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ROAD REHABILITATION AND SAFETY PROJECT (RRSP)

Rehabilitation and Maintenance of State Roads of the 1st and 2nd category in the Republic of Serbia

site-specific

ENVIRONMENTAL MANAGEMENT PLAN

for

road rehabilitation works on State Road of the IB Class, No. 20 (old marking: M-7), section:

ZABALJ INTERSECTION - ZRENJANIN

- Environmental Category B -

FINAL DOCUMENT BELGRADE, December 2012

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ABBREVIATIONS AND ACRONYMS

AADT Annual Average Daily Traffic CEP Contractor's Environmental Plan

EBRD European Bank for Reconstruction and Development

EIA Environmental Impact Assessment

EIB European Investment Bank

EMP Environmental Management Plan HSE Health, Safety and Environment IFIs International Financing Institutions

INP Institute for Nature Protection of the Republic of Serbia

IPCM Institute for Protection of Cultural Monuments of the Republic of Serbia

MoEDEP Ministry of Energy, Development and Environmental Protection

MoT Ministry of Transport (fmr. Ministry of Infrastructure and Energy – MoIE)

PERS Public Enterprise "Roads of Serbia"

PINP Provincial Institute for the Nature Protection

PSEP Provincial Secretariat for Environmental Protection

PSC Project Supervision Consultant

RE Resident Engineer

RRSP Road Rehabilitation and Safety Project

SE Site Engineer

SLMP Safety Labour Management Plan SSIP Site Specific Implementation Plan

WB The World Bank Group WMP Waste Management Plan

INTRODUCTION

This Environmental Management Plan (EMP) has been prepared for the proposed rehabilitation of the State Road of the IB Class, No. 20, section Zabalj Intersection - Zrenjanin to ensure application of the good environmental practice and document compliance with the requirements of the International Financing Institutions (IFIs) which will finance Serbian Road Rehabilitation and Safety Project (RRSP). This road section is a 24.2 km segment located between Zabalj and Zrenjanin (see picture No.1). The Project has been classified as Environmental Category B. i.e. a project requiring an EMP pursuant to IFIs Safeguard Policies.

The Project Proponent is the Government of Serbia, acting through its Ministry of Transport (MoT), former Ministry of Infrastructure and Energy (MoIE). Project implementing entity is Public Enterprise Putevi Srbije (PERS).

The objective of this EMP is to address the environmental impacts and management issues associated with the proposed road rehabilitation. Project will comply with Serbian legislation, procedures and policies, international conventions and IFIs safeguard policies.

This site specific EMP is focusing more on the rehabilitation phase of the selected investment, as it will become part of the respective Contract for the implementation of civil works, and as such, the future contractor's obligation. The activities related to subsequent regular maintenance of this section are not the main focus of this EMP, but bare presented herewith for the purpose of completeness.

The preparation of this EMP was undertaken through a desk study and field investigations, including consultations with regional level representatives and local stakeholders. The EMP is based primarily on field investigations performed during July and August 2012.



Picture 1. Location of Zabalj Intersection – Zrenjanin road section

EXECUTIVE SUMMARY

Project description

Road Rehabilitation and Safety Project (RRSP) represents the first phase of the Government's National Road Rehabilitation Program and is expected to cover, over a period of 4-5 years, the rehabilitation of about 1,370 km of national roads spread over the entire country.

Road rehabilitation works on proposed 24.2 km long road section Zabalj Intersection – Zrenjanin belongs to the list of sub-project to be implemented during first year of project implementation and it is selected as one of 4 relevant sample sections (sample subprojects) for which site-specific EMPs are prepared in the first batch of projects.

The section is located in Vojvodina. Administrative units and it goes through the territories of City of Zabalj and Zrenjanin. The section belongs to the IB state road category, number 20 (old classification arterial road M-7). Length of the section is 24.2 km.

The section is located in clearly flat area, on medium high embankment. The section is typically rural, without passing through the settlements.

The road alignment goes across two bigger watercourses, Jegricka Canal and the Tisa River. Jegricka Canal is a part of Nature Park "Jegricka" which is statutory protected under III zone of protection.



Picture 1. Bridge over Jegricka Canal and information about protected area

Picture 2. Bridge over Jegricka River and a view to a Nature Park "Jegricka"



The road works covered by the Project will be carried on the existing road with no change of the alignments. Through the Detailed Design Phase it will be reconsidered if some widening is necessary, but in that case all widenings will be undertaken within the right of way. The project therefore entails no resettlement and land acquisition as defined by OP 4.01, nor long lasting disruptions to the natural environment and human settlements and activities. More details about this are available in Project's Resettlement Policy Framework.

Draining will be performed over the pavement surface with ditches that will be partly drainage and partly absorbing ditches.

Works will not be undertaken over bridges that cross natural protected areas, therefore there will be no impact on water quality on protected watercourses.

Policy, legal and administrative framework

The Ministry of Energy, Development and Environmental Protection (MoEDEP), former Ministry for Environment and Spatial Planning, is the key institution in the Republic of Serbia responsible for formulation and implementation of environmental policy matters.

The environmental legislation currently in force in Republic of Serbia is summarized in Appendix III.

In the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment, which is completely in line with European EIA Directive - 85/337/EEC. Therefore Environmental Impact Assessment is not required for road rehabilitation projects unless theirs alignment is placed within or in the vicinity of natural/cultural protected areas. Road section Zabalj intersection – Zrenjanin is partially placed in the vicinity of natural protected area (Nature Park "Jegricka", III Category of protection) so the EIA could be required for this project in accordance with the Serbian legislation, depending strictly on the opinions obtained from the relevant institutions (Provincial Institute for the Nature Protection¹ - PINP and Provincial Secretariat for Environmental Protection² - PSEP).

PERS submitted request to the PINP during November 2012 in order to obtain preconditions under which proposed project should be implemented. Until today, PERS still haven't received any respond from PINP regarding this issue.

Request for opinion regarding necessity of EIA procedure for this project will be submitted to the PSEP together with other relevant project documentation which mandatory include preconditions of PINP.

After receiving abovementioned documents (preconditions of PINP and opinion of PSEP), and also based on requirements defined within this EMP document, PERS will define a Terms of Reference for this particular project. Documentation received from PINP and PSEP will be integral part of TOR for this project. This will ensure proper implementation of all project related environmental requirements and will offset or minimize any impact on local human and biotic environment.

Lender requirements will also apply to this project and include the following Environmental Policies

- 1. Operational Policy OP 4.01 Environmental Assessment;
- 2. EBRD Environmental and Social Policy 2008
- 3. EIB Statement of Environmental and Social Principles and Standards (2008).

EBRD and EIB will require that the project complies with the Republic of Serbia national laws and EU standards. WB will require that the projects comply with the Serbian legislation and the Bank's OP 4.01.

Baseline conditions assessed during route survey

The start of the section is in Zabalj intersection, fairly distanced from city of Zabalj. Section goes to the km 24+200, and the whole stretch is free of residential buildings. Only residential zone is noted on the end of proposed road section, in Zrenjanin suburb area.

² This opinion will be obtained after receiving the opinion from Provincial Institute for Nature Protection

¹ Provincial Institute was contacted but opinion is not obtained yet

The section is intersected by two important river flow (the Jegricka Canal and Tisa River). Drainage of run-off water is ensured on both directions, transversally (to gutters, over the shoulders into the ditches or along the slopes of embankments) and longitudinally (by gutters and ditches to culverts or watercourses). However, due to existing river classification and small amounts of expected drainage water, the impact on water quality is expected to be minimal to negligible. And more important, zone of the existing bridges over Jegricka and Tisa rivers are excluded from the project, due to the fact that pavement on subject bridges is replaced recently and there is no need to replace it again.

A segment of proposed road section from Zabalj Intersection to Zrenjanin is crossing Jegricka Canal in the vicinity of natural protected area – Nature Park "Jegricka". Mitigation measures and monitoring plan which are part of this EMP document contain basic recommendations regarding this issue, although the bridge zones are excluded from the project.

There will be no land acquisition as defined by OP 4.01 during the project implementation.

Within the corridor of road section Zabalj Intersection – Zrenjanin there is no significant point sources of noise or air pollution.

Current traffic load (AADT) on this road sub section is 7017 vehicles/day.

Summary of environmental impacts

The possible temporary impacts as consequence of the construction activities will consist of, among others, disruption of current traffic circulation, roadway safety, damage to access roads, dust nuisance, and gaseous emissions, potential pollution of soils and water resources, brief disturbance to biota, and momentary interference to neighbouring settlements through various operation activities. Offsite activities include quarry, burrow pit and asphalt plant operations, which if not managed properly, may cause localized adverse impacts. The contractor's yard and workers' camp can be potential sources of temporary adverse impacts.

No relocation and resettlement issues as defined by OP 4.01 are anticipated.

Local residents (in Zrenjanin suburb zone) will be affected with minor air and noise pollution during rehabilitation works on proposed road section.

Various cases of water contamination can occur during the rehabilitation of the road and future operation. Wastewater discharged during the works can jeopardize the quality of the surface and underground water in rivers Jegricka and Tisa. Adequate mitigation measures and monitoring activities are planned, in accordance with the Law on water ("Official Gazette of RS", 54/96, 101/05). As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

In respect to future use of the rehabilitated road section - this section belongs to the regional roads network, on which significant increase of road traffic as a result of rehabilitation works is not expected, since they are the primary transport routes for communication between Zabalj and Zrenjanin - i.e. belong to group of the "commuter roads". In respect to impact of the potential increase of the vehicle speed on rehabilitated roads, this issue will be addressed through the project's road safety component, which will include implementation of the active and passive measures to control the vehicle speed on rehabilitated road sections.

The proper implementation of the EMP measures, as listed in Appendix I would offset or minimize any impact on local human and biotic environment that might be related with any long-term cumulative negative effects.

Environmental management plan

Possible environmental impacts will be mitigated during the design/prerehabilitation, rehabilitation, and operation Phases, as summarized in the Environmental Management Plan as shown in Appendix I.

A basic assessment of the proposed road rehabilitation project concluded that the rehabilitation impacts will be minor, reversible and manageable if the mitigation measures as given in the EMP are properly implemented. The EMP consist 3 parts: Mitigation Plan (Appendix I), Monitoring Plan (Appendix II) and institutional arrangements and reporting procedures

During the rehabilitation, the Contractor will work according to the requirements of the Contractor's Environmental Plan (CEP) (based on the EMP) which has been prepared by the Contractor and according to the opinion of the Provincial Institute for Nature Protection. Following the award of the contract and before commencing the work, the Contractor will prepare a Contractor's Environmental Plan (CEP) that addresses the conditions of the rehabilitation in the EMP that has been attached to the Bid and Contract Documents. The CEP will amplify how the Contractor will address the activities in the rehabilitation section of the EMP. The contractor will submit the CEP to the PERS for approval.

The findings and proposed mitigation measures have been compiled into an Environmental Mitigation Plan (Appendix I). It summarizes all the anticipated environmental impacts and its associated mitigation measures during the design, rehabilitation and operational phases. It makes reference to the laws and contract documents, approximate location, timeframe, and the responsibility for its implementation and supervision.

It is the Contractor's obligation to cost implementation of environmental mitigation measures in his overall cost. The Contractor will be required to provide a short statement that confirms that:

the EMP conditions have been costed into the bid price,

- the Contractor has a qualified and experienced person on the Contractor's team who will be responsible for the environmental compliance requirements of the EMP.
- the Contractor and its sub-contractors will comply with Republic of Serbia national laws, EU standards and Lender requirements.

PERS will build fines and penalties for any non-compliance into contracts, and enforce them.

A monitoring plan for the proposed Project (Appendix II) has been prepared. The main components of the monitoring plans are the following:

- 1. Environmental issues to be monitored and the means of verification,
- 2. Specific areas, locations and parameters to be monitored;
- Applicable standards and criteria;
- 4. Duration and frequency and
- 5. Institutional responsibilities for monitoring and supervision.

Stakeholder engagement - Information disclosure, consultations and public participation

As required by the IFIs Safeguards Policies, public consultations were undertaken during the preparation of EMP. The EMP and other project information were disclosed to the Public and were available locally to the communities at the and

PERS office	19a Vlajkoviceva St., Belgrade, contact person		
	Igor Radovic, 011 3206811		
Community centres	Zrenjanin Municipality, Trg slobode 10,		
	Zrenjanin		
PE "Roads of Serbia" web site	www.putevi-srbije.rs		

Stakeholders that may have an interest in the project have been identified and listed in Appendix 4 and were consulted or advised about project related issues.

The in-country disclosure of the EMP document started on Dec 13th 2012 when invitation to the interested parties were published in the daily newspaper "Politika", inviting the public, authorities and relevant institutions to have an insight into the proposed road rehabilitation works and environmental impact of the project with presented mitigation and monitoring measures. Prior to announcement in the newspapers, all documents were delivered to the Municipality of Zrenjanin and made publicly available on site, and also placed at PERS web site.

Representatives of the local self-government informed the public through local media of the time and place of public consultations. Disclosure of draft EMP document finished on December 20th 2012 when the public meeting was held in city of Zrenjanin.

There were 8 attendees on public consultation meeting in Zrenjanin³. One of them were local citizen. Among the others, there were local municipals, PERS representative and local environmental officer.

The meeting started according to schedule at 12:00 PM. EMP document was presented in detail to the interested attendees by the PERS representatives. During the public consultations, there were no significant remarks in regards to environmental protection issues.

During the 7 days aimed for insight into the EMP document, nobody came into PERS premises to see the EMP document. During disclosure period there were no telephone or E-mail contacts regarding proposed EMP document.

During Public Consultation process and EMP document disclosure no interested groups or other stakeholders visited the environmental department of Zrenjanin municipality in order to have insight into the EMP document.

Consultation ended at 02:00 PM, local time.

Detailed Report on Public Consultation process is presented within the Appendix IV of this EMP document and includes a list of identified stakeholders, which shall be updated as necessary.

Beneficiary consultations will be conducted during the construction phase, and records of environmental and social issues raised and complaints received during consultations, field visits, informal discussions, formal letters, etc., will be followed up and the records will be kept in the project office at PERS. In advance of the work commencing PERS will provide information in:

- Newspaper articles in one national and also in one local media.
- Posters on main notice board at all community centres of potential affected Communities
- Radio announcement of road diversions
- Provide contact details of community liaison officers who are appointed to work with local communities.

A Grievance Mechanism will be implemented to ensure that all complaints from local communities are dealt with appropriately, with corrective actions being implemented, and the complainant being informed of the outcome. It will be applied to all complaints from affected parties. A grievance form is attached in Appendix and hard copies will be made available at community centres. .

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³ List of participants is presented within the Appendix IV.

1. PROJECT DESCRIPTION

Road Rehabilitation and Safety Project (RRSP) represents the first phase of the Government's National Road Rehabilitation Program and is expected to cover, over a period of 4-5 years, the rehabilitation of about 1,370 km of national roads spread over the entire country.

RRSP main objective is "to support the Government of Serbia in enhancing the efficiency, effectiveness and safety of its main and regional road network, through the improvement of a proportion of these road networks, scaling up of the use of efficient road asset management practices, the institutionalization of safe road design principles and road safety audits, and the strengthening of the institutional capacity of PERS".

Road rehabilitation works on proposed 24.2 km long road section Zabalj Intersection – Zrenjanin belongs to the list of sub-project to be implemented during first year of project implementation and it is selected as one of 4 relevant sample subprojects for which site-specific EMPs are prepared.

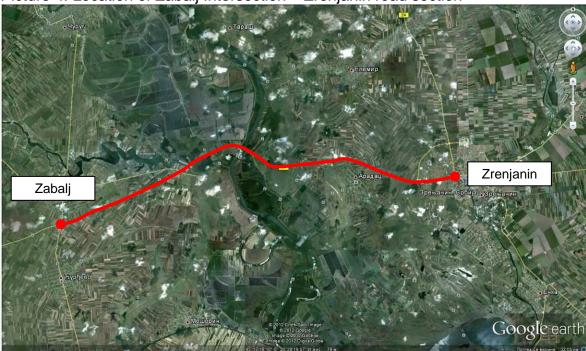
Location Description

The section is located in Vojvodina, partly in the administrative district of the Southern Banat, and partly in the administrative district of the Central Banat. Administrative units where the section is located are Zabalj and Zrenjanin. The section belongs to the IB state road category, number 20 (Novi Sad-Zrenjanin-Secanj-Plandiste-Vrsac). According to the old classification, it belonged to the arterial road M-7 (Backa Palanka-Novi Sad-Zrenjanin-Zitiste-Nova Crnja- Srpska Crnja Border Crossing). Length of the section is 24.2 km.

The section is located in clearly flat area, on medium high embankment. The section is typically rural, without passing through the settlements. There are several farms ("salasi") alongside the road, at distance of not less than 100-150m, covering the stretch from Zabalj intersection to the Tisa River. From the Tisa River to Zrenjanin, the section goes through weekend settlements whose buildings and structures do not occupy the road reserve and these generally do not have accesses to the main road.

Pavement width is 8.5m (the road was constructed as the first phase of future motorway), except for the part across the Tisa River, where the road is narrowed to 7.00 m. The planned works include milling of the existing wearing course, remedy of cracks from cement stabilization and construction of two new asphalt layers.

The road alignment goes across two bigger watercourses, Jegricka Canal and the Tisa River. Jegricka Canal is a part of Nature Park "Jegricka" which is statutory protected under III zone of protection. A bridge on the Jegricka Canal was constructed in 1981 and the bridge span is 61m. The bridge on the Tisa was constructed in 1963, while its span is 401.5m. The bridge was rehabilitated in detail in 2005, while in 2010 sidewalks were reconstructed and fences replaced.



Picture 4. Location of Zabalj Intersection – Zrenjanin road section

Works on the bridges over Jegricka and Tisa rivers are excluded from the project, due to the fact that pavement on subject bridges is replaced recently and there is no need to replace it again.

In addition to these structures, there are several culverts on the section, on locations where the road crosses over the melioration canals. The canals are neglected and not cleaned recently. The design states rehabilitation of culverts, but based on the experience from the previous sections where the culverts were treated within the right of way and cleaned and excavated to the required depth in accordance with the requirements from the local institution for water management, their full function will not be achieved unless the institution for water management cleans the canals.

Draining will be performed over the pavement surface with ditches that will be partly drainage and partly absorbing ditches. As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

Rehabilitation works description

The road works covered by the Project will be carried on existing road with no change of the alignments. The project therefore entails no resettlement and land acquisition as defined by OP 4.01, nor long lasting disruptions to the natural environment and human settlements and activities.

2. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

Relevant Institutions

The Ministry of Energy, Development and Environmental Protection (MoEDEP), former Ministry for Environment and Spatial Planning is the key institution in Republic of Serbia responsible for formulation and implementation of environmental policy matters.

The other aspects of environmental management related to road rehabilitation projects are dealt with several other institutions, among which are the Institute for Nature Protection of Serbia (INP) and the Institute for Protection of Cultural Monuments of the Republic of Serbia (IPCM), and the Public Enterprise "Roads of Serbia" (PERS).

Existing Serbian legislation

Environmental protection in Republic of Serbia is regulated by several national and municipal laws and by-laws. The environmental legislation in force in Serbia is summarized in Appendix III.

EIA procedure in the Republic of Serbia

In the juridical system of the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment, which is completely in line with European EIA Directive -85/337/EEC. Therefore Environmental Impact Assessment is not required for road rehabilitation projects unless theirs alignment is placed within or in the vicinity of natural/cultural protected areas. In that case Project proponent is obliged to submit Request for Decision-making on the necessity of preparation of the Environmental Impact Assessment to the MoEDEP. Depending on assessment of significance of potential environmental impacts of project it could be decided that it is necessary to implement full EIA procedure for that kind of projects.

Road section Zabalj intersection – Zrenjanin is partially placed in the vicinity of natural protected area (Nature Park "Jegricka", III Category of protection) so the **EIA could be required for this project in accordance with the Serbian legislation, depending strictly on the opinions obtained from the relevant institutions** (Provincial Institute for the Nature Protection - PINP and Provincial Secretariat for Environmental Protection - PSEP).

PERS submitted request to the PINP during November 2012 in order to obtain preconditions under which proposed project should be implemented⁴. Until today, PERS still haven't received any respond from PINP regarding this issue.

Request for opinion regarding necessity of EIA procedure for this project will be submitted to the PSEP together with other relevant project documentation which mandatory include preconditions of PINP.

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⁴ See Appendix V of this EMP Document

After receiving abovementioned documents (preconditions of PINP and opinion of PSEP), and also based on requirements defined within this EMP document, PERS will define a Terms of Reference for this particular project. Documentation received from PINP and PSEP will be integral part of TOR for this project. This will ensure proper implementation of all project related environmental requirements and will offset or minimize any impact on local human and biotic environment.

Relevant IFIs Policies and Statements

As the road rehabilitation will be funded by IFIs the following Lender requirements will need to be applied to the any works:

- WB: Operational Policy OP 4.01 Environmental Assessment, which require partial EIA and development of site specific EMPs for projects belonging to Category B.;
- EBRD: Environmental and Social Policy 2008
- EIB: Statement of Environmental and Social Principles and Standards (2008).

EBRD and EIB will require that the project complies with the Republic of Serbia national laws and EU standards.

As a conclusion, it could be stated that GoS regulations do not require separate section-specific EMP to be undertaken for this type of investments (road rehabilitation), while the WB policy requires partial EIA assessment and preparation of site-specific EMP for each section.

3. BASELINE CONDITIONS ASSESSED DURING ROUTE SURVEY

Road section Zabalj Intersection to Zrenjanin is located in Vojvodina, northern Serbia. Administrative units where the section is located are Zabalj and Zrenjanin. Length of the section is 24.2 km.

Route survey was carried out by the PERS representatives several times during 2012, as an integral part of project preparation activities. PERS is performed detailed "Diagnostic on proposed Zabalj Intersection - Zrenjanin road section" during period between June and July 2012.

A PIT representative appointed for environmental protection took independent field survey together with the WB representative during August 2012 and with the EBRD representative during September 2012.

Road section Zabalj intersection – Zrenjanin is partially placed in the vicinity of natural protected area (Nature Park "Jegricka", III Category of protection). Within road section there are no protected cultural areas which could be impacted by the

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⁵ Document is available in PE "Roads of Serbia" – Sector for Investment

road rehabilitation works. There will be no land acquisition as defined by OP 4.01 during the project implementation.

Settlements

The start of the section is in Zabalj intersection, fairly distanced from city of Zabalj. Section goes to the km 24+200, and the whole stretch is free of residential buildings. Only residential zone is noted on the end of proposed road section, in Zrenjanin suburb area.

Watercourses

The section is intersected by two important river flow (the Jegricka Canal and Tisa River). Drainage of run-off water is ensured on both directions, transversally (to gutters, over the shoulders into the ditches or along the slopes of embankments) and longitudinally (by gutters and ditches to culverts or watercourses).

A segment of proposed road section from Zabalj Intersection to Zrenjanin is crossing Jegricka Canal in the vicinity of natural protected area – Nature Park "Jegricka". Adequate mitigation measures and appropriate monitoring plan are included in this EMP document.



Picture 6. Jegricka River



Noise and Air pollution

Within the corridor of road section Zabalj Intersection – Zrenjanin there is no significant point sources of noise or air pollution.

Existing major road M-7 is linear source which causes additional emission of air pollutants along the corridor of proposed road section.

Data on the measured values of air pollution in the observed corridor were not available.

Traffic counting performed in recent years⁶ and traffic forecast shows that no significance increase of road traffic will occur after the rehabilitation works on proposed road section.

Based on experience and expected traffic load during and after the planned road rehabilitation works, the increase of existing levels of air pollutants within the corridor of proposed road section is not expected.

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⁶ Available on PERS web site

Noise

Existing state road of the IB class, no. 20 (old marking; M-7) on Zabalj - Zrenjanin road direction as linear source is the only dominant noise source.

Based on experience and expected traffic load during and after the planned road rehabilitation works, the increase of existing levels of noise within the corridor of proposed road section is not expected.

4. SUMMARY OF ENVIRONMENTAL IMPACTS

The following table provides a summary of the Environmental Impacts that are predicted for the project

impact	significance	comment
impacts on land use/ settlements,	low	There will be no land acquisition as defined by OP 4.01 during the project implementation.
ground and surface water,	low	Due to low amount of drainage water that can be drained into Jegricka River and Tisa River, the consequential impact is minimal to negligible
air quality,	low	Temporary impact
flora and fauna (protected areas and species),	low	According to the recommendations prescribed within the preconditions obtained by Institute for nature protection
noise,	low	Temporary impact
access/crossing points of the main road and local roads,	low	The rehabilitation and widening works won't affect existing crossing points. No specific issues
soil management,	low	With application of waste handling measures
waste,	low	Ensured through

impact	significance	comment
cumulative impacts etc.	Medium/mod erate	environmental management - waste and wastewater management plan will be prepared and implemented Temporary, rehabilitation works may cause a slight increase of noise levels and air pollutants concentrations during the works only

Road rehabilitation works on proposed Zabalj Intersection – Zrenjanin section will have only minor impacts on the environment (environmental category B). Most of the impacts are of temporary character and they disappear after the road rehabilitation works are completed.

The possible temporary impacts as consequence of the construction activities will consist of among others: disruption of current traffic circulation; roadway safety; damage to access roads; noise, waste and dust nuisance; and air emissions; potential impacts of soils and water resources; brief disturbance to biota, and momentary interference to neighbouring settlements through various construction and operation activities. Off-site activities include quarry, borrow pit and asphalt plant operations, which if not managed properly, may cause localized adverse impacts. The Contractor's yard and workers' camp can be potential sources of temporary adverse impacts.

Air and noise pollution within the residential areas

It is expected that local residents who are living in suburb zone of Zrenjanin will be affected with minor air and noise pollution during rehabilitation works on proposed road section. Local Air quality may experience some moderate and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NOx) and sulphur oxide (SOx) from construction equipment exhaust are the primary pollutants. The dust may settle on vegetation, crops, structures and buildings, and may cause some degree of impact.

Noise caused by the rehabilitation works will be only a temporary impact. Relatively small traffic load on proposed road and non-presence of significant amount of residential buildings placed close to the road lead to the conclusion that noise barriers will not be implemented within this project. Noise barriers should be constructed only if they are determined to be "reasonable" and "feasible" which is not the case in proposed road rehabilitation project. .

Potential water contamination

Cases of water contamination may occur during the rehabilitation of the project road from site run off, spills and -water from the equipment maintenance areas and sanitary wastewater effluent from the work camps.

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

Fuel and lubricant spills can, in most instances, occur at the Contractor's work camp and motorpool while maintaining and washing equipment and work vehicles. The oily wash-water should be passed through an adequately sized, gravity oil separator prior to discharge.

Should spills occur in any part of the road, especially in the vicinity of natural protected area (zone of Nature Park "Jegricka"), Jegricka canal, to mitigate the problem the Contractor should use absorbing materials, such as absorbent mats/fabrics, or sand and scrape off the contaminated soils and dispose them in approved facility, in accordance with the Law on water ("Official Gazette of RS", 54/96, 101/05).

Bridge over Tisa River is designed to collect all polluted water from the bridge pavement and transport it on a sufficient distance from Tisa River. Therefore there is no need for any mitigation measure or monitoring activities related to possible Tisa river contamination.





5. ENVIRONMENTAL MANAGEMENT PLAN

Possible environmental impacts will be mitigated during the design/prerehabilitation, rehabilitation, and operation phases, as summarized in the Environmental Management Plan.

A basic assessment of the proposed road reconstruction and rehabilitation project concluded that the rehabilitation impacts will be minor, reversible and manageable if the mitigation measures as given in the EMP are properly implemented. The EMP (Appendix I and Appendix II) is based on the type, extent and duration of the identified environmental impacts. PERS (the Implementing Agency) will guide the design and supervision engineers and contractors on the implementation of the EMP.

A. MITIGATION PLAN

The findings and proposed mitigation measures have been compiled into an Environmental Mitigation Plan (Appendix I). It summarizes all the anticipated environmental impacts and its associated mitigation measures during the design, rehabilitation and operational phases. It makes reference to the **preconditions obtained from the relevant institution** (Provincial Institute for the Nature Protection⁷ and Provincial Secretariat for Environmental Protection⁸), law and contract documents, approximate location, timeframe, and the responsibility for its implementation and supervision.

Contractor Management

The recommendations and proposed mitigation measures, as shown in Appendix I will be attached to the Project Bidding Documents and subsequently the Contractors' contracts. Mitigation measures will be incorporated as part of the standard design and rehabilitation practices and as such their costs will be included in the rehabilitation cost. This will be refined during the detailed design stage.

Experience shows that inadequate application of the EMP by the Contractor may occur due to weak linkages of the EMP with the contract documents. The EMP is a part of the work program and as such it must be addressed by the Contractor and carried out as required.

EMP is a forming part of the Bid and Contract document. The contractor will use this document to cost his compliance with the EMP. It is the Contractor's obligation to cost the implementation of environmental mitigation measures in his overall cost. The Contractor will be required to provide a short statement that confirms that:

the EMP conditions have been costed into the bid price,

⁷ Provincial Institute was contacted but opinion is not obtained yet

⁸ This opinion will be obtained after receiving the opinion from Provincial Institute for Nature Protection

- the Contractor has a qualified and experienced person on the Contractor's team who will be responsible for the environmental compliance requirements of the EMP.
- the Contractor and its sub-contractors will comply with Republic of Serbia national laws, EU standards and Lender requirements.

Design Phase

Project proponent (PERS) contacted Provincial Institute for Nature Protection in Novi Sad in order to **obtain preconditions** under which rehabilitation works could be performed in the vicinity of natural protected area – Nature Park "Jegricka".

PERS is obliged to submit request, together with the preconditions obtained, to Environmental Authorities in Vojvodina (EAV) in order to receive decision about necessity of full EIA procedure for proposed project. If EAV made decision that full EIA is mandatory, PERS is obliged to follow complete EIA procedure prescribed by Serbian Law, including producing of EIA Study. Mitigation measures and monitoring program prescribed within the EIA Study will be basic project environmental requests, together with this EMP document.

Mitigation measures will be incorporated as part of the standard design and rehabilitation practices and as such their costs will be included in the rehabilitation cost. This will be refined during the detailed design stage.

In addition to addressing the requirements of the Mitigation Plan the following additional activities, will be carried out during the design phase in preparation for the mobilisation of the project:

The Site Organization Plan will be prepared as part of Detailed design. Design phase will take place just after the appraisal of the project. Site organization study incorporates environmental, health and safety protection measures that meet legal and Lender requirements (including the measures defined in the EMP and Safety Labour Management Plan.

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply. The plan will contain basic requirements related to:

- 1. Provision of materials needed for construction works
- 2. Material transport
- 3. Material placement
- 4. Site organization
- 5. Waste management
- The right-of-way arrangement (cleaning)

Technical specifications for work execution which address environmental, health and safety protection measures:

1. Preliminary works

- 2. Rehabilitation works on the existing pavement
- 3. Earth works
- 4. Drainage
- 5. Traffic signage systems

PERS is responsible for checking that the EMP and SLMP requirements are incorporated into the site organization.

Rehabilitation Phase Mobilisation - Contractor EMP

During the rehabilitation, the Contractor will work according to the requirements of the Contractor's Environmental Plan (CEP) (based on the EMP) which has been prepared by the Contractor and approved by PERS. Supervision and monitoring of the CEP activities will be undertaken as follows:

- (i) The contractor has the initial responsibility for preparing and implementing the CEP as per the works contract.
- (ii) The Resident Engineer (RE) will direct the Contractor with regard to compliance with the CEP.
- (iii) The PERS will carry out independent monitoring of the work and can issue Defect Notices to the RE who will transmit these to the Contractor.
- (iv) The contractor will have his own representative on site the Site Engineer (SE) who will be responsible for implementing the contract and complying with the CEP.

Contractor prepares CEP: following the award of the contract and before commencing the work, the Contractor will prepare a Contractor's Environmental Plan (CEP) that addresses the conditions of the rehabilitation in the EMP that has been attached to the Bid and Contract Documents including measures to comply with national legalisation and Lender requirements. The CEP will detail how the Contractor will address the activities in the rehabilitation section of the EMP. The contractor will submit the CEP to the PERS for approval.

Following the approval of the CEP, the Contractor together with the person on the Contractor's staff who will be responsible for supervising the CEP will meet the Project Supervision Consultant PSC (Environment) on-site. If the plan is appropriate and implementable, the PSC will advise the PE that the Contractor can now commence work.

Rehabilitation works

Preparation of site and establishment of contractor's facilities: This applies to all of the Contractor's facilities, storage areas, workshops, labour camps (when needed), concrete batching areas, asphalt plant, etc. The location and development of the Contractors' facilities will be approved by the RE. Locations will be selected so that:

1. they do not interfere with the environment and social well-being of the surrounding communities re noise, dust. vibration, etc.,

- 2. the size of contractor's facilities are limited to absolute minimum to reduce unnecessary clearing of vegetation,
- 3. sanitary waste and grey waters are treated before release into surface water systems, in accordance with the Law on water ("O.Gazette of RS", 101/05).
- 4. the sites are properly drained. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to drain to an oil and water separator,
- 5. fuel storage areas are not located within 20m of a water course. The contractor's facilities are to be contained within an adequate security fence.
- 6. Clearing of sites and removal and disposal of vegetation:
- 7. Wherever possible limit area to be cleared and avoid excessive machine disturbance of the topsoil.
- 8. Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements.
- 9. Prevention of soil erosion on construction site: The contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods. The contractor will:
- 10. Limit the extent of excavation to reduce soil erosion potential.
- 11. Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site.
- 12. Avoid excavation and operating machinery in wet ground conditions.
- 13. Where fuel in excess of 5,000 litres is stored on site, it will be stored in sealed tanks on a concrete base that is bunded to hold 110% of the tank capacity.
- 14. All workshops would be provided with oil and water separators.
- 15. The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills.
- 16. All waste oil, oil and fuel filters will be collected and disposed of in secure landfill areas. At the closure of the site, all contaminated soil will be excavated, removed and replaced with fresh topsoil.

Environmental Management during Rehabilitation works

Considering all the identified impacts, it becomes essential for the Contractor to prepare and later conscientiously implement the EMP throughout the duration of the project to ensure compliance with legislative and Lender requirements. The emphasis of the EMP shall be on the following:

- 1. <u>Layout of the work camp</u> and details of the proposed measures to address adverse environmental impacts resulting from its installation. Description and layout of equipment maintenance areas and lubricant and fuel storage facilities including distance from water sources/bodies;
- Sewage and septage management plan for provision of sanitary latrines and proper sewage collection and disposal system to prevent pollution of watercourses
- 3. A plan (<u>mechanism and organizational structure</u>) detailing the means by which local people and other project affected persons (PAP) can raise

- grievances arising from the rehabilitation process and how these will be addressed (e.g., through dialogues, consultations, etc.) (see Appendix 4 for the Project grievance mechanism).
- 4. <u>Soil Management Plan</u> detailing measures to be undertaken to minimize effects of wind and water erosion on stockpiles, measures to minimize loss of fertility of topsoil, timeframes, haul routes and disposal site;
- 5. <u>Dust management plan</u> which shall include schedule for water spraying on access road and in nearby settlements along the project road, as well as list of equipment to be used; This applies to all of construction sites and haul roads. During rehabilitation, when dust may be generated, the Contractor will monitor the worksite conditions and apply dust control measures, which include reducing construction traffic movements and spraying water on exposed areas.
- 6. A plan indicating the location of the proposed material extraction site as well as rehabilitation measures to be implemented for the borrow areas and access roads upon project completion;
- 7. Waste and wastewater management plan. Disposal of waste materials: All construction waste materials including drums, lumber, sand and gravel, cement bags etc. are to be suitably disposed of. If these cannot be recovered for scrap value these materials should be taken to an approved landfill sites for safe disposal. Hazardous waste will be stored and removed from the construction site on demobilization, in accordance with the Law on Waste management ("Official Gazette of RS", 36/09) The Contractor's SSIP should cover all aspects of waste management, including implementation of practice standards such as reduce, re-use and recycle. It should specify final disposal alignments for all waste and demonstrate compliance to national legislation and best practice procedures on waste management. The Waste Management Plan will, as a minimum, include details of temporary waste storage, waste transfer and pre-treatment prior to final disposal or recycling. Licensed/approved facilities for solid and liquid waste disposal must be used and a duty of care and chain of custody for all waste leaving the site will be followed. As part of the plan Contractors will be expected to produce waste handling forms for chain of custody, which will be used to control waste leaving site. Thus the waste controller will keep a copy of the form and the driver will always carry a copy and will ensure that the load is signed for at the final disposal site. All records will be kept by the Contractor for audit purposes and to demonstrate that the project is complying with best practice and applicable legislation.
- 8. Oil and fuel storage management plan. The Contractor's SSIP should cover all procedures for storage, transportation and usage of oils and fuels, refuelling of plant and machinery and procedures for minimizing the risk of ground and water contamination. All oils and fuels will be required to be stored within secondary containment of 110 % capacity and all spillages shall be cleaned up immediately. Re-fuelling vehicles will carry Spill Kits to enable spillages to be cleaned up as soon as possible. All categories of spillage will be reported in accordance with the Plan to be developed by The Contractor. Toolbox Talks would be expected to be delivered on an ongoing basis as "continued training" and following any significant incident.

- In-river works management plan. The Contractor's SSIP should cover procedures and plans for safeguarding aquatic habitats and fish during inriver work (Tisa and Jegricka River) and will complement the Construction Method Statements.
- Camp management plan. The Contractor's SSIP should contain procedures for establishing and operating construction camps in order to safeguard nearby communities and environmental resources.
- 11. <u>Emergency response plan</u>. The Contractor's SSIP should contain procedures for emergency response in the event of accidents or major incidents, in order to safeguard people, property and environmental resources. Details of the spill response equipment to be provided on site are to be specified.
- 12. Noise all equipment is licenced and approved in accordance with EU standards. This applies to all machinery, vehicles and construction sites where noise and vibration may affect susceptible receptors. The contractor will be responsible for ensuring that noise and vibration does not affect the adjacent communities, in accordance with the Law on noise protection ("Official Gazette of RS", 36/09).. While it is unlikely that noise and vibration will be an issue due to the large distances between the activities and the communities the Contractor will confine all work to daylight hours (0700hrs 1900hrs) should the community find that any night time operations become a nuisance.
- 13. Rehabilitation Plan: Clearance and rehabilitation of construction sites and removal of contractor's facilities: It is the contractor the Contractor's responsibility to address site cleanup. This includes the removal of all waste materials, machinery and any contaminated soil. The contractor will develop a plan for handover, sale or removal of all plant, vehicles and machinery to ensure that no unserviceable items are left on the construction site, in accordance with the Law on Waste management ("Official Gazette of RS", 36/09). All construction sites and work areas will be rehabilitated so that these can be returned as close as possible to their previous uses. This includes the stabilization and landscaping of all of the construction sites. No waste will be left on site after the work is completed, in accordance with the Law on environmental protection ("Official Gazette of RS", 135/04, 36/09, 72/09). Should the Contractor fail to remove the waste, the PERS is entitled to withhold payment and arrange the clean-up and deduct the cost of the clean-up and administrative charges from the final payment.

Safety

Safety and Hazard Assessment: Before commencing work, the Contractor will be required to identify potential hazards. Provisions for emergency responses are to be included in the Contractor's site safety plan which is to include nomination of a person who will be immediately contacted should an accident occur. The site safety plan will be submitted to the PSC for approval one week prior to starting work.

1. The contractor will be required to keep the site free of drugs and alcohol.

- 2. The contractor's site safety plan will include provision for a safe work environment and provide safety measures and protective equipment to all workers including; hand, head, eye and ear protection and safety footwear.
- 3. The site safety plan will include provision for first aid facilities on-site and employ a trained first aid person, in accordance with the Law on Safety and Health at work ("Official Gazette of RS", 101/05).
- 4. The contractor will provide supplies of potable water, toilets and wash water to the workers.
- 5. Safety and Labour Management Plan (SLMP), prepared by the PERS, will be consisting part of bidding documentation, in order to ensure H&S provisions during rehabilitation works.
- 6. Contractor is obliged to perform all project activities by respecting SMP recommendations and all Serbian laws and sub-laws which are covering H&S issues.

The PERS and Contractor together have responsibility for reporting and investigating incidents.

Community safety from increased vehicle movements: This applies to all vehicles and particularly to haul trucks that pass through villages. The contractor will ensure that all vehicles which pass through villages are operated safely without endangering these communities. The contractor is to ensure that:

- 1. all trucks and equipment is maintained in a safe operating condition,
- 2. all drivers and machinery operators are trained and act responsibly (to be stipulated in the Contractor's site safety plan),
- 3. all loads are secured and all loads with potential dust generating materials (e.g. excavated soil and sand) will be covered with tarpaulins,
- 4. the Contractor will immediately remove any drivers that ignore any of the community safety requirements.
- 5. Speed limits will be observed

Prior to commencement of construction activities/site works, all of the above plans will be submitted by the Contractor to the Sector for Investment within the PERS for approval.

Following the completion of works a Site restoration will take place. It's Contractor obligation to restore location of the project as it was at beginning of the project.

Operational Phase

People Safety: During operation, according to the assessment performed within the design phase, road safety features will include (i) measures to slow the traffic; e.g. decreasing of speed at selected places (e.g. settlements, schools, markets, etc.), (ii) dust suppression sealing, (iii) improvements in road signage and pavement markings, and (iv) attention to road accident black spots.

Road Maintenance: Routine maintenance (grading, grass cutting, drain clearing, and pothole patching and shoulder repairs, together with regular control and

maintenance of drainage structures and retention) will be undertaken on regular basis. Seasonal maintenance such as flood repairs, emergency maintenance to reinstate roads after major failures, and the regular upkeep of safety features and road signs will be undertaken as necessary. Major maintenance that include resurfacing and repairs are typically scheduled over periods of several years.

B. MONITORING PLAN

A monitoring plan for the proposed Project (Appendix II) has been prepared. The main components of the monitoring plans include:

- Environmental issue to be monitored and the means of verification,
- Specific areas, locations and parameters to be monitored;
- Applicable standards and criteria;
- Monitoring of noise levels near residential areas
- Monitoring of the procurement of materials (checks that valid permits are in place)
- Duration and frequency and estimated monitoring costs; and
- Institutional responsibilities for monitoring and supervision.

A field monitoring checklist has been prepared based on the EMP and monitoring plan (Appendix II). The field monitoring checklist will be used by the supervising field engineers. The signed checklists will be provided to the PERS who will be responsible for the follow-up and compliance reporting.

The PERS will maintain a Complaints Database, which will contain all the information on complaints or grievances received from the communities or other stakeholders. This would include: the type of complaint, location, time, actions to address these complaints, and final outcome.

C. INSTITUTIONAL IMPLEMENTATION AND REPORTING ARRANGEMENTS

Project Implementation

PERS is the Implementing Agency for the Project and will be responsible for the implementation and compliance with the EMP and Monitoring Plan. Day-to-day implementation and compliance will be the task of PSC.

Prior to the commencement of works PERS will submit to the Bank for its approval this section specific Environmental Management Plan.

The Contractor will provide "Zero monitoring" results prior to commencement of earth works, during its own mobilization phase.

To ensure that the proposed mitigation measures will be carried out by the Contractors during the construction stage, the Project Proponent will undertake the following:

- clearly set out in the tender and contract documents the Contractor's obligation to prepare CEP and undertake environmental mitigation measures as specified in the Environmental Mitigation Plan in Appendix I (to be appended to Contract specifications);
- (ii) No compensation for the costs of the required environmental mitigation measures and monitoring activities in the form of the particular item in the BoQ shall be given to the Contractor, except for the water quality analysis and noise measurement. It shall be regarded as if the Contractor has included these costs in the other items of the BoQ. Real expenditures of water quality analysis and noise measurement in scope defined by the BDs and the Contract shall be compensated to the Contractor in the form of the particular item in the BoQ.

For noncompliance with requested environmental mitigation measures and monitoring activities the Contractor shall suffer specific liquidated damages in a form of demerit points. Demerit points are provided as a measure that should stimulate the Contractor to carry out his obligations in an organized and timely way and to perform his duty meeting high standards even though those tasks does not appear to be of a serious nature. Demerit points have in the same time two meanings – numeric and monetary.

Each demerit point has associated monetary value which represents permanent payments reduction for determined noncompliance of the contracted obligations.

Number of received demerit points has cumulative effect. If during the Contract the Contractor receives more than certain number of demerit points specified in the BDs and the Contract, the Contractor will for a period of 2 years not be allowed to compete for any other PERS works contract. Also, if the Contractor is awarded over a specified number of demerit points, the Employer has a right to terminate the Contract. Monetary value of each demerit points as well as limits for other possible actions by the Employer shall be clearly specified in the BDs and the Contract.

Application of explained two measures - compensation for specific costs and penalties for noncompliance – should assure implementation of all requested environmental mitigation measures and monitoring activities, and

Explicitly require the Contractor to recruit an environmental specialist. The contractor will be responsible for the implementation of environmental mitigation measures during construction and shall employ an environmental supervise will implementation of the Contractor's environmental responsibilities and coordinate with the PERS and MoT. The contractor, in coordination with PERS, shall set-up a grievance redress committee that will address any complaints during project implementation. During project implementation, the PERS shall monitor the compliance of the Contractor with the EMP provisions. It is proposed that the project supervision consultants (PSC) employ an environment specialist (with civil engineering/environmental management background) assist to environmental supervision.

Upon Project completion, the PERS will be in charge of the operation and maintenance of the Project Road. Routine and random monitoring will be undertaken as scheduled in the monitoring plan.

The Public Enterprise "Roads of Serbia" (PERS) is also responsible for:

- Implementation of requests for environmental protection given by:
 - Government environmental authorities and EIA document (if exists),
 - IFIs and other institutions,
 - Law on environmental protection ("Official Gazette of RS", 36/09, 72/09),
- Implementation of requests for environmental protection through contractors specifications,
- Supervision of the project through the consulting services for supervision and implementation of the project,
- Supervision of environmental monitoring through the consulting services for environmental monitoring,
- Preparation of the final environmental reports.

Construction Contractor will make proposal for environmental protection, including safety of persons associated with the works and the public, during a preconstruction period within the Environmental Management Plan. This proposal will be reviewed by PERS in order to obtain the "no objection" to the proposal's recommendations. In this regard, attention will be given to:

- taking all reasonable steps to protect the environment on and off site and avoid damage or nuisance to persons or property arising from its operations,
- maintaining conditions of safety for all persons entitled to be on site and
- provision of all lights, guards, fencing, warning signs, traffic control and watching for protection of the works and other property and for the safety and convenience of the public.

MoEDEP will have the authority for immediate suspension of works if performance is not in accordance with environmental standards and regulations. Inspection will then inform the PERS about suspension and order to proceed according to its directive.

During the implementation of this Project, the public has the right to participate either directly or indirectly, which introduces the possibility to present its interests and opinion in the process of decision making. In order to reach the best option during this process, PERS was disclosed this EMP document to stakeholders (See Appendix 4) such as interested public, including local municipalities and NGOs. Draft EMP document was placed in PERS web site too (www.putevi-srbije.rs). During process of public consultations interested public collected all project information, including all environmental issues related to this project. Opinions and suggestions are incorporated within the final version of EMP document which will be an integral part of project bidding documentation. A grievance mechanism will be maintained by PERS via their website.

During rehabilitation works, a public liaison officer, named by the Contractor will establish communication with the local residents affected with the project and will be responsible to inform them about all project activities, especially related to environmental impacts of the project and planed mitigation measures.

Reporting Arrangements

A) Contractor to PERS

The Contractor will prepare his compliance reports in respect to this EMP and his SSIP as a Quarterly Progress Reports and submit them to PERS, in both Serbian and English language, in hard copy and electronic versions.

Construction Contractor will provide quarterly reports to the PERS which document the environmental mitigation and protection measures, together with prescribed monitoring activities carried out during that quarter's reporting period. Construction Contractor will take care on environment quality according to the mitigation and monitoring plan which are a consisting part of EMP (Appendix I and Appendix II) through those phases and will report quarterly to the PERS.

The same applies to the Environmental Monitoring and Supervision Contractors for their part of mitigating and environmental monitoring activities.

If any kind of accident or endangerment of environment happens, reporting will be immediate. Contractor is obliged to inform the project manager and local authorities about accidents immediately after it happened. In case that project manager is not responding on a call, the Contractor is obliged to inform PERS about accident (phone number +381113040701 or via E-mail on following address: office@putevi-srbije.rs).

The Consulting Services of Supervision, to be contracted under the loan, includes the services of environmental monitoring as well. Within the Services in question, The Contractor will monitor quality of environmental conditions according to the monitoring plan which is a consisting part of EMP (App II) through those phases and will report quarterly to the PERS. These reports will encompass a list and explanation of all undertaken activities at the site and results of the field research, as well as recommendations for future field activities and protection measures.

B) Project Supervision Consultant to PERS

The findings of the regular monitoring activities, including activities specified in the Monitoring Plan (Appendix II) carried by the Contractor will be included in the quarterly PSC progress reports.

If some kind of accident or endangerment of environment happens, reporting will be immediate.

C) PERS to MoT, WB, EBRD and EIB

Annual Environmental Health and Safety (EHS) reports, including monitoring indicators and reporting on the implementation of the requirements set forth in the EMP will be prepared by PERS and submitted for IFIs review. IFIs will review the reports and verify their contents through periodic site visits. The PERS shall provide Annual reports to MoT and IFIs regarding the status of implementation of mitigation measures by the Contractors, additional mitigation measures that may need to be implemented, incidents of non-compliance with applicable environmental permits, complaints received from local residents, NGOs, etc. and how these were addressed.

In case of fatalities or major incidents on site the PERS will immediately report to the Bank which is financing the road section.

6. INFORMATION DISCLOSURE, CONSULTATIONS, AND PARTICIPATION

As required by the IFIs Safeguards Policies, public consultations will be undertaken during the preparation of EMP. The EMP and other project information will be disclosed to the Public and were available locally to the communities at the

PERS office	19a Vlajkoviceva St., Belgrade, contact person Igor Radovic, 011 3206811		
Community centres	Zabalj and Zrenjanin Municipalities		
PE "Roads of Serbia" web site	www.putevi-srbije.rs		

Stakeholders that may have an interest in the project have been identified and listed in Appendix IV and may be consulted or advised about project related issues.

Detailed Report on Public Consultation process is presented within the Appendix IV of this EMP document and includes a list of identified stakeholders, which shall be updated as necessary.

Beneficiary consultations will be conducted during the construction phase, and records of environmental and social issues raised and complaints received during consultations, field visits, informal discussions, formal letters, etc., will be followed up and the records will be kept in the project office at PERS.

In advance of the work commencing PERS will provide information in:

- Newspaper articles in one national and also in one local media.
- Posters on main notice board at all community centres of potential affected Communities

- Radio announcement of road diversions
- Provide contact details of community liaison officers who are appointed to work with local communities.

A Grievance Mechanism will be implemented to ensure that all complaints from local communities are dealt with appropriately, with corrective actions being implemented, and the complainant being informed of the outcome. It will be applied to all complaints from affected parties. A grievance form is attached in Appendix and hard copies will be made available at community centres.

Report on consultation is presented within the Appendix IV of this EMP document.

7. REFERENCE

- 1 Environmental Assessment Sourcebook No 25, Environmental Management Plans, The World Bank Environment Department, January 1999
- 2 Roads and the environment: A Handbook, The World Bank Environment Department
- 3 EIB ENVIRONMENTAL AND SOCIAL PRACTICES HANDBOOK, Environment and Social Office Projects Directorate Version 2 of 24/02/2010
- 4 EBRD Environmental and Social Policy 2008
- 5 EIB Statement of Environmental and Social Principles and Standards (2008).
- 6 Environmental Management Plan for rehabilitation of roads, bridges and tunnels under the World Bank road management and safety project, Republic of Srpska Road Directorate, Banja Luka, 2001
- 7 Environmental Assessment REPORT & Environmental Management Plan for Serbian Transport Rehabilitation Project, report No: E866, project name/ID: YF-Transport Rehabilitation Project P075207, document date 2003/11/30

Appendix I MITIGATION PLAN

MITIGATION PLAN

Phase	Issue Mitigating measure	Institutional responsibility		Comments (e.g.	
			Install	Supervision	secondary impacts)
PRE- CONSTRUCTION	Detailed Design				
	Bid documents prepared without access to or use of the this EMP in a translated version	having incorporated a (Serbian) copy of the mitigation	Detailed Design Consultant and RC	Technical Control of Detailed Design PERS	
	EIA procedure requirements based on project conflict with area of nature park "Jegricka"	for nature protection (Novi Sad) in order to avoid	PERS	PERS	
	EIA Study, on Environmental Authorities of Vojvodina (EAV) demand (if recognized as mandatory document only)	PERS will purchase EIA Study from independent consultant, organize and perform public consultations and obtain environmental approval from EAV	Detailed Design Consultant and RC	Technical Control of Detailed Design PERS	
	The location and development of the contractors' facilities will be approved by the PE. Locations will be selected	they do not interfere with the environment and social well-being of the surrounding communities re noise, dust. vibration, etc., the size of contractor's facilities are limited to absolute minimum to reduce unnecessary clearing of vegetation, sanitary waste and grey waters are treated before			

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g.
			Install	Supervision	secondary impacts)
	so that:	release into surface water systems, in accordance with the Law on water ("Official Gazette of RS", 101/05). the sites are properly drained. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to drain to an oil and water separator, and fuel storage areas are not located within 20m of a water course. The contractor's facilities are to be contained within an adequate security fence. Clearing of sites and removal and disposal of vegetation: Wherever possible limit area to be cleared and avoid excessive machine disturbance of the topsoil. Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements. Prevention of soil erosion on construction site: The contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods. The contractor will: Limit the extent of excavation to reduce soil erosion potential. Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site. Avoid excavation and operating machinery in wet ground conditions.			
	Site selection for construction camps, near or within existing settlements. Impact on	Proper site selection, observing criteria which primarily protect the public general. Observe a minimum distance (buffer zone) between camp site and nearest residential area. Observe local wind conditions to	Detailed Design Consultant and RC	Technical Control of Detailed Design	

Phase	Issue	Mitigating measure	Insti respo	Comments (e.g. secondary	
			Install	Supervision	impacts)
	public health and sociological setting	reduce nuisances. Work safety and environmental protection measures to be specified by the Contractor in his Site Management Plan. Planning for independent water and electric supply network and a medical service station at the site.		PERS	
	Road safety issues associated with pedestrian crossing	Plan for safe and adequate pedestrian crossing facilities that can be in most cases over passages equipped with ramps and structures that allow the use of wheelchairs, pushcarts, bicycles and prams.	Detailed Design Consultant and RC	Technical Control of Detailed Design PERS	
	Stakeholder engagement	Details of the proposed road alignment, access points and safety features will be disclosed in the locality of the planned works. Feedback from local stakeholders will be sought and recorded. Evidence of how feedback has been considered in the final design will be recorded.			
Construction		Management Plans			
		ement the following plans as described in the EMP to islative and Lender requirements.			
	Site organisation plan	า			
	Sewage and septage	 			
	Project grievance me Sail Management Pla	•			
	Soil Management PlaDust management pl				
		location of the proposed material extraction site as well			

Phase	Issue	Mitigating measure		tutional ensibility	Comments (e.g.	
			Install	Supervision	secondary impacts)	
	access roads upon Maste and wastewa Waste managemen Oil and fuel storage r In-river works management Camp management Emergency response Rehabilitation Plan Safety and Hazard A	nter management plan in accordance with the Law on at ("Official Gazette of RS", 36/09). management plan. pement plan. plan. plan.				
CONSTRUCTION		Site Induction				
		o site shall be given a Health, Safety and Environment nd instructed in the need and use of PPE.				
CONSTRUCTION		Material supply				
	Asphalt plant dust, fumes, workers health and safety, ecosystem disturbance	use existing asphalt plants; requirement for official approval or valid operating license	Asphalt plant	Asphalt plant	a)-c) to be specified in bid documents- Conditions for selection of	
	Stone quarry dust, workers health and safety, ecosystem	use existing stone quarries; requirement for official approval or valid operating license	Stone quarry	Stone quarry	subcontractor s for material supply	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g.
			Install	Supervision	secondary impacts)
	disturbance				
	Sand and gravel borrow pit disturbance of river bed, water quality, ecosystem disturbance	use existing borrow pits or buy material at licensed separations; requirement for official approval or valid operating license	Sand and gravel Contractor or Separation	Sand and gravel Contractor or Separation	
CONSTRUCTION		Material transport			
	Asphalt dust, fumes	All trucks are to be covered This is a problem area through-out the region and I this will not be achieved unless the selection contractors operating trucks is managed	Truck operator	Truck operator	a)-d) to be specified in bid documents- Technical
	Stone Dust	wet or cover truck load	Truck operator	Truck operator	Specifications for realization
	Sand and gravel Dust	wet or cover truck load	Truck operator	Truck operator	of works
	Traffic management noise, vehicle exhaust, road congestion	haul material at off peak traffic hours (preferably 9-14h); use alternative routes to minimize major traffic sites Need to ensure that adequate signs to work fronts to minimise 'wrong turn' chances causing even more congestion	Transport manager; Truck operator	Transport manager; Truck operator	
	Archaeological chance finds	In case of chance finds Contractor is obliged to stop the works immediately and inform institute for protection of Cultural Monuments and PERS about it,.	Contractor	Supervision Contractor	

Phase	Issue	e Mitigating measure		Institutional responsibility	
			Install	Supervision	secondary impacts)
CONSTRUCTION		Construction site			
	Noise disturbance to human and animal population and workers	limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities); equipment operating with noise mufflers and licenced and approved in accordance with EU standards. Noise screens/barriers for noisy works for those longer than one day in the same location/area. Noisy equipment will be located as far as possible from residential or other sensitive receptors.	Construction Contractor	Construction Contractor	
	Dust	water construction site and cover material storage areas limited speed of vehicles Implement a Dust Management Plan: measures to avoid/minimize dust emissions, including use of hoardings; wetting down/spraying of construction areas, accesses, materials stockpiles and during loading/unloading activities; covering of vehicles carrying dusty materials; wheel washing/spraying of vehicles; and management of spoil, etc.	Construction Contractor	Construction Contractor	
	Vibrations	limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities) if any material damage proved to have been caused to local houses, buildings and other infrastructure (including access roads) by the works will be compensated for and subject to repair on a timely basis. Earthmoving equipment will be located as far away as possible from vibration-sensitive receptors.	Construction Contractor	Construction Contractor	

Phase	Issue	Mitigating measure	Insti respo	Comments (e.g. secondary	
			Install Supervision		impacts)
	Traffic disruption during construction activity	traffic management plan with measures to redirect traffic that are easily seen or easy to follow; include traffic police assistance if needed Construction Traffic Management Plan will establish speed limits for construction vehicles and organize traffic to avoid as much as possible populated areas. Local residents will be kept informed of planned works	Construction Contractor	Construction Contractor	
	Reduced access to roadside activities	provide alternative access to roadside activities at all times	Construction Contractor	Construction Contractor	
	Vehicle and pedestrian safety when there is no construction activity	lighting and well defined safety signs and protection measures.	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper material storage, management and usage	organize and cover material storage areas; isolate concrete, asphalt and other works from watercourse by using sealed formwork or covers; isolate wash down areas of concrete and asphalt trucks and other equipment from watercourse by selecting areas for washing that are not free draining directly into watercourse Operate construction site in a way to reduce the risk of generating sediments and wastewater that may pollute local soils or receiving water bodies (considering situations such as including stormwater runoff, wastewater generated from facilities on site such as wheel washing facility).	Construction Contractor	Construction Contractor	
		Soil Management Plan shall be prepared for the controlled removal of top soil, storage and reuse.			

Phase	Issue	Mitigating measure	Institutional responsibility Install Supervision		Comments (e.g. secondary
					impacts)
		Prevent sediments flowing into surface waters and drainage channels by localised control measures (eg sediment fences, check dams, mulch barriers, rock groynes, or geofabric barriers, sediment basins), contouring to optimise slope angle and steepness, Prevent wind erosion via fencing, covering, etc.			
	Water and soil pollution from improper disposal of waste materials	dispose waste material at location protected from washing out, should be marked in the site plan; if not on site, then at authorized landfill / depot	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper disposal of waste materials	Storage of wastes according to international best practice (IFC EHS General Guideline). Apply additional measures for storage of hazardous wastes (such as use of secondary containment, access restriction, provision of PPE etc.) as necessary to prevent harm to construction staff, environment and public. Use and labelling of designated waste collection containers and storage areas for different kinds of wastes (hazardous and non-hazardous).	Construction Contractor	Construction Contractor	
	Potential contamination of soil and water from improper maintenance and fuelling of equipment	apply best engineering practice in safe storage and handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and dispose to permitted waste recovery facility	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper disposal of waste materials	Transport of waste in marked vehicles designed to the type of waste to minimise the risk of release of materials (hazardous and non-hazardous materials)	Construction Contractor	Construction Contractor	

Phase	Issue Mitigating measure			tutional onsibility	Comments (e.g.
			Install	Supervision	secondary impacts)
		and windblown debris. Training of drivers in handling and disposal of their cargo and the documentation of the transport describing the nature of the waste and its degree of hazard.			
	Workers safety	provide workers with safety instructions and protective equipment; safe organization of bypassing traffic	Construction Contractor	Construction Contractor	
		Landscaping - Undertaking of re-vegetation progressively with cover crop and native endemic species and monitor its effectiveness. Where initial plantings were not successful, replacement plantings will be carried out.			
OPERATION		Maintenance			
	Noise disturbance to human and animal population and workers	limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public); equipment operating with noise mufflers	Maintenance Contractor	Maintenance Contractor	a)-d) to be specified in maintenance contract documents-Technical Specifications for realization of maintenance works
	Possible air, water and soil pollution dust, vehicle exhaust, fuel	apply best engineering practice in safe storage and handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance	Maintenance Contractor	Maintenance Contractor	

Phase	Issue	Mitigating measure	Institutional responsibility Install Supervision		Comments (e.g.
					secondary impacts)
	and lubricants spills	of equipment; collect all waste and dispose in line with the Law on waste management; organize and cover material storage areas; isolate asphalt from watercourse by using sealed formwork; selecting areas for washing that are not free draining directly or indirectly into watercourse (Tisa and Jegricka River); dispose waste material at location protected from washing out			
	Vibrations	limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities)	Maintenance Contractor	Maintenance Contractor	
	Workers safety	provide workers with safety instructions and protective equipment; safe organization of bypassing traffic This could really be expanded as it rather limited.	Maintenance Contractor	Maintenance Contractor	
	Increased vehicle speed	install traffic signs for speed limit	Maintenance Contractor	Maintenance Contractor	a)-b) to be specified in maintenance contract documents-Technical Specifications for realization of maintenance works
	Erosion, rockfall, hazardous conditions	install warning signs (rockfall, landslide, wet or slippery conditions, dangerous curve, animal or pedestrian	Maintenance Contractor	Maintenance Contractor	

Phase	Issue Mitigating measure			tutional ensibility	Comments (e.g. secondary
			Install	Supervision	impacts)
		crossing, school, slow moving vehicles, merge), reflective markers to indicate steep edge or convex mirrors to see oncoming traffic at blind curves; locate warnings at points considered necessary by good engineering practice, or as agreed in writing with public and authorities			

Appendix II MONITORING PLAN

MONITORING PLAN

Phase	What is the parameter to	Where the parameter	How the parameter should be monitored?/	When the parameter should be monitored? (frequency of	Why the parameter should be	Institutional responsibility
	be monitored?	should be monitored?	type of monitoring equipment	measurement or continuous)	monitored? (optional)	Operate
CONSTRUCTION			Material supply			
Asphalt plant	possession of official approval or valid operating license	asphalt plant	Inspection / supervising engineer	before work begins	assure plant compliance with environment, health and safety requirements	Plant Operator
Stone quarry	possession of official approval or valid operating license	stone quarry	Inspection / supervising engineer	before work begins		Quarry Operator
Sand and gravel borrow pit	possession of official approval or valid operating license	sand and gravel borrow pit or separation	Inspection / supervising engineer	before work begins		Borrow pit or Separation Operator
CONSTRUCTION			Material transpor	t		_
Asphalt	truck load covered	job site	supervision	unannounced inspections during work, at least once per week	assure compliance of performance with environment, health	Supervision Contractor

Phase	What is the parameter to	Where the parameter	How the parameter should be monitored?/	I?/ be monitored? (frequency of	Why the parameter should be	Institutional responsibility
1 11.000	be monitored?	should be monitored?	type of monitoring equipment	measurement or continuous)	monitored? (optional)	Operate
Stone	truck load covered or wetted	job site	supervision	unannounced inspections during work, at least once per week	and safety requirements and enable as	Supervision Contractor
Sand and gravel	truck load covered or wetted	job site	supervision	unannounced inspections during work, at least once per week	little disruption to traffic as it is possible	Supervision Contractor
Traffic management	hours and routes selected	job site	supervision	unannounced inspections during work, at least once per week		Supervision Contractor
CONSTRUCTION			Construction Site	•		
Noise disturbance to workers and neighboring population	noise levels	job site; nearest homes at settlement Zrenjanin	equipment – hand- held analyzer with application software	once at the beginning of the project and later on quarterly basis, and on complaint. If the results of monitoring are not satisfactory, monitoring should be conducted on monthly basis	a)-k) assure compliance of performance with environment	Construction Contractor
Water and soil pollution from improper material storage, management and usage	water and soil quality (suspended solids, oils, pH value, conductivity)	on Jegricka Canal	unannounced sampling; analysis at accredited laboratory with necessary equipment	At least 3 times during project period. Monitoring should be done prior construction (or on a referent point upstream of construction site) and during and after rehabilitation works		Construction Contractor

Phase	What is the parameter to	Where the parameter	How the parameter should be monitored?/	When the parameter should be monitored? (frequency of	Why the parameter should be	Institutional responsibility
Tildae	be monitored?	should be monitored?	type of monitoring equipment	measurement or continuous)	monitored? (optional)	Operate
Dust	air pollution (solid particles)	at and near job site	inspection and visual observation	unannounced inspections during material delivery and construction	health and safety requirements and enable as little disruption to traffic as it is possible	Supervision Contractor
Vibrations	limited time of activities	job site	supervision	unannounced inspections during work and on complaint		Supervision Contractor
Traffic disruption during construction activity	existence of traffic management plan; traffic patterns	at and near job site	inspection; observation	before works start; once per week at peak and non-peak periods		Supervision Contractor
Reduced access to roadside activities	provided alternative access	job site	supervision	random checks at least once per week during construction activities		Supervision Contractor
Vehicle and pedestrian safety when there is no construction activity	visibility and appropriatenes s	at and near job site	observation	random checks at least once per week in the evening		Supervision Contractor
Workers safety	protective equipment; organization of bypassing traffic	job site	inspection	Unannounced inspections during work. It is recommended to use EBRD template for this purpose (next table)		Supervision Contractor

Phase	What is the parameter to	Where the parameter	How the parameter should be monitored?/	When the parameter should be monitored? (frequency of	Why the parameter should be	Institutional responsibility
	be monitored?	should be monitored?	type of monitoring equipment	measurement or continuous)	monitored? (optional)	Operate
OPERATION			Maintenance			
Noise disturbance to human population and workers	noise levels	job site; nearest homes	equipment – hand- held analyzer with application software	unannounced inspections during maintenance activities and on complaint	assure compliance of performance with environment, health and safety requirements	PERS
Vibrations	limited time of activities	job site	supervision	unannounced inspections during maintenance activities and on complaint		PERS
Workers safety	protective equipment; organization of bypassing traffic	job site	inspection	unannounced inspections during maintenance activities and on complaint		PERS
OPERATION			Road Safety			
Increased vehicle speed	condition of traffic signs; vehicle speed	road section included in project	visual observation; speed detectors	during maintenance activities; unannounced	enable safe and economical traffic flow	Maintenance Contractor; Traffic Police
Erosion, rockfall, hazardous conditions	road section included in project	condition of hazard signs	visual observation	during maintenance activities		Maintenance Contractor

Proposed Template - additional data required that should be incorporated into monitoring plans:

1. General		
Is the project materially compliant with all relevant Performance Requirements (taking account of agreed action plans, exemptions or derogations)?	Yes □ No □	If No, please provide details of any material non-compliances:
Is the project materially compliant with all applicable environmental and social laws and regulations?	Yes □ No □	If No, please provide details of any material non-compliances:
Have there been any accidents or incidents that have caused damage to the environment, brought about injuries or fatalities, affected project labour or local communities, affected cultural property, or created liabilities for the company?	Yes 🗆 No 🗅	If yes, please describe, including details of actions to repair and prevent reoccurrence:
Have there been any changes to environment, social, labour or health and safety laws or regulations that have materially affected the company?	Yes □ No □	If yes, please describe:
How many inspections did you receive from the environmental authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found
How many inspections did you receive from the health and safety authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found
How many inspections did you receive from the labour authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
Have these visits resulted in any penalties, fines and/or corrective action plans?	Yes □ No □	If yes, please describe, including status of implementing corrective actions to address any violations found:

Has the Company engaged work in the reporting period?		for project-related	Yes □ No □	If yes, please state for which types of work, and how t compliance of contractors with Performance Requiren Action Plan:				
Were any of the violations contractors?	stated above the	e responsibility of	Yes □ No □	If yes, please provide details, including how the Compare implemented by the Contractor?	any is ensuring that corrective actions			
Have any operations been closed down due to environment reasons?			Yes □ No □	If yes, please describe:				
Please describe any environ performance and/or manage	•	grammes, initiatives	s or sub-proje	cts undertaking during the reporting period to improve the	ne company's environmental or social			
	Please indicate the level of associated expenditure (capital expenditure and operating expenditure), and whether this relates to the requirements of the Environmental and Social Action Plan, or to any other initiative:							
2. Status of the Env	ironmental a	nd Social Acti	on Plan					
Please provide information on the status of each item in the Environmental and Social Action Plan (ESAP). If the ESAP has been updated during the reporting period, please attach a copy of the new plan.								
3. Environmental Monitoring Data ⁹								
Please provide the name a environmental manager:	nd contact detail	s for your						
Parameter ¹⁰	Value ¹¹	Unit		Compliance Status ¹²	Comments ¹³			

⁹ Please provide the results of any environmental monitoring carried out by the Company or its consultants. If you already have all the data requested available in another format, then this can used instead.

Not all parameters will necessarily apply. Please complete those rows that are most relevant to the industry sector. Additional parameters can be added as necessary.
 Please ensure that the units of measurement are clearly stated
 Please report on compliance against the standards for this project (typically local, EU and/or World Bank Group)
 In addition to any other comments, please indicate whether the measurements reported apply to all or only some process operations at the facility

Please provide the name and contact details for your environmental manager:		s for your		
Parameter ¹⁰	Value ¹¹	Unit	Compliance Status ¹²	Comments ¹³
Waste Water				
Total waste water generated				
BOD				
COD				
Suspended Solids				
Phosphorus				
Nitrates				
Heavy metals				
[Other]				
Air Emissions				
SO ₂				
NO _X				
Particulates				
CO ₂				
CH ₄				
N ₂ O				

Please provide the name and contact details for your environmental manager:				
Parameter ¹⁰	Value ¹¹	Unit	Compliance Status ¹²	Comments ¹³
HFCs				
PFCs				
SF ₆				
[Other]				
Other Parameters				
Noise				
[Other]				
Solid Waste				
Please provide details of the or disposal method for each		ts of solid wastes g	generated by the project. Indicate where wastes are classified as haza	rdous. Indicate the final re-use, recycle

4. Resource Usage and Product Output						
Parameter	Value Measurement Unit Comments ¹⁴					
Fuels used						

¹⁴ In addition to any other comments, please indicate whether the measurements reported apply to all or only some process operations at the facility Please include any fuel quality parameters (e.g. calorific value)

4. Resource Usage and Product Output						
Parameter	Value	Measurement Unit	Comments ¹⁴			
Oil						
Gas						
Coal						
Lignite						
Grid Electricity						
Heat Purchased						
Feedstocks and raw materials consumed						
Name 1						
Name 2						
Product output						
Product 1						
Product 2						
Product 2						

5. Human Resources M	Management		
Please provide the name and contact details for your Human Resources manager:			
	Total	Recruited in this reporting period	Dismissed in this reporting period
Number of direct employees:			

Number of contracted workers:							
Were there any colle redundancies during the repoperiod?	ctive yes I		If yes, please describe the redundancy plan, including reasons for redundancies, number of workers involved, how they were selected, consultation undertaken, and measures to mitigate the effects of redundancy:				
Are there any planned redundar to the workforce in the next year			If yes, please describe the redundancy plan, including reasons for redundancies, number of workers involved, and selection and consultation process:				
Were there any changes in union representation at Comfacilities during the reporting per	pany Yes 🖬	If yes	s, please provide details, and summar	arise engagement with trade unions during reporting period:			
Were there any other we representatives (e.g. in the abs of a trade union)?		If yes	s, please provide details and summaris	rise engagement with them during reporting period:			
Were there any changes in status of Collective Agreements		If yes, please provide details:					
Have employees raised grievances with the project d the reporting period?	any yes D No D		s, please state how many, split by gend in how the Company has addressed th	ender, summarise the issues raised in grievances by male and female staff and it them:			
Have employees raised complaints about harassmen bullying during the reporting periods			s, please state how many, split by gend company has addressed them:	ender, summarise the issues raised by male and female staff and explain how			
Have there been any strikes or collective disputes related to la and working conditions at Company in the reporting period	bour Yes Later the No Later	If yes	s, please summarise nature of, and rea	easons for, disputes and explain how they were resolved			
Have there been any court of related to labour issues during reporting period?		If yes	s, please summarise the issues contes	ested and outcome:			

Have there been any changes to the following policies or terms and	Yes □	If yes, please give details, including of any new initiatives:
conditions during the reporting	No □	
period in any of the following areas:	140	
Union recognition		
 Collective Agreement 		
 Non-discrimination and equal 		
opportunity		
 Equal pay for equal work 		
Gender Equality		
 Bullying and harassment, 		
including sexual harassment		
 Employment of young persons 		
under age 18		
 Wages (wage level, normal and 		
overtime)		
Overtime		
 Working hours 		
 Flexible working / work-life 		
balance		
 Grievance mechanism for 		
workers		
 Health & safety 		
•		
	1	

6. Occupational Health and Safety Data							
Please provide the name and contact details for your Health and Safety manager:							
	Direct employees	Contracted workers		Direct employees	Contracted workers		
Number of man-hours worked this reporting period:			Number of Fatalities ¹⁵ :				

¹⁵ If you have not already done so, please provide a separate report detailing the circumstances of each fatality.

Budget spent on OHS in this period (total amount and currency):			Number of disabling injuries:			
OHS training provided in this period in person-days:			Number of Lost Time Incidents (including vehicular) ¹⁶ :			
Number of lost workdays ¹⁷ resulting from incidents:			Number of cases of occupational disease:			
Number of sick days:						
Accident causes (falling, heavy loads, str	uck by object, contact with	energy source etc.)				
Please provide details of any fatalities or major accidents that have not previously been reported to Banks, including total compensation paid due to occupational injury or illness (amount and currency):						
Please summarise any emergency prevention and response training that has been provided for company personnel during the report period:						
Please summarise any emergency response exercises or drills that have been carried out during the report period:						

 ¹⁶ Incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.
 17 Lost workdays are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

7. Stakeholder Engagement
Please provide the name and contact details for your external relations or community engagement manager:
Please provide information on the implementation of the stakeholder engagement plan and summarise interaction with stakeholders during the reporting period, including: - Meeting or other initiatives to engage with members of the public or public organisations during the report period, - information provided to members of the public and other stakeholders during the report period relating to environmental, social or safety issues - coverage in media, - and interaction with any environmental or other community groups. Please describe any changes to the Stakeholder Engagement Plan:
How many complaints or grievances did the project receive from members of the public or civil society organisations during the reporting period? Please split by stakeholder group. Summarise any issues raised in the complaints or grievances and explain how they were resolved:

8. Status and Reporting on Resettlement Action Plan/Livelihood Restoration Framework

Existing Land Acquisitions

Please report any further progress made during this reporting period in the implementation of the Resettlement Action Plan (RAP) or Livelihood Restoration Framework (LRF), using the monitoring indicators as detailed in the RAP or LRF, and complete the table below. Please provide the results of any other related monitoring carried out by the Company or its consultants and attach any additional information you think would be useful.

Have all the affected persons been fully compensated for their physical displacement and, if applicable, any economic losses resulting from the project?	Yes • No •	If no, specify how many compensation payments are still outstanding (in terms of number and percentage of recipients and payment amounts) and state when these payment will be made:
Has the land acquisition had any additional, unforeseen impacts on affected persons' standard of living or access to livelihoods that were not previously covered in the RAP?	Yes • No •	If yes, quantify these impacts and specify what measures have been undertaken to minimize and mitigate these impacts. If no, specify how potential impacts on livelihoods have been monitored.
Have any vulnerable groups been identified?	Yes □ No □	If yes, list the groups that were identified and describe any additional measures undertaken in order to mitigate impacts specific to these groups.
If applicable, have all transit allowances been paid?	Yes • No •	If no, specify how many payments are still outstanding (in terms of number and percentage of recipients and payment amounts) and state when these payments will be made.
Has legal support been provided to all the affected persons?	Yes • No •	If yes, specify how many persons effectively made use of the legal support.
Have all outstanding land and/or resource claims been settled?	Yes □ No □ Not applicable □	If no, specify how many claims are still outstanding and state what the expected timing is for settling them.

Have there been any new land acquisition-related complaints or grievances?	Yes □ No □	If yes, please state how many and summarize their content.
Has the company regularly reported to the affected communities on progress made in implementing the RAP?	Yes 🗆 No 🗅	If yes, please state how many meetings were held and how many participants attended.
		se provide documents to show closure of land acquisition transactions. Please attach es, compensation, agreements reached, etc., and provide in tabular form a list of affected
Have any persons been physically displaced?	Yes □ No □	If yes, how many?
Have any persons been economically displaced?	Yes □ No □	If yes, how many?
Was it a government assisted resettlement?	Yes □ No □	
9. Community Interaction and Develop	oment	
Please summarise any social or community development	ent initiatives undertaken by t	he company during the reporting period, and any associated expenditure:

Appendix III

LEGISLATION

MAIN SERBIAN LEGISLATION:

EMP for road rehabilitation works on State Road of the IB Class No. 20 (old marking: M-7) section: ZABALJ INTERSECTION - ZRENJANIN, REPORT ON PUBLIC CONSULTATION

The main laws and regulations currently in force in Republic of Serbia which are relevant to the environmental protection during planning, design, construction and operating of this Project are listed below:

- 1. Law on planning and construction ("Official Gazette of RS" No. 72/2009, 81/2009)
- 2. Law on nature protection ("Official Gazette of RS", 36/09)
- 3. Law on environmental protection ("Official Gazette of RS" No. 135/04, 36/09, 72/09)
- 4. Law on EIA ("Official Gazette of RS" No. 135/2004, 36/2009)
- 5. Law on Strategic EIA ("Official Gazette of RS" No. 135/2004)
- 6. Law on waste management ("Official Gazette of RS", 36/09)
- 7. Law on noise protection ("Official Gazette of RS", 36/09)
- 8. Law on water ("Official Gazette of RS", 46/91, 53/93, 67/93, 48/94, 54/96, 101/05)
- 9. Law on forest ("Official Gazette of RS", 46/91, 83/92, 54/93, 60/93, 53/93, 67/93, 48/94, 54/96, 101/05)
- 10. Law on air protection ("Official Gazette of RS", 36/09)
- 11. Law on Safety and Health at Work ("Official Gazette of RS", 101/05)

Regulations established on the basis of the Law on EIA include the following:

- 12. Decree on establishing the List of Projects for which the Impact Assessment is mandatory and the List of projects for which the EIA can be requested ("Official Gazette of RS" No. 114/08)
- 13. Rulebook on the contents of requests for the necessity of Impact Assessment and on the contents of requests for specification of scope and contents of the EIA Study ("Official Gazette of RS" No. 69/05)
- 14. Rulebook on the contents of the EIA Study ("Official Gazette of RS" No. 69/05)
- 15. Rulebook on the procedure of public inspection, presentation and public consultation about the EIA Study ("Official Gazette of RS" No. 69/05)
- 16. Rulebook on the work of the Technical Committee for the EIA Study ("Official Gazette of RS" No. 69/05)
- 17. Regulations on permitted noise level in the environment ("Official Gazette of RS" No. 54/92)
- 18. Decree on establishing class of water bodies ("Official Gazette of SRS" No. 5/68)
- 19. Regulations on dangers pollutants in waters ("Official Gazette of SRS" No. 31/82)

Other relevant Serbian legislation

- Law on confirmation of convention on information disclosure, public involvement in process of decision making and legal protection in the environmental area ("Official Gazette of RS", 38/09)
- 21. Law on public roads ("Official Gazette of RS" No. 101/2005, 123/07)

EMP for road rehabilitation works on State Road of the IB Class No. 20 (old marking: M-7) section: ZABALJ INTERSECTION - ZRENJANIN, REPORT ON PUBLIC CONSULTATION

Appendix IV

STAKEHOLDER ENGAGEMENT AND REPORT ON PUBLIC CONSULTATION

Identified Stakeholders

EMP for road rehabilitation works on State Road of the IB Class No. 20 (old marking: M-7) section: ZABALJ INTERSECTION - ZRENJANIN, REPORT ON PUBLIC CONSULTATION

Stakeholders can be defined as those people and organisations who may affect, be affected by, or perceive themselves to be affected by, a decision or activity. For the Project, the stakeholders range according to the following main groups:

Potential affected parties:

Employees of PERS and Contractors;

Representatives of companies operating the area immediately adjacent to the Project;

Residents from settlements within the zone of influence of the Project

Statutory regulatory authorities, on local or regional level, such as: Local landowners and leaseholders within Project easements; and Potentially affected industries/businesses.

Interested parties:

General public;

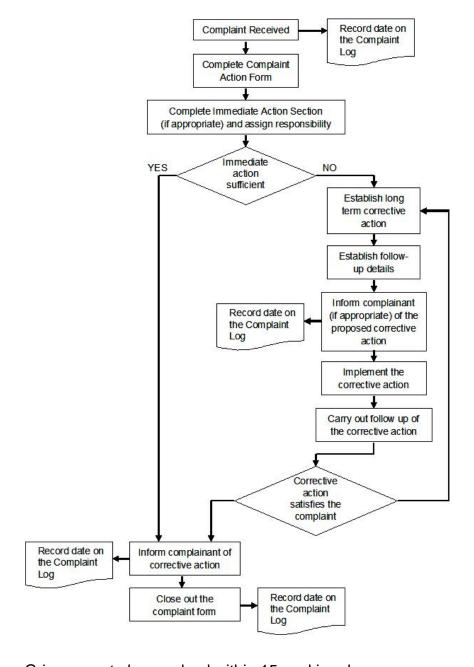
Other companies operating on the National Grid; and

Non-Governmental Organisations (NGO).

It is acknowledged that, as the Project develops, more stakeholders may be identified and engaged. In this regard, once identified, each stakeholder will be characterized in terms of their interests, concerns and requirements and will be included within this list.

Grievance mechanism and form

Flowchart of Complaints/Grievance Procedure



Grievances to be resolved within 15 working days.

ROAD REHABILITATION AND SAFETY PROJECT (RRSP) EMP for road rehabilitation works on State Road of the IB Class No. 20 (old marking: M-7) section: ZABALJ INTERSECTION - ZRENJANIN, REPORT ON PUBLIC CONSULTATION

Grievance Reference	Number (to be fill	ed in by [name]):	
Contact Details	Name:		
	Address:		
	Tel:		
	e-mail:		
How would you prefer		By phone	By e-mail
be contacted? Please			
box			
Name and the identific	cation information	(from identity card)	
Details of your grievar	nce. Please descr	ibe the problems, w	ho it happened to,
when, where and how	many times, as r	elevant	
What is your suggeste	ed resolution for the	ne grievance?	
How to submit this	By Post to:	[tbc]	
form to /[name of		drop this form at [
concessionaire]	By e-mail: Please email your grievance, suggested		
	resolution and p	referred contact det	
Signature			Date

EMP for road rehabilitation works on State Road of the IB Class No. 20 (old marking: M-7) section: ZABALJ INTERSECTION - ZRENJANIN, REPORT ON PUBLIC CONSULTATION

Feedback from public consultation on EMP:

In accordance with OP/BP 4.01, PERS has prepared EMP document for Road rehabilitation works on 24.2 km long road section Zabalj Intersection - Zrenjanin.

The in-country disclosure of the EMP document started on Dec 13th 2012 when invitation to the interested parties were published in the daily newspaper "Politika", inviting the public, authorities and relevant institutions to have an insight into the proposed road rehabilitation works and environmental impact of the project with presented mitigation and monitoring measures. Prior to announcement in the newspapers, all documents were delivered to the Municipality of Zrenjanin and made publicly available on site, and also placed at PERS web site.

Representatives of the local self-government informed the public through local media of the time and place of public consultations. Disclosure of draft EMP document finished on December 20th 2012 when the public meeting was held in city of Zrenjanin.

There were 8 attendees on public consultation meeting in Zrenjanin¹⁸. One of them were local citizen. Among the others, there were local municipals, PERS representative and local environmental officer.

On behalf of PERS the meeting was attended by Mr. Igor Radovic, PERS representative for environmental issues of the projects.

On behalf of Local Municipality the meeting was attended by:

1.	Mrs. Jelena Fatovic	Zrenjanin Municipality
2.	Mr. Sasa Jovanov	Zrenjanin Municipality
3.	Mrs. Snezana Lakic	Zitiste Municipality
4.	Mrs. Biljana Tasin	Zrenjanin Municipality, Environmental Department
5.	Mrs. Ana Vujinov	Zrenjanin Municipality, Environmental Department
6.	Mr. Bojan Radulov	Zrenjanin Municipality, Environmental Department
7.	Mrs. Silvija Jozo	Zrenjanin Municipality, Environmental Department

The meeting started according to schedule at 12:00 PM. EMP document was presented in detail to the interested attendees by the PERS representatives. During the public consultations, there were no significant remarks in regards to environmental protection issues.

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¹⁸ List of participants is presented within the Chapter 3.

EMP for road rehabilitation works on State Road of the IB Class No. 20 (old marking: M-7) section: ZABALJ INTERSECTION - ZRENJANIN, REPORT ON PUBLIC CONSULTATION



Picture 1: Public consultation in Zrenjanin, December 20th, 2012

During the 7 days aimed for insight into the EMP document, nobody came into PERS premises to see the EMP document. During disclosure period there were no telephone or E-mail contacts regarding proposed EMP document.

During Public Consultation process and EMP document disclosure no interested groups or other stakeholders visited the environmental department of Zrenjanin municipality in order to have insight into the EMP document.

Consultation ended at 02:00 PM, local time.

1. LIST OF PARTICIPANTS

ПЛАН	АВНИХ КОНСУЛТАЦИЈА: ПРАВЉАЊА ЗАШТИТОМ ЖИВОТНЕ E (Environmental Management Plan – EMP) Место одржавања ЈАВНИХ КОНО Зрењанин, зграда Градск			
Пут: М-4 Деоница: Раскреница за Жабаљ - Зрењанин		Датум јавних консултација: 20. децембар 2012.		
P.6.	Име и презиме	Организација / адреса	Тезефон.;Факс; E-mail	
KC-I	JELENA FATONC'	GRADSKA UPKOVA ZR	023/315 0090 plan 2 Renjouin B	
KC-2	Saia Jovanov	Gradska uprava tr	022/315-0094 EAST jord mile grad tronjanin ra	
KC-3	LORMA LAKIE!	005t MA 2 18 tt.	062/232 839 Encoshented genaire	
кс-4	BIGANA TASIN	GRADSHA UPRAHA - WEGETETA	619aux tosin@grad trenjunin. 15 064 1811 63 02	
KC-5	ANA WUDINOV	GRADSKA UPRAVA FRENJANIN ODENOENSE FA ZZ S.	023/315 0090 1 066/866 00 55 ana vymone grad mayaww RS	
KC-6	EGIAH PALYAOB	PARCKA JOHBA SPETDAHUH OLENGENE 34 3.74.C.	Bojan Rodules @ god menann RS	
KC-7	SILVIA FOJO	Opadske upava Aeupuin Obeferje sa 2.2 S.	Silve Jozo & good skeyanin PS	
KC-8				

2. DOCUMENTATION



Сагласно оперативној политици Светске банке (ОП 4.01) Јавно предузеће "Путеви Србије" позива на

ЈАВНЕ КОНСУЛТАЦИЈЕ

јавност, органе и организације заинтересоване за

ПЛАН УПРАВЉАЊА ЗАШТИТОМ ЖИВОТНЕ СРЕДИНЕ

за пројекат рехабилитације државног пута IБ реда број 20 (ранија ознака М-7), деоница: ЖАБАЉ — ЗРЕЊАНИН

Увид у предметни План управљања заштитом животне средине може се извршити:

- о у просторијама ЈП "Путеви Србије", сектор за инвестиције, Влајковићева 19а, Београд, први спрат, сваког радног дана од 11 до 13 часова у року од 7 дана од дана објављивања овог обавештења;
- о у просторијама Градске управе града Зрењанина, Трг слободе 10, 23000 Зрењанин, у року од 7 дана од дана објављивања овог обавештења;
- о на интернет страници JП "Путеви Србије": www.putevi-srbije.rs

Примедбе и мишљења у вези са Планом управљања заштитом животне средине се подносе у писаном облику и достављају на адресу ЈП "Путеви Србије", Сектор за инвестиције, Влајковићева 19а, Београд. Примедбе се могу доставити и електронском поштом на адресу office@putevi-srbije.rs

Дана 20. 12. 2012. године, са почетком у 12 часова биће одржане јавне консултације и презентација предметног Плана у мултимедијалној сали 101. Градска управа града Зрењанина, Трг слободе 10, 23000 Зрењанин.

За додатне информације обратити се на следећу адресу:

ЈП "Путеви Србије" Сектор за инвестиције Влајковићева 19а, 11000 Београд, Република Србија, тел./факс +381 11 / 32 06 811 e-mail: igor.radovic@putevi-srbije.rs

11215422-1

Picture 2: Announcement of public consultation in daily newspaper ("Politika", Dec 13, 2012)



In accordance with the WB Operational Policies (OP 4.01)
Public Enterprise "Roads of Serbia" issues an invitation for

PUBLIC CONSULTATIONS

for the public, bodies and organizations interested in

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

for road rehabilitation works on State Road of the IB Category No.20 (old marking: M-7), section:

ZABALJ - ZRENJANIN

Interested parties can get an insight into the EMP document on following adresses:

- the premises of the PE "Roads of Serbia", investment sector, 19a
 Vlajkoviceva St., Belgrade, on the first floor, on working days from 11:00 AM to 01:00 PM (local time), within 7 days in regards to the date of public announcement of this invitation;
- the premises of Zrenjanin Municipality, 10 Trg Slobode, 23000
 Zrenjanin, on working days, within 7 days in regards to the date of public announcement of this invitation;
- o on PE "Roads of Serbia" web site: www.putevi-srbije.rs

Remarks and suggestions in regards to the EMP document shall be submitted in written form to the PE "Roads of Serbia", Sector for investments, 19a Vlajkoviceva St., Belgrade. Remarks can be also provided on following internet address: office@putevi-srbije.rs

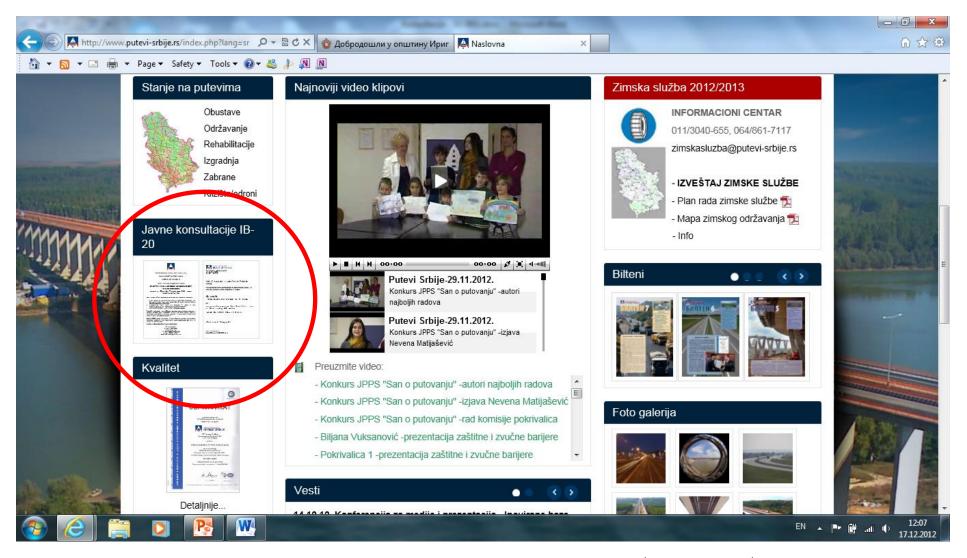
On December 20th, 2012, at 12:00 PM (local time), public consultations and presentation of the subject EMP document will be organized in the multimedia hall No.101, Zrenjanin Municipality, 10 Trg Slobode, 23000 Zrenjanin.

If you need any additional information, please contact:

PE "Roads of Serbia"
Sector for investments
19a Vlajkoviceva Street
11000 Belgrade, Serbia
tel./fax.+381 11 / 30 34 744
E-mail: igor,radovic@putevi-srbije.rs

11215422-2

Picture 3: Announcement of public consultation in daily newspaper ("Politika", Dec 13, 2012)



Picture 4: Announcement of public consultation on PERS web site (Dec 13th 2012 to Dec 20th 2012)