only authorized and trained personnel to work with hazardous materials – Segregate used materials/wastes in categories to maximize ability to restore, reuse, recycle and minimize disposal – Dispose wastes in licensed disposal area or hire licensed hauler to take wastes to a licensed area (verified by contractor) – For hazardous wastes taken away by hauler, verify hauler's license and verify that final disposal/recycling location is properly permitted		
6.6	Vehicle and equipment fueling and maintenance	– Spills and contaminated soil or water – Fire	– Vehicle and equipment fueling and maintenance only over impermeable surfaces. Use drip trays needed when not over paved surface. – Fire extinguisher with proper chemicals in all vehicles/equipment and at all fueling locations – Spill cleanup kits at all locations where fuel and hazardous chemicals are stored and in all vehicles and mobile equipment – Vehicles maintained per manufacturers' recommendations: mufflers, safety equipment, engine and fuel burning (no black smoke), etc.	– No contamination from incidents involving fueling – Vehicles maintained as required	Contractor
6.7	All activities within 20m of natural watercourses or other perennial and seasonal streams	– Spills of fuel or other materials into water – Damage to streams and water bodies – Erosion into streams and water bodies	– Implement procedure for working in or near surface water – Barriers between work zones and water if within 25m of water – No fueling within 25m of surface water or ephemeral drainageway – Vehicle/equipment crossings of drainageways or small streams only at designated locations – Apply gravel or otherwise prepare surface at places of frequent crossings to minimize damage to streambed – Minimize crossings during wet weather	– No water contamination – Minimal damage to streams and drainageways	Contractor

No.	*Activities*	*Potential Adverse Impact*	*Mitigation Measures/ Best Management Practice*	*Target outcome of mitigation*	*Responsible body*
			– Repair rutting and other damage to stream banks and streambeds immediately when works are completed in that area (grade, revegetate)		
6.8	Responding to emergencies	– Worker injury or death – Community member injury or death – Excess damage to property or people	Implement Emergency Preparedness and Response Plan, which is to include: – Appointment of emergency response team – Train workers in their responsibilities in case of emergencies and in responding – Identify possible emergencies and possible consequences (fire, accidents, injuries or deaths, earthquake or weather event, civil unrest, spills) – Develop and use checklists to verify readiness for emergencies – Place and maintain emergency response equipment (fire extinguishers, first aid kits, radios/communication devices, etc.) – Conduct investigations/reviews to identify causes and avoidance measures following emergencies, including accidents	– Emergencies avoided – Emergency equipment in place and ready if needed – Quick and effective responses to emergencies	Contractor and Barqi Tojik
6.9	Protect undiscovered cultural heritage	Damage or destruction of artifacts or archaeological remains	Implement chance find procedure, to include – Stop work upon discovery – Notify Ministry – Consult with Ministry on steps to commence work – Protect site while awaiting work re-start – Begin work when authorized by Ministry – Train workers and supervisors in procedure	– Qualified personnel make judgments about possible finds – Cultural heritage protected	Contractor

Annex 3: Generic Mitigation Measures

Activity	Parameter	Mitigation measures checklist
General Conditions	Notification and Worker Safety	• The local construction and environment inspectorates and communities have been notified of upcoming activities • The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) • All legally required permits have been acquired for construction and/or rehabilitation • The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. • Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) • Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
Construction Activities	Air Quality	• During interior demolition debris-chutes shall be used above the first floor • Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust • During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site • The surrounding environment (side-walks, roads) shall be kept free of debris to minimize dust • There will be no open burning of construction / waste material at the site • There will be no excessive idling of construction vehicles at sites
	Noise	• Construction noise will be limited to restricted times agreed to in the permit • During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible
	Water Quality	• The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers.
	Waste management	• Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. • Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. • Construction waste will be collected and disposed properly by licensed collectors • The records of waste disposal will be maintained as proof for proper management as designed. • Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)

Activity	Parameter	Mitigation measures checklist
Individual wastewater treatment system	Water Quality	• The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities • Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment • Monitoring of new wastewater systems (before/after) will be carried out • Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.
Affected forests, wetlands and/or protected areas	Protection	• All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities. • A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided • Adjacent streams and water bodies shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences • There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.
Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	• In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated • Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards • Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. • Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities

Annex 4: Example of ESMP Monitoring Plan

Example of Monitoring Plan

Activity	*What* ***(Is the parameter to be monitored?)***	*Where* ***(Is the parameter to be monitored?)***	*How* ***(Is the parameter to be monitored?)***	*When* ***(Define the frequency / or continuous?)***	*Why* ***(Is the parameter being monitored?)***	*Who* ***(Is responsible for monitoring?)***
All construction works	Technical progress and implementation of mitigation measures, compliance with Tajik E&S law, World Bank ESF, and C-ESMP	All areas	– Observations during normal activities – Inspections – Monthly reports and incident reports	Continuous or as necessary	Verify implementation of mitigation measures	Supervision Consultant
			E&S monitoring audit	Annually during construction	Verify implementation of C-ESMP	Third-party consultant appointed by Barqi Tojik