

# Environment **NWCC ENVIRONMENTAL AND SOCIAL ACTION PLAN**

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## **1 GENERAL**

### **1.1 INTRODUCTION**

The North-West Concession Company (NWCC) Environmental and Social Action Plan (ESAP) has been developed from the Environmental and Social Action Plan performed by ERM, developed on the basis of the conclusions made in the process of preparations of additional sections for the Environmental Impact Assessment of the Moscow Saint Petersburg Project - Section km 15th- km 58th.

The goal of this ESAP is to describe briefly basic actions, which shall be implemented in the course of realization of the Project to observe UN Global Compact Principles.

This Plan covers both construction and operation stages of the Project. At the operation stage a part of obligations of NWCC as a Concessionaire under the Concession Agreement will be fulfilled under the contract with the company-operator (hereinafter – the Operator), which is currently created with the participation of the Founder and Sole Stake-Holder of NWCC.

A key to successful implementation of this Plan is to involve respective Stakeholders of the Project in the actions according to the list below:

- Competent executive bodies of the Russian Federation,
- Competent executive bodies of the city of Moscow,
- Competent executive bodies of Moscow Region,
- The Grantor,
- Committee on Public Environmental Control over Construction and Operation of Express Highways of Russia of State Company “Russian Highways” (hereinafter – the Grantor’s Environmental Committee),
- The General Contractor,
- Environmental protection organisations,
- Non Governmental Organizations (NGOs),

In all cases when implementation of one or another action planned pursuant to the Plan for one or another Stakeholder is not an obligation of such Stakeholder entrusted to it by virtue of the existence of any contract or requirements of the law, “NWCC” LLC plans an active work with such Stakeholder to convince it of the need to implement by it certain action.

### **1.2 REFERENCES**

- The Concession Agreement (CA) signed between the Russian Federation and NWCC,
- The Design & Construction Contract (D&C) signed between NWCC and the General Contractor,
- International Norm ISO 14001,
- Environmental Improvement Plan 2012 – PLA VPMT EMS 0000000 0003,
- Global Compacts principles and its Global Reporting Indicators GRI,
- International Financial Corporation (IFC) standards

## **2 NWCC ENVIRONMENTAL AND SOCIAL ACTION PLAN**

GRI quoted in the following table come from the official site of GRI.

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
1. ENVIRONMENT AND SOCIAL MANAGEMENT					
1.1	Definition and implementation of an Environmental and Social Management System and a monitoring system to answer: <ul style="list-style-type: none"> <li>- biodiversity preservation,</li> <li>- public engagement,</li> <li>- grievance mechanism,</li> <li>- community engagement.</li> </ul>	Efficient implementation of the Environmental and Social Management System and monitoring system according to ISO 14001	NWCC	ISO 14001 ISO 26000	Environmental and Social Policy Environmental and Social Master Plan Grievances and / or public complaints tracking and monitoring mechanism Results of internal audits, training Regular reporting
1.2	Implementation of an Environmental Management system (EMS) sustained by all involved parties of the Project	Each involved parties has to apply an Environmental Plan according to the Environmental Master Plan of the Concessionaire	NWCC General Contractor during construction Operator related to Operation activities	ISO 14001	Environmental Master Plan of the Concessionaire Environmental Plan of each involved parties
1.3	Implementation of environmental documentations	Ensure that involved parties comply with the Environmental requirements of the Project	NWCC General Contractor during construction Operator related to Operation activities	ISO 14001	Reports on the implementation of this Plan by General Contractor and Operator respectively
1.4	Implementation and annual updating of detailed Stakeholder Engagement Plan (SEP)	Efficient stakeholder engagement Guide for public communication	NWCC Grantor	ISO 14001	Detailed SEP for 2010 Report on its fulfilment Annually updated version of the Plan (in the beginning of a calendar year) Public availability of the annual report (in the end of the year)
1.5	Establishment of an open working group for environmental and social monitoring involving stakeholders	Ensure communication about the social and environmental activities of the Project	NWCC Grantor Participation of other stakeholders	ISO 26000	Minutes of meetings of working groups Refer to item 1.9 - development of the Khimki Forest Conservation Project (KFCP)

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
1.6	Implementation of an Emergency Response Plan (taking into consideration the fact that river Klyazma and Moscow Canal are sources of drinking water and classified as water bodies of the highest fishery category)	Efficient response in case of Emergency situation	NWCC General Contractor Grantor (for approval) Operator EMERCOM of Russia State Traffic Safety Inspectorate of the Ministry of Internal Affairs of Russia	ISO 14001 EN 23 of the GRI	Emergency Response Plan Training report Reports on Emergency Situation
1.7	Implementation of requirements for all required environmental permits from supervisory authorities	Protect natural resources during construction and operations	NWCC General Contractor Operator Grantor	International Financial Corporation (IFC) standards	Measures taken by the Project in case of prescription notes and sanctions from supervisory authorities
1.8	CO <sub>2</sub> balance of the Project	Have measurable results of the impacts of the project by kind of constructive and operational choices	NWCC General Contractor (provide data during construction) Operator (provide data during operation)	EN16 from GRI from Global impact	Reports of results and audit result of this report
1.9	Allocating a funding during construction and operation of the highway to Sustainable Development, such as participation to the development of the Khimki Forest Ecosystem Improvement Project and others	Improve preservation and restoration of the Khimki Forest Ecosystem and biodiversity	NWCC Participation of environmental protection organisations	EN 30 of GRI	Financial reports on implementation of additional compensation measures Monitoring reports from realized projects in the Khimki Forest
<b>2. BIODIVERSITY CONSERVATION</b>					
<b>2.1. Actions aimed at reducing the Project's ecological footprint and minimizing the land use in the Khimki forest</b>					
2.1.1	Analyse options of project design adjustments, which could allow for reduction of tree cutting in the Khimki forest	Minimization of impacts on the Khimki forest through reducing the deforestation area Decrease CO <sub>2</sub> emissions during the construction stage	NWCC Grantor (for approval) General Contractor	International Financial Corporation (IFC) standards	Analyse options report

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
2.1.2	Implementation of project design adjustments, which could allow for a provision up to 3,7 meter reduction of the road's median strip width	Preserve natural resources and decrease CO2 emissions during the construction stage	NWCC Grantor General Contractor	International Financial Corporation (IFC) standards	Analyse options report
2.2. Integrated environmental protection measures for minimization of impacts on biodiversity					
2.2.1	Implementation of measures aimed at maximum preservation of natural vegetation on the slopes of the Klyazma river valley and its tributaries (23-24 km, 27-29km, 38-40km, 49-51 km of the proposed road) in particular, including <ul style="list-style-type: none"> <li>- erosion prevention and control of activities,</li> <li>- strict compliance to the approved cutting area route</li> <li>- authorize construction traffic only on temporary roads during the construction stage</li> </ul>	Prevention of any increase in the surface runoff flow from slopes, drainage of groundwater at the foot of slopes, and prevention of subsequent slope erosion	NWCC General Contractor Operator (for site inspection)	EN 12 of GRI	Report on the lack of slope erosion evidence during construction and operation stage
2.2.2	Installation of culverts for surface runoff flow under the roadbed at all road sections where there are water-accumulating depressions  Installation of drainage facilities, permanent and temporary runoff drainage at the areas adjacent to swamps and at the crossings of the forest gullies, ravines and valleys of creeks and the Klyazma River (19-21km, 26-30km, 31-33km and 35km, 38-40km, 41-42km, 49km)	Prevention of the risk of flooding and swamping of the areas adjacent to the highway  Prevention of degradation of the trees in the forest (prevent dead and fallen trees along the highway route)  Conservation of natural drainage conditions in swamps and lake systems  Mitigation of the fragmentation effect on small fauna, particularly amphibians  Monitor potential water accumulation and potential variations of hydrologic and hydrogeological conditions with specific focus on protected swamp and river crossings	NWCC General Contractor Operator (for site inspection)	EN 12 of GRI	Working documentation  Monitoring report during the construction and operation stage

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
2.2.3	<p>Promote assignment on region level of a higher protection status for the part of the Khimki forest, which is not impacted by the highway</p> <p>At a later stage and should this higher protection status be enacted, based on operational results of this area of Moscow Oblast, consider the possibility to provide the protected area with federal status</p>	<p>Prevention of vegetative degradation caused by anthropogenic and recreational pressure in the Khimki forest, which is not impacted by the highway</p> <p>Prevention of an increase of anthropogenic and recreational pressure on the adjacent natural ecosystems along the entire highway length</p>	<p>NWCC</p> <p>Grantor</p> <p>Participation of relevant government agencies of the RF and Moscow Oblast</p>	EN 13 of GRI	<p>Petition document</p> <p>Approvals and regulatory documentation of state and municipal authorities</p>
2.2.4	<p>Promote for planning and establishment of local nature areas under special protection, such as expansion of the existing <b>Ant Reserve</b> in the vicinity of the settlement of Peshki (54-57km)</p>	<p>Measures to improve conservation and maintenance of stability of the environment of the northern part of the Moscow region</p> <p>Prevention of an increase of anthropogenic and recreational pressure on the adjacent natural ecosystems</p>	<p>NWCC</p> <p>Grantor</p> <p>Participation of relevant government agencies of the RF and Moscow Oblast</p> <p>Grantor's Committee of ecology</p>	EN 13 of GRI	<p>Petition document</p> <p>Approvals and regulatory documentation of state and municipal authorities</p> <p>Availability of a legislative act of Moscow Oblast and consideration of its provisions in the General Development Plan of Solnechnogorsky Districts</p>
2.2.5	<p>Organize and implement monitoring of the highway impacts on the wildlife and vegetation in the adjacent areas, such as at Solnechnogorsky or Khimkinsky districts</p>	<p>Identification and monitoring of condition of sites, which have special environmental value (rare species and habitats)</p> <p>Timely implementation of appropriate corrective environmental protection measures</p>	<p>NWCC</p> <p>General Contractor (during construction)</p> <p>Participation of relevant government agencies of the RF and Moscow Oblast Operator to provide assistance</p>	EN 12 of GRI	<p>Results of the Monitoring program performed during the construction stage as a data base to begin the monitoring during the operation stage</p> <p>Reports on inventories and zoning of the territories including area in the direct vicinity the highway in the land plots</p> <p>Reports of the Operator</p> <p>Availability of a legislative act of Moscow Oblast and consideration of its provisions in the General Development Plan of Khimkinsky and Solnechnogorsky Districts</p>
2.2.6	<p>Plantation of 500 ha of forest</p>	<p>Creation of new area of development of biodiversity</p>	<p>Russian Federation</p> <p>NWCC (participation)</p> <p>Grantor (participation)</p> <p>Grantor's Committee of ecology</p>	EN 30 of GRI	<p>Documents, which give the surface of land plots</p> <p>Documents, which give the density of forest</p> <p>Monitoring document to follow the evolution of the forest</p>

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
2.2.7	Carry out additional studies (during landscape studies) to improve passages for large animals and small fauna (noise, light, air quality, etc.)	Conservation of the size and stability of local wildlife populations (predators, hoofed animals) within the area between the highway (29-58 km) and the M-10 highway	NWCC General Contractor (during construction) Operator to provide assistance and follow up of event with animal Environmental Protection Authorities NGOs	EN 12 of GRI	Reports on studies undertaken Data collected by hunting supervisory authorities in the course of winter reconnaissance traversing during the first five years of the highway operation
2.2.8	Analyze the necessity and recommend eventual installation (and maintenance) of birdhouses and nest boxes in the Khimki forest, as well as special shelters for bats	Compensation for loss of nesting grounds as a result of felling of old hollow trees	NWCC General Contractor (during construction) With the support of voluntary local associations and within the Khimki Forest Ecosystem Improvement Project. "Bird Protection Union of Russia"	EN 12 of GRI	Data of periodic surveys of small passerine birds and bats Refer to item 1.9 - development of the Khimki Forest Conservation Project (KFCP)
2.2.9	Analyze migration paths of small mammals and amphibians. Based on the results of analysis to perform arrangement of culverts for crossing of small mammals and amphibians (where the highway runs in the vicinity of water bodies and swamps).	Conservation of the size and stability of amphibians and small mammals on the road (especially during the mating season)	NWCC General Contractor Administration for the Protection, Monitoring and Regulation of Use of Game Animals of Moscow Oblast (hereinafter - Mosoblokhotupravlenie) State Environmental Protection Committee of Moscow Oblast (hereinafter - Mosoblkompriroda) Moscow Forest Administration	EN 12 of GRI	Monitoring Results report at the vicinity of water bodies and swamps where amphibians pass
2.2.10	Design, create, and maintain a network of saltlicks and feeding sites to the east of the planned highway within the Solnechnogorsky District	Maintenance of the size and stability of local populations of hoofed animals and game animals	NWCC General Contractor (during construction) Operator to provide assistance Mosoblokhotupravlenie Mosoblkompriroda Moscow Forest Administration	EN12 of GRI	Reporting data on the Solnechnogorsk hunting department referring to the number of hoofed animals Refer to item 1.9 - development of the Khimki Forest Conservation Project (KFCP)



Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
2.2.11	Implementation of measures to minimize impact on the Klyazma river bed at the II MP 4 river crossing (40km) near the village of Klushino	Preservation of habitats of sculpin ( <i>Gottus gobio</i> ), a species included in the Red Data Book	NWCC General Contractor	EN 12 of GRI	Regulating documentation, findings of internal audits for executed work and water quality monitoring data
2.2.12	Prohibition of works in the Klyazma river bed in the spring and early summer during the fish spawning period	Prevention of contamination and silting of spawning grounds	NWCC General Contractor	EN 12 of GRI	Regulating documentation Findings of internal audits for executed work Water quality monitoring data
3.MITIGATION OF POTENTIAL ENVIRONMENTAL IMPACTS CAUSED BY AIR EMISSIONS, WASTEWATER DISCHARGE, SOLID WASTE GENERATION AND HARMFUL PHYSICAL IMPACT FACTORS DURING HIGHWAY CONSTRUCTION AND OPERATION STAGES					
3.1. Air emissions: impact on public health and the health of operating personnel during operation stage					
3.1.1	Provide a monitoring of air pollution by acrolein in the settlement of Vashutino (monitoring of emissions at the No.1 toll plaza)	Permanent monitoring of risk for the health of residents of the houses located in the vicinity of the No.1 toll plaza Provide corrective measures in a timely manner	NWCC General Contractor (during construction) Operator to provide assistance	EN 16 of GRI	Reports on monitoring results with conclusion on absence of health risks or about sickness rates Corrective measures reports and monitoring of progress on following results Refer to item 3.1.3
3.1.2	Implement a procedure of regulation to monitor health of the personnel of traffic police service at the highway	Monitor the health of the personnel (traffic police officers) Provide corrective measures in a timely manner	NWCC Operator to provide assistance Participation of the Traffic Police Department of Khimkinsky District	EN 16 of GRI	Reports by the polyclinic of the Traffic Police Department referring to the health conditions of officers involved in the highway supervision Corrective measures reports and monitoring of progress on following results Refer to item 3.1.3
3.1.3	Provisions for monitoring concentrations of main pollutants in the ambient air at the houses located in the nearest vicinity of the highway (monitoring near house once a year during operation stage) Later make such measurements once every five years	Monitor the health of inhabitants in the vicinity of the highway Provide corrective measures in a timely manner	NWCC General Contractor (during construction) Operator to provide assistance	EN 16 of GRI Regulatory maximum daily and average daily MPC levels of air pollutants (NO2, CO, total dust, PM10) in the ambient air at the boundary of the nearest residential areas	Reports on monitoring results with conclusion on absence of health risks or about sickness rates Corrective measures reports and monitoring of progress on following results
3.2. Waste Water discharge					

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
3.2.1	Provide design solutions to improve treatment and discharge of storm water runoff outlets where possible	Prevention of surface water and groundwater contamination	NWCC General Contractor Grantor	EN 21 from the GRI Regulatory maximum permissible concentrations (MPC) for fishery water bodies in relation to treated water released to the Klyazma River and the Moscow Canal, as well as the regulatory sanitary MPC (Maximum Permissible Concentration) levels for water released to the ground	Results report of measurements of the chemical composition of discharged water after treatment
3.2.2	In the vicinity of the St. George water spring: <ul style="list-style-type: none"> <li>- Ensure release of treated storm water from highway to the adjacent gully</li> <li>- Review of the design to check that the highway has no consequences</li> <li>- Improve or modify the design as necessary</li> </ul>	Preservation of high water quality in the water spring Improve pedestrian access to the spring	NWCC General Contractor Operator (for site inspection) Grantor	Environmental regulatory requirement	Results of water quality monitoring of the water spring Report on hydrogeological study undertaken
3.2.3	Snowmelt water from sites for accumulation of snow removed from the road has to be treated	No display with no treatment of snowmelt water from sites for accumulation of snow removed from the road	NWCC General Contractor Operator Grantor	Environmental regulatory requirement	Monitoring results reports of display of snowmelt water from sites for accumulation of snow removed from the road
<b>3.3. Waste management</b>					
3.3.1	After clearing, follow the selection of areas (with approval of the forest protection agency) and ensure disposal of felling residues not suitable for utilization is performed	Prevention of any damage to the natural environment due to improper disposal of felling residues	NWCC (for the audit) General Contractor to provide assistance Grantor	EN 22 from the GRI	Results of an internal audit to be carried out after completion of forest clearing
3.3.2	Performing of Waste Management Plan	Preservation of natural resources	NWCC General Contractor Operator	EN 22 from the GRI Environmental Master Plan	Approved documentation

Ser. Nos.	Actions	Objectives	Organizations planned to be involved in the implementation	Standards	Performance indicators / monitoring
3.3.3	Former and large dumps, which are on, near, or around the land plots of the Highway have to be treated, such as the one at PK 113 - 117	Avoid any consequences on the highway and on the users	NWCC for coordination General Contractor for dumps on the highway route Grantor for all dumps	EN 24 of GRI	Results of monitoring of soil in the vicinity of the dump Procedure for soil decontamination
3.4. Mitigation of impacts of highway illumination					
3.4.1	Analyze the design and propose adjustments to adapt illumination to mitigate impacts of the highway: - in the dwelling houses in the vicinity of the junction in the settlement of Starbeyevo	Minimize impacts of the highway illumination on inhabitants	NWCC General Contractor	Regulatory requirements relating to illumination impacts on residents of residential areas adjacent to a motor road	Results report of measurements of luminous flux in the process of highway operation at the facades of the nearest residential houses
3.5. Mitigation of impacts of noise					
3.5.1	Implementation of screen noise barrier and acoustic plantations, replacement of glazing by noise protection glass units, installation of noise protection flap ventilators	Minimize impacts of the highway noise on inhabitants	NWCC General Contractor	Regulatory requirements relating to noise impacts on residents of residential areas adjacent to a motor road	Approved documentation Results report of measurements of noise
3.5.2	Analyse possibility of speed limitation during the operation stage along residential areas	Minimize impacts of the highway for noise on inhabitants and greenhouse gas emissions	NWCC Rospotrebnadzor (Federal Service for Supervision over Customer Rights Protection and Human Welfare) Operator State Traffic Safety Inspectorate of the Ministry of Internal Affairs of Russia	Regulatory requirements relating to noise impacts on residents of residential areas adjacent to a motor road	Approved documentation CO2 emissions evaluation Noise measurement reports