

Luxembourg, 03 September 2024

Environmental and Social Data Sheet

Overview

Project Name:	Armenia North South Corridor – Sisian Kajaran Road Project
Project Number:	2023-0365
Country:	Armenia
Project Description:	<p>The Sisian-Kajaran section is one of five sections of the Armenian part of the North-South Corridor programme and is located in the southern part of the country. The project comprises construction of a new approx. 60km long single carriageway road link between Sisian and Kajaran in Syunik Marz, Armenia. The project comprises three distinct sections:</p> <ul style="list-style-type: none"> • Section 1: Northern Road Section from Sisian to Shenatagh (approx. 27km) • Section 2: Bargushat Tunnel (approx. 8.6km) • Section 3: Southern Road Section (approx. 24km)
EIA required:	Yes
Project included in Carbon Footprint Exercise ¹ :	Yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

Environmental Assessment

The project will be implemented in Armenia by the "Road Department Fund" ("RD" or the Promoter) in the Ministry of Territorial Administration and Infrastructure of Armenia. The project consists of the construction of a new 60km long single carriageway road link between Sisian and Kajaran in Syunik Marz, Armenia. The project includes 9 tunnels and 27 bridges. The project comprises three distinct sections:

- Section 1: Northern Road Section from Sisian to Shenatagh (approx. 27km) – to be co-financed by EIB and ADB.
- Section 2: Bargushat Tunnel (approx. 8.6km) - to be financed by the French Government and the Government of Armenia.
- Section 3: Southern Road Section (approx. 24km) – to be co-financed by EIB and EBRD.

The project is categorized as "High Risk" according to the EIB Group's E&S Policy as there are likely to be significant environmental, climate and/or social impacts and risks and require preparation of an Environmental and Social Impact Assessment (ESIA) report since it would fall under Annex I of the EIA Directive 2011/92/EU, as amended by the Directive 2014/52/EU, if the project was located inside the EU. In consideration of all three Lenders' environmental and social requirements, an ESIA covering all three lots was prepared by an independent consultant. The ESIA package is composed of:

- Environmental and Social Impact Assessment ("ESIA")
- Environmental and Social Management Plan ("ESMP")
- Environmental and Social Action Plan ("ESAP")
- Biodiversity Action Plan ("BAP")
- Non-Technical Summary ("NTS")
- Stakeholder Engagement Plan ("SEP")

¹ Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO₂e/year absolute (gross) or 20,000 tonnes CO₂e/year relative (net) – both increases and savings.



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- Resettlement Framework ("RF")

The ESIA package was disclosed on the RD's website on July 21, 2023 for 120 days and the public consultations were concluded by December 1, 2023. Integrating the results of the public consultation activities, as described in the ESIA Disclosure and Consultation Report, the final ESIA package was redisclosed on RD's website on April 4, 2024.

The Armenian national regulations on the Environmental Impact Assessment (EIA) namely, the Law on Environmental Impact Assessment and Expert Examination (2014), categorizes projects as A, B and C depending on their expected impact on the environment. A national EIA was prepared in parallel with the preparation of the Feasibility Study and Detailed design and received a positive conclusion of the State Environmental Review in March 2018. However, this conclusion expired in March 2019. Therefore, it was necessary to relaunch the national EIA process which was conducted parallel to the ESIA process. The project is categorized as B by the Ministry of Environment and the Positive Conclusion (Environmental Decision) for the EIA prepared in line with the national EIA requirements was provided by the Ministry of Environment on November 27, 2023.

The ESIA package and the national EIA prepared describe the project as a whole (i.e. including all three lots of the project), and the direct, indirect and cumulative impacts as well as alternatives and measures to avoid / minimize the impacts and monitoring requirements described in the ESIA package will be implemented for all three lots by the promoter. The EIB financing considers section 2 (i.e., Bargushat Tunnel) as an associated works/facility.

Impacts and mitigation

Based on the ESIA assessments, the major negative environmental and social impacts are identified as, increase in noise and vibration levels, geohazards, impacts on sensitive biodiversity elements and important biodiversity areas, occupational health and safety issues and impacts on tangible cultural heritage for construction and operational phase of the project. During both the construction and operational phases, the impacts will be minimized and reduced to acceptable levels through the implementation of mitigation and compensatory measures developed.

The measures identified in the ESIA will be further enhanced through the establishment of various management plans by both the Contractor and the Promoter. These plans include, among others, air quality management, topsoil management, waste management, erosion control, slope stabilisation, wastewater and stormwater management, noise and vibration management, spill management, hazardous materials management, tunnel water management, community and occupational health and safety, cultural heritage, emergency preparedness and response, utilities protection and relocation, construction camp management, concrete batching management. Any design changes proposed by the Contractor during implementation will be assessed through the change management procedure that will be established by the Promoter. The change management procedure is to ensure that any new impacts due to changes to the existing project design, capacity, location or process technology, are appropriately addressed and mitigated in line with Lenders' E&S requirements.

Air quality: No significant operational phase air quality impacts are anticipated during the operational phase. Nevertheless, the Promoter will prepare and implement an Air Quality Management Plan which will include measures to improve driver behaviour and engagement with the government on improvement of the legislation on motor vehicle emission reductions. Construction phase impacts are described to be mostly relevant to Particulate Matter (PM)₁₀ and the respective impacts are presented to be reduced to the acceptable levels through implementation of the following mitigation measures: dust suppression techniques, use of dust screens, careful siting of the auxiliary facilities in consideration of the sensitive receptors and the prevailing wind directions, evaluation of PM_{2.5} and other exhaust emissions from construction vehicles and provide further mitigation measures as necessary which will be described in the Air Quality Management Plan to be prepared by the contractor.

Noise and vibration: Both construction and operational phase activities of the project will exceed the national and international threshold values identified as the project standard for day and



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nighttime under worst case scenarios. A Noise and Vibration Management Plan will be prepared by the contractor and will at minimum include use of high maintenance and low sound power vehicles, use of silencers and noise barriers, limitation of the working hours close to the residential areas, selection of quieter construction techniques, speed limits, establishment of a blasting management plan and conducting test blasts for blast design to minimize the disturbance, and establishment of a grievance mechanism. During the operational phase, the noise levels will be reduced to acceptable levels through road traffic control measures, noise attenuation barriers and landscape planning. The noise attenuation measures including but not limited to the barriers, landscape vegetation etc. will be designed and integrated into the detailed design at the noise sensitive receptors as appropriate.

Biodiversity: The biodiversity baseline studies cover desktop studies, appropriate consultations with relevant stakeholders, and fieldworks for four seasons during 2021-2022. The project will be implemented in a biologically rich area. The Bargushat tunnel will be under the Zangezur Sanctuary and candidate Emerald Network site (AM0000015), with the tunnel's entry and exit portals located outside the Sanctuary. The proposed road runs close to the candidate Gorhajk (AM0000013) and Tatev (AM0000016) Emerald sites. No direct effects are anticipated on the habitats, nor on the integrity of the sites while some indirect effects due to blasting and accidental water pollution, sediment resuspension, and/or disturbance by dust, noise and light pollution on the species will be mitigated through the proposed measures in the ESMP. The project alignment also runs through the Meghri Large Key Biodiversity Area (KBA) and Zangezur Important Bird Areas (IBA) and KBA. No management plans have been established for neither of the special protection areas, KBAs or IBAs. The Critical Habitat Assessment reveals existence of several critical habitats within the project area of influence. The impacts on the biodiversity elements identified within the project's area of influence (e.g., habitat loss and degradation, species disturbance, potential mortality, loss of connectivity, accidental pollutions etc.) will be reduced to acceptable levels through the mitigation and compensatory measures proposed in the ESMP and the Biodiversity Action Plan (BAP) which will be part of the tender documents for the contractors. The mitigation measures include avoidance of the Zangezur protected area and the proposed Emerald sites through Bargushat tunnel, identification of no-go areas when siting further project components, detailed design of the passages to avoid impacts on wild animal species; development and implementation of a Biodiversity Offsets Management Plan (BOMP) to ensure no net loss and net gain where needed; appointment of qualified experts within the Project Implementation Unit /Project Management Consultant, contractor and the supervision engineer to effectively implement and monitor the measures proposed; implementation of construction and operational phase mitigation measures (i.e. avoidance, reduction and restoration measures). The Biodiversity Action Plan addresses the proposed compensatory measures including but not limited to the critical habitat restoration and conservation targeting degraded habitats, reinforcing anti-poaching efforts, contribution to strengthening and extension of protection and management of Zangezur Biosphere Complex. The proposed measures will be further detailed in the BOMP. The design in the southern section will be further enhanced with the proposed green bridges/underpasses for protection of the biodiversity elements to provide net gain for the critical habitats and no net loss for the priority biodiversity features.

There have been consultation meetings with the relevant stakeholders including the Ministry of Environment (MoE) and the Manager of the Zangezur Sanctuary as well as other national and international stakeholders throughout the biodiversity assessment in the ESIA process. The list of mitigation measures required by the manager of Zangezur Sanctuary Protected Area have been integrated into the BAP. The opinions of all stakeholders have been incorporated into the ESIA, ESMP, and BAP as needed. These included considerations related to the methodology for baseline studies, baseline analysis, impact assessment, and mitigation measures throughout the ESIA consultation process.

Geohazards: The road will be constructed on a mountainous terrain and the following geohazard risks are highlighted by the Promoter: rockfall, rockslides, unstable slopes/landslides, seismic risk and avalanches. The contractor will be required to update the



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geohazard mitigation measures in the existing design and implement them at appropriate locations.

Spoil Disposal Areas (SDAs) and some auxiliary facilities of the project: Details for some of the project components required in the construction phase such as the construction camps, quarries and borrow pits, temporary disposal areas, asphalt plant requirements, areas for temporary storage of removed topsoil, spoil disposal areas (SDAs), material and energy requirements for construction activities are not available at the current stage. The ESMP establishes minimum specific design requirements for such project components to avoid or minimize their impacts. These requirements encompass various aspects, including avoiding no-go areas identified, siting at least 500 m away from the sensitive receptors and 2 km away from protected areas, minimization of vegetation clearing, determination of the closure obligations, safe topsoil removal and storage and stabilisation of cleared surfaces. In addition, the contractor's management plans will include further measures to reduce the site-specific environmental and social impacts.

The works will result in excessive spoil materials that cannot be reused for the road construction and the materials will need to be disposed in Spoil Disposal Areas (SDAs). ESIA envisaged 8 SDAs close to the construction sites for all three sections (i.e. 5 in northern section and 3 in southern section), however three of them in the southern section were disqualified due to E&S considerations through ESIA studies. Therefore, three new SDA sites are proposed to handle the excessive materials which will be further assessed by the contractor in line with the ESIA requirements prior to utilization of the sites. The contractor will be responsible for completing site selection, conducting E&S surveys and assessments, design works and obtaining necessary permits and licenses for all project components that are currently not included in the main project design.

Climate Change: According to the climate change and climate adaptation review reports carried out at project preparation the most significant risks with higher probability and impact are related to flooding, potential landslides / rockfalls and increased snow loading (snowstorms and avalanches). Other relevant climate change related project risks, e.g. temperature increase, precipitation increase and strong winds, are rated "medium". The Promoter has confirmed that the project design incorporates appropriate measures and is sufficiently adapted to the identified climate vulnerabilities with the highest risks for the Northern Road Section. The Southern Road Section will be procured as a Design and Built contract and the Contractor will carry out the detailed designs incorporating the required climate adaptation measures including a geo hazard survey and assessment report. Some of the potential adaptation measures that will be implemented are:

- Appropriate design and implementation of the drainage system.
- Rockfall protection and slope protection measures at specific locations.
- Avalanche protection measures where required.
- Proper selection of materials.

After the application of proper mitigation measures, the climate risk of the project is rated as "low".

Project Paris alignment

The project is Paris aligned. The project has been assessed by the Bank's Services for Paris Alignment in accordance with the policies set out in the Climate Bank Roadmap (CBR). The project is considered to be aligned with the low carbon goal as it consists of extending a new road infrastructure capacity meeting the EIB eligibility criteria for Transport, including passing the Adapted Economic Test introduced under the CBR.

EIB Carbon Footprint Exercise

The project is included in the Carbon Footprint exercise on the following basis:

- Estimated annual emissions of project in a standard year of operation:
 - Forecast absolute (gross) emissions are 30,900 tonnes of CO₂ equivalent per year.
 - Forecast emission avoided are 20,900 tonnes of CO₂ equivalent per year.



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- The project boundaries are given by the new road connecting the Sisian and Kajaran in Syunik Marz, Armenia

The baseline is the forecast third party emission, in the absence of the project, from the existing network, only within the boundary defined above. The forecasts reflect the Services' assumptions on traffic, traffic growth, speed/flow, infrastructure capacity and fuel consumption.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment

A Land Acquisition and Resettlement Framework (LARF) for the North-South Corridor Road Investment Program ('the Program') was prepared by the Ministry of Transport and Communications of Armenia (currently, the Ministry of Territorial Administration and Infrastructure (MTAI)). Following the LARF, a Resettlement Framework (RF) has been prepared in relation to the Sisian-Kajaran Road project in June 2023 and has been disclosed publicly.

The legal and policy framework of the Project is based on laws and legislations of the Republic of Armenia (RA) related to land acquisition and resettlement (LAR) as well as relevant EBRD Environmental and Social Policy with its Performance Requirement (PR) 5 (2019), ADB, Safeguard Requirement 2 – Involuntary Resettlement (2009), and EIB Environmental and Social Standards (especially Standard 6) (2018) (hereafter: Lenders E&S Standards).

The proposed road will pass through Sisian and Kajaran Communities (municipalities) of Syunik Region in the south of Armenia. Sisian Community includes 36 settlements (including two towns - Sisian and Dastakert) with the total population of around 31,620 residents. The urban population is about 52% of the total population. Kajaran Community includes 22 settlements with one town – Kajaran. The total population is 8,945 residents with 8,567 people (96%) living in Kajaran town and only 378 in rural settlements. Only 414 ethnic minority residents are in Syunik Region (0.3% of the total region's population), of whom 259 declare themselves as Russians (2011 Census). The Project-affected settlements of both Sisian and Kajaran Communities are almost exclusively inhabited by Armenians, and the communication language within the settlements is Armenian. No presence of refugees and/or internally displaced people is indicated in the social baseline of the area of direct influence of the project. Affected households in a condition of vulnerability will receive dedicated assistance as per the entitlements outlined in the safeguard documents (e.g. Resettlement Action Plan).

A first draft Resettlement Action Plan was prepared in September 2023 and an updated version in May 2024. From this draft RAP, it is anticipated that there will be land acquisition of private, community and state-owned land for the project, as follows:

- Approx. total number of affected households (AHs) is 398. Approx. 15 residential and non-residential structures will be affected.
- With respect to the acquisition of private land, 375 households with 1,459 persons are affected. 23 households are affected due to the acquisition of community land (out of these, 22 AHs are leaseholders of community lands, and the remaining AH is an informal user of two community land plots.
- Cultural Heritage: The baseline studies have been conducted in consultation with the relevant stakeholders including the community members, relevant NGOs, administrative heads and relevant competent authorities during the ESIA process. Accordingly, the project may be likely to adversely affect 46 cultural heritage sites with 67 units of cultural heritage elements. This will be confirmed during the project implementation and a Cultural Heritage Management Plan (CHMP) will be developed and implemented by the Promoter, which will detail further site-specific measures that will be agreed with the competent authority on a case-by-case basis.



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The Promoter will be required to finalise the RAP with the most up to date project designs and estimates of final displacement impacts. The final RAP, once judged to the satisfaction of the Bank, will be disclosed in the EIB public register.

In the operational phase, the project is expected to have an overall positive socio-economic impact, including the reduction of travel time, costs and improvement of road safety. It will result in a reduced air and noise pollution for the neighbouring communities. The project will also facilitate temporary and permanent job creation and some local business opportunities in the region.

A Gender Impact Analysis was carried out during the ESIA process. According to this analysis there are positive expectations from the project, mainly in terms of jobs opportunities and improved transportation, safer roads with inter-settlement connectivity improvement and also better connection with Sisian, Kapan, and Kajaran towns and the capital of Yerevan.

The following gender specific project-related opportunities and risks are identified: i) Women employment opportunities (direct, indirect, and induced), ii) Women entrepreneurship opportunities, and iii) Gender-Based Violence and Harassment (GBVH) impacts. Mitigation measures are identified and provided under ESMP that will be implemented during the project implementation. Some measure include:

- The Supervision Engineer will be required to appoint suitably qualified and experienced local Gender specialist.
- Contractors to appoint a female grievance officer ('confidant') for gender sensitive issues at each construction camp.
- Training sessions on the gender elements of the Worker Code of Conduct for the Contractor's and Supervision Engineer's staff
- The Contractor to develop women-only training sessions and safety meetings and discuss any additional OHS concerns from a gender perspective.
- Develop and implement a Human Resource policy including commitments related to Gender-Based Violence and Harassment (GBVH),

Public Consultation and Stakeholder Engagement

The ESIA documentation was disclosed on the Promoter's website on 21 July 2023, for a period of over 120 days. The Promoter organized extensive public consultations and assured stakeholder engagement during the different stages of the ESIA and RAP procedures in compliance with the requirements of the applicable legal framework. Prior to the public consultation meetings, information was made available through publication in local media and posting on information boards and webpages of the municipalities impacted by the project. The proposals and recommendations received during the consultations were dealt with, before issuing the environmental decisions and defining technical requirements for the design.

The ESIA and RAP engagement processes targeted different socio-economic categories and project stakeholders. Women were consulted with dedicated engagement sessions. Specific attention was dedicated in the data collection and impact assessment process. The Promoter will be required to develop a Stakeholder Engagement Plan (SEP) to lay out foundations for continuous information dissemination and engagement with affected stakeholders. The SEP will also include the proposed Grievance Redress Mechanism (GRM) for the project implementation.

Other Environmental and Social Aspects

In accordance with national law on labour standards and obligations deriving from International Labour Organisation (ILO) conventions ratified by Armenia, the works contracts will comply with ILO core labour standards. Contractors shall also ensure occupational and community health & safety as part of their works contracts. The Promoter will be required to integrate labour and H&S management plans as part of the project Environmental and Social Management System (ESMS).

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Conclusions and Recommendations

The project is high risk according to EIB Group's E&S Policy and category B according to the national regulations. The measures for preventing the anticipated impacts are described in the ESIA package. Limited negative environmental and social impacts can occur during construction and operation. Appropriate mitigation measures will be introduced through relevant management plans. At the time of appraisal, the national EIA procedures, including issuing of Positive Conclusion (Environmental Decision) were completed for the project.

Subject to the fulfilment of the below-mentioned conditions and undertakings, the project is acceptable for EIB financing in E&S terms.

Prior to first disbursement - For Northern and Southern Road section

- The Promoter shall establish and submit evidence to the satisfaction of the Bank, on the fully functional PIU.
- The Promoter shall submit evidence to the satisfaction of the Bank that an external International PMC with sufficient qualifications and expertise for E&S including but not limited to environment, social, biodiversity, cultural heritage, resettlement and stakeholder consultation is mobilised.
- The promoter shall provide evidence that the Construction Supervision Consultant team includes (CSC) qualified national and international E&S standards, as described in the ESMP.
- The Promoter shall ensure that Contractor has sufficient staff for project implementation and with adequate competences on national and international E&S standards, as described in the ESMP.
- The Promoter shall submit the final version of the Resettlement Action Plan (RAP) to the satisfaction of the Bank.
- The Promoter shall submit the final version of the Stakeholder Engagement Plan (SEP) to the satisfaction of the Bank.
- The Promoter shall submit evidence that the Grievance Redress Mechanism for the project is operational.
- The Promoter shall submit the change management procedure to the EIB and integrate it into the Environment Social Management System (ESMS).
- The Promoter shall submit evidence that labour and H&S management plans form part of the project ESMS.
- The Promoter shall submit evidence that the land has been made available (aligned with the compensations as well as physical relocation measures set out in the final approved RAP) prior to commencement of works in the relevant road sections according to the work calendar.

Prior to subsequent disbursements – for Northern and Southern Road section:

- The Promoter shall submit evidence to the satisfaction of the Bank on completion of the site selection, E&S surveys and relevant assessments and design works for the SDAs and other auxiliary facilities which are currently not sited.
- The Promoter shall submit evidence that project's RAP, SEP, ESMP, ESAP and all respective management plans part of the project are being implemented to the satisfaction of the Bank prior to commencement of works in the relevant road sections according to the work calendar and monitored throughout the project progress.
- The Promoter shall submit the BOMP based on the principles as explained in the BAP to the satisfaction of the Bank.
- The Promoter shall submit a Wildfire Prevention Plan for road construction and operation to the satisfaction of the Bank.
- The Promoter shall submit a Climate Vulnerability Risk Assessment to the satisfaction of the Bank, and update the project design, accordingly.



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- The Promoter shall submit to the Bank the Cultural Heritage Management Plan (CHMP) including the Chance Finds procedure developed in agreement with the competent authority.
- (Sothern Roads section only) Where applicable, the Promoter shall submit the geohazards identification and assessment studies where applicable to the satisfaction of the Bank, and update the project design, accordingly.
- (Sothern Roads section only) Where applicable, the Promoter shall submit evidence that the design includes green bridges as per the ESIA.

Undertakings – for both Northern and Southern Road sections

- The Promoter shall promptly inform the EIB on any significant environmental claims, proceedings or investigations commenced, pending, or risk of being initiated regarding environmental and social matters affecting the project.
- The Promoter shall regularly monitor and report to the Lenders on a quarterly basis on the E&S performance of the project (for all three sections) according to the ESIA commitments.
- The Promoter shall submit evidence (quarterly progress reports) that project's RAP, SEP, Environment and Social Management Plan (ESMP), respective management plans part of the project's Environmental and Social Management System (ESMS) and Environmental and Social Action Plan (ESAP) are being implemented and monitored to the satisfaction of the Bank.
- The Promoter shall appoint an independent / external E&S consultant who will monitor and provide regular reports on the project's E&S performance to the lenders during the project implementation (pre-construction and construction phases and two first years of operations)
- The Promoter shall submit an independent / external third-party resettlement completion audit once the RAP is fully implemented.
- The Promoter shall submit an independent / external third-party cultural heritage completion audit to verify the implementation of the CHMP.
- The Promoter shall submit sufficient evidence on developing and implementing an ESMS to the satisfaction of the Bank.
- The Promoter shall submit any material changes in accordance with the Change Management Procedure, to the Bank. This is also applicable to the final approved BAP, RAP, SEP, and other management plans part of the project's ESMS.
- The Promoter shall implement the project in accordance with the provisions of the ESIA, ESMP, BAP, Resettlement Framework and RAP, SEP, and respective management plans part of the project's ESMS and ESAP
- The Promoter shall submit evidence to the satisfaction of the Bank that the detailed design includes the wildlife passages and necessary noise attenuation measures at relevant locations as described in the ESIA.
- The Promoter shall duly implement BAP on site and develop and implement the BOMP.
- The Promoter shall ensure that all required permits, authorizations and approvals from the relevant authorities are obtained, and compliance is maintained throughout the project implementation.
- The Promoter shall update and implement the operation phase ESMP and the respective management plans as part of an operation-phase ESMS prior to the operationalization of the project.
- The Promoter shall submit evidence that the Grievance Redress Mechanism for the project is operational.

Subject to the above mentioned environmental and social conditions being met, the overall residual environmental and social impacts of the Project are expected to be acceptable.