



# Non-Technical Executive Summary

## Draft for Consultation

R-21 “Kola” highway St. Petersburg – Petrozavodsk - Murmansk – Pechenga – border with the Kingdom of Norway, Republic of Karelia, Russian Federation, km 406 to km 422

11 November 2019

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R-21 “Kola” highway St. Petersburg – Petrozavodsk - Murmansk – Pechenga – border with the Kingdom of Norway, Republic of Karelia, Russian Federation, km 406 to km 422

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## 1. INTRODUCTION

Independent consultant conducted an Environmental and Social Assessment (ESA) of a proposed upgrading of a section km 406 – km 422 of the R-21 "Kola" highway St. Petersburg – Petrozavodsk – Murmansk – Pechenga – to the border with the Kingdom of Norway, located within the area of the Prionezhsky and Pryazhinsky districts of the Republic of Karelia, Russia (hereinafter "the Project").

AIIB is considering extending a sector loan to the Government of the Russian Federation (RF) through the Ministry of Transport, to support the implementation of roads upgrading by the Federal Road Agency (Rosavtodor) and local Rosavtodor units. Specifically, through this sector loan AIIB is considering financing the upgrading of multiple road sections on international road corridors implemented by local branches of Rosavtodor across the Russian Federation that meet Environmental and Social (E&S) eligibility criteria established by AIIB.

The objective of the ESA is aimed at assessment of the Project features and design, of its implementing entity's capacity and foreseeable environmental, health, safety and social performance against Russian environmental, health, safety and social regulatory requirements as well as against the requirements of the AIIB's Environmental and Social Policy (ESP) and Environmental and Social Standards (ESS).

As part of this ESA, an independent consultant reviewed the existing Project design documentation including related to E&S aspects and numerous related documents, local Environmental Impact Assessment (EIA), and numerous related documents provided by the Federal Road Agency "Rosavtodor" and its local unit in the Republic of Karelia, conducted a site visit between September 4 and 6, and conducted interviews with selected Project-Affected People and other stakeholders.

## 2. PROJECT BACKGROUND

The Project envisages construction of a section km 406 – km 422 of the R-21 "Kola" highway St. Petersburg – Petrozavodsk – Murmansk – Pechenga – to the border with the Kingdom of Norway.

The route of the proposed road of 14.82 km length runs along the southern edge of Vilga and Polovina settlements within the administrative borders of the Prionezhsky district (Novovilgovsky rural settlement) and, partially, the Pryazhinsky district of the Republic of Karelia, 12 km west of Petrozavodsk.

In the target area, the existing R-21 road crosses the settlements Vilga and Polovina. The road has two traffic lanes; traffic intensity is over 8,000 vehicles per day.

The Project provides for the following activities:

- reconstruction and expansion of the start and end parts of the existing road to 4 lanes (two lanes in each direction);
- construction of a new 4-lane section bypassing the villages of Vilga and Polovina;
- construction of 12 bus stops with pavilions and pathways;
- construction of 8 slip roads and 18 exits to local roads leading to residential areas and gardening plots;
- construction of a 37.75 m arch culvert across the Vilga River;
- construction of the infrastructure facilities (five power units and installation of exterior illumination for pedestrian crossings and bus stops; culverts and stormwater sewage with five stormwater treatment facilities; noise screens along the area designated for the new settlement construction) and re-installation of power transmission lines, communication lines and high-pressure gas pipelines.

At present there are no pre-construction or construction activities in progress at the target km 406 – km 422 section of the road.

Construction of the proposed road section will be performed by contractors to be selected through a tender after the detailed design of the Project.

It is expected that the stage of construction will last around 21 months with the peak onsite headcount of 98 workers. The Project construction personnel will be transported to the construction sites from Petrozavodsk city.

The Project provides for organization of about four construction camps along the proposed road route (outside of residential areas\settlements) designated for storage of construction equipment and machinery, storage of raw and construction. The camps will be equipped with construction trailers for office premises and changerooms for workwear, dining rooms, bio-toilets and wash stations for vehicle wheels.

Construction materials and structures (concrete, cement, bitumen, sand, crushed stones, reinforced concrete structure, steel piles etc.) will be mainly sourced locally, from companies operating in Petrozavodsk and St. Petersburg. According to the design documentation batching plants for cement, bitumen / asphalt will not be used / operated at the Project.

The Project will be implemented by the FKU Uprдор "Kola" which is a regional branch of Rosavtdor in the Republic of Karelia. Contractors on a contractual basis will carry out all types of the Project's works (development of the design documentation, land allocation and legal registration, construction operations, supply of construction materials and subsequent maintenance of the road).

The total area of Project land withdrawal is 151.20 ha including the existing allocation area of 19.28 ha, the area of the additional allotment of 131.92 h and temporary allotment area of 10.02 ha.

According to a land and property inventory, lands to be withdrawn for the Project will be presented by forestry lands owned by Pryazhinsky, Prionezhsky and Petrozavodsk local forestries; reserve lands and lands of the Ministry of Defence of the Russian Federation; and undeveloped residential lands owned by the administration of the Novovilginsky rural settlement and by the housing association "Nadezhda".

The proposed route is exclusively located outside of residential areas and agricultural lands. Therefore allocation of land for the Project will not result in physical and/or economic displacement.

All land plots designated for acquisition have already been reserved; the acquisition and registration of title (for permanent withdrawal) or leasing rights (for temporary withdrawal) as well as conversion to industrial lands will be conducted after the commencement of the Project.

### 3. PROJECT ENVIRONMENTAL AND SOCIAL CATEGORIZATION

Following the screening in accordance with AIIB's Environmental and Social Policy (ESP), the project has been assigned Category "B" given the following:

- The anticipated environmental and social risks and impacts of the project are limited, temporary in nature and reversible excluding road bed and by-passes which will have permanent impact in terms of land allocation.
- The project excludes the construction of major infrastructure such as bridges with structure (e.g. piles) in water bodies and tunnels, and construction in densely populated areas (e.g. road widening in village, town or city).
- The project excludes affecting environmentally and ecologically sensitive area, such as internationally, nationally or locally protected area, conservation area, or critical habitat as defined in AIIB's ESP. No significant damage to natural habitats is expected.

- The project excludes interaction with, impact on, use of or access restriction to natural resources such as water sources (including surface and ground water), timber, wild fauna, forest products, etc., except for minimized vegetation clearing duly pitted and offset to ensure no net loss of habitat (including fauna and flora).
- Land acquisition will not induce physical and economic resettlement.
- The project will not be implemented in areas inhabited by Indigenous Peoples. Therefore no impacts on land and natural resources subject to traditional ownership or under customary occupation or use; no causing involuntary relocation of Indigenous Peoples (IPs) from land or limitations on access to natural resources subject to traditional ownership or under customary occupation or use; or no significant impacts on IP's cultural heritage will be associated with the project implementation.
- The project excludes impact on tangible cultural heritage as determined by federal or local regulations, and no impact on natural features and landscapes of religious, aesthetic, or other cultural significance.

## 4. SCOPE OF THE ESA

The ESA has comprised a:

- desktop review of the existing Project design documentation including local Environmental Impact Assessment (EIA) and numerous related documents provided by the Federal Road Agency "Rosavtodor" and FKU Uprдор "Kola";
- site visit to the Project area (existing part of the road R-21 (406 – 422 km); settlements Vilga and Polovina; bypass of the Matrosy settlement; area with summer houses "Landysh" and "Eco") in between September 4 - 6, 2019.

Based on the findings of our review, an independent consultant has assessed the compliance of the Project against relevant Applicable Standards (see below), identified gaps against these standards, and developed Environmental and Social Action Plan (ESAP) to address identified gaps and issues comprising measures and actions required for the project to achieve compliance with Applicable Standards over a specified timeframe.

In the agreement with AIIB, the Project was reviewed against the following Applicable Standards:

- AIIB's Environmental and Social Policy (ESP), Environmental and Social Standards and Environmental and Social Exclusion List;
- Applicable Russian laws and regulations; and
- Relevant International guidelines and standards including: the World Bank Group General EHS Guidelines and relevant sector specific guidelines (including Toll Roads); and International laws including conventions and treaties adopted by the host country and applicable to the Project.

## 5. KEY FINDINGS OF THE ESA

### 5.1 Environmental Impacts

Essential adverse environmental impacts of the Project are associated with discontinuity of natural / forested habitat during the bypass construction and threat to the aquatic organisms while construction of an arch culvert at the Vilga River. Duration of other environmental impacts is mostly dictated by the timeframe of construction operations and their spatial extent will be confined to the road's land allocation area and adjacent territories.

Environmental impacts of the Project will be less during the operational stage.

Impact on Air Quality: According to the results of air dispersion modeling prepared in the EIA section, concentrations of air pollutants generated at the construction stage and during the operation stage will not exceed the established regulatory standards at the boundary of sensitive receptors (settlements Vilga and Polovina, areas with summer houses and garden lots, area designated for construction of a new settlement), or the thresholds for SO<sub>2</sub>, CO and NO<sub>2</sub> determined by the World Health Organization (WHO) standards.

Environmental Noise and Vibration: Calculations in the local EIA section of the design documentation suggest that the maximum noise level in the nearest residential settlements Vilga and Polovina (near the houses located 200 – 850 m from the construction sites of the road) will not exceed the noise level of 55 dBA for the daytime established in Russia during construction operations. The highest vibration levels will be within 30 - 50 m from impact sources (according to surveys undertaken for similar facilities (M-11 Motorway Sections 1 and 2, Western High Speed Diameter road) gradually decreasing with distance. Given the nearest residential areas are located at the distance of more than 200 m from the R-21 construction sites, these areas are not expected to be exposed by vibration exceeding established thresholds. The Project design provides construction of a noise prevention screens with total length of 900 m, height of 3 m along the proposed new settlement in order to minimize noise levels up to the established standards. The project design calculations with account of the planned noise screen installation show that noise levels at the boundary of the proposed residential area will be in accordance with Russian noise pollution thresholds and WHO standards (for day and night time).

Impacts on Soils and Geology: Road construction operations could lead to the following potential impacts on geology and soil condition: potential development of adverse geological processes (wind and water erosion, land- and rockslides); reduction of soil fertility; deterioration of soil quality as a result of pollution / contamination (vehicle maintenance, spills and leaks from construction machinery, etc.). No adverse geological and soil impacts are expected, provided that mitigation measures are implemented.

Impacts on Hydrology: The Project design provides for construction of an archculvert over the Vilga River and construction of 32 culverts. The arch culvert construction proposes straightening the riverbed, which can lead to increase of water speed, complete destruction of trophic soil layer and changes in watercourse productivity. Potential migration of pollutants into groundwater cannot be totally avoided given the extensive area (length) of construction operations and absence of continuously waterproofed construction site surface. During operations, no, or negligible, impact on the surface water and groundwater is expected provided that condition monitoring and necessary repairs of road structures / storm-water discharge and treatment facilities are conducted in an appropriate and timely manner.

Impacts on Biodiversity: The Project implementation will affect the natural communities of forest, swamp areas, as well as the water communities of the Vilga River and two unnamed streams. Impacts on biodiversity will be mostly associated with right-of-way clearing of trees (at the total area of app. 112 ha), topsoil removal, construction operations (including contamination and noise) and operation of construction camps.

It should be noted, that since the construction of the road will affect territories located close to existing road R-21 "Kola", these areas are already under anthropogenic impact (noise from passing vehicles, emissions into the air, soil pollution, etc.). Therefore, no significant damage to natural habitats is expected.

Based on the information provided by the environmental authorities and results of public data review, no specially protected natural areas of national or international importance, known congregatory species sites, and unique or threatened ecosystems are located within Project area or in its close proximity.

The Project design documentation includes the assessment of impacts on vegetation and wildlife and calculation of a compensation for harmful effects on hunting species of fauna and aquatic organisms (fish). As per the requirements of the Russian legislation FKU Uprdor "Kola" will be required to implement forest restoration within the region of the road construction at the area equal to the area of forest cuttings. Forest restoration includes trees planting with a use of young plants and should be provided not less within one year after the forest clearance.

## 5.2 Social Impacts

Occupational Health and Safety: Health and safety issues will be regulated in accordance with the relevant national legislation which provides for risk assessment, development of risk minimization measures and subsequent monitoring of implementation of these. During the operation stage, control of contractor compliance with the H&S requirements and their implementation will be performed by FKU Urddor Kola.

Labor Influx: Given the local based workers supposed to participate in the construction of the road, as well as their insignificant outman, no impact on the local communities and social facilities is expected from labor influx.

Community Health and Safety: Modelling of air emissions and noise for the subject road section performed as part of the design documentation development indicated that the Project would have no significant impact on the ambient air quality and nearby residential areas. The Project provides for the installation of noise screens along the proposed road section in the area of proposed residential settlement in order to minimize noise impacts. The total length of noise screens is 900 meters. The Project is being developed taking into account potential impacts and risks caused by natural hazards. Information about potential natural hazards is included in the environmental and engineering survey reports as part of design documentation.

Land Use and Property: The proposed route is located outside of residential areas and agricultural lands. Therefore allocation of a land for the Project will not result in physical and/or economic displacement. All land plots designated for acquisition have already been reserved; the acquisition and registration of title (for permanent withdrawal) or leasing rights (for temporary withdrawal) as well as conversion to industrial lands will be conducted after the commencement of the Project.

Cultural Resources: According to the results of the desktop and field archaeological study which was performed in 2014 and detailed in the project design documentation there are no cultural heritage/high value archaeological sites in the Project area.

Cumulative Impacts: No off-site associated facilities and cumulative impacts are envisaged during the construction stage with exception of construction materials transportation. Mitigation measures of potential risks and impacts, associated with the transportation are not considered in the design documentation. Cumulative impacts associated with the operation of the road may relate to increased noise levels. The Project provides for noise reduction measures including installation of noise screens and use of special road coating. Provided mitigation measures and forest strip along the proposed route of the road section will significantly reduce noise impact to existing residential areas located at sufficient distance from road.

Induced (Positive) Impacts: According to the project design documentation, the construction of a new section of the road is expected to bypass the settlements. Project implementation will allow to reduce the traffic within Vilga and Polovina settlements along with reducing of accident rates, traffic safety increasing, and improving the air quality in residential areas; as well as create conditions for safe and unhindered passage of transport on this section of the Federal road R-21 "Kola" and increase traffic capacity.

Gaps identified during the E&S assessment are reported below in the Table 1 and shall be addressed through the preparation of relevant studies, management plans and implementation of relevant mitigation and management measures in compliance with the Environmental and Social Management Planning Framework (ESMPF) applicable to the AIIB Infrastructure Sector Loan.

**Table 1: Key gaps with the applicable E&S standards and recommendations**

Ref.	Gaps	Score	Risk level	Recommendations to close the gap
1	As the construction contractors and operational contractor are not defined at the current stage of the Project, no information related to their production bases and capability for the constructor workers accommodation are available. Therefore it is possible, that some changes may occur in the nature and scope of the Project following the AIIB's approval and signing of the legal agreements governing the Project's financing. Such changes may have material environmental or social risks and impacts. The Company is not aware of adaptive management process specifying how such changes or circumstances are to be managed and reported to the AIIB.	PA	M	<ul style="list-style-type: none"> <li>■ Carry out an additional environmental and social assessment in accordance with AIIB's ESP and applicable ESSs in case of material changes to the scope, design, implementation or operation of the Project;</li> <li>■ Propose measures to prevent and/or mitigate the identified E&amp;S risks and impacts (if any);</li> <li>■ Provide the Bank with a report related to the E&amp;S assessment results and proposed mitigation measures for approval;</li> <li>■ Update the ESAP (which is developed as part of this ESA report) with regard to proposed mitigation actions;</li> <li>■ Implement the approved mitigation measures according to updated ESAP.</li> </ul>
2	While the environmental mitigation measures are included in the EIA section of the design documentation prepared for the review and approval by the State Expertise, an Environmental and Social Management Plan (ESMP) was not developed as part of the design process.	PA	M	Develop ESMP for the Project.
3	The Company does not have a formal mechanism for stakeholder identification (affected communities and other interested stakeholders in the company's activities) beside the process included in the preparation of the engineering studies. Taking in consideration the fact that the proposed road runs outside of residential areas and the allocation area includes mostly forest lands no formal public consultations with local communities (i.e. settlement of Polovina, Vilga village) have been held during design development.	PA	M	Implement the Stakeholder Engagement Plan developed by an independent consultant. Carry out meaningful consultation with Project-affected people and facilitate their informed participation in the consultations.
4	The current capacity and competency of staff responsible for E&S matters of the Project is enough for dealing with the requirements of national E&S legislations. However, existing staff's knowledge and skills is considered not enough for development and implementation of the ESMP in line with the requirements of AIIB's ESP and recommendations of this report.	PA	M	Consider hiring additional staff to be responsible for the development and further implementation and coordination of ESMP or alternatively outsource this function to qualified third party with provision of relevant trainings to the existing staff.

Ref.	Gaps	Score	Risk level	Recommendations to close the gap
5	<p>Construction operations and further operation of the road will be performed by the contractors of the FKU Uprдор „Kola“. Implementation of the proposed E&amp;S measures is the responsibility of the contractors.</p> <p>Given no information related to construction contractor and contractor for the road operation is available at the current stage of the Project, environmental risks and impacts dealing with production / repair / operation bases of these contractors have not been assessed yet (air emissions, wastes, wastewater and hazardous materials management, etc.).</p> <p>The Company does not have any policy, procedure or plan for Contractor Management.</p>	PA	M	<ul style="list-style-type: none"> <li>■ At the stage of tender process assess environmental risks and impacts from production / repair / operation bases of contractors and involve into the Project those organizations which are in compliance with E&amp;S requirements of the Russian legislation and the Bank;</li> <li>■ Develop a Contractors' Management Plan;</li> <li>■ Conduct periodic E&amp;S inspections/audits of contractors and their production / repair bases at the stage of construction and operation of the road.</li> </ul>
6	<p>Specific avoidance, minimization and restoration measures were proposed in the EIA as part of the design documentation for protection and conservation of biodiversity during the project implementation. However, forest felling for the bypass route and changes in the riverbed of the Vilga River during its crossing cannot be avoided. The Project design proposes offset measures to compensate the damage to biodiversity.</p> <p>Since the requirements of the Russian legislation provide for the consistent development of documentation regarding reforestation, no detailed information on the proposed compensatory forest planting is available at this stage of the Project.</p> <p>No forest survey (which includes assessment of amounts and quality of trees subject for felling) has been carried out at the current stage of the Project (environmental baseline study includes only preliminary assessment prepared based on secondary data). As per the Russian forestry legislation the forest survey can be carried out only after the legal registration of the land ownership (during development of the forest exploitation plan).</p>	PA	M	<p>Develop and implement actions related to:</p> <ul style="list-style-type: none"> <li>■ Initial assessment of amounts and quality of trees subject to felling (trees inventory, forest exploitation plans);</li> <li>■ Post-operation restoration of habitats; and</li> <li>■ Offset of losses through the creation of ecologically comparable area(s).</li> </ul>
7	<p>The assessment of the impact on biodiversity and natural resources was conducted based on secondary data, therefore presence of rare and protected species within the Project implementation area cannot be excluded.</p>	PA	M	<ul style="list-style-type: none"> <li>■ Update information regarding potential presence of rare and protected species within the area of the road construction by request to environmental responsible agencies;</li> <li>■ Carry out an additional biodiversity field survey related to rare and protected species (in case any of rare and protected species will be reported to be present onsite);</li> </ul>

Ref.	Gaps	Score	Risk level	Recommendations to close the gap
				<ul style="list-style-type: none"> <li>Develop mitigation measures for rare and protected species (if any will be identified).</li> </ul>
8	<p>Assessment of impacts from noise and vibration and on the quality of ambient air within sensitive areas (residential areas; gardening communities) was not performed with regard to construction material supply traffic over existing part of the road and access roads. Potential impacts may affect settlements which are located at the transportation routes of construction materials (Vilga, Polovina, New Vilga, Pryazha, and Shuya, summer houses and gardening communities).</p>	PA	M	<ul style="list-style-type: none"> <li>Perform additional assessment of air emissions, noise and vibration levels and subject impacts for sensitive areas (residential areas; gardening communities) produced during construction materials transportation via existing road and access roads;</li> <li>Based on the results of assessment develop and implement additional corrective / mitigation measures (if any will be required) to protect residents from identified impacts;</li> <li>Monitor air emissions and levels of noise and vibration (as part of the environmental management program) to ensure compliance with the established regulatory norms and international standards (at the boundary of (or within) residential and sensitive areas).</li> </ul>
9	<p>The Project did not assess and address impacts on local individual/private business including food market and hotel and restaurant complex owners located on the existing road and whose profit is depend on the high traffic on the existing road. Project implementation may result in their profit lessening since the proposed road route will avoid their location or reduce access to these.</p> <p>According to the information provided verbally the Company is aware of the issue and plans to keep the existing and provide additional access roads to the private service stations. To provide the new road access to the services an additional land allocation will be required as well as additional construction works which were not considered by the current design process. In addition the Company plan to provide information boards to inform the drivers about the service. However, the Company intentions are not documented so far; no data on additional land allocation as well as maps with additional road exit were made available for Independent Consultant review.</p>	PA	M	<ul style="list-style-type: none"> <li>Perform documentation of identified impacts and the proposed mitigation measures with regard to local services affected by the Project implementation;</li> <li>Ensure the information/advertising boards are fully compensated by the Company;</li> <li>Ensure constant engagement with the representatives of local services and control of implementation of all mitigation/compensation measures.</li> </ul>
10	No special grievance mechanism for external stakeholders and workers was developed for the Project. The Company has adopted a General procedure for	PA	M	Implement Grievance mechanism developed by independent consultant within the SEP.

Ref.	Gaps	Score	Risk level	Recommendations to close the gap
	sending appeals, applications, complaints in accordance with the current legislation.			Ensure it can directly receive and facilitate resolution of complaints, concerns and wishes for the workers engaged in the Project and all external stakeholders in accordance with the AIB recommendations (for instance, grievances can be submitted via suggestion boxed set up in the nearby settlements, via "hot" telephone lines, special website function, etc.). Inform external stakeholders including nearby communities about this re-invigorated mechanism.
11	The Project provides for general traffic and road safety measures (e.g. the use of regulatory traffic signs) without identification of specific risks. No Traffic Management Plan was developed as part of project design process.	PA	M	<ul style="list-style-type: none"> <li>■ Perform identification and assessment of traffic and road safety risks to Project workers and affected communities.</li> <li>■ Develop Traffic Management Plan.</li> <li>■ Provide appropriate training to Project workers on driver and vehicle safety, and ensure regular maintenance of all Project vehicles (owned or leased). Monitor traffic and road safety throughout the Project life-cycle.</li> </ul>
12	The risks related to the transportation of hazardous materials and substances including fuels and lubricants on existing public roads were not identified and assessed by the Project.	PA	M	Identify and assess risks related to transportation of hazardous materials and substances. In case the risks to "third parties" exceed the acceptable level mitigation measures should be implemented.