



**MINISTRY OF TRANSPORT
THE REPUBLIC OF TAJIKISTAN**

**PROJECT IMPLEMENTATION UNIT
FOR ROAD REHABILITATION**

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

TAJIKISTAN: DANGARA – GULISTON ROAD

Non-Technical Summary (NTS)

October 2024

Public

Consultancy

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List of Abbreviation

ADB	Asian Development Bank
AH	Affected Household
AP	Affected Person
BOQ	Bill of Quantities
CEP	State Committee for Environmental Protection of Tajikistan
CSC	Construction Supervision Consultant
DMS	Digital Measurement Survey
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESP	Environmental and Social Policy
EU	European Union
FP	Focal Person
GOST	National Standards (Gosudarstvennye Standarty)
GPS	Global Positioning System
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HSE	Health, Safety and Environment
HSMP	Health and Safety Management Plan
IBA	Integrated Biodiversity Assessment
IEE	Initial Environmental Examination
LAR	Land Acquisition and Resettlement
LARP	Land Acquisition and Resettlement Plan
MOT	Ministry of Transport
NTS	Non-Technical Summary
NVMP	Noise and Vibration Management Plan
PCR	Project Completion Report
PIB	Project Information Brochure
PIURR	Project Implementation Unit for Road Reconstruction
RNSP	Road Network Sustainability Project
RoW	Right of Way
PR(s)	Performance Requirement(s)
SAEMR	Semi-Annual Environmental Monitoring Report
SEE	State Ecological Expertise
SEP	Stakeholder Engagement Plan
SES	Social Economic Survey
SMA	Stone Mastic Asphalt
SPS	ADB Safeguard Policy Statement
WHO	World Health Organisation
WQMP	Water Quality Management Plan

1 Project Description

This report presents the Non-technical Summary (NTS) of the Initial Environmental Examination (IEE) and Environmental and Social Impact Assessment (ESIA) Supplementary report and describes the key findings of the assessment in ‘non-technical language’. This NTS is one of a number of supplementary assessments and action plans for the Project provided to meet EBRD’s performance requirements, as follows:

- ⇒ Supplementary Biodiversity Baseline Assessment
- ⇒ Biodiversity Management Plan
- ⇒ Environmental and Social Action Plan
- ⇒ Environmental and Social Management Plan
- ⇒ Resettlement Plan
- ⇒ Labour and Working Conditions Management Plan
- ⇒ Worker Accommodation Plan for Construction phase
- ⇒ Health and Safety Plan
- ⇒ Emergency Response Plan
- ⇒ Traffic Management Plan

The Dangara-Guliston project road section is 49 km long and is a key route of regional importance in the southern region of the republic. It is part of the Bokhtar-Okmazor-Dangara-Guliston road, a major arterial road of international importance in Tajikistan. It facilitates important transport links and the supply of agricultural products and industrial raw materials. The road traverses hilly terrain with small curves and steep gradients. The Dangara-Guliston road links the districts of Dangara, Farkhor and A. Hamadoni, and connects the jamoats of Korez, Ismat Sharif and Guliston with the towns of Dangara and Guliston. The map in Figure 1 below provides an overview of the project road.

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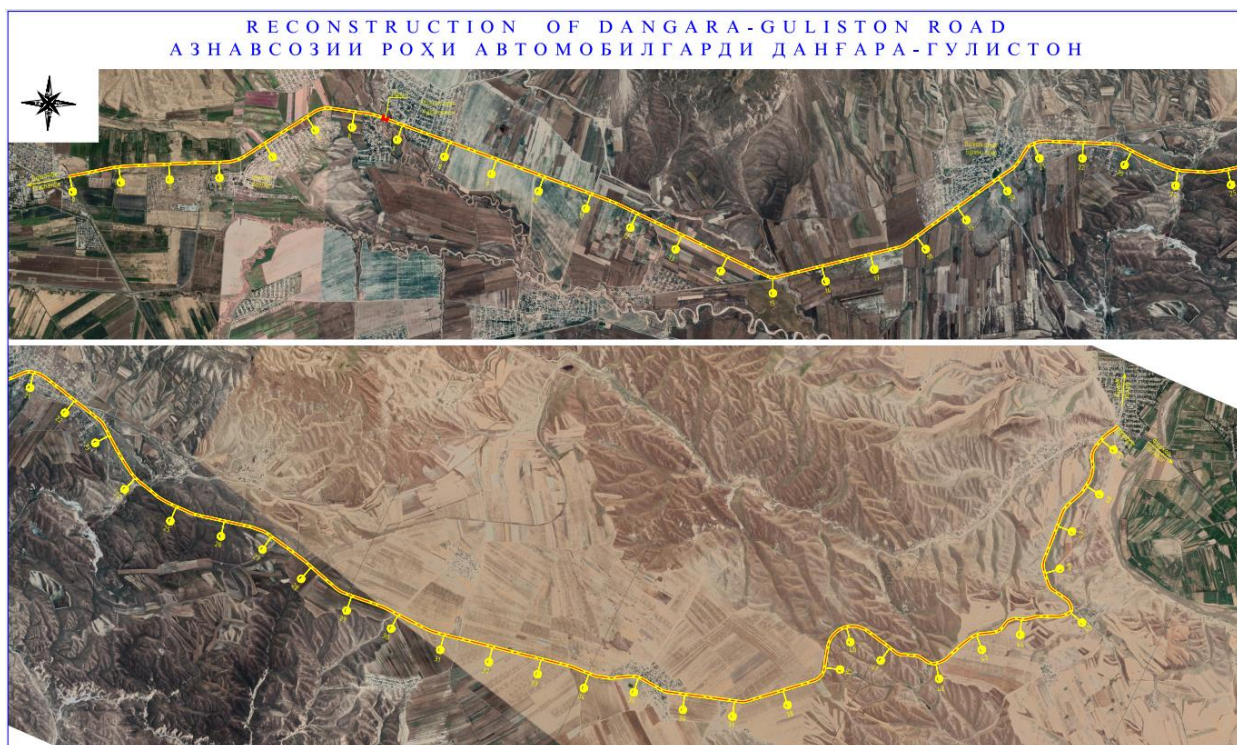


Figure 1 – Project Location Map of the Dangara-Guliston Road

The existing road is classified as technical category III and consists of a two-lane carriageway. Traffic volume assessments indicate that the current road category is inadequate for the expected future traffic volumes. Therefore, an upgrade to two carriageways with four lanes is required.

The designed cross-section of the road includes four driving lanes, a central dividing strip, shoulders, and sidewalks within the green zones in settlements. Side-walks are located on both sides and, in some areas, on one side of the road. According to the Terms of Reference for the design, a bicycle path is provided along the entire length of the road (on the right side). Depending on the terrain, twenty-four types of cross-sections were adopted during the project development. The following figures illustrate the typical cross-sections outside settlements. The width of the cross-section including the bicycle lane, and the shoulders is 29 to 30 meters as compared to the approximately 10 meters of the existing road (2 x 3,75 m driving lanes plus shoulders).

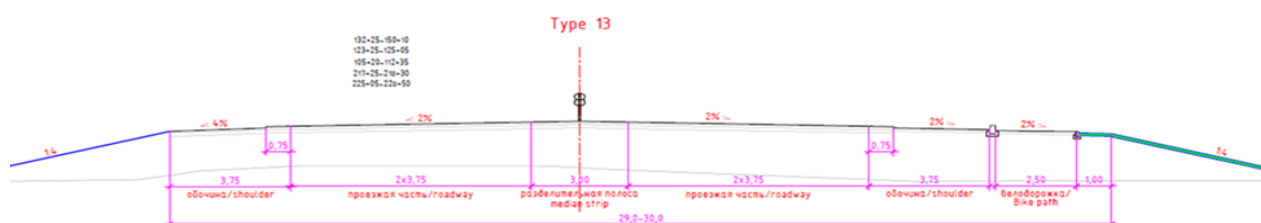


Figure 2 – Existing Project Road with severely damaged pavement at km 17+600

The design includes the widening of the road to 4-lane standard. The detailed design was developed in accordance with the current regulatory documents of the Republic of Tajikistan.

2 Background

The European Bank for Reconstruction and Development (the "EBRD" or the "Bank") is considering providing funds to the Government of the Republic of Tajikistan, in collaboration with the Asian Development Bank (ADB), for the reconstruction and widening from 2 to 4 lanes of the Dangara-Guliston road.

The existing road surface is badly damaged by cracks and potholes. Visibility is poor in many places. In addition, the current technical category of the project road does not correspond to the expected future traffic volume. Therefore, the project is urgently needed and will reconstruct and upgrade the Dangara-Guliston road to technical category I (a four-lane highway).

The road network has a particular importance for the Republic of Tajikistan. Due to its geographical location, specific mountainous conditions of the relief in the complete absence of sea and river routes, insufficient development of railways and airlines network, roads and motor transportations are the main type of transport services for the Republic. Therefore, improving Tajikistan's road network system remains a national priority and will remain so, as the main task of the MoT is to connect all regions of the country with a reliable network of relevant roads.

The MoT and ADB agreed to enhance income and reduce poverty in the Republic of Tajikistan by improving the road infrastructure, and thereby support the creation of productive employment opportunities. The Dangara-Guliston project road is connected to the Road Network Sustainability Project which consist of the additional two road sections, as shown in the map in figure 3:

- ⇒ Hulbuk-Temurmalik-Kangurt, approximately 59 km in length; and
- ⇒ Okmazor-Dangara, approximately 28.7 km



Figure 3 - Location of the 3 Road Sections of the Road Network Sustainability Project within Tajikistan (Project Road Dangara-Guliston is shown in blue)

2.1 Legal Aspects and Compliance with relevant Environmental and Social Laws

The Project complies with Tajikistan national legislation as well as ADB and EBRD standards, the

- ⇒ ADB Safeguard Policy Statement (SPS) 2009
- ⇒ EBRD Environmental and Social Policy (ESP) 2019

2.1.1 National Environmental Legislation

There are three laws in the country that regulate all aspects of environmental assessment: (a) the Law on Environmental Protection (2011); (b) the Law on Ecological Expertise (2012) and the Law on Environmental Impact Assessment (2018). Chapter V, Articles 35-39 of the Law on Environmental Protection (2011) introduces the concept of State Ecological Expertise (SEE), which aims to verify the compliance of proposed activities and projects with the requirements of environmental legislation and standards and the ecological safety of society.

According to National environmental law an EIA was prepared for the Project. The national EIA is categorized as B in terms of its environmental and complies with the IEE prepared for ADB. The national environmental permit is the SEE (State Ecological Expertise). For obtaining the SEE the IEE is submitted to the CEP (State Committee for Environmental Protection of Tajikistan).

2.1.2 National Social Legislation

In Tajik legislation, there is no specific law or policy regulating the issues of resettlement and/or land acquisition or expropriation of rights to land and immovable property for state or public needs. In addition, there is no separate law that fully sets out standards and mechanisms for determining the full and fair market value of land. The main legislative acts regulating land management relations and ownership rights to immovable property in the Republic of Tajikistan are as follows

- ⇒ Constitution of the Republic of Tajikistan (1994, as amended in 2003)
- ⇒ Land Code (amended in 2012)
- ⇒ Land Code (amended in 2008)
- ⇒ Civil Code (amended in 2007)
- ⇒ Regulation “about compensation of losses to the land users and losses of agricultural products” (approved by the Decree of Government of Republic of Tajikistan, № 641 dated 2011)

2.1.3 Financier’s Requirements

The international policy framework for the Project is based on ADB Safeguard Policy Statement (2009) and EBRD Environmental and Social Policy (2019).

ADB SPS (2009) establishes policy principles and outlines the delivery process for ADB’s environmental safeguard policy. ADB has adopted specific safeguard requirements for addressing environmental and social impacts and risks by the borrowers/clients.

The safeguard policies are operational policies that seek to avoid, minimize or mitigate the adverse environmental and social impacts of projects including protecting the rights of those likely to be affected or marginalized by the development process.

ADB SPS (2009) consists of three operational policies on the environment, involuntary resettlement and indigenous peoples.

The EBRD is an international financial institution which uses investment as a tool to build market economies. Commitment to sustainable energy and safeguarding the environment are central to the EBRD’s activity. The EBRD Performance Requirements were introduced to provide guidance for EBRD clients to manage and improve their environmental and social performance through a risk and outcomes-based approach. The Project’s ESIA package has been prepared following the relevant EBRD’s Performance Requirements, which are as follows:

- ⇒ PR 1: Assessment and Management of Environmental and Social Impacts and Issues
- ⇒ PR 2: Labour and Working Conditions
- ⇒ PR 3: Resource Efficiency and Pollution Prevention and Control
- ⇒ PR 4: Health and Safety

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- ⇒ PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement
- ⇒ PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ⇒ PR 8: Cultural Heritage
- ⇒ PR 10: Information Disclosure and Stakeholder Engagement

The Project includes international best practice measures in accordance with the mitigation hierarchy to avoid, minimise / mitigate and restore / rehabilitate any adverse changes in environmental and social conditions. Of particular focus are those critical habitat-qualifying features and potential priority biodiversity features for the Project which are of high conservation value. The ESIA package also takes into account international conventions and treaties, relating to environmental and social issues, particularly with regards to biodiversity conservation.

2.2 Project history and alternatives

The Dangara-Guliston road section was selected for reconstruction and widening under the Road Network Sustainability Project (RNSP), for which the Ministry of Transport of Tajikistan (MoT) and ADB have agreed on funding. The various project roads of the RNSP, whose connectivity will be greatly improved by the Dangara-Guliston project, are shown on the map in Figure 3.

Alternative 0, in this instance, is defined as a decision not to undertake the proposed rehabilitation of the Project Road and continue using the existing road infrastructure. This Alternative would result in the continued deterioration of the road, bridges and drainage structures along the RoW, thereby impeding the economic development of the project area and the Khatlon region. Refusing to implement the project means missing out on all the positive benefits. Although relatively minor, environmental impacts (such as noise and short-term air quality impacts due to construction activities) and inconveniences (such as traffic diversions) would be avoided in the short run; in the long run, however, the steadily declining state of the roadway would severely hamper economic development in the area.

Hence, Alternative 0 (No action) is not a viable choice for this project.

No spatial alternatives were studied. This is because the chosen alignment of the project road corresponds to the existing two-lane road and follows the existing right of way. Therefore, the environmental and social impacts are reduced to the technically possible minimum compared to any other spatial alternative.

3 Process

The permitting process for the Project must comply with both, the National permitting procedure and the approval process of the financiers.

3.1 Project's current state of compliance with national regulatory requirements and relevant EU requirements

The national environmental permit is the State Ecological Expertise (SEE) prepared by the State Environmental Protection Committee of Tajikistan (SEP). To obtain the state permit, the Russian version of the IEE prepared for ADB must be submitted to the SEP. National legislation does not require public consultation prior to a positive EIA decision.

The European Union (EU) EIA Legislation is laid down in the DIRECTIVE 2014/52/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014, amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

The EU directive distinguishes between Projects requiring mandatory EIA and such type of Projects for which the member States shall determine whether an EIA must be carried out based on criteria set by the directive. Projects requiring mandatory EIA according to the EU directive are listed in annex I of the directive. Regarding road projects mandatory EIA is required for the following:

- ⇒ Construction of motorways and express roads.
- ⇒ Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road or realigned and/or widened section of road would be 10 km or more in a continuous length.

The Dangara-Guliston Road reconstruction project falls into the second category (widening of an existing road from two to four lanes over a section of more than 10 km) and therefore, also according to the EU legislation an EIA is required.

3.2 Public consultations and disclosure and dealing with objections

Public consultations and dissemination of project-related information to project stakeholders at national, regional and project levels were initiated at an early stage of project preparation.

Within the design phase of the project, all affected households, farmers, business owners and hired labourers were individually consulted. They were provided with information on project objectives, extent of impacts on their land and assets, principles of compensation for loss of land use rights, annual and perennial crops, structures, improvements, income/wage loss due to permanent and

temporary cessation of business, additional allowances for severely affected and vulnerable affected households.

Information on the Grievance Redress Mechanism was provided through Project Information Brochures (PIB). Copies of the PIB were distributed to project-affected hukumats, jamoats and villages.

Between 2021 and 2024, eight (8) public consultations were conducted to address the social, environmental and involuntary resettlement aspects of the road project. The eight (8) public consultations were conducted in three rounds: the first round on 17 November 2021; the second round on 4, 7 and 15 March 2023 and the last (third) round on 6 April 2024. The total number of participants is 229 (152 men and 77 women).

4 Summary of Benefits, Potential Adverse Environmental Impacts, Mitigation and Management Measures

The benefits and positive impacts of the project are manifold. The main benefit is the improved condition of the road. The reconstruction and widening of the project road, which is currently in a poor state of repair, combined with the road safety measures that will be implemented, will result in safer driving in the future and will better connect the small villages along the project road. The current unacceptably poor road conditions, which hinder economic development and access to essential infrastructure such as education, medical care and markets, will be significantly improved. This will be of great benefit to the people living in the villages along the project corridor.

In addition, the regional and long-distance traffic benefits from the upgraded and improved Project Road, which strengthens significantly the transport connections within the international road corridor “Dushanbe – Dangara - Kulob – Khorog – Kulma- PRC” and “Dushanbe- Dangara – Guliston- Farkhor - Afgan Border”.

Like all major infrastructure Projects, also the Dangara-Guliston project results in potentially negative impacts on the environment which in the following are briefly described.

4.1 Air Quality

An air quality impact assessment was prepared for both the construction phase and the operational phase.

Baseline conditions

Instrumental air quality measurements have been conducted in August 2020 and April 2024. The below figure shows the locations of Air Quality Instrumental Measurement Locations in April 2024.



Figure 4 - Air Quality and Vibration Instrumental Measurement Locations (April 2024)

The measurement results were compared against valid Tajikistan standards. No exceedances of standards occurred. This is because there are no significant industrial pollution sources in the project corridor, so the main source of air pollution in the region is the burning of fossil fuels for heating and cooking. Another source of emissions into the atmosphere can be divided into two categories: exhaust gases from motor vehicles and dust from motor vehicles. In addition, there is dust from agriculture during the harvest season.

Hence exhaust emissions to the atmosphere at the current level are relatively low and a priori it is therefore not expected that any air quality standards, national or international, are exceeded due to Project implementation.

Construction phase

During construction phase impacts on air quality result from:

- ⇒ Operation of Asphalt Plant and Aggregate Crushers which cause increased dust emissions and emissions of pollutants
- ⇒ Emissions because of vehicles and machinery
- ⇒ Vehicles causing dust when traversing unsealed roads.
- ⇒ Dust emissions from the demolition and construction works.
- ⇒ Smoke arising from road construction works during bitumen works.

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- ⇒ Welding works can cause welding aerosol and manganese monoxide emissions; and Concrete work for bridge can result in cement dust emissions.

Prior to the implementation of mitigation measures, these air quality impacts may potentially have adverse impacts on human health and the biological fitness of fauna and flora species in the Project area. Increased dust and combustion emissions are known to cause irritation and impairment of respiratory functions, skin irritation, and vision impairment. Potential impacts may be cumulative in nature. Pollutants could also be ingested (for example, when deposited on plants or fruit, which is then consumed), which may then have an adverse impact on human and species health.

The magnitude of impacts to people and species of fauna and flora arising from inhaling these dust emissions and air pollutants depends on the quantity, composition, and respiratory rates and a person's / species' health.

Operation phase

Some of the most pervasive sources of air pollutants come from transportation systems. Air emission from road traffic is a significant air pollutant source in urban environments and alongside the road corridor it is also a relevant pollutant source in rural environments particularly when traversing nearby sensitive receptors.

Therefore, an air quality modelling for the operation phase was conducted.

Table 1 – Stakeholder Identification and Analysis

Air Quality Standards Applied in the Project		EU Air Quality Standards according to Directive 2008/50/EC	WHO
Substance in mg/m ³	Tajikistan Standards ¹ in mg/m ³ (Annual Average Values)	EU Standards in mg/m ³	WHO Air Quality standards ²
CO	3.00	10 ³	
PM ₁₀	0.06	0.04	0.02
PM _{2.5}	0.035	0.025	0.01
NO ₂	0.04	0.04	0.04
NO	0.06		
SO	0.05	SO ₂ : 0.350 ⁴	0.02 (24 h)

¹ Annex 3 to the Environmental Impact Assessment Procedure, adopted by resolution of the Government of the Republic of Tajikistan No. 464 of 3rd October 2006.

² The IFC cites WHO ambient air quality guidelines typically apply only in jurisdictions where there are no national standards in place.

³ Maximum daily 8 hour mean

⁴ 350 µg/m³, not to be exceeded more than 24 times a calendar year

No exceedances occurred which is because the Project area is rural without much industry.

Mitigation and Monitoring Measures

- ⇒ Accesses and construction sites should be kept moist to reduce dust formation. Water sprays to be implemented during drilling and excavation activities. It is recommended that water spraying is undertaken a minimum of three times per day.
- ⇒ Dust-generating activities to be slowed down or ceased on days of strong wind.
- ⇒ In windy and dry conditions, earth stockpiles to be moistened to prevent the distribution of dust particles.
- ⇒ As soon as a surface is no longer in use or is finished it should be vegetated to prevent dust emissions.
- ⇒ Work areas should be large enough to allow storage of the excavated material, access of trucks and truck loading operations.
- ⇒ Ensure all machinery and vehicles are maintained to minimise exhaust emissions. Vehicles and equipment that emit smoke shall be removed from the project, if they can't be fixed.
- ⇒ Implement a regular vehicle maintenance and repair program, utilising the manufacturer recommended engine maintenance programs.
- ⇒ Locate support facilities and spoil disposal sites so to reduce vehicle trip numbers and distance, and therefore emissions – as far as feasible.
- ⇒ All trucks used for transporting materials to and from the site will be covered with canvas tarpaulins.

Monitoring

During construction phase instrumental air quality monitoring must be conducted. Air quality monitoring must be undertaken for the following parameters TSP, CO, NO, NO₂; SO₂, PM 10 and PM 2.5.

4.2 Biodiversity and Nature Conservation

There are no protected areas under national law within the Project Area of Influence. Consequently, there is no measurable impact on any of these reserves due to the Project Road rehabilitation.

To identify areas of international protection status including areas of key biodiversity, an online search was conducted within scope of work of the IEE by means of the Integrated Biodiversity Assessment Tool (IBAT). The search revealed that the Dangara-Guliston road is running alongside and marginally traversing the IBA Dangara Massif. The area of the IBA Dangara Massiv in relation to the Project road is shown in the map in the below figure.

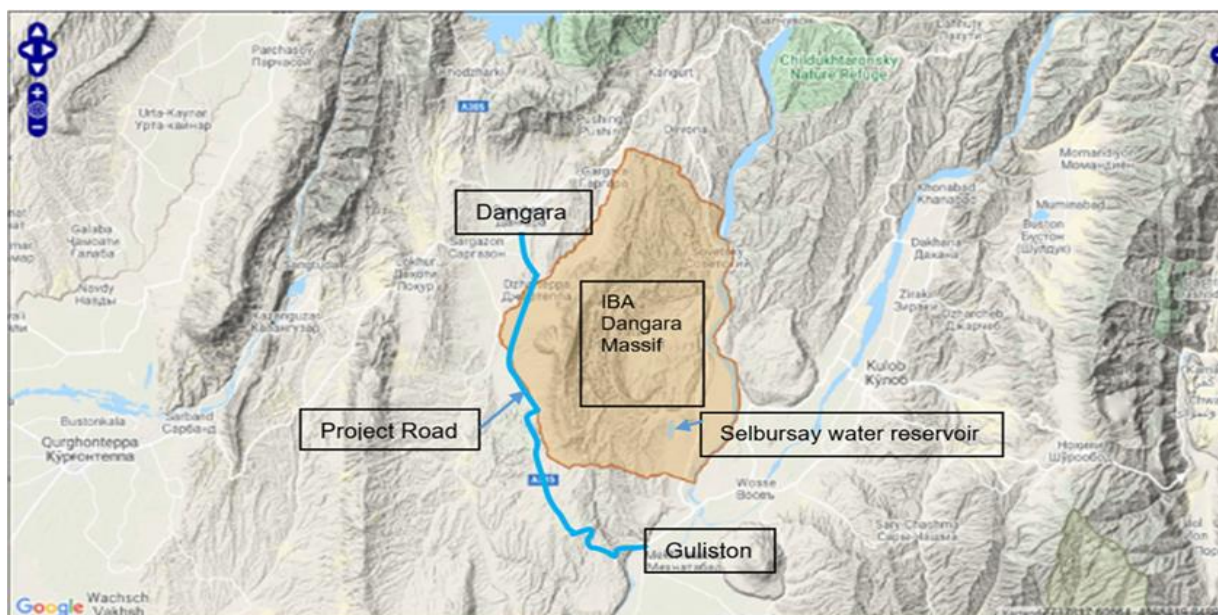


Figure 5 - IBA Dangara Massif in Relation to the Project Road

To establish baseline conditions biodiversity surveys were conducted. The biodiversity surveys identified the following impacts and mitigation measures which were incorporated into the EMP.

4.2.1 Impacts

Regarding the area potentially impacted by the Project implementation, it needs to be distinguished between the core impact area which is subject to direct physical encroachment and interferences such as noise and air emissions and the wider zone of Project influence that is mostly subject to indirect and positive impacts such as better road connectivity.

The area of direct physical encroachment is the construction corridor which is 15 m to both sides of the existing Project road. In addition, the area of influence covers an area outside the immediate construction corridor. It is up to 200 m on both sides of the road. Within this area there is no direct physical encroachment but there may be negative interferences such as noise and air emissions. Outside this 200 m corridor negative impacts only occur at ancillary facilities, such as borrow areas and transport routes.

The impact analysis distinguishes between construction phase impacts and operation phase impacts.

4.2.1.1 Construction Phase Impacts

Impacts to cliff nesting birds

At locations where the Project Road is traversing alongside or cutting cliffs, particularly loess cliffs which bear potential nesting sites for cavity nesters, there is the impact of possible destruction of bird nesting sites. This refers to bird species representatives of the roller family (Coraciidae),

particularly the European roller (*Coracias garrulus*), the family of bee-eater (*Meropidae*) (golden bee-eater *Merops apiaster*), starlings (lane or Indian starling) and weaver family (Indian sparrow). In addition, these cliffs are often habitats for wintering or sheltering reptiles and amphibians.

Vegetation losses

There is a considerable number of tree losses involved. Based on the conducted surveys in total 3461 trees need to be felled (362 pieces with a stem diameter in one meter height of more than 32 cm, 1422 pieces with a diameter of 16-32 cm and 1677 pieces with a diameter of 16 cm). In addition, 1688 trees will be trans-planted (dig out and planted at a new location).

Mitigation Measures

At sections where the Project Road rehabilitation is traversing alongside cliffs, mainly formed by loess sediments which are suitable nesting sites for various birds such as the European roller *Coracias garrulus* (assessed as Least Concern by IUCN), bee-eater (*Merops apiaster*) evaluated as Least Concern or the Indian starling (Common Myna *Acridotheres tristis*) evaluated as Least Concern the design investigated the possibility of widening the cross section to the opposite site and avoid any impacts.

In addition, prior to construction start, a fast-track ecological survey will be conducted by CSC's ornithologist for purpose of identification of nesting sites at cliffs in the construction corridor. In case nesting sites are identified, then construction schedule will consider nesting season in order to avoid bird losses. This means that at the identified bird nesting sites no earthworks at the bird nesting cliffs are allowed during nesting season.

Also required tree felling and site clearance activities which involves the removal of vegetation must be outside nesting season (between October and February). The first SAEMR will include the photo-documentation, GPS coordinates, and strip map of nesting sites.

Tree losses that cannot be prevented will be compensated by new tree plantings at the respective locations alongside the Project Road. Tree losses on private land are compensated as set out in the LARP. Suitable species for roadside planting are pines (*Pinus spec.*), cypresses (*Juniperus spec.*), mulberry (*Morus nigra*), pistachio (*Pistacia vera*), walnuts (*Juglans regia*) and planes (*Platanus orientalis*).

4.2.1.2 Operation Phase Impacts

Impacts to soaring birds

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Soaring birds (vultures and raptors) are potentially attracted by the road because of carrion due to road kills. This impact is already existing but might worsen because of increased traffic and vehicle speed with the newly upgraded road.

This is however very unlikely because it is not expected that road kills will increase with the upgraded Project Road due to implementation of crossing facilities for domestic and wild animals.

Disruption of animal migration routes

The upgrade of a 2-lane road to a 4-lane highway potentially exacerbate the barrier effect of the road and hinders animal migrations.

Mitigation Measures

Reduction of road kills

Implementation of suitable linear barriers and crossing facilities to reduce road kills of small animals. These measures contribute to the reduction of road kills of small animals and avoid that soaring birds are “attracted” by the road.

Crossing facilities for domestic and wild animals

The Project includes the construction of 48 culverts, which incorporate 9 specific passages for livestock and wild animals. These facilities, alongside existing culverts and passages, will ensure the safe transit of domestic and wild animals, meeting the project's requirements for animal safety and road protection.

An additional survey conducted in June 2024 allowed the development of additional mitigation measures for the pre-construction and construction phases. The mitigation measures are described in the Biodiversity Management Plan, which is Annex 7 of the ESMP.

Mitigation Measures of the Biodiversity Management Plan

Design Phase:

- ⇒ In order to allow the safe crossing of the Project road and avoid road kills of tortoises and small animals suitable guiding and crossing facilities are designed.

Construction Phase

- ⇒ Sampling and translocation of tortoises
- ⇒ Fencing and Marking of Habitats of Gecko and Agama
- ⇒ Definition of priority area for Construction Camp Location.
- ⇒ Additional surveys for protection of soaring birds

4.2.2 Additional Surveys

Following the gap analysis review, findings of the IEE were considered not sufficient to meet EBRD PR6 (2019) and the EBRD 2022 PR6 Guidance Note requirements. Therefore, additional biodiversity surveys for supplementing the baseline and update the BMP data shall be conducted as follows.

Survey of habitats of Gecko and Agama is conducted in September and October 2024). In spring 2025 supplemental biodiversity baseline surveys (divided into 4 sub-tasks) are undertaken which include:

- ⇒ Survey on gecko and agama (June 2025)
- ⇒ Tortoise survey (April 2025)
- ⇒ Raptor and vulture nest survey (March to July 2025)
- ⇒ Habitat/rare plants survey (April 2025)

In addition, a roadkill survey prior to construction start and post construction will be undertaken.

Based on the findings of the additional surveys the supplementary ESIA report and this NTS will be updated. All new measures will be incorporated in the Biodiversity Management Plan and implemented during construction and operation phased.

4.3 Consistency with Policy, Law and other Plans

The project perfectly fits with the vision, goals and targets of the National Development Strategy of the Republic of Tajikistan for the period of up to 2030.

4.4 Cumulative and Induced Impacts

The cumulative impact assessment requires an assessment of the combined effects of the Dangara-Guliston road and other related infrastructure projects, namely the

- ⇒ Hulbuk – Temurmalik - Kangurt, approximately 59 km in length; and
- ⇒ Bokhtar – Dangara - road, approximately 70 km.

The cumulative impacts are mostly beneficial because the currently bad road network in the affected southern region of Tajikistan will be significantly improved allowing better transport links and access conditions for the population of Dangara, Baljuvan, Khovaling districts with Temurmalik and Vose district.

In addition, there will be mostly positive induced impacts, such as an increase in spending capacity in the project area due to the influx of labour, which will create opportunities for local businesses. Negative induced impacts associated with road construction projects usually involve the spread of uncontrolled development activities and threats to natural resources in previously undisturbed

areas. As the project involves the reconstruction and widening of an existing road, no negative induced impacts are expected.

4.5 Landscape and Visual Impacts

The project involves widening an existing two-lane road to a four-lane motorway. Therefore, no new linear engineering element is added to the landscape. The new road will have appropriate roadside vegetation to improve air quality, control dust and create a visually appealing environment. Trees and shrubs planted along the project road will contribute to the positive visual impact. Species selected for road-side planting outside settlements are: pine, cypress and yellow flowering Spanish broom.

At settlements, provided that there is regular watering and alongside sections at which an irrigation channel is running parallel to the road, species with a higher water demand can be considered and planted. These are mulberry (*Morus nigra*), pistachio (*Pistacia vera*), walnuts (*Juglans regia*), chestnut (*Aesculus hippocastanum*), planes (*Platanus orientalis*) and the Sada (*Ulmus minor umbraculifera*).

4.6 Raw material sourcing and transportation, including borrow pits

The construction works, in particular the embankment works, the production of asphalt concrete and concrete mixes, will require construction aggregates to be extracted from suitable borrow areas. The aggregate sources proposed are already in use and consist of three aggregate reserves located in river floodplains.

- ⇒ Land Reserve 1 is the gravel deposit in the floodplain of the Surkhob River.
- ⇒ The proposed soil reserve 2 is located 22 km from the end of the project road in the riverbed and floodplain of the Yahsu River.
- ⇒ The proposed soil reserve is located along the Dangara-Kangurt road in the floodplain of the Tairsu River.

After use in the Project the selected borrow areas must be reinstated according to the site specific environmental and social management plan.

4.7 Road safety

The Dangara – Guliston Road Rehabilitation project, supported by the European Bank for Reconstruction and Development (EBRD), places significant emphasis on traffic and road safety. This project ensures that potential risks are systematically identified, evaluated, and managed to protect workers and local communities.

Summary of Health, Safety and Environmental Benefits

The project is designed to provide multiple HSE benefits, including:

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- ⇒ **Enhanced Road Safety:** Improved road conditions and safety measures reduce the likelihood of accidents, benefiting both motorized and non-motorized road users, safe crossings for the domestic and wild animals.
- ⇒ **Reduced Traffic Congestion:** Effective traffic management plans help in minimizing congestion, leading to lower vehicle emissions and improved air quality.
- ⇒ **Sustainable Infrastructure:** The adoption of EU road safety standards ensures long-term sustainability and resilience of the road infrastructure.

Potential Adverse Impacts

Despite the benefits, the project may pose certain adverse impacts, such as:

- ⇒ **Increased Traffic During Construction:** The rehabilitation activities might lead to temporary traffic disruptions, causing inconvenience to local communities and increased risk of accidents.
- ⇒ **Noise and Dust Pollution:** Construction activities can generate noise and dust, potentially affecting nearby residents and the local environment.
- ⇒ **Risk to Non-Motorized Users:** Construction zones can pose additional risks to pedestrians and cyclists if not properly managed.

Mitigation and Management Measures

To address these potential impacts, a comprehensive set of mitigation and management measures have been developed:

- ⇒ **Traffic Management Plans:** Detailed plans outline adjustments in traffic flow, detour routes, and the timing of construction activities to minimize disruptions and risks.
- ⇒ **Safety Barriers and Signage:** The installation of safety barriers, warning signs, and speed limits in high-risk areas to protect both workers and the public.
- ⇒ **Incident Response Plans:** Predefined plans are in place to ensure swift and effective management of any traffic incidents, reducing potential harm.
- ⇒ **Compliance with EU Standards:** The project design adheres to relevant EU road and traffic safety standards, guiding the implementation of safety measures for all road users.
- ⇒ **Road Safety Audits:** Audits conducted during the original design phase and updated in April 2024, with the involvement of an ADB expert consultant, ensure ongoing safety compliance.
- ⇒ **Incident and Accident Reporting:** A robust system is in place to monitor and record all traffic incidents, enabling quick identification of safety trends and implementation of corrective actions.

4.8 Noise and Vibration

Vibration impacts have been assessed for construction phase only, regarding noise impacts there must be distinguished between construction noise impacts and operation phase impacts

4.8.1 Construction Phase

During construction works, airborne noise and vibration is generated by construction equipment such as milling machines, excavators, bulldozers, pavers, compactors and generators. Particularly the breaking up of the old pavement and asphalt layer by excavator or milling machine will cause

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noise emissions and vibrations. Also, the hauling of materials with heavy trucks causes noise and vibration impacts during construction.

Therefore, to establish baseline conditions which allows the monitoring of noise and vibration levels during construction phase instrumental baseline measurements were undertaken.

Baseline conditions

Noise

Instrumental baseline measurements of noise were undertaken in August 2020 using electronic sound level meters. The standards used are Tajik standards (Sanitary Norms SN 2.2.4/2.1.8.562-96 - provided by the Sanitary Epidemiological Surveillance Service of the Ministry of Health of Tajikistan).

Measurements were taken within the villages crossed by the. The measurements provide a representative noise baseline for the entire project road.

Noise measurements showed that the measured noise levels did not exceed the acceptable noise levels specified in the Sanitary Norms.

Vibration

Instrumental measurements of vibration have been conducted in April 2024 in the villages traversed by the Project road. Measurement locations are shown in figure 4. The measurement results were compared against valid Tajikistan standards. No exceedances of standards occurred.

Mitigation and Monitoring Measures

During construction phase a Noise and Vibration Management Plan (NVMP) will be in place. The NVMP must specify the need to undertake condition surveys no later than 28 days before the commencement of construction works. The Contractor shall identify areas for monitoring of noise, vibration and air quality based on the preconstruction survey and other indicators such as third-party complaints received. It is expected that the measurements will be conducted once per month and reported quarterly.

Additional measurements on noise must be undertaken at the asphalt plant, the concrete plant and the aggregate crusher. The measurements must be compared against the National, EU and WHO standards.

For mitigation special construction techniques will be used to protect areas where buildings and structures are close to the road. Such measures may include alternative construction methods such as (i) reducing the vibration emission of the particular piece of equipment; (ii) replacing the

particular piece of equipment at that location with other equipment capable of variable vibration control; (iii) using smaller equipment; (iv) compaction without vibratory rollers; (v) reducing the thickness of material layers below the maximum thickness allowed by the specification; (vi) constructing wave barriers (trench or ditch) where appropriate; (vii) reducing the thickness of material layers below the maximum thickness allowed by the specification; (v) reducing the thickness of the layers of material to below the maximum thickness permitted by the specification; (vi) constructing wave barriers (trench or ditch) where appropriate; (vii) changing the type of pavement, for example from flexible to rigid; (viii) any other method of the Contractor's choice which will ensure that the specification for the material being compacted is met.

4.8.2 Operation Phase

For assessing the noise impacts during operation phase a modelling was conducted which assesses the operation noise impacts for the year 2040 based on the traffic forecast.

Noise modelling was carried out using SoundPLAN essential version 5 noise modelling and planning software. This is a widely used environmental noise modelling and prediction software developed by SoundPLAN GmbH, Germany. The road noise sources and the sound propagation model used in the analysis follow the German guideline RLS-19 for road traffic noise prediction.

In result, the traffic noise levels at some receptors exceed the desirable level of 55 dB(A) in daytime and 45 dB(A) in nighttime in accordance to WHO 199 Guidance for community noise.

In order to comply with EBRD PR 3, the applicable statutory noise standards must be met. This will be achieved by using sound insulating Stone Mastic Asphalt (SMA) as the surface course for the entire project road, which will provide a noise reduction of 3 dB compared to standard asphalt. This requirement is reflected in the project's technical specifications.

4.9 Waste management

Both hazardous and non-hazardous waste will be generated during construction. This includes non-hazardous waste materials (i.e. aggregate, concrete and other construction material) and grey water waste and hazardous waste compounds (i.e. bitumen, used oil container, used fuel containers). Poor waste disposal poses a risk of pollution to the environmental and human health.

During construction phase a Waste Management Plan must be in place managing all waste generated during the construction works in a manner which does not pose a threat to human health and the environment.

All waste shall be managed in accordance with the following “waste hierarchy”, with priority to given to the waste management measure closest to the top of the hierarchy: Prevention; Minimisation;

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Re-use; Re-cycle; Treatment; Disposal; Waste Management must be according to the national legislation.

Contractors used for the disposal of waste and the waste disposal sites must be reputable, legitimate enterprises, licenced by the relevant regulatory authorities, and operating to acceptable standards.

The following mitigation measures will also be applied:

- ⇒ all waste materials will be deposited in accordance regulatory requirements and the approach will be approved by the local authorities
- ⇒ waste permitting documentation / licences will be obtained or outsourced
- ⇒ emergency response procedures will be developed for the Project to effectively manage any accidental spills and leakages of non-hazardous waste and hazardous compounds and staff and contractors will receive training in spill events management.

4.10 Waste resources

The Project area is very dry and the only natural river in the Project area is the Tairsu River. Therefore, water quality management is an essential issue, also in order to avoid competition with local communities for water resources.

During construction phase water quality in surface waters crossed by and nearby the Project road must be monitored regarding the following substances:

- ⇒ pH, temperature, suspended solids (mg/l), oil products (mg/l), mineralization (mg/l), BOD 5 (mg O₂/l), turbidity (mg/l) and electrical conductivity (Ohm/cm)

During construction activities water measurements will be carried out on a quarterly basis and results must be documented in the environmental monitoring reports.

During construction phase a Water Quality Management Plan (WQMP) will be in place.

The contractor needs to agree to water use with the local water supply company and other stakeholders. The WQMP Plan must include calculations for the water demand for construction including water required for:

- ⇒ Construction (e.g. concrete mixing);
- ⇒ Dust suppression.
- ⇒ Cleaning equipment.
- ⇒ Potable water for construction workers; and
- ⇒ Use in construction camps (if these will be used).
- ⇒ The plan must include measures to minimise water usage in the first instance, and also opportunities for reuse of water where possible.

5 Labour and Working Conditions and Accommodation

The Project must comply, at a minimum, with (i) national labour, employment and social security laws, (ii) the fundamental principles and standards embodied in the ILO core conventions, and (iii) EBRD PR 2.

To check the compliance of the prepared documents with the requirements for labour and working conditions of the EBRD PR 2 the GCC (General Contract Conditions) and PCC (Particular Contract Conditions) for the Project have been in detail reviewed. For fully compliance

- ⇒ a general requirement to fully conform to EBRD ENVIRONMENTAL AND SOCIAL POLICY (APRIL 2019), especially this PR, has been added to PCC Part B Special Provisions Sub-clause 6.1.
- ⇒ national laws are referred to in the construction contract.

In addition, the contractor needs to prepare site specific management plans which include among others a Construction Camp Management Plan which shall detail the labourer's accommodation and management. Also, and according to EBRD requirements a Labour Management Plan and Accommodation Management Plan is in place. These were prepared as part of the ESMP for inclusion into the tendering documents.

The Labour and Working Conditions Plan outlines the Project's Human Resources Policies and Working Relationships, and it also includes a summary of the potential risks and impacts related to labour and working conditions, together with mitigation measures to avoid, eliminate or reduce associated impacts and the monitoring required to assess the performance of these measures (Table 5). The Contractor's obligations in Labour Management at least are to ensure:

- ⇒ Equal pay for equal work
- ⇒ Respect for different cultures
- ⇒ Acknowledgement of cultural differences in respect to diet, religious ceremonies and so forth
- ⇒ Non-discrimination and equal opportunity
- ⇒ A worker grievance procedure
- ⇒ Female grievance officers ('confidants') are made available to female members of the workforce.
- ⇒ A disciplinary procedure
- ⇒ Workplace rules and regulations
- ⇒ A demobilization procedure
- ⇒ Industrial action handling protocols

Workers will receive information about procedures and protocols during their initial training.

The contractor will provide written contracts to employees at the start of their employment and whenever there are significant changes to their terms or conditions. These contracts will outline the employment arrangement with the client with terms and conditions, as a minimum, complying with legislation of the Republic of Tajikistan. Each party to the contract shall have an original copy. Contracts will be drafted in the relevant language and the contractor will ensure that the worker understands the terms and conditions of employment. The terms and conditions should be equal to, or better than, similar work in similar industries in the region.

Young workers, persons with disabilities, migrant workers and refugees, workers engaged by third parties, and workers in the client's supply chain will be considered as vulnerable works. Workplace conditions of employment and tools for vulnerable workers doing similar work will not be substantially different. Where these cannot be avoided, they must be documented, and the contractor will communicate these instances to PIURR with a plan to mitigate potential conflict that may arise.

A separate grievance redress mechanism (GRM) specifically for addressing complaints related to workers employed by construction contractors will be created for the project. Such grievances may include salary size and unpaid overtime, delays with payments, improper living accommodations, lack of clean drinking water and sanitation facilities, and absence of medical care and other issues. Grievance Redress Committee (GRC) will be established to deal with labour grievances, including members who are directly and indirectly associated with the construction work.

The contractor is prohibited from using forced labour, which involves work or service that is not performed voluntarily and is obtained from an individual through threats of force or penalties, including abusive and fraudulent recruitment practices. This includes involuntary or compulsory labour, such as indentured labour, involuntary prison labour, bonded labour, or similar labour-contracting arrangements, as well as trafficking in persons.

The use of Child Labour will be strictly prohibited. Young people below the age of 18 years will not be employed for the project.

The construction camps should have self-sustaining water supplies, septic tank sanitation, food, and recreation facilities for workers.

6 Health and Safety

Health and Safety is crucial in the Project. All workers (including manual labourers) of the contractor prior to dispatch to worksite are trained and instructed on relevant Health and Safety issues. During construction phase there must be a Health and Safety Management Plan (HSMP) in place.

Specific requirements, which the HSMP must include due the specific risks of the Dangara-Guliston Project are the following:

- ⇒ Contractor's H&S Policy/Statement
- ⇒ Legal and other Requirements
- ⇒ Contractor's Health and Safety Organizational Chart
- ⇒ Roles and Responsibilities
- ⇒ Information and Training
- ⇒ Communication
- ⇒ Monitoring, inspections, audits, and non-conformances
- ⇒ Accident and Incident Investigation and Reporting
- ⇒ Arrangements for Controlling Significant Risks associated with the Work including but not limited to:
 - ⇒ Working at height (particularly relevant with regard to the bridge reconstruction over the Tairsu River)
 - ⇒ Lifting Operations
 - ⇒ Ground disturbance and excavations
 - ⇒ Working with and around live electrical conductors

7 Cultural heritage

The PR 8 is complied with. No archaeological artefacts were identified along-side the Project. A suitable chance find procedure is in place in case of chance finds during construction. PIURR is responsible for ensuring that all environmental assessment documentation, including the IEE, the EBRD ESIA package and environmental monitoring reports, are properly and systematically kept as part of PIURR project specific record.

8 Social Assessment

The social assessment has been undertaken within scope of work for preparation the Land Acquisition and Resettlement Plan (LARP) and the Livelihood Restoration Plan. The results are presented in the following chapters.

8.1 Villages and Community Profile along Project Alignment

The project is located in the Khatlon Region of Tajikistan. Khatlon Region is one of the most populated of the four regions of Tajikistan. It is situated in the southwest of the country, between the Hisor (Gissarr) Range in the north and the Panj River in the south and borders of Afghanistan in the southeast and on Uzbekistan in the west. Khatlon has an area of 24,800 square kilometres and consists of 24 districts – 14 in Western Khatlon and 10 in Eastern Khatlon. The total population of Khatlon in 2018 was 3,274,900. The population characteristics of the Project area is as follows:

Table 2 – Demographic Data in Project impacted Villages

Population in Project Impacted Villages							
Rayon	Jamoat	Villages affected by the Project	Population	Men	Women	Number of Households	Average number of household members
Dangara	Korez	Kayonush	2.072	1.061	1.011	437	4,7
	Ismat Sharif	Cuisine	3.891	1.934	1.957	736	5,2
		Shabur	1.804	907	897	198	9,1
		Khuramzamin	5.786	2.892	2.894	826	7
		Buleoni Poyon	4.520	2.261	2.259	600	7,5
		Durakhshon	1.663	870	793	332	5
Vose	Guliston	Bahoriston	1.097	511	586	134	8,1
Sum:	3	7	20.833	10.436	10.397	3.263	46,6

Administratively, the Dangara-Gulistan highway passes through three districts of the Khatlon region: Dangara, Farkhor and A. Hamadoni as shown in the map in the below figure.

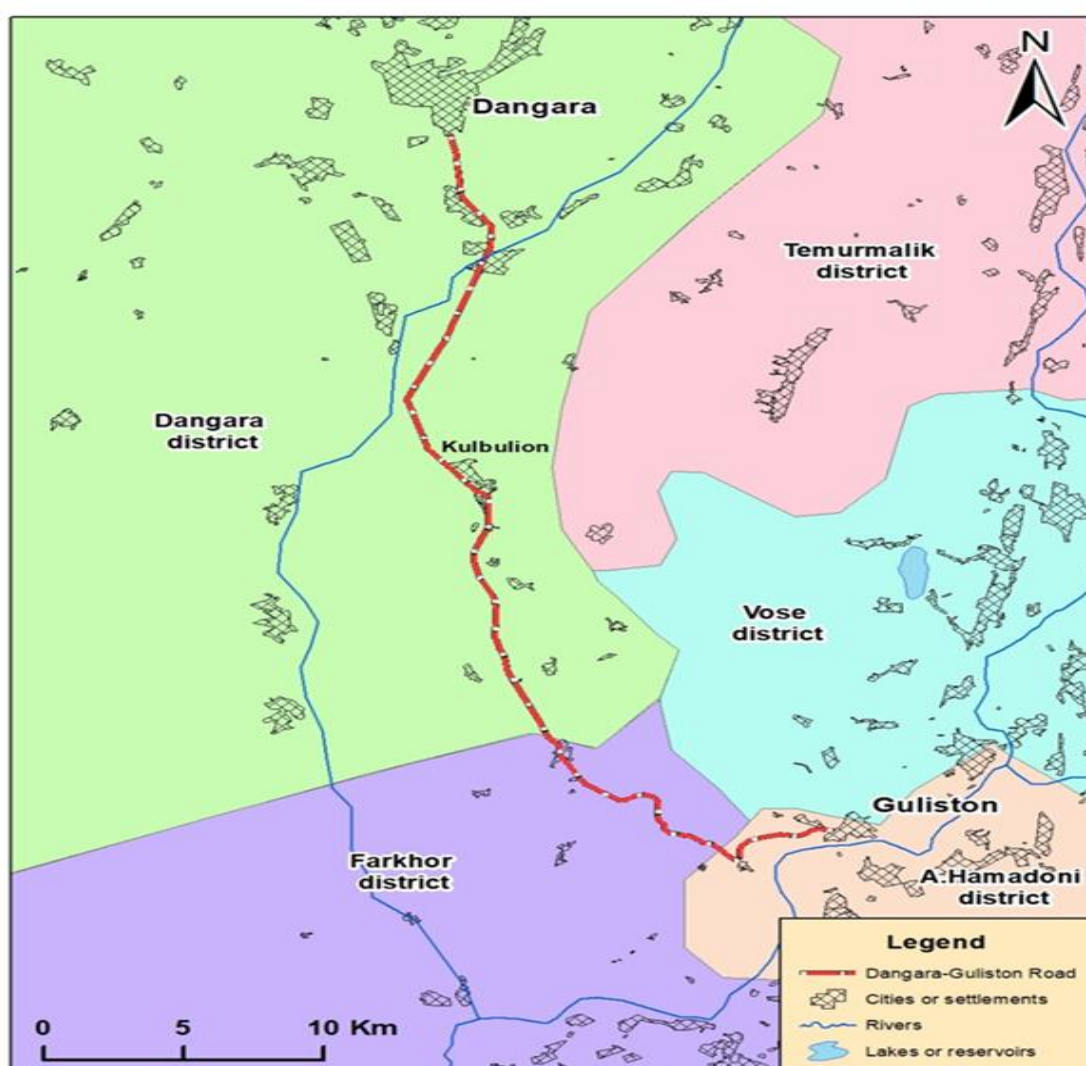


Figure 6 – Map of administrative units of the Dangara-Guliston

8.2 Profile of the Project Area

The proposed road project is located in Khatlon Region. Khatlon Region is one of the most populated of the four regions of Tajikistan. It is situated in the southwest of the country, between the Hisor (Gissar) 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 has an area of 24,800 square kilometres and consists of 24 districts – 14 in Western Khatlon and 10 in Eastern Khatlon. The total population of Khatlon in 2019 was 3,274,900 up from 2,677,251 in the 2010 population census. The population in Khatlon is mainly engaged in Agriculture.

The following table presents the economic profile of the rayons in the Project area

Table 3 - Economic profile of the rayons in the Project area

Economic Profile of the Rayons of the Project Area									
Rayon	Jamoat	Wheat (ha)	Orchard (ha)	Pasture (ha)	/ Irrigated Land (ha)	Non Irrigated Land (ha)	Number of Horses	Number of Sheep	Number of Cows
Dangara	Khorez	1.707	544	6.398	1.119	1.625	442	12.827	2.473
	Ismat Sharif	7.363	222	11.271	2.591	20286	559	34.603	8.895
Vose	Guliston	1.578	97	5.805	2005	1.478	483	19.164	7.692
Total:	3	10648	863	23474	5715	23389	1484	66594	19060

Rural and urban lifestyles differ in terms of main sources of income. In terms of job opportunities regional centres are in more advantageous position because there are more operating state institutions, such as education and health care facilities, as well as enterprises and private businesses.

Most households in the Project area keep some cattle and poultry. Some households also run private business or are employed locally and receive regular wages. Many households rely on pensions and earnings from selling surplus agricultural produce at the local market or to the wholesalers at the farm gate prices. Additional source of income is remittances provided by family members working abroad, mainly men working in Russia as labour force engaged in construction.

Most of the women in rural settlement are mainly involved in household activities and tend in field to grown annual crops mainly for self-consumption. A few females work in public sector, or even run own shop. Women participate in household decision-making processes and organizing family matters. Women are actively involved in decision making process in family care, children's education, household issues, and sharing social responsibilities.

8.3 Impacts on businesses and employment

The construction of the road project will affect some operating businesses located within the road project ROW (Right of Way). Expected permanent and temporary businesses have been identified, recorded, surveyed, assessed and an appropriate compensation package developed to compensate for loss of structures and income.

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The LARP covers all APs (Affected Persons) that are eligible for business interruption compensation to be paid during the implementation of the LARP prior to the commencement of any civil works. The contractor will be responsible to provide full access after the months of compensated business stoppage. However, APs will be eligible for additional compensation to be issued by Contractor to cover their income loss in case if lack of access/disruptions to business lasts on longer than expected.

Given past experience and established practice, new employment opportunities for skilled and unskilled labour will emerge as soon as the contractor starts the mobilisation process.

The Supervising Engineer will carry out regular monitoring to ensure that the Contractor fulfils its responsibilities, including the social and environmental aspects foreseen in the LARP, ESIA and ESMP.

8.4 Impacts to existing infrastructure and public services

The scope of the project impacts is mostly on both sides of the existing road; however, the project does not have a significant impact on public infrastructure and services. These impacts are limited to some improvements (fences, gates, etc.) to these public structures, which are located on government-managed land. These structures will be restored by the contractor and the cost of restoration is included in the BOQ.

8.5 Land acquisition and resettlement (cross reference any resettlement report that is being developed)

The implementation-ready LARP developed under the ADB-financed project will be implemented to provide cash compensation to project-affected households, businesses, farmers and employees or their affected assets and income losses. In addition, the Livelihood Restoration Plan (LRP) developed under EBRD financing will provide additional rehabilitation to all vulnerable groups, severely affected and physically resettled households to assist them in restoring their livelihoods.

The status and quality of LARP and LRP implementation and compliance with ADB and EBRD requirements will be reflected in the relevant compliance reports.

The below table provides summary information on the extent of project impacts on privately owned and used assets subject to cash compensation during LARP implementation.

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Table 4 - Synopsis of Project Impacts on Affected People Assets

No.	Description	No Table	PCS	Number	Number
A	Tenure status of project affected land		No of parcel	sqm	meter (m³)
1	Private land parcels	1	168	1,330,402.85	
2	State land attached with private assets		32	131,339.99	
3	Total of project affected land (Private land parcels and State land attached with private assets)		200	1,461,742.84	
4	State-owned attached with public facilities	12	36 (location)	359,375.39	
5	Total of project affected land (State-owned attached with public facilities)		36	359,375.39	
6	Total of project affected land	1 and 12	236	1,821,118.23	
B	Private land parcels	1	No of parcel	sqm	
7	Residential		90	29,753.13	
8	Commercial		17	15,790.29	
9	Agricultural land used by large Dehkan Farm		51	952,362.03	
10	Dehkan land for garden (empty)		2	15,655.50	
11	Pastureland		8	320,940.4	
12	Total of private land (w/t double counting)		168	1,334,501.35	
C	Annual Crops	7	No of parcel	sqm	
13	Annual crops grown of private land (Dehkan land)		46	844,099.52	
14	Annual crops grown of private land (Dehkan land) Rent		3	87,176.96	
15	Total of affected annual crops		49	931,276.48	
E	Trees		No of parcel	No of tree	
16	Mature fruit tree (AH and AE)	3	83	3,005	
17	Fruit tree sapling (AH and AE)	4	32	430	
18	Non-fruit tree on private land (AH and AE)	5	51	612	
19	Non-fruit tree on State land (AH and AE)	6	41	646	
20	Total of trees (w/o double counting)	2	153	4,693	
F	Structures		PCS	sqm	
21	House (main permanent residential dwelling)	9	7	652.49	
22	Vacated and deteriorated structure		1	19.80	
23	Ancillary buildings (chicken coop, cowshed, etc.) attached to residential land parcel		88	2,476.89	
24	Other (Sheds, canopy, Fences, Foundation, Concrete reservoir, water pump, concrete platform, Tandir and Metal gates		243	3,631.50	1,870.44

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No.	Description	No Table	PCS	Number	Number
25	Total (Affected assets attached to residential land parcels)		339	6,780.68	1,870.44
26	Commercial facilities (Gas station)	10	2	242.10	
27	Canopy from gas station		6	697.28	
28	Commercial old non-residential premises		3	435.62	
29	Old non-residential premises		3	163.94	
30	Furniture workshop		1	63.39	
31	Warehouse auxiliary building		28	1,104.34	
32	Shop		9	425.87	
33	Car wash		1	55.2	
34	Other (Canopy, platforms, stairs, Fence, Foundation, Tandir, Movable billboard, barrel, Container, kiosk and Metal gates		74	1,924.23	6,872.90
35	Total (Commercial project affected assets)	10	127	5,111.97	6,872.90
36	Dehkan land parcels, Field camp (recreation building)	11	2	280.84	
37	Non-residential ancillary buildings (chicken coop, cowshed, etc.)		5	269.92	
38	Other, Canopy, Fence, Transfer of wagon and Metal gates		5	4,369.51	
39	Total (Affected assets attached to dehkan farm land parcels)		12	4,920.27	
40	Affected Public and State assets attached	12	1		
41	Khuramzamin Village Medical Center, Public place (Masjid) jamoat Ismat Sharif, Public place (Masjid) jamoat Ismat Sharif in the name of Emomi Azam and Public place (Cemetery) Guliston Jamoat				
42	Restroom			99.89	
43	Railway checkpoint (Building (place of barrier)			12.48	
44	Other, Fence, Gates, Canopy from the gate, Concrete pad,			427.17	
45	Fruit trees		80		
46	Non fruit trees		40		
47	Total (affected Public and State assets attached)		120	538.54	
G	Social Patterns		No of AH /AE	No of AP	
48	Total of affected	19	154 / 68	1,047	
49	Total affected men		-	521	
50	Total affected women		-	526	
51	Severely affected AHs and AEs	31 AH and 14 AE	43	43	
52	Vulnerable Households	14	33	294	

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No.	Description	No Table	PCS	Number	Number
53	Physical displacement		6	28	
54	Permanent stoppage of business	8	9	60	
55	For temporary affected business facilities		6	29	
56	Renters of project affected business facilities		10	61	
57	Hired labourers losing salaries or wages		8	42	

8.6 Local traffic and access impacts

The Dangara - Guliston Road Rehabilitation Project aims to improve transport infrastructure while minimising disruption to local communities. The project will be designed and implemented in accordance with the Environmental and Social Policy, with a focus on managing local traffic and access impacts.

Summary of Social Benefits

- ⇒ **Improved Accessibility:** The rehabilitation project will enhance road conditions, leading to better accessibility for local communities. Improved roads facilitate easier travel, better connectivity, and can boost local economies by improving access to markets, healthcare, and educational facilities.
- ⇒ **Economic Opportunities:** The project is expected to create job opportunities for local residents during both the construction and operational phases. Improved infrastructure can attract businesses and tourism, fostering economic growth in the region.
- ⇒ **Enhanced Safety:** By addressing road safety concerns, the project aims to reduce traffic accidents and improve overall safety for all road users, including pedestrians and cyclists.

Potential Adverse Impacts

- ⇒ **Traffic Disruptions:** Construction activities may cause temporary traffic disruptions, leading to delays and inconvenience for local residents and businesses.
- ⇒ **Access Restrictions:** During certain phases of construction, access to homes, schools, and businesses may be temporarily restricted, causing inconvenience to the local population.
- ⇒ **Increased Noise and Dust:** Construction work may result in increased noise levels and dust, impacting the quality of life for nearby residents.

Mitigation and Management Measures

- ⇒ **Traffic Management Plans:** Comprehensive traffic management plans will be implemented to minimize disruptions. These plans will include detour routes, adjusted traffic flows, and scheduled construction activities to avoid peak traffic times.
- ⇒ **Communication and Signage:** Clear communication with local communities and adequate signage will be provided to inform residents about construction schedules, detours, and alternative routes. This ensures residents are well-informed and can plan their travel accordingly.

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- ⇒ **Access Arrangements:** Temporary access solutions will be arranged to ensure that residents can reach their homes, schools, and businesses with minimal disruption. This includes constructing temporary pathways and ensuring that key access points remain open whenever possible.
- ⇒ **Noise and Dust Control:** Measures will be taken to control noise and dust during construction, such as using noise barriers, maintaining equipment to reduce emissions, and watering down construction areas to minimize dust.

8.7 Socio-economic impacts; including vulnerable groups or disproportionately Project-affected groups (taking into account gender specificities and needs)

The project influence area is extended over 20 villages of 4 Jamoats and 1 town located within the administrative boundaries of 3 districts as shown in table below.

Table 5 - Description of the project influence area based on census and DMS results

District	Jamoat	Number of villages influenced by projects	No AH	of	No AP	of	No AE	of
Dangara	Korez	Naqshonzamin	-		-		1	
		Mahalai 15	11		72		-	
	Ismat Sharif		-		-		2	
		Shahbur	11		55		-	
			-		-		13	
		Durakhshon	17		96		-	
			-		-		7	
		Khuramzamin	56		428		-	
			-		-		16	
		Bulyoni poyin	20		135		-	
			-		-		4	
		Bahoriston	1		5		-	
			-		-		2	
	Lolazor	Baynak	-		-		1	
		Bahoriston	-		-		1	
		Durakhshon 2	-		-		1	
		Qaymobod	1		6		-	
Farhor	Vatan	Shuhratyr	5		29		-	
	Zafar	Olimtoy	1		1		-	
			-		-		5	
		Gulzor	-		-		1	
	Darkant	Istiqlo	-		-		4	
		Beshkapa	-		-		1	
	Khutan	Bahoriston	8		64		-	
Vose	Guliston	Tojmahal	1		7		-	
		Bahoriston	20		132		-	
	Abdi Avaz	Chorvodoron	-		-		2	
			2		17		-	
		Guliston	-		-		1	
3 districts	3 town and 9 Jamoats	21 villages	154		1,047		68	
			AH + AE = 222 / AP 1,047					

8.7.1 Vulnerable Groups

Information on vulnerable groups, disaggregated according to specific types of vulnerability, was collected from all AHs and APs employed in project-affected commercial establishments. APs belonging to vulnerable households were identified on the basis of the 100% census, SES results (from 146 AHs) and through individual consultation with AHs who were reluctant to participate in the SES and provide financial information about their household.

Complete information on vulnerable groups, disaggregated by specific types of vulnerability, was collected from all AHs and APs employed in project-affected commercial establishments. In summary, a total of thirty-three (33) AHs are defined as vulnerable and are entitled to a vulnerability allowance. These vulnerable AHs consist of 294 persons. The analysis of the data collected from the census and the SES revealed that five (5) households are headed by women, six (6) AHs are headed by a person with a disability, one (1) AH of these 6 AHs is also below the poverty line and receives targeted assistance from the State; finally, twenty-one (21) households have five and more minor children in the family. In total, without double counting, 33 AHs (22.60% of AHs) fall into the vulnerable category. All 33 AHs will receive, in addition to cash compensation for project-affected assets, an additional one-time allowance during LARP implementation and will be eligible for livelihood restoration assistance under the LRP, which will be prepared in accordance with the EBRD ESS 2019.

9 Communication and Contract Details

For communication purposes, please find below the contact details of PIURR representatives.

Table 6 – Contact Details

Mr. Eraj Abduvohidzoda	To be determined	Mrs. Sharis Shakirova
Lead Resettlement specialist of Project Implementation Unit for Roads Rehabilitation 14 Ayni Street, Dushanbe. Tajikistan	Lead Resettlement specialist of Project Implementation Unit for Roads Rehabilitation 14 Ayni Street, Tajikistan	Environmental Assistant 14 Ayni Street, Dushanbe. Tajikistan

The following reports will be disclosed on the MoT website (<https://mintrans.tj>):

- ⇒ Environmental and Social Management Plan (ESMP)
- ⇒ Stakeholder Engagement Plan (SEP)
- ⇒ Environmental and Social Action Plan (ESAP)
- ⇒ Supplementary ESIA Report
- ⇒ Non-Technical Summary (NTS)

9.1 Process for addressing any issues arising

Grievances

All complaints relating to the project will be dealt with with the participation of the PIURR, the Construction Supervision Consultant and the Contractor's representatives. In more complex cases, representatives of other authorised institutions will be invited. The GRM will address social, environmental and other safeguards issues in accordance with the ADB SPS 2009 and applicable laws of Tajikistan.

PIURR members of the GRC include:

- ⇒ Chief Engineer
- ⇒ Social safeguard specialist
- ⇒ Environmental safeguard specialist
- ⇒ MOT lawyer other specialists as necessary

The Grievance Redress Committee will be established at the local level in accordance with the national legislation and in accordance with PIURR Letters No. 359-360 dated 6 April 2020 and will operate during the entire project implementation cycle.

The Grievance Redress Committee will function throughout the project cycle. A Focal Person (FP) appointed at each project jamoat will coordinate between APs, GRC members at local level and PIURR. The PIURR will be involved in all consultations with project stakeholders. The PIURR is responsible for providing full contact details of GRC members to the Jamoats within the project impact area so that any affected person can contact the GRC with any project-related questions, concerns or complaints on social, environmental and LAR issues. The contact details of the GRCs as well as a detailed description of the grievance redressal process and the grievance redressal application form are provided in the Stakeholder Engagement Plan (SEP).

9.2 Stakeholder Engagement Plan

The Stakeholder Engagement Plan (SEP) has been prepared to serve as a planning document for culturally appropriate information disclosure and consultation throughout the lifecycle of the project. The SEP identifies relevant stakeholders who may be affected by, or have an interest in, the project, and defines modes of communication and consultation with these stakeholders to maintain constructive relationships during the construction and operation of the project. It also provides a grievance mechanism for both the local community and the workers involved in the various phases of the project to raise concerns about the project if necessary.

As a living document, the SEP will be updated periodically to reflect all relevant project information, pending changes, including changes to the project design, schedule or project scope of influence.

New stakeholders may be identified at a later stage and should therefore be included in an updated SEP.

10 Environmental and Social Management

10.1 Stakeholder Engagement Plan

The roles, responsibilities and monitoring systems for the delivery of avoidance, mitigation and management measures are detailed in the Project's Environmental and Social Management Plan (ESMP), the Environmental and Social Action Plan, the IEE (and related EMP), the ESIA Supplementary Package. Implementation of all of these measures will require appropriate staff, financial resources, equipment and support systems. It is the responsibility of all PIURR staff, Constructor Supervising Consultant and Project contractors to comply with the requirements set out in the above-mentioned documents. The responsibility of Project contractors and suppliers will be defined through standard terms and conditions of contracts that are consistent with the commitments of the ESMP and EMP. PIURR are committed to implementing the ESMP, EMP and ESAP and will work with and direct their contractors to ensure full implementation and compliance.

10.2 Environmental and Social Management Plan

The Environmental and Social Management Plan is prepared for the Project as part of the ESIA Supplementary Package. Originally from the Project was prepared an Environmental Management Plan as part of the Initial Environmental Examination. Both these documents includes commitments in regard to environmental and social mitigation measures that the Project will implement to reduce the significance of adverse Project-related impacts to environmental and social receptors. The ESMP includes a Labour and Working Conditions Management Plan, Worker Accommodation Plan, Health and Safety Plan, Emergency Response Plan outline, a Traffic Management Plan outline and a Biodiversity Management Plan.

10.3 Environmental Action Plan

An Environmental and Social Action Plan (ESAP) has been prepared for the Project to meet EBRD requirements. In general, the ESAP requires compliance with the IEE and ESIA Supplementary Package including specific requirements for many of the actions whose purpose is to avoid, reduce, or otherwise mitigate the most significant potential impacts.