



Beograd, Bulevar kralja Aleksandra 282
tel: +381 11 30 40 700
fax: +381 11 30 40 699

ROAD REHABILITATION AND SAFETY PROJECT (RRSP)

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

ENVIRONMENTAL MANAGEMENT FRAMEWORK DOCUMENT

FINAL DOCUMENT
BELGRADE, February 2013

Table of Contents

EXECUTIVE SUMMARY	7
1. DESCRIPTION OF PROJECT COMPONENTS INCLUDING DESCRIPTION OF TYPE OF ACTIVITIES ELIGIBLE FOR FINANCING	13
1.1. Background	13
1.2. Project Description.....	13
1.3. Objectives of the Environmental Management Framework Document	15
1.4. Approach and Methodology	15
2. OPERATING REQUIREMENTS – DIAGNOSIS OF LEGAL AND INSTITUTIONAL FRAMEWORK AND APPLICABLE SAFEGUARDS.....	16
2.1. Foreword	16
2.2. Relevant Institutions	16
2.3. EIA procedure in the Republic of Serbia	16
2.4. Relevant Government Policies, Acts, Rules, Strategies and Guidelines.....	17
2.4.1. The Constitution of Serbia	18
2.4.2. The National Strategy for Sustainable Development	18
2.4.3. Law on Environmental Protection	18
2.4.4. Law on Environmental Impact Assessment.....	19
2.4.5. The Law on Waste Management	19
2.4.6. The Law on Protection against Environmental Noise	19
2.4.7. The Law on Water	19
2.4.8. The Law on Occupational Safety and Health	19
2.5. World Bank’s Environmental Safeguard Policy	20
2.5.1. OP/BP 4.01 Environmental Assessment	20
2.5.2. OP/BP 4.04 Natural Habitats.....	20
2.5.3. OP/BP 4.11 Physical Cultural Resources	20
2.5.4. OP/BP 4.36 Forestry.....	21
2.5.5. OP/BP 4.12 Involuntary Resettlement	21
2.5.6. IFC Environmental, Health and Safety Guidelines	21
2.5.7. Safeguard Policies Triggered by the Project	22
2.6. Implication of GoS Policies in RRSP – instruction how to integrate national laws and their requirements with the Project/Bank Requirements.....	22
2.6.1. Environmental Approval Procedure	22
3. ENVIRONMENTAL AND SOCIAL BASELINE ON NATIONAL/STATE LEVEL AND SAMPLE SUBPROJECT LEVEL.....	25
3.1. Environmental and Social baseline at national/state level	25
3.1.1. Baseline country and environmental information.....	25
3.1.2. Water quality	25
3.1.3. Air Quality.....	26
3.1.4. Noise	26
3.1.5. Road Safety.....	26
3.1.6. Waste.....	26
3.1.7. Occupational Health	27
3.1.8. Climate Change.....	27
3.2. Environmental and Social baseline for sample subprojects.....	27
3.2.1. Main environmental characteristics for sample sub-projects.....	27

4.	ENVIRONMENTAL MANAGEMENT FRAMEWORK DOCUMENT (EFD) - SCREENING PROCEDURES.....	33
4.1.	Introduction.....	33
4.2.	General Principles for Environmental Management	34
4.2.1.	Introduction.....	34
4.2.2.	General responsibilities under PERS are:.....	34
4.3.	Environmental Assessment Procedure	34
4.3.1.	Bid Documents for Detailed Design.....	35
4.3.2.	Screening and Scoping.....	36
4.3.2.1.	Screening.....	36
4.3.2.2.	Scoping.....	37
4.3.3.	Environmental Management Plans, Request for Decision about Need for EIA and EIA Study	38
4.3.4.	Bid Documents for Rehabilitation Works, including EMP and provisions from EFD.....	41
4.3.5.	EMP Implementation	41
4.3.6.	Supervision.....	41
4.3.7.	Monitoring	41
4.4.	Mitigation and Management Plan.....	42
4.4.1.	Mitigation Measures.....	42
4.4.2.	Mitigation Plan	42
4.4.2.1.	Design Phase.....	43
4.4.2.2.	Contractor Management	43
4.4.2.3.	Contractor’s Camp and Facilities	44
4.4.2.4.	Environmental Documentation Plans During Rehabilitation Works.....	44
4.4.2.5.	Health and Safety.....	46
4.4.2.6.	Operational (Post-Rehabilitation) Phase	46
5.	IMPLEMENTATION ARRANGEMENTS.....	53
5.1.	Introduction.....	53
5.2.	Environmental Management Unit - Functions and Staffing Responsibilities	53
5.3.	Implementation Support.....	55
5.3.1.	Design and Supervision Consultants.....	55
5.3.2.	Management Support Consultants	55
5.3.3.	Project Supervision Consultants.....	55
5.3.4.	Project Audit Consultants.....	56
5.4.	Contractor.....	56
5.5.	Monitoring.....	57
5.6.	Capacity Building	57
5.7.	Institutional Development.....	57
6.	PUBLIC CONSULTATION AND DISCLOSURE PROCESS/PROCEDURES	59
6.1.	Introduction.....	59
6.2.	Consultation and Information Disclosure.....	59
6.2.1.	Public Consultation	59
6.2.2.	Information Disclosure and Dissemination of EIA Studies	60
6.3.	Grievances Redress Mechanism	61
7.	ENVIRONMENTAL MITIGATION MEASURES.....	63
7.1.	General.....	63
7.2.	Potential negative Impacts and recommended Mitigation Measures.....	63

7.2.1.	Environmental Impacts During Road Rehabilitation Phase	65
7.2.2.	Environmental Impacts During Operation Phase (post-rehabilitation phase).....	68
7.3.	General Environmental Mitigation Measures During Road Rehabilitation Works	68
7.3.1.	Site Preparation.....	68
7.3.2.	Waste Management.....	70
7.3.3.	Hazardous Materials Management.....	71
7.3.4.	Water Resources Management.....	71
7.3.5.	Drainage Management	73
7.3.6.	Soil Quality Management	73
7.3.7.	Top Soil Management.....	74
7.3.8.	Borrow Areas Development & Operation	75
7.3.9.	Air Quality Management.....	76
7.3.10.	Noise and Vibration Management.....	77
7.3.11.	Tree Cutting and Afforestation	78
7.3.12.	Road Transport and Road Traffic Management	79
7.3.13.	Erosion and Sedimentation Control	80
7.3.14.	Construction Camp Management	80
7.3.15.	Cultural and Religious Issues	82
7.3.16.	Occupational Health and Safety	82
8.	MONITORING AND REPORTING ARRANGEMENTS	84
8.1.	Monitoring.....	84
8.1.1.	Environmental Monitoring during Road rehabilitation Phase	85
8.1.2.	Construction Monitoring and Post Auditing	87
8.2.	Reporting Arrangements.....	87
8.2.1.	Design Consultant to PERS	87
8.2.2.	Contractor to PERS	87
	Annual Environmental & Social Report	88
8.2.3.	Project Supervision Consultant to PERS	88
8.2.4.	PERS to MoT, WB, EBRD and EIB	88
8.3.	RRSP Results Monitoring and Evaluation.....	88
9.	TRAINING AND CAPACITY BUILDING RECCOMENDATIONS	89
9.1.	Modes of Environmental Training	89
9.1.1.	Training Strategy	89
9.1.2.	Concept of Training	89
9.1.3.	Training Methods	90
9.1.4.	Classroom Sessions	90
9.1.5.	On-the-job Training.....	90
9.1.6.	Workshops	90
9.1.7.	Seminars.....	90
9.2.	Training Program for Contractors, Project Supervisors and Project Staff	90

ANNEXES:	92
Annex 1: List of Road Sections to be Maintained under RRSP Project - 1st Year	93
Annex 2: Sample Report on Public Disclosure and Consultations for Road Section Arandjelovac - Krcevac	94
Annex 3: Sample Screening Checklist for the Annual Environmental and Social Reports	103
Annex 4: Generic Mitigation Plan for Road Rehabilitation Projects	115
Annex 5: Generic Monitoring Plan for Road Rehabilitation Projects	129
Annex 6: Sample of the Detailed Project-Specific Environmental Baseline for Road Section Uzice – Pozega – Kratovska Stena and Road Section Zabalj - Zrenjanin	135
Annex 7: Sample Environmental Checklist	145
Annex 8: Relevant National Legislation as of January 2013	148
Annex 9: Report on Public Disclosure and Public Consultation	151

List of Tables

Table 3.1 Main environmental characteristics of sample sub-projects	27
Table 3.2: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Uzice – Pozega – Kratovska Stena Road Maintenance Sub-project	32
Table 3.3: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Arandjelovac - Krcevac Road Maintenance Sub-project	32
Table 3.4: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Zabalj Intersection – Zrenjanin Road Maintenance Sub-project	32
Table 4.1: Consequence Categories and Rankings	37
Table 4.2: Likelihood Categories and Rankings	37
Table 4.3: Possible Impact for Road Maintenance	40
Table 4.4: Generic Environmental Management Plan	47
Table 5.1: Functions and Responsibilities of the EMU	54
Table 6.1: Information Disclosure Framework	60
Table 7.1 Summary of key impacts	64

Abbreviations

AADT	Annual Average Daily Traffic
CEP	Contractor's Environmental Plan
CXHP	Corridor X Highway Project
DD	Detailed Design
DC	Design Consultants
DoEIA	Department of EIA (within the MoEDEP)
DWQ	Drinking Water Quality
EA	Environmental Assessment
EBRD	European Bank for Reconstruction and Development
EFD	Environmental Management Framework Document
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
EMS	Environmental Management System
EMU	Environmental Management Unit
FEA	Final Environmental Approval
GEMM	General Environmental Mitigation Measures
GoS	Government of Serbia
HSE	Health, Safety and Environment
IDA	International Development Association
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
LEP	Law on Environmental Protection
LOEIA	Law on EIA
MoEDEP	Ministry of Energy, Development and Environmental Protection
MoT	Ministry of Transport (fmr. Ministry of Infrastructure and Energy – MoIE)
MS	Management Support Consultants
NGOs	Non-Government Organizations
NRNRP	National Road Network Rehabilitation Program
OP	Operational Policy
PAPs	Project Affected Persons
PBMC	Performance-Based Maintenance Contract
PC	Public Consultations
PERS	Public Enterprise "Roads of Serbia"
PIT	Project Implementation Team
PINP	Provincial Institute for the Nature Protection
PPE	Personnel Protective Equipment
PAC	Project Audit Consultant
PSEP	Provincial Secretariat for Environmental Protection
PSC	Project Supervision Consultant
RDNEIA	Request for Decision about Need for EIA
RE	Resident Engineer
RONEIA	Request for Opinion about Need for EIA
RRSP	Road Rehabilitation and Safety Project
SE	Site Engineer
SLMP	Safety Labour Management Plan
SSIP	Site Specific Implementation Plan
TCDD	Technical Control of Detailed Design
WB	The World Bank Group
WMP	Waste Management Plan

EXECUTIVE SUMMARY

The Ministry of Transport of the Republic of Serbia (MoT) is initiating a National Road Network Rehabilitation Program (NRNRP) to improve the quality and safety on priority national roads, thus improving the connectivity of the entire road network. NRNRP aims to improve the conditions and safety of the National Road Network by, among others, rehabilitating and enhancing the safety of some 5 thousand kilometers of national roads.

The Road Rehabilitation and Safety Project (RRSP) will support the Government of Serbia (GoS) in the implementation of the first phase of NRNRP. The RRSP has three components: Component 1 - Road Rehabilitation and Safety Investments; Component 2 - Institutional Strengthening; and Component 3 - Project Detailed Design, Supervision, Management and Monitoring. The first phase of NRNRP is expected to include between 50 and 55 sections totaling 1,125 km - of which approximately 40 sections will be financed by RRSP and 15 sections by the EBRD-financed Project.

Public Enterprise “Putevi Srbije” (PERS) will be the implementing agency for NRNRP, including the proposed Bank-supported project. PERS has gained significant experience on road rehabilitation activities while previously implementing the World Bank-supported Transport Rehabilitation Project.

Environmental Management Framework Document

The Environmental Management Framework Document (EFD) aims to identify the range of required environmental management measures that need to be taken during the planning, design, road rehabilitation and operation phases of RRSP, in order to ensure compliance with the national and WB requirements.

EFD provides general policies, guidelines, codes of practice and procedures to be integrated into the implementation of the Project. It defines the steps, processes, and procedures for screening, alternative analysis, assessment, monitoring and management of the environmentally-related issues. In addition, EFD presents overview of environmental policies and legal regime of Serbia and WB safeguard policies; includes institutional and capacity assessment related to environmental management; and describes the principles, objectives and approach to be followed while designing the site-specific environmental mitigation measures. A generic sample environmental mitigation and environmental monitoring plans are included in the document as annexes. The EFD is intended to be used as a practical tool during program formulation, design, implementation, and monitoring of RRSP related activities.

Legal and Institutional Framework

Environmental legislation in Serbia has over 100 laws and regulations and the majority of these are harmonized with EU legislation.

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

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 fully in line with the European EIA Directive-85/337/EEC. The Law stipulates that preparation of EIA is not required for the road rehabilitation projects, unless their alignments are placed within or in the

vicinity of the nature or culture protected areas. In case of existence of protected areas, the investor is obliged to request from MoEDEP the opinion of the need and, if necessary, the conditions for undertaking EIA. Depending upon the assessment of potential significance of environmental impacts, MoEDEP can decide if there is a need to apply partial or full EIA procedure for the relevant road section.

Environmental Safeguard Policies of the World Bank relevant for RRSP are: OP/BP 4.01 Environmental Assessment; OP/BP 4.04 Natural Habitats; OP/BP 4.11 Physical Cultural Resources; OP/BP 4.12 Involuntary Resettlement.

Environmental and Social Baseline

The environment of Serbia is highly diverse compared to some other countries in Europe. The reasons for this comparative richness include: the variety of climate, topography, and geology and the long-term ecological and evolutionary history of the region at a biological crossroads. The varied ecosystems of Serbia give rise to a diversity of valuable ecological processes.

Serbia is species-rich. It has a number of different types of ecosystems of particular environmental importance, including: forest ecosystems representing different types of forests; high mountain regions with characteristic mountain ecosystems well-represented or preserved, some of which are found along the borders and would require trans-boundary management efforts; mountain regions in which the traditional human activities have maintained and even increased biodiversity through centuries of maintaining the open pastures on mountain meadows; gorges and canyons that have been identified as important centers for relict and endemic species; steppes and sands of Vojvodina, as well as lakes, wetlands, swamps, marshes and ponds which provide key-habitat for the migratory birds from elsewhere in Europe that have been protected under the Ramsar Convention; karst regions in parts of Serbia, with their numerous caves and pits, supporting a rich fauna; and mountain bogs around mountain and glacial lakes.

Water quality in Serbia differs significantly from one region to the next. According to the findings of the Republic Hydro-meteorological Service of Serbia in 2005 and keeping in mind that the best river quality is Class I and the most polluted is Class IV, the water parameters for 23% of 65 monitored river profiles fell into Classes I and II, 70% into Class III and 6% into Class IV.

The relatively poor quality of ambient air in a number of towns in Serbia results from the emissions of sulfur dioxide, nitrous oxides, carbon monoxide, soot and particulate. Road vehicles are considered as major contributors to air pollution in Serbia, especially in larger cities. Emissions from vehicle exhausts contribute sulfur dioxide, carbon monoxide, nitrogen oxides, ozone and particulate matter pollution to the air. The main reasons for the air pollution from the transport sector are poor quality of the engine fuel; old and inadequately maintained vehicle fleet.

The general state of waste management in Serbia is still inadequate. Over 50% of waste disposal sites do not meet the technical requirements of sanitary landfills, and are actually just fenced and mapped dump areas. There are also hundreds of illegal dump sites of various sizes in rural areas. Leakages from these dump sites pose additional threat to groundwater, surface water and soil. However, the country has adopted the new Law on Waste Management, which is fully harmonized with the EU *acquis communautaire*, and its implementation is steadily progressing.

Road safety is generally not taken by the relevant institutions as a top priority, and the systematic traffic education that was previously institutionalized in schools is no longer performed.

Principles of RRSP Environmental Management

All RRSP sub-projects are classified as Environmental Category B according to WB classification, since they will involve rehabilitation of the existing roads, with the possibility of minor alignment changes for safety purposes. It is not envisaged that any road will be significantly widened (e.g. addition of more lanes) or upgraded to a higher category. The PERS will be responsible for the environmental compliance monitoring and oversight to ensure overall project environmental compliance. General responsibilities of PERS are presented within the chapter 4 of EFD document.

Environmental assessment procedure for any of the RRSP sub-projects contain: environmental screening; preparation Detailed Design for Road Rehabilitation sub-projects; preparation of the site-specific EMPs based on screening criterion; obtaining all the necessary preconditions, conditions and opinions from the relevant institutions; preparing the EIA Studies (if required); and obtaining the Final Environmental Approval(s) for the respective sub-projects. The details of EA procedure are presented on Figure 4.2 in EFD document.

Regarding the implementation of site-specific EMP(s), a construction/rehabilitation contractor will be responsible for undertaking all activities related to environmental protection during road rehabilitation works; while PERS will be responsible for the supervision of EMP implementation and for the compliance enforcement measures.

Additionally, an independent Project Audit Consultant (PAC) will review works and contracts that may have sensitive environmental or social impacts, or those requiring special oversight as determined by the EIB and WB.

Main Environmental Impacts and possible Mitigation Measures

Road rehabilitation works on proposed sub-projects will have only minor impacts on the environment. Most of the impacts are of temporary character, can be successfully mitigated and will disappear after the road rehabilitation works are completed.

The possible direct negative impacts as consequence of the road rehabilitation activities, if not mitigated, will relate to waste management; noise and health & safety management; and possible soil and water pollution from the construction activities. Off-site impacts may be related to quarry, borrow pit and asphalt plant operations, which if not managed properly may cause localized adverse impacts. The contractor's yard and camps can also be potential sources of temporary adverse impacts.

Potential mitigation measures to address the above impacts have been discussed in EFD and include: specific management programs; engineering design solutions; alternative approaches and methods to achieve the activity objectives; stakeholder participation in finalizing mitigation measures; operation control procedures; and application of management systems.

Project specific environmental mitigation measures are the main part of each of the site-specific EMPs. A more extensive list of possible impacts and proposed mitigation measures has been presented in chapter 7 of this EFD document. Based on the three already prepared site-specific EMP documents, a Generic Mitigation Plan for road rehabilitation projects is presented in the Annex 4 of this EFD document, to be used as a reference material while developing the scope of the future site-specific EMPs.

Environmental mitigation measures will be incorporated as a part of the standard design and rehabilitation practices in each bidding document, and as such costs of their implementation will be included in the overall sub-project rehabilitation cost. As a part of the project requirements, each contractor will be obliged to produce the following documents before start of the works: Waste and Wastewater Management Plan; Oil and Fuel Storage Management Plan; Noise Management Plan; Layout of the Work Camp, and Camp Management Plan; Sewage

Management Plan; Soil Management Plan; Dust Management Plan; In-river Works Management Plan; and Emergency Response Plan.

Implementation arrangements

PERS, as the Project's implementing agency, will be responsible for the implementation and compliance with the EFD, site-specific EMPs and monitoring plans. PERS will also be responsible for the supervision of the overall project implementation and supervision of environmental monitoring (through the consulting services and preparation of the periodic environmental reports).

The Project Implementation Team (PIT) within PERS will be responsible for the day-to-day project implementation, using its own staff from the Investments Department. The Director for Investments heads the PIT and reports to PERS Deputy Director General. The PIT's Environmental Specialist and the Assistant Engineer for Environment will be engaged during the whole project implementation period and will be responsible for monitoring and evaluation of environmentally-related indicators, to be measured against the agreed targets and compared to defined baselines. Project progress reports, including monitoring indicators and reporting on the implementation of the requirements set in the site-specific EMPs, will be prepared on a quarterly basis and submitted to WB for review. Monthly progress reports prepared by the supervision consultants will be submitted by PIT to WB for review upon request.

An independent Project Audit Consultant (PAC) will perform annual audits and results monitoring and evaluation. A comprehensive review will be carried out by PAC on randomly-selected road sections on about 20 percent of the sub-projects. Besides the random selection of contracts/sub-projects, the review may also include works or contracts/sub-projects believed to have sensitive environmental or social impacts, or on those requiring special oversight as determined by EIB and WB.

Public Consultations and Disclosure Process

As required by the IFI's Safeguards Policies, public consultations were undertaken on draft version of three site-specific EMP documents that were produced for three sample sub-projects. Public consultations and information disclosure will be obligatory for all site-specific EMP documents which will be prepared under RRSP.

Beneficiary consultations will be conducted during the design and later during the construction/road rehabilitation phase, and issues related to environmental and social issues raised and complaints received during consultations, field visits, informal discussions, written communications etc. will be followed up. The relevant records will be kept in the project offices of PERS.

Information Disclosure Framework in case of any specific EIA preparation (according to national legislation) is presented in table 6.1 of EFD document. Basic stages for public consultations in this case are: Initial Consultation, Decision about scope and Content of EIA Study, Draft EIA Study and Final Environmental Approval. Each of these stages is followed with adequate process of public consultations, in line with the national legal requirements.

A project-specific Grievance Mechanism will be implemented to ensure that all complaints from the local communities are dealt with appropriately, with corrective actions being implemented, and the complainants being informed of the outcome. PERS will maintain a Complaints Database, which will contain all the information on complaints or grievances received from the communities or other stakeholders. Details of this procedure are presented in table 6.2 and section 6.3. of EFD.

Public discussion and disclosure of this Environmental Management Framework document has been completed in January 2013, and details of the process can be found in the Annex 9 of this document.

Monitoring and Reporting Arrangements

A generic monitoring plan for the proposed Project has been developed and is presented in Annex 5 of EFD. The main components of the monitoring plan include: Environmental issue to be monitored and the means of verification; Specific areas and locations; Parameters to be monitored; Frequency; and Institutional responsibilities for monitoring and supervision.

Site-specific monitoring checklists will be prepared by the designers for the each sub-project, and be included as an integral part of site-specific EMP. Monitoring checklist should be prepared using the generic monitoring plan presented within this EFD document and respecting significant site-specific impacts and proposed mitigation measures elaborated in site-specific EMP document.

The contractors will be responsible for providing “Zero monitoring” results prior to commencement of works, according to the EMP monitoring plans; they will also have a dedicated public liaison officer, who will establish communication with the local residents that may be affected by the project and be responsible to inform them about all of the project related activities, especially those related to environmental impacts of the project and planned mitigation measures. The contractors are obliged to engage certified laboratory to undertake measuring and sampling of the requested potential pollutants in accordance with site-specific EMPs.

The contractors will prepare their compliance reports in respect to EMP, which document the implementation of environmental mitigation and protection measures (together with prescribed monitoring activities carried out during the reporting period) on quarterly basis and submit them to PERS. However, in case of any kind of accident or endangerment of protected environments, reporting to PERS will be immediate.

Each contractor is also obliged to produce and deliver to PERS an Annual Environmental and Social Report (AESR) covering all project activities during one calendar year. AESR document should be produced respecting the proposed template – a sample screening checklist for AESR presented within the Annex 3 of this EFD document.

PSC will supervise all of the contractor’s monitoring activities prescribed within the Detailed Design and site-specific EMPs. MoEDEP will have the authority for immediate suspension of works if performance is found not to be in accordance with environmental standards and regulations. Inspection/MoEDEP will then inform PERS about suspension and order to proceed according to detailed specific directive.

Monitoring and compliance in accordance with EFD and site specific EMPs, including monitoring of implementation of site-specific measures on each sub-project/section during project implementation will be undertaken by PERS and its implementation unit, and reported in writing to the Bank on semi-annual basis.

Annual Environmental Health and Safety (AEHS) reports, including monitoring indicators and reporting on the implementation of the requirements set forth in the EMPs will be prepared by PERS and submitted for IFIs review. In case of fatalities or major incidents on sites, PERS will immediately report to WB and EIB.

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

Training and Capacity Building

RRSP will finance consultants to provide project management support to PERS PIT during the Project implementation. They will support PIT in, among others: (i) supervision of civil works implementation; (ii) environmental and social supervision of safeguards implementation; (iii) annual program planning and preparation including the economic analysis; and (iv) overall project management.

A comprehensive training program planned for the project staff of PIT intends to address all components of RRSP. The environmental training may be broadly divided into several main topics: Principles and policies for (natural and social) environmental mitigation in development projects; Legal and institutional aspects; Project mandates; Likely (natural and social) environmental impacts and losses in road strengthening and widening projects; EMP monitoring, evaluation and reporting methods; and Mechanisms for inter-sectorial and inter-agency collaboration.

A key concept in training programs is to provide training through a combination of formal classroom training and practical on-the job sessions. Technical assistance should be made available to provide training, guidance and advisory support in all aspects of works implementation in order that the key players (environmental as well as technical team) become fully conversant with, and capable of carrying out their respective duties. Training for the various categories of staff will need to be carried out through different approaches, such as on-site and classroom training, workshops, seminars and practical on-the-job training.

1. DESCRIPTION OF PROJECT COMPONENTS INCLUDING DESCRIPTION OF TYPE OF ACTIVITIES ELIGIBLE FOR FINANCING

1.1. Background

Ministry of Transport of the Republic of Serbia (MoT) is initiating a National Road Network Rehabilitation Program (NRNRP) to improve the quality and safety on priority national roads, thus improving connectivity of the entire road network. With the support of the European Union (EU), MoT has developed a Transport Strategy and Master Plan that envisage a €4.6 - €5.0 billion investment in maintenance and rehabilitation between 2009 and 2027.

NRNRP aims to improve the condition and safety of Serbia's National Road Network by rehabilitating, and enhancing the safety of, about 5,000 km of national roads at an estimated cost of about €1.5 - €1.7 billion. Road Rehabilitation and Safety Project (RRSP) will support Government of Serbia (GoS) in the implementation of the first phase of NRNRP.

The first phase of NRNRP is expected to include about 50 - 55 sections totaling 1,125 km of which about 35 – 40 sections will be financed by RRSP and 15 - 20 sections by the EBRD Project. EIB, WB and GoS will co-finance RRSP; while EBRD will provide parallel financing. EIB and EBRD will contribute €100 million each to the first Phase of NRNRP. The detailed design, construction supervision, project management and monitoring for the entire first phase of NRNRP (both RRSP and the EBRD Project) will be financed by RRSP.

List of Priority Road Sections to be maintained for the First Year of RRSP is presented within the Annex 1 of this Environmental Management Framework Document (EMFD).

The Project Proponent is the GoS acting through its MoT, former Ministry of Infrastructure and Energy (MoIE). Public Enterprise "Putevi Srbije" (PERS) will be the implementing agency for the rehabilitation program including the proposed Bank-supported project. PERS, including its Project Implementation Team (PIT), has gained previous experience while implementing the World Bank (WB)-supported Transport Rehabilitation Project.

This Environmental Management Framework Document (EMFD) is required for the RRSP to identify the required environmental management measures that need to be taken during the planning, design, road rehabilitation and operations phase of the road maintenance, in order to ensure compliance with the GoS own requirements and those of the WB. All the major environmental impacts along with mitigation and management measures have been compiled in the form of EMFD.

1.2. Project Description

RRSP is a part of a larger IFI coordinated effort to support GoS in the implementation of the first phase of NRNRP (see the diagram below). *The first phase of NRNRP* refers to two projects: (i) the project co-financed by GoS, EIB and WB (*RRSP*), and (ii) the project financed in parallel solely by EBRD (*the EBRD Project*).

RRSP has three components. Disbursement for Components 1 and 2 will be dependent on meeting annual agreed Disbursement-Linked Indicators (DLI) targets; while Component 3 will follow the traditional Specific Investment Loan (SIL) mechanism with disbursement against eligible expenditures for specified activities.

Component 1: Road Rehabilitation and Safety Investments (€264 million). This component will finance periodic maintenance and rehabilitation works, partial pavement widening, works concerning traffic signalization improvement and structure renewal as well ancillary road connections for 35 – 40 sections, totaling over 800 – 810 km in length. This component will also support the incorporation of road safety measures as recommended by road safety audits in the design of RRSP's road sections and their subsequent implementation as a way to institutionalize these practices for all road works.

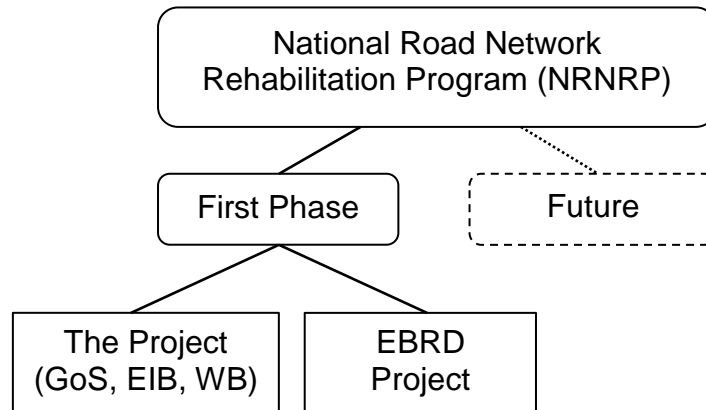


Figure 1.1 Definition of the first Phase of NRNRP and RRSF

Component 2: Institutional Strengthening (€3.10 million). This component consists of:

Subcomponent 2A: Support to road safety (€0.35 million). This subcomponent covers road safety inspections and the implementation of low cost road safety measures such as signage, traffic calming measures and road furniture for an additional 1000 km of national roads, beyond of what is covered in the first phase of NRNRP. The implementation of these measures will be covered out of PERS's annual maintenance budgets. The subcomponent also includes road safety awareness campaigns, strengthening enforcement on the NRNRP-improved roads and training on road safety audits and inspections. Equipment for additional enforcement on the NRNRP-improved roads will be financed through the ongoing Corridor X Highway Project (CXHP).

Subcomponent 2B: Strengthen road rehabilitation and planning processes (€1.75 million). This subcomponent includes a road condition survey for the entire National Road Network, an update of the road database, institutionalizing the development of multi-year maintenance plans based on clearly-defined economic and social criteria; and the adoption of updated design standards for maintenance and rehabilitation.

Subcomponent 2C: Strengthening maintenance management (€1.0 million). This subcomponent includes the development of a strategic plan for Performance-Based Maintenance Contract (PBMC), the preparation of model bidding documents for PBMC, training staff and contractors on PBMC, and the provision of implementation support. The Project will not cover the cost of the PBMC contracts.

Component 3: Project Detailed Design, Supervision, Management and Monitoring (€18.85 million). This component consists of:

Subcomponent 3A: Design and supervision (€14.8 million). This subcomponent covers the design and supervision costs for all the roads covered under phase 1 of NRNRP (both RRSF and the EBRD Project).

Subcomponent 3B: Project management support (€2.25 million). This includes project management support and capacity building to PERS as may be necessary in procurement, financial management, environmental and social safeguards and annual program planning.

Subcomponent 3C: Project Audits (€1.80 million). This includes: (i) the Integrated Performance Audit which will review engineering designs, management of social and environmental issues, procurement, quality assurance, contract management and compliance to agreed conditions, quality of project supervision, review of traffic safety implementation, and achievement of DLIs to trigger disbursement; and (ii) Project financial audit.

1.3. Objectives of the Environmental Management Framework Document

This Environmental Management Framework Document (EFD) provides general policies, guidelines, codes of practice and procedures to be integrated into the implementation of the WB-supported RRSP. It defines the steps, processes, and procedures for screening, alternative analysis, assessment, monitoring and management of the environmentally-related issues. In addition, the EFD analyzes environmental policies and legal regime of Serbia and safeguard policies of the WB; presents the institutional and capacity assessment related to the environmental management; and describes the principles, objectives and approach to be followed while designing site-specific environmental mitigation measures. The EFD is intended to be used as a practical tool during program formulation, design, implementation, and monitoring in RRSP.

1.4. Approach and Methodology

The operations under RRSP are classified as belonging to environmental Category B according to WB procedures, since they will involve only rehabilitation of the existing roads, with the possibility of minor alignment changes for safety purposes. It is not envisioned that any roads will be significantly widened (e.g. addition of more lanes) or upgraded to a higher category.

The EFD outlines the environmental policy, legal, and administrative framework for undertaking the project, presents the environmental baseline information and potential environmental impacts and includes the range of available mitigation measures that may be adopted, based on each particular situation. The EFD also contains the description of the environmental management systems and institutional arrangements to be applied as well as recommendations for the capacity building measures to be implemented in PERS during project implementation in order to ensure environmental sustainability. The EFD includes a generic sample environmental mitigation (see Annex 4) and environmental monitoring plans (see Annex 5).

The EFD describes how the potential environmental impacts of any sub-projects¹ will be managed during preparation, implementation (road rehabilitation works) and, in the post-implementation periods (post-rehabilitation phase). The EFD incorporates a framework for implementation, monitoring, supervision, auditing and reporting of the EFD requirements. The EFD report also includes General Environmental Mitigation Measures (GEMM)² and Generic sample Environmental Management Plan³ (EMP) to assist the PERS/ Technical Control of Detailed Design (TCDD) Consultants in preparation of the necessary environmental specifications and/or sub-project specific EMP for integration of impacts avoidance/prevention/mitigation measures with the design and contract documents of the sub-projects.

An EFD and three section-specific Environmental Management Plans (EMPs) for Sample Sub-Projects have been prepared up to January 2013. These documents have been modeled on EIAs and EMPs already implemented by PERS on previous projects. The work, which has been performed in close cooperation with the project team included collection of secondary data, related literatures, field surveys, public/stakeholder consultations, and desk studies.

¹ Sub-Projects are all road rehabilitation projects covered with RRSP

² The General Environmental Mitigation Measures (GEMM) for compliance with the WB's OP 4.01 are presented within the chapter 7.3.

³ Generic Environmental Management Plan is presented in Table 4.4.

2. OPERATING REQUIREMENTS – DIAGNOSIS OF LEGAL AND INSTITUTIONAL FRAMEWORK AND APPLICABLE SAFEGUARDS

2.1. Foreword

The legal, legislative and institutional framework for health and environment in Serbia is founded on the Constitution of Serbia, which stipulates the right to a healthy environment and the duty of all, in line with the law, to protect and enhance the environment. Health and environment is also supported by many governmental strategies, international agreements and the Millennium Development Goals.

Environmental legislation in Serbia has over 100 laws and regulations. Currently, the majority of these are harmonized with EU legislation. The list of currently valid environmentally-related legislation is presented in Annex 8 of EFD.

2.2. 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).

2.3. 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. According to that Law, preparation of the Environmental Impact Assessment is not required for the road rehabilitation projects unless their alignments are placed within or in the vicinity of the nature or culture protected areas. In such cases the Project Proponent is obliged to submit so-called “Request for Decision about Need for Environmental Impact Assessment” (RDNEIA) to the MoEDEP. Depending on the Ministry’s assessment of significance of potential environmental impacts of the project, it is decided if there is a need (or not) to apply partial or full EIA procedure for the relevant road section.

If any project is found to be adjacent or within the nature/cultural protected area the EIA could be required for this project in accordance with the Serbian legislation, depending strictly on the opinions obtained from the relevant institutions (INP, Provincial Institute for the Nature Protection (PINP), Institute for Protection of Cultural Monuments (IPCM), Department of EIA (DoEIA) within the MoEDEP and Provincial Secretariat for Environmental Protection - PSEP). In such case a PERS/Design Consultant (DC)⁴ should submit request to the INP/PINP and/or IPCM in order to obtain preconditions under which proposed project should be implemented.

Request for opinion regarding necessity of EIA procedure for each sub-project which is found to be adjacent or within the nature/cultural protected area will be submitted to DoEIA together with other relevant project documentation, which mandatory include preconditions of relevant institutions in charge of the environmental protection.

After receiving preconditions of INP/PINP, IPCM and opinion of MoEDEP/PSEP, PERS will define a Terms of Reference (TOR) for such sub-projects. This will ensure proper implementation of all project related environmental requirements and will offset or minimize any negative impact on local human and biotic environment.

⁴ PERS will authorize a DC in order to obtain all preconditions from relevant institutions.

For all other sub-projects which are found neither adjacent nor within the nature/cultural protected areas there is no need for obtaining preconditions from INP/PINP or opinions from MoEDEP/PSEP.

For three sample sub-projects for which three section-specific EMPs have been already prepared prior to January 2013, the EMP requirements will become part of TOR, but no new EMP document will be required to be prepared by DC. The environmental mitigation measures and prescribed monitoring programs will become part of detailed designs for those three projects (section Uzice – Pozega – Kratovska Stena, section Arandjelovac – Krcevac and section Zabalj – Zrenjanin).

As the RRSP will be funded by IFIs the following Lender requirements will need to be applied to 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, while WB requires compliance with the national laws and WB safeguards procedures.

2.4. Relevant Government Policies, Acts, Rules, Strategies and Guidelines

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 Annex 7. The main legal documents are:

- The Constitution of Serbia (“Official Gazette of RS” No. 98/06).
- The National Strategy for Sustainable Development (“Official Gazette of RS” No. 72/09, 81/09)
- Law on Environmental Protection (“Official Gazette of RS” No. 135/04, 36/09)
- Law on Environmental Impact Assessment (“Official Gazette of RS” No. 135/04)
- The Law on Waste Management (“Official Gazette of RS” No. 36/09)
- The Law on Protection against Environmental Noise (“Official Gazette of RS” No. 36/09, 88/10)
- The Law on Water (“Official Gazette of RS” No. 30/10, 93/12)
- The Law on Occupational Safety and Health (“Official Gazette of RS” No. 101/05)
- Law on Planning and Construction (“Official Gazette of RS” No. 72/09, 81/09)
 - Law on Nature Protection, (“Official Gazette of RS” No. 36/09)
- Law on Strategic EIA (“Official Gazette of RS” No. 135/2004) 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),
- Law on Air Protection (“Official Gazette of RS”, 36/09)
 - Law on (“Official Gazette of RS” No. 135/04)
 - Agricultural Land Law , (“Official Gazette of RS” No. 62/06)

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

- 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)
- 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)

- Rulebook on the contents of the EIA Study (“Official Gazette of RS” No. 69/05)
- Rulebook on the procedure of public inspection, presentation and public consultation about the EIA Study (“Official Gazette of RS” No. 69/05)
- Rulebook on the work of the Technical Committee for the EIA Study (“Official Gazette of RS” No. 69/05)
- Regulations on permitted noise level in the environment (“Official Gazette of RS” No. 72/10)
- Decree on establishing class of water bodies (“Official Gazette of SRS” No. 5/68)
- Regulations on dangers pollutants in waters (“Official Gazette of SRS” No. 31/82)
- 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)

The parts related to this project are briefly summarized below (in sections 2.5.1 to 2.5.8 of this document).

2.4.1. The Constitution of Serbia

Serbia’s Constitution, adopted in September 2006, states that “Everyone shall have the right to a healthy environment and the right to timely and full information about the state of the environment. Everyone, especially the Republic of Serbia and autonomous provinces, shall be accountable for the protection of the environment. Everyone shall be obliged to preserve and improve the environment.”

2.4.2. The National Strategy for Sustainable Development

The National Strategy for Sustainable Development contains chapters that cover public health and environmental risk factors, including climate change, waste, chemicals, accidents, radiation, noise and natural disasters, such as floods, landslides, fires and earthquakes.

2.4.3. Law on Environmental Protection

Law on Environmental Protection (LEP) is adopted in 2004. The LEP is currently the main legislation relating to environment protection in Serbia. The Law on Environmental Protection is fully harmonized with Council Directive 2003/105/EC, which amends Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances (Seveso II Directive).

The main objectives of LEP are:

- Conservation and improvement of the environment; and
- Control and mitigation of pollution of the environment.

The main focuses of LEP are:

- Declaration of ecologically critical areas and restriction on the operations and processes, which can or cannot be carried out/ initiated in the ecologically critical areas;
- Regulations in respect of vehicles emitting smoke harmful for the environment;
- Environmental Approval;
- Regulation of industries and other development activities’ discharge permits;
- Promulgation of standards for quality of air, water, noise and soil for different areas for different purposes;
- Promulgation of a standard limit for discharging and emitting waste; and
- Formulation and declaration of environmental guidelines.

To implement the Law on Environmental Impact Assessment, a government decree determines the list of projects for which an impact assessment is mandatory or may be required in accordance with the relevant EU directives 97/11/EC and 337/85/EEC. Public participation is also envisaged in all environmental impact assessment stages. All subsidiary regulations were adopted in 2005.

Public information and public participation in decision-making have been introduced in line with EU Directive 2003/35/EC on public participation.

2.4.4. Law on Environmental Impact Assessment

The Law on EIA (LOEIA) provides categorization of industries and projects and identifies types of environmental assessment required against respective categories of industries or projects.

The Law covers, among others:

- Declaration of ecologically critical areas;
- Classification of industries and projects into 2 categories;
- Procedures for issuing the Final Environmental Approval (FEA); and
- Determination of environmental standards.

LOEIA also contains the procedures for obtaining FEA from the Department of EIA for different types of proposed industries or projects.

2.4.5. The Law on Waste Management

The Law on Waste Management, which is harmonized with all relevant EU directives, has been adopted in 2009 and contains provisions that relate to persistent organic pollutant waste and polychlorinated biphenyl and/or polychlorinated terphenyl waste.

2.4.6. The Law on Protection against Environmental Noise

The Law on Protection against Environmental Noise, adopted in May 2009, transposed EU Directive 2002/49/EC. The Law has the following main goals: establishment, maintenance and improvement of the system of noise protection on Serbian territory; and determination and realization of measures in the field of noise protection that avoid, prevent or decrease the harmful effects of noise on human health and the environment. Other goals are: determination of the limit values of noise levels in the environment in view of area, facilities and/or public (population) sensitivity, as well as in view of noise source; determination of the level of noise exposure in the environment; and public access to the information about noise and its effects. The levels of noise are covered by the Regulation on permitted level of noise in the environment.

2.4.7. The Law on Water

The Law on Water ("Official Gazette of RS" No. 30/10, 93/12), which incorporates the EU Water Framework Directive, covers water regimes, water management areas, responsibilities for water management (including sub-law water management legislation), water management activities, limitation of owners' and beneficiaries' rights, water cooperatives, financing of water management activities, and administrative inspection to enforce the Law. The legislation provides for various water management sub-laws on water resource conditions, water resource compliance and water resource permits.

2.4.8. The Law on Occupational Safety and Health

The Law on Occupational Safety and Health regulates the occupational safety and health system in Serbia. By harmonizing this law with the ratified International Labor Organization conventions and EU Framework Directive 89/391/EEC, as well as special directives derived from the Framework Directive, all guidelines originating from them have been accepted in a form adjusted to national conditions. Apart from this Law, the regulatory framework of the occupational safety and health system is integrated by several sub-acts.

2.5. World Bank's Environmental Safeguard Policy

Following is the short summary of several relevant Banks' Safeguards Policies. The full texts could be found at the WB web site.

2.5.1. OP/BP 4.01 Environmental Assessment

The Bank requires Environmental Assessment (EA) of projects proposed for Bank support to ensure that they do not have, or mitigate potential negative environmental impacts. The EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. The EA evaluates a project's potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation. The EA takes into account the natural environment (air, water and land); human health and safety; social aspects; and transboundary and global environmental aspects. The Borrower is responsible for carrying out the EA and the Bank advises the Borrower on the Bank's EA requirements.

The Bank classifies the proposed projects into three major categories, depending on the type, location, sensitivity, scale of the project and the nature and magnitude of its potential environmental impacts.

- Category A: The proposed project is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.
- Category B: The proposed project's potential adverse environmental impacts on human population or environmentally important areas-including wetlands, forests, grasslands, or other natural habitats- are less adverse than those of Category A projects. These impacts are site specific; few if any of them are irreversible; and in most cases migratory measures can be designed more readily than Category A projects.
- Category C: The proposed project is likely to have minimal or no adverse environmental impacts.

2.5.2. OP/BP 4.04 Natural Habitats

The conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. The Bank therefore supports the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. The Bank supports, and expects borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development. The Bank promotes and supports natural habitat conservation and improved land use by financing projects designed to integrate into national and regional development the conservation of natural habitats and the maintenance of ecological functions. Furthermore, the Bank promotes the rehabilitation of degraded natural habitats. The Bank does not support projects that involve the significant conversion or degradation of critical natural habitats.

2.5.3. OP/BP 4.11 Physical Cultural Resources

Physical cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Their cultural interest may be at the local, provincial or national level, or within the international community. Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices. The Bank assists countries to avoid or mitigate

adverse impacts on physical cultural resources from development projects that it finances. The borrower addresses impacts on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment (EA) process. When the project is likely to have adverse impacts on physical cultural resources, the borrower identifies appropriate measures for avoiding or mitigating these impacts as part of the EA process. These measures may range from full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost.

2.5.4. OP/BP 4.36 Forestry

The Policy envisages the protection of forests through consideration of forest-related impact of all investment operations, ensuring restrictions for operations affecting critical forest conservation areas, and improving commercial forest practice through the use of modern certification systems.

In the process of forest conservation interventions, especially the local people, the private sector and other pertinent stakeholders should be consulted.

In general, the Policy aims at reducing deforestation and enhancing the environmental and social contribution of forested areas.

2.5.5. OP/BP 4.12 Involuntary Resettlement

This Policy is based on assisting the displaced persons in their efforts to improve or at least restore their standards of living.

The impetus of this Policy is that development undertakings should not cause the impoverishment of the people who are within the area of influence of the undertakings. In cases where resettlement of people is inevitable, or in cases where loss of assets and impacts on the livelihood of the PAPs is experienced, a proper action plan should be undertaken to at least restore, as stated above, their standard of life prior to the undertakings.

Concerning public consultation, resettlers as well as the host communities should be consulted for the successful implementation of the resettlement process. The views of the consulted resettles and the host communities should be incorporated into the Resettlement Action Plan including the list of their choices.

2.5.6. IFC Environmental, Health and Safety Guidelines

The Environmental, Health and Safety (EHS) Guidelines of the International Finance Corporation (IFC), 2008 are the safeguard guidelines for environment, health and safety for the development of the industrial and other projects. They contain performance levels and measures that are considered to be achievable in new facilities at reasonable costs using existing technologies.

2.5.7. Safeguard Policies Triggered by the Project

Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

2.6. Implication of GoS Policies in RRSP – instruction how to integrate national laws and their requirements with the Project/Bank Requirements

Except LEP and LOEIA, all other policies, strategies and legal instruments do not explicitly require any environmental assessment of the Project-related activities. Most of the policies, strategies and legal instruments emphasized the need for environmental consideration along with the project planning and implementation. There is no straight forward environmental categorization for the proposed RRSP as per LEP and LOEIA. PERS will ensure, on a case-by-case basis, that the environmental management will be an integral part of the sub-project planning, design, implementation, and operation and maintenance (O&M). PERS will screen and monitor the environmental issues in both road rehabilitation and in subsequent operation & maintenance phases and ensure efficient application of environmentally-related measures, as defined in site-specific EMPs.

2.6.1. Environmental Approval Procedure

Legislative base for EIA in Serbia is found in LEP and LOEIA). The Department of EIA (DoEIA), under MoEDEP, is the regulatory body responsible for enforcing LEP and LOEIA. It is the responsibility of PERS to conduct EIA of development proposals (road sections to be rehabilitated), while the responsibility to review EIA for the purpose of issuing FEA rests on DoEIA.

Final Environment Approval has to be obtained by PERS from DoEIA for all RRSP sub-projects which are found to be adjacent or within the nature/cultural protected area. The EIA could be required for such sub-projects in accordance with the Serbian legislation.

The procedure for “B” Environmental Category (which in major part correspond to Projects on List No.2 of the 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)) includes submission of:

- Request for Decision about Need for EIA (RDNEIA)
- Environmental Impact Assessment (EIA)
- Environmental Management Plan (EMP)

Structure of the whole process is presented in Figure 2.2 – Environmental Approval Procedure.

Most of the RRSP road rehabilitation sub-projects will be implemented within the non-sensitive areas in environmental point of view, so they could be categorized as a “Low B” Environmental

Category. Such projects require only EMP, Checklist EMP or application of regulations/standards. Environmental management process, including obtaining of FEA includes:

- Screening/Scoping in order to determine what are the likely potential issues;
- Request for the Opinion about Need for EIA, submitted to MoEDEP/PSEP;
- Full Environmental Impact Assessment Procedure, shown in figure 2.2, only in case where MoEDEP/PSEP issue an Opinion that EIA is needed for these projects;
- In case where MoEDEP/PSEP issue an Opinion that EIA is not needed for the project, Environmental Approval is obtained by collecting subject Opinion.
- EMP

The environmental impact assessment, based on LOEIA, has been the most efficient regulatory instrument since it was implemented in Serbia over 15 years ago. With this instrument, impacts of any pollution originating from the future facilities and/or related activities can be foreseen and prevented or mitigated.

Structure of the whole process of obtaining FEA for “B” Category Projects according to national legislation is presented in Figure 2.1 – Environmental Approval Procedure.

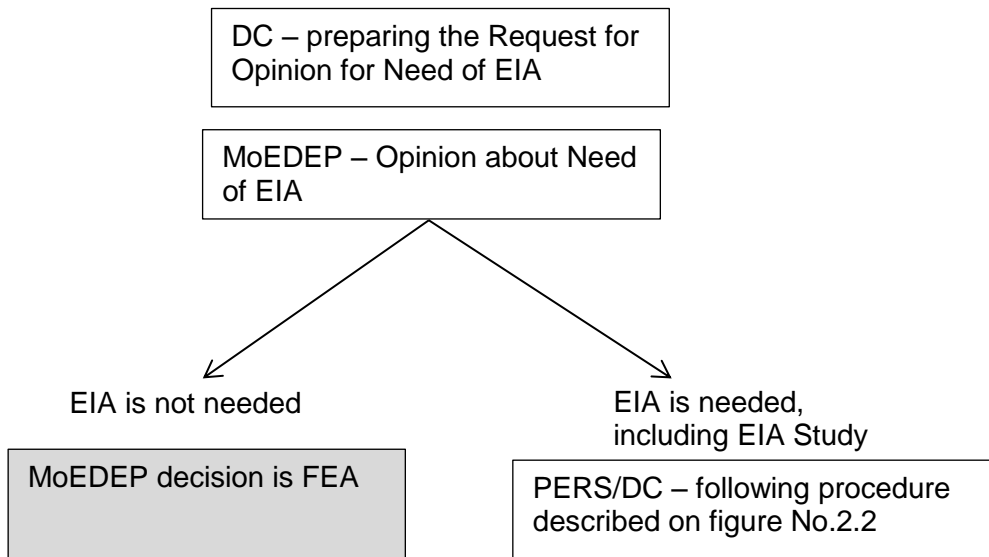


Figure 2.1: Environmental Approval Procedure for “Low B” Projects

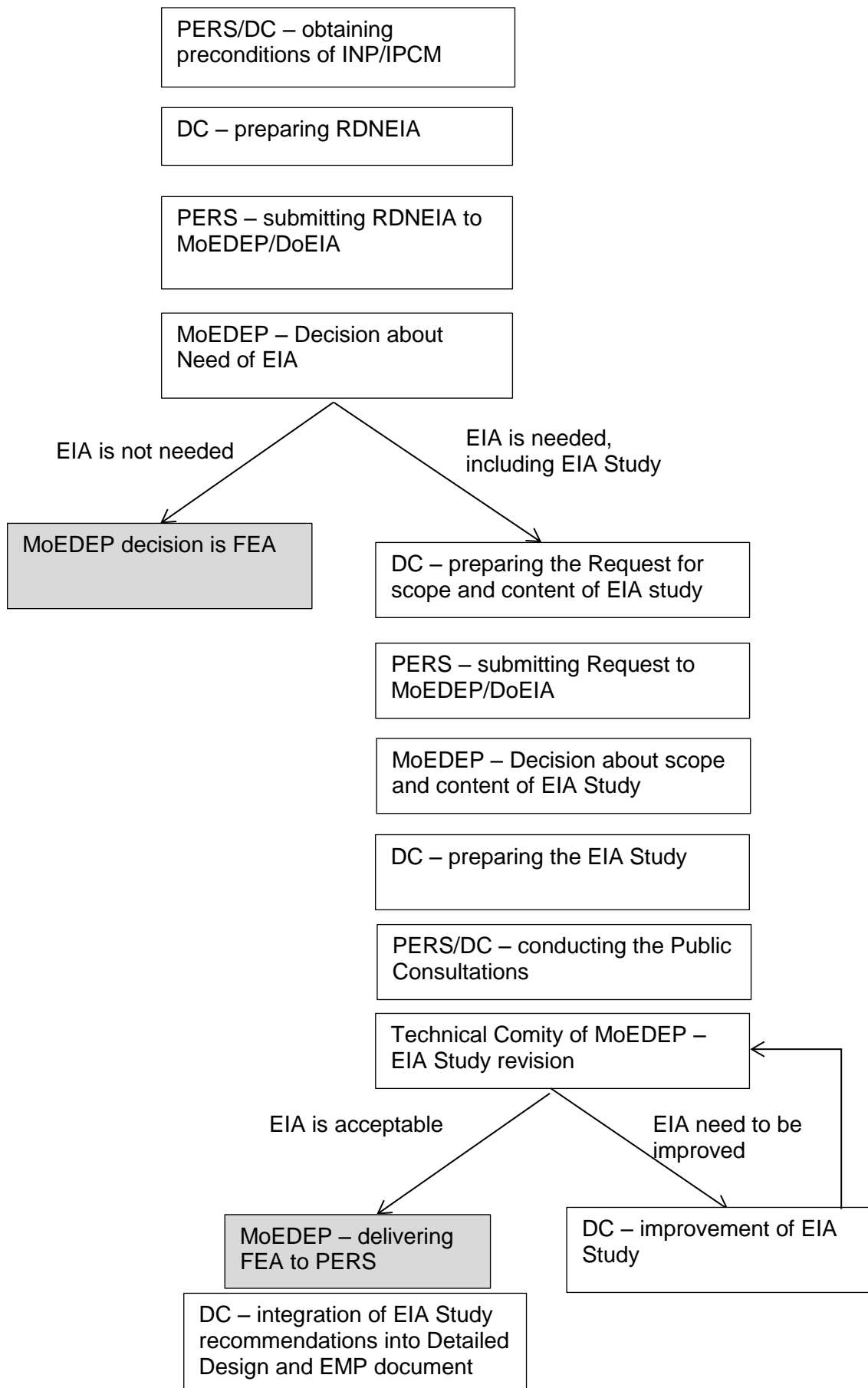


Figure 2.2: Environmental Approval Procedure

3. ENVIRONMENTAL AND SOCIAL BASELINE ON NATIONAL/STATE LEVEL AND SAMPLE SUBPROJECT LEVEL

3.1. Environmental and Social baseline at national/state level

Republic of Serbia is taking a huge effort to reach good environmental standards. A set of environmental laws adopted during the last decade contributed to Serbia coming closer to desired environmental standards. The standards of good environmental practice are applied throughout the country, and progress is particularly visible within the energy and transport sector, also due to the fact that several large projects were financed by different International Financing Institutions (IFI), which implemented a strict environmental systems.

However, there is still a lot of work to be done regarding environmental protection in Serbia and this chapter is focused on issues most commonly present in these fields, which lead to environmental degradation.

3.1.1. Baseline country and environmental information

Serbia has a land area of 77,474 square kilometers, constituting only 0.05% of the world's land area, or about 1.5 % of Europe. Despite its small size, however, the environment of Serbia is highly diverse compared to other countries in Europe. The reasons for this comparative richness include: the variety of climate, topography, and geology and the long-term ecological and evolutionary history of the region as a biological crossroads.

The varied ecosystems of Serbia in turn give rise to a diversity of valuable ecological processes. The following ecosystems are represented: deciduous forests of several types in lowland, foothills, and mountain areas; mountain forests of pine, spruce, and fir; steppe (grasslands that develop in regions of wind-deposited soil) and forest-steppe; and alpine grasslands above "tree line" in the high mountains.

Serbia is species-rich. The Balkan Peninsula is the most species-rich part of Europe for flowering plants and Serbia is among the most diverse parts of the Balkan Peninsula - only Greece and Bulgaria being comparable.

In general, Serbia has a number of different types of ecosystems of particular environmental importance, including: forest ecosystems representing different types of forests ; high mountain regions with characteristic mountain ecosystems well-represented or preserved, some of which are found on borders and would require trans-boundary management efforts; mountain regions in which traditional human activities have maintained and even increased biodiversity through centuries of maintaining the open pastures of mountain meadows; gorges and canyons that have been identified as important centers for relict and endemic species; steppe and sands of Vojvodina, as well as lakes, wetlands swamps, marshes, ponds which provide key habitat for migratory birds from elsewhere in Europe and have been identified as wetlands of the Ramsar Convention; karst regions in parts of Serbia, with their numerous caves and pits, supporting a rich fauna; and mountain bogs around mountain and glacial lakes.

3.1.2. Water quality

Water quality in Serbia differs significantly from one region to next. Monitoring has shown the presence of: ammonia, nitrates, sulfides, iron and mineral oils in the Tisa River Basin; evaporable phenols and manganese in wells in the area of Backa; and, in some cases, suspended solids – for example, in the South Morava Basin. Throughout Serbia, the most problematic physicochemical water quality parameters are turbidity, iron, manganese, nitrates and, in the Autonomous Province of Vojvodina, arsenic. In Central Serbia the main problem is bacteriological contamination, with more than 40% of samples not meeting required standards for unlimited use. Moreover, the reserves of underground water in the Autonomous Province of Vojvodina are polluted with heavy metal contamination, particularly arsenic.

According to the findings of the Republic Hydrometeorological Service of Serbia in 2005 and keeping in mind that the best quality is Class I and the most polluted is Class IV, the water

parameters for 23% of 65 monitored river profiles fell into Class II, 70% into Class III and 6% into Class IV. During last decade the Danube and Tisa rivers fell from Class II/III to Class III/IV, along with the trans-boundary rivers that come from Romania.

3.1.3. Air Quality

The poor quality of ambient air in a number of areas and towns in Serbia results from emissions of sulfur dioxide, nitrous oxides, carbon monoxide, soot and particulate. In particular, the air quality deteriorates during calm weather and during the heating season.

Among other sources, the main sources of air pollution are: the energy sector (coal-fired thermal power plants); district heating plants; oil refineries; the chemical industry; fuel combustion in households, industry, individual heating boiler plants; traffic; the construction industry; inadequate storage of raw materials; and waste dump sites.

Road vehicles are considered as one of the major contributors to air pollution in Serbia, especially in larger cities. Emissions from vehicle exhausts contribute sulfur dioxide, carbon monoxide, nitrogen oxides, ozone and particulate matter pollution to the air. The main reasons for the air pollution from the transport sector are poor quality of engine fuel, out-of-date vehicles and generally poor technical standards for the vehicle fleet.

3.1.4. Noise

Serbia has problems that originate from: inadequate legislation and limit values for noise; inadequate monitoring of noise in urban areas; lack of enforcement of spatial planning, including noise zoning and improper location of industrial areas; insufficient control of noise emitted by motor vehicles; and improper traffic management. Also, the noise that arises from various infrastructure development activities is not always considered during planning. Significant progress in this field was made by the adoption of the Law on Protection Against Environmental Noise in May 2009. Work on the related by-laws will be finished during 2010.

3.1.5. Road Safety

Road safety is generally not taken by the relevant institutions as a top priority, and the systematic traffic education that was previously institutionalized in schools is no longer performed. Currently, only traffic signals are taught in the schools, accompanied by one hour presentation per year by the local traffic police. Some initiatives of local governments now try to develop road safety awareness campaigns for the local children and drivers.

Road traffic fatalities declined from about 1200 deaths per year to about 400 deaths per year, due to increased law enforcement in the past few years. However, the rate is now growing again (currently at 964 deaths per year) due to lax enforcement of traffic rules. Also, the number of registered vehicles increased dramatically in the same period (especially two-wheeled vehicles), which is often used to explain the entire increase in road fatalities, as mopeds and motorbikes are considered high-risk vehicles.

3.1.6. Waste

The general state of waste management in Serbia is still inadequate, posing public health and environmental hazards. The most acute problem is hazardous waste, which is not separately collected and disposed of – currently it is processed in regular waste disposal sites. In general, over 50% of disposal sites do not meet the technical requirements of sanitary landfills, and are actually just fenced and mapped dump areas. There are also hundreds of illegal dump sites of various sizes in rural areas. Moreover, leakage from these dump sites poses a threat to groundwater, surface water and soil, due to the high content of organic matter and heavy metals. It is, however, important to mention adoption of the new Law on Waste Management, which is fully harmonized with the EU *acquis communautaire*, and the numerous sub-laws that are currently being developed.

3.1.7. Occupational Health

On average, Serbia has 60 fatal cases of industrial accidents each year, mostly associated to lack of enforcement of relevant laws.

3.1.8. Climate Change

According to the World Meteorological Organization, the estimated effects of climate change on Serbia will be the medium range. Serbia, as well as south-east Europe, is likely to have hotter summers, decreased precipitation and, therefore, an increased risk of summer drought.

3.2. Environmental and Social baseline for sample subprojects

3.2.1. Main environmental characteristics for sample sub-projects

Four relevant sample subprojects have been chosen from list of sub-projects to be implemented during first year of project implementation. For each of them a site-specific EMP is prepared. Subprojects and their main environmental characteristics are presented in table 3.1:

Table 3.1 Main environmental characteristics of sample sub-projects:

No.	Name of the sub-project	Main environmental characteristics
1.	Rehabilitation works on the State Road of the IA Category No. 4, section Uzice – Pozega – Kratovska Stena	Cumulative impact; impact on surface watercourses.
2.	Rehabilitation works on the State Road of the IB Class No. 23, section Arandjelovac - Krcevac	Social impact; pedestrian and traffic safety.
3.	Rehabilitation works on the State Road of the IB Class No. 20, section Zabalj Intersection - Zrenjanin	Project will be executed in the vicinity of nature protected area; potential impact on surface watercourses
4.	Rehabilitation works on the State Road of the IB Class No. 13, section Paragovo – Iriski Venac - Paragovo	Project will be executed within the nature protected area; several cultural heritage objects in vicinity

Detailed baseline information are available in site-specific EMPs, while one (as a sample) is presented in Annex 6 of EFD. A short overview of environmental baseline for sample subprojects is presented within this chapter.

Subprojects Description

- Rehabilitation works description

The road works covered by the Project will be carried on the existing roads with no change of the alignments. Through the Detailed Design Phase it will be reconsidered if some widening is possible. 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. There will be no relocation and resettlement issues as defined by OP 4.01 during project preparation and implementation.

It is necessary to inspect conditions of all culverts on the sections, check their through-put capacity and consequently plan appropriate measures (cleaning, repair, replacement, removal of installations, etc.). A detailed survey and possible correction of levels of open canals is also

needed in order to ensure longitudinal water draining to culverts, i.e. out of the road body. “Wild” culverts and improvised draining solutions should be also examined.

One of four sample sub-projects (Paragovo – Iriski Venac – Paragovo) is within the nature protected area (Nature Park “Fruska Gora” while other sample sub-projects will not be implemented within protected natural or cultural areas.

On Arandjelovac – Krcevac road section it is necessary to have a pavement widening of app. 1.00-1.20 m along the whole section. Extension of arched culverts is also necessary due to pavement widening, as well as widening of one box culverts and the bridge at km 4+705. The existing sidewalks from the beginning of the section to km 1+500 should be rehabilitated, new ones should be designed on locations of interruptions and where the sidewalks are missing by km 5+000 since there is a school at km 3+500 and the pedestrian movement is intensive. However, these works will be undertaken completely within the existing right-of-way; therefore no land acquisition will be involved.

- Location Description

Uzice – Pozega – Kratovska Stena road section is located in Western Serbia, Zlatibor Administrative District, and it goes through the territories of City of Uzice and Municipality of Pozega (to the borders of territory of City of Cacak and Moravica Administrative District).

Administrative units where the Arandjelovac – Krcevac road section is located are municipality of Arandjelovac and Topola. Length of the section to be rehabilitated is 8,7 km. Although being characterized as rural, the section is as one with a dense construction alongside the road and there are a number of commercial and private buildings, especially to the chainage mark of km 5+000.

Zabalj – Zrenjanin road section is located in Vojvodina, partly in the administrative district of Southern Banat, and partly in the administrative district of Central Banat. Administrative units where the section is located are Zabalj and Zrenjanin. The road alignment goes across two bigger watercourses, Jegricka Canal and Tisa River. Jegricka Canal is a part of Nature Park “Jegricka”, which is protected under III zone of protection. Works on the bridges over Jegricka and Tisa rivers are excluded from the project, since they have been completed couple of years ago.

Paragovo – Iriski Venac – Paragovo road section is located in Vojvodina, and whole road section is placed within the National Park “Fruska Gora”. Length of the section is 8.1 km.

- Geography

Road section Uzice – Pozega – Kratovska Stena goes through the territories of City of Uzice and Municipality of Pozega (to the borders of territory of City of Cacak and Moravica Administrative District. The start of the section is in Uzice and it goes to km 1+530, although the whole stretch is free of residential buildings. The following settlements are located along the section: Sevojno, Gorjani, Uzici, Rasna, Pozega and Gugalj. There are two watercourses that go in parallel with the road: the Djetinja River at part from Uzice to Pozega, while from Pozega to Asanovac there is the river Zapadna Morava. The section is intersected by several streams and one river flow (the Skrapez river at km 23+117).

Road section Arandjelovac – Krcevac represents a section from turning to Orasac from Arandjelovac direction to the point of intersecting with the state road of the IB class no. Administrative units where the section is located are municipality of Arandjelovac and Topola. Although being characterized as rural, the section is as one with a dense construction alongside the road and there are a significant number of commercial and private buildings, especially to the chainage mark of km 5+000. Afterwards, the section really becomes a rural one. A detailed position and number of structures are presented within the document “Diagnostic assessment of road condition, section Arandjelovac-Krcevac”⁵, while the significant structures are “Knjaz Milos” factory at km 0+397 to km 1+500 and the primary school at km 3+485.

Zabalj – Zrenjanin road 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

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

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.

Paragovo – Iriski Venac – Paragovo road section is located in Fruska Gora mountain. This mountain chain is about 80 km long; the widest part of the chain has the width of 15 km. The highest pick of the mountain is Crveni Cot (549 m). The road sections runs through the forested area.

- Watercourses

In respect to road-rehabilitation works, 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) into the purpose build settlement (purification) basins. As for the potential pollution originating from the road users during operation after the rehabilitation works, this is mostly limited to accidents.

There are two watercourses on the road section Uzice – Pozega – Kratovska Stena that run in parallel with the road: the Djetinja River at part from Uzice to Pozega, while from Pozega to Asanovac there is the river Zapadna Morava. The section is intersected by several streams and Skrapez River at km 23+117.

The Kubrsnica River runs in parallel with the road section Arandjelovac – Krcevac, on the right side in a direction of the chainage mark increase, at distance of 50-100 m (it is the biggest tributary to the Jasenica River). The road is intersected by three streams that are bridged by means of box culverts.

Zabalj – Zrenjanin road section is intersected by the Jegricka Canal and Tisa River.

Paragovo – Iriski Venac – Paragovo road section is not intersected by any river. However, the road is crossing several unnamed local gully streams.

- Air Quality

Data on measured values of air pollution in the observed corridors were not available. However, important to note is that the selected roads belong to category of commuter roads, where the number of vehicles is much less dependent upon the state of the road, as they are mostly the only options for local users.

Based on experience, the expected traffic load after completion of planned road rehabilitation works will not increase. Therefore it is likely to expect that existing levels of air pollutants within the corridor of proposed road section will remain the same or will be slightly decreased.

Within the corridor of road section Uzice – Pozega – Kratovska Stena there are two existing point sources of air pollution. They are “Sengolj” and “Jelen Do” stone quarries. The existing road (E-761) is linear sources which cause additional emission of air pollutants along the corridor of proposed road section.

Within the corridors of road sections Arandjelovac – Krcevac, Zabalj Intersection – Zrenjanin and Paragovo – Iriski Venac – Paragovo there are no significant point sources of air pollution. Existing roads are the only linear sources which cause emission of air pollutants along the corridors of proposed road sections.

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 sections.

- Noise

Noise is another threat to the quality of the environment. Many heavy vehicles such as trucks, buses, cars, move on the roads during day & nights and these vehicles can generate high noise in the subproject areas.

Based on experience and expected traffic load, the planned road rehabilitation works and operation of roads after rehabilitation will not increase existing levels of noise within the corridor of proposed road sections.

⁶ Available on PERS web site

There are two dominant noise sources on proposed road section Uzice – Pozega – Kratovska Stena: Existing State Road of the IA Category No.4 (E-761) as linear source and existing major railway “Belgrade – Bar”.

Dominant noise source within the corridor of road section Arandjelovac – Krcevac is existing state road of the IB class, no. 23 (old marking; M-4) on Lazarevac – Topola.

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. There are no noise affected zones within the proposed road corridor due to the fact that whole stretch is free of residential buildings. There are no sensitive receptors (schools, hospitals, etc.) along the route.

- Biological Environment

The selected road sections go through urban, semi-urban and rural areas. However, no protected wild animals inhabit these areas and there are no endangered species present on Uzice – Pozega – Kratovska Stena, Arandjelovac – Krcevac, and Zabalj – Zrenjanin road sections. However, nests of endangered species -imperial eagle- are registered in wide zone of Paragovo – Iriski Venac – Paragovo road section.

Trees (large ones) have been noted along the Arandjelovac – Krcevac road section, in close proximity to existing pavement. Although these are the planted species (not protected or of high natural value), if possible, these should be saved. The trees are located along the right and left pavement edges, sporadically along the whole section, and especially along the stretch from km 1+400 to km 2+200.

On Mt. Fruska Gora, on road section Paragovo – Iriski Venac – Paragovo, 110 bird species have been recorded. Certain bird species - nature rarities have been observed, and they are the largest birds, such as black stork, imperial eagle and the other birds of prey. The imperial eagle is the most endangered and the rarest bird in the Fruska Gora, and one of the rarest in Europe. At the moment there are 4 couples living in the Fruska Gora, and 10 couples of this rare species in Vojvodina. However, the nest locations are over 20 km away from the proposed road section to be rehabilitated, close to Andrevlje village (Beocin Municipality)⁷.

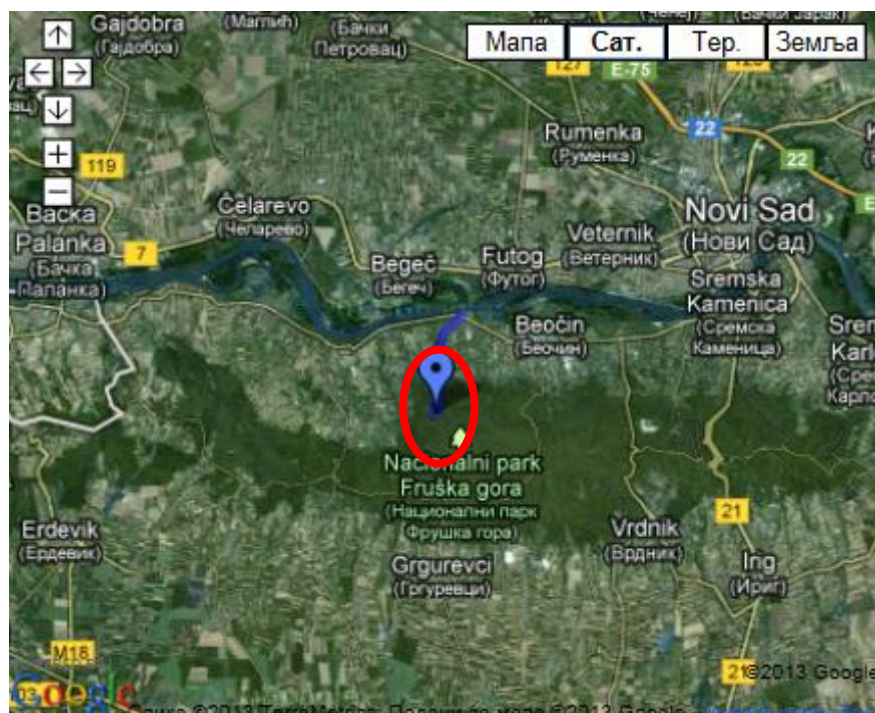


Figure 3.1 Area where eagle nests are recorded

⁷ Source: Ceptor,
http://www.andrevlje.vojvodina.gov.rs/index.php?option=com_content&task=view&id=18&Itemid=19

- Socio-cultural, Religious and Archeological Sites

There are no archaeological structures / monuments or sites that are of significance in the vicinity of the subproject locations for Uzice – Pozega – Kratovska Stena, Arandjelovac – Krcevac and Zabalj – Zrenjanin road sections.

On Fruska Gora Mountain, where road section Paragovo – Iriski Venac – Paragovo belongs, there are 16 orthodox monasteries famous for their specific architecture, treasuries, libraries and frescoes and numerous archeological sites from prehistoric and historic times. The Fruska Gora Monasteries are the unique group of thickly situated monasteries built in the period from XV to XVIII century. However, the locations of closest monasteries and archeological sites are more than 0.5 km away from the proposed road section to be rehabilitated.

- Settlements

The start of the Uzice – Pozega – Kratovska Stena road section is in Uzice and it goes to km 1+530, although the whole stretch is free of residential buildings. The following settlements are located along the section: Sevojno, Gorjani, Uzici, Rasna, Pozega and Gugalj.

The start of the Arandjelovac – Krcevac road section is in city of Arandjelovac and it goes to km 8+700. The significant structures are “Knjaz Milos” factory at km 0+397 to km 1+500 and the primary school at km 3+485. End of the section is close to the settlement Krcevac.

The start of the Zabalj - Zrenjanin road 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.

The start of the Paragovo – Iriski Venac – Paragovo road section is in Paragovo intersection, fairly distanced from settlement Paragovo. The whole road section is free of residential buildings.

- Land Use

On Uzice – Pozega – Kratovska Stena and Arandjelovac – Krcevac road sections most of the surrounding areas are rural in nature. Commercial activities are also found around the project site on many different locations in Sevojno, Gorjani, Uzici, Rasna, Pozega and Gugalj settlements.

Most of the surrounding areas on Zabalj - Zrenjanin road section are agricultural in nature. There are no industries operating in the area.

The whole Paragovo – Iriski Venac – Paragovo road section is placed within the protected zone - National Park “Fruska Gora”, which is forested area.

- Industries and Commerce

Industrial structures are present within the area of Uzice – Pozega – Kratovska Stena road section. These are “Seval” aluminium rolling mill, and “Sevojno” copper rolling mill.

“Knjaz Milos” mineral water bottling factory cause increased levels of concentrations of pollutants in the atmosphere when operating in full capacity or without applying air-pollution reduction measures in the wide zone of Arandjelovac – Krcevac road section.

- Important Environmental Features/Hotspots

Locations of major environmental hotspots/features along the sample sub-project roads are shown in Tables 3.2. to 3.4.

Table 3.2: Important Environmental Features (IEFs)/Hotspots along the Uzice – Pozega – Kratovska Stena Sub-project

Chainage (km)	IEFs	Road Side	Comments (distance from the centre-line (CL) of the road)
5+000	“Seval” aluminium rolling mill	LS	It is located at about 50m far from the CL of the road
6+000	“Sevojno” copper rolling mill	LS	It is located at about 50m far from the CL of the road
33+000	“Sengolj” stone quarry	LS	It is located at about 50m far from the CL of the road
35+000	“Jelen Do” stone quarry	LS	It is located at about 50m far from the CL of the road

Table 3.3: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Arandjelovac - Krcevac Stena Sub-project

Chainage (km)	IEFs	Road Side	Comments
0+397 to 1+500	“Knjaz Milos” Water Factory	RS	It is located at about 20m far from the CL of the road
3+485	Primary School	RS	Primary School in Banja Settlement is located 20m far from the CL of the road

Table 3.4: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Zabalj Intersection – Zrenjanin Sub-project

Chainage (km)	IEFs	Road Side	Comments
8+000 to 9+000	Nature Park “Jegricka”	LS	It is located at about 500m far from the CL of the road,
9+000	Jegricka Canal	CL	It is located directly under the bridge, but bridge works are excluded from this project

4. ENVIRONMENTAL MANAGEMENT FRAMEWORK DOCUMENT (EFD) - SCREENING PROCEDURES

4.1. Introduction

The Environmental Management System (EMS) establishes the criteria to identify the level of Environmental Assessment (EA) and the processes involved, their sequence to conduct the EA studies for various components/phases of the road maintenance including their legal requirements and implications (Figure 4.1). Understanding the required level of EA will help the RRSP in assessing the requirements related to needs of the external services to be engaged at planning and design stages and requirements related to the Project Supervision Consultant (PSC) during the project implementation stage.

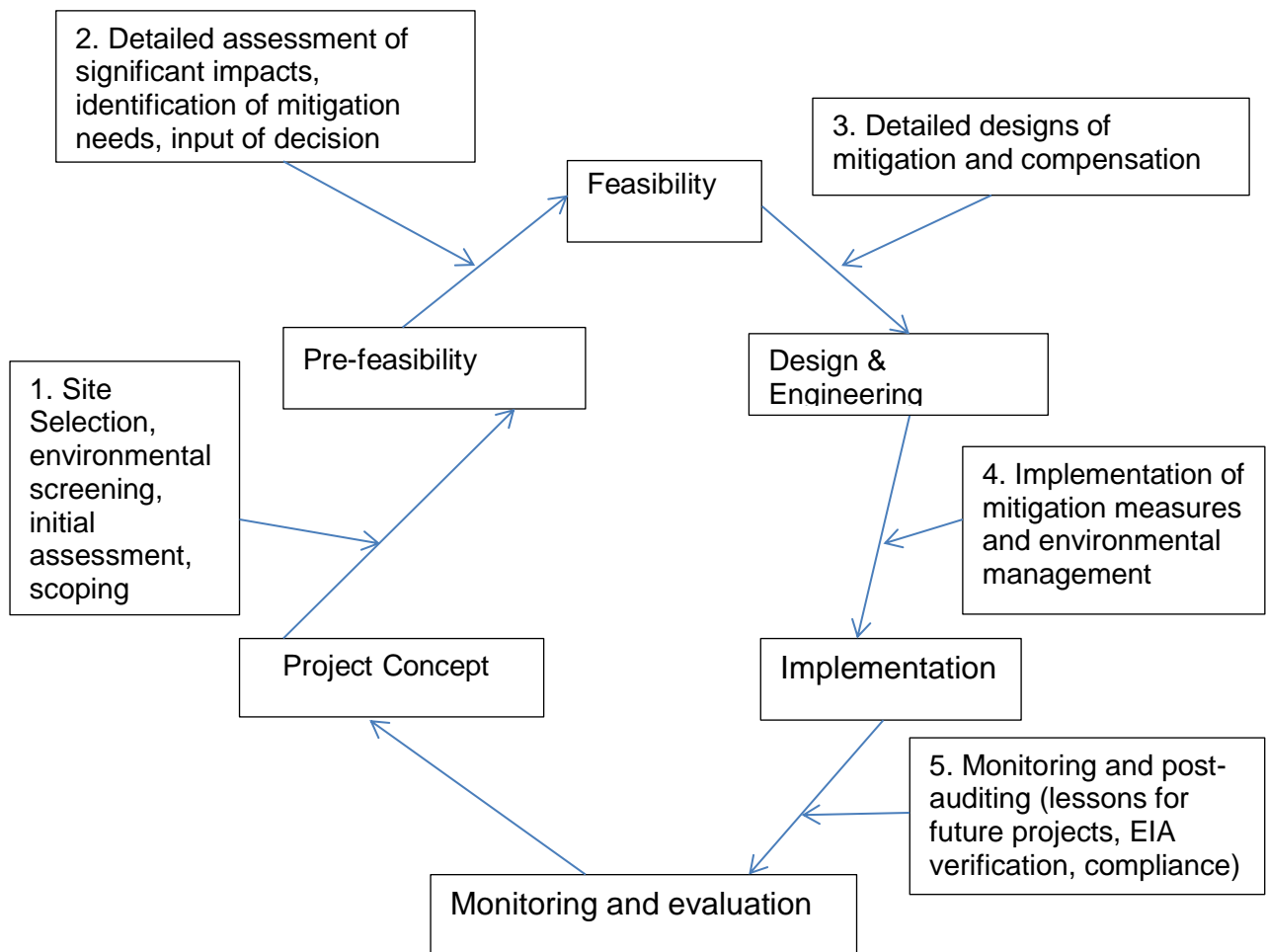


Figure 4.1: Environmental Management System in Project Life Cycle

Once the need/justification of a sub-project is finalized based on the engineering parameters (like traffic, economic and financial analysis), the process of Environmental Management System starts. First step in EMS is screening of the project components to ascertain the category of Environmental Assessment required.

The category of EA can be assessed by RRSP or if desired can be offered to some agency or independent environmental expert. It is worth to mention here that any external agency or consultant or expert can help RRSP in analyzing and reporting of environmental features and parameters, filing the application for approval, but ultimately the responsibility lies with RRSP. The RRSP has to ensure that all legal rules and regulations set by DoEIA through MoEDEP are adhered to.

4.2. General Principles for Environmental Management

4.2.1. Introduction

All RRSP sub-projects are classified as Environmental Category B, since it will involve only rehabilitation of existing roads, with the possibility of minor alignment changes for safety purposes. It is not envisioned that any roads will be significantly widened (e.g. addition of more lanes) or upgraded to a higher category.

This EFD document and three site-specific EMPs were prepared prior to January 2013, modeled on EA and EMPs already implemented by PERS. The EFD outlines the environmental policy, legal, and administrative framework for undertaking the Project, presents environmental baseline information and potential environmental impacts and includes the range of available mitigation measures that may be adopted, based on each particular situation. The EFD also contains a description of the environmental management system and institutional arrangements to be applied as well as recommendations for capacity building measures in PERS during project implementation in order to ensure environmental sustainability. The EFD includes a generic sample environmental mitigation and environmental monitoring plans.

4.2.2. General responsibilities under PERS:

- The PERS/PIT will be responsible for the environmental compliance monitoring and oversight to ensure overall project environmental compliance. The consultants that would be hired by PERS would assist PERS to carry out this mandate.
- PERS will follow the related government rules (laws, ordinances, acts etc.) and WB Operational Policies and Guidelines. This EFD would serve as a base for ensuring this compliance.
- PERS will ensure participation of local communities in planning and implementation of sub-projects.
- PERS will be responsible for obtaining and ensuring Environmental Approvals required from DoEIA for all RRSP sub-projects for which EIA study is required (see chapter 2.6.1. Environmental Approval Procedure). All the activities proposed under the project will abide by General Environmental Mitigation Measures (GEMM) prepared under EFD.
- The requirements of EMP, EFD and Serbian standards will be included in all sub-project's civil works contracts through a set of special environmental clauses included in the Technical Specification of the bidding documents.
- Environmental Management Plan along with EFD will be incorporated in the bid document's work requirements. Penalty clauses for not complying with EMP requirements will be incorporated.

4.3. Environmental Assessment Procedure

- For all subprojects a DC will carry out the environmental screening.
- PERS will ensure that proper environmental screening will be done by DC.
- Project Audit Consultant (PAC)/PERS will review and clear all screening reports.
- PERS will conduct verification of some screening on a sample basis.
- DC will ensure that environmental considerations are given sufficient attention. To this end, it will carry out preparation of the specific EMPs for all road maintenance subprojects based on screening criterion.
- For each sub-project which is placed within the natural/cultural protected areas, DC will obtain all necessary preconditions from relevant institutions (INP/IPCM) and prepare RDNEIA to be submitted to MoEDEP/PSEP (see chapter 2.6.1).
- PERS will obtain FEA from MoEDEP/PSEP according to the procedure described within the chapter 2.6.1.
- Bid documents will be prepared by PERS, and will include site-specific EMPs. The EMP implementation should be done by relevant contractors.

- RRSP road improvement works will be supervised by PSC and monitoring should be done by PAC.
- PERS will ensure that environmental assessment addresses all potential environmental direct and indirect impacts of the sub-project throughout its life: pre- rehabilitation, road rehabilitation and operation stages; and that the specified mitigation measures have been implemented. Subsequent activities related to future road maintenance will follow GEMM, prepared under EFD (see chapter 7.3).

The Environmental Assessment Process is presented in Figure 4.2, below.

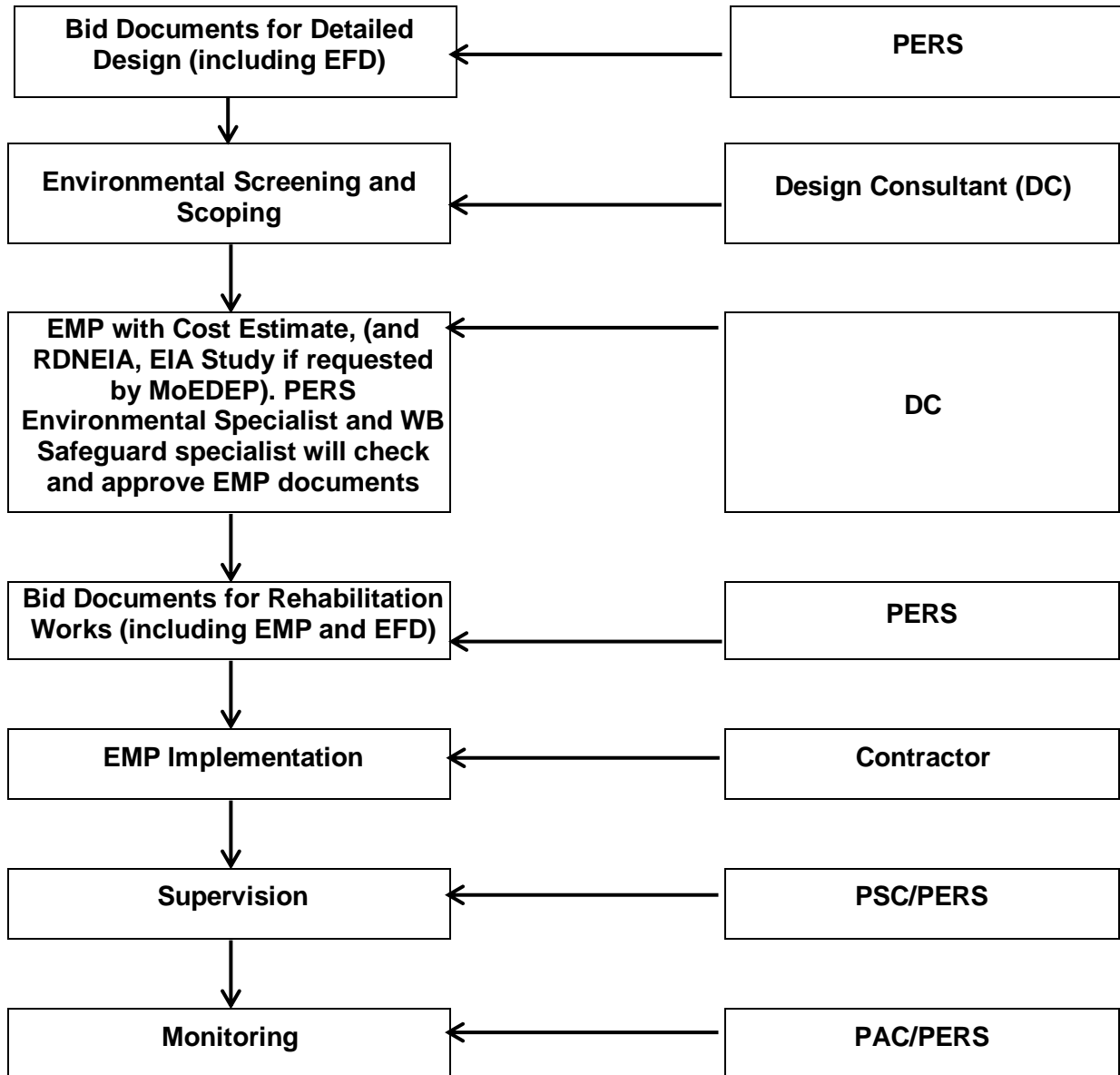


Figure 4.2: Environmental Assessment Steps for Road Maintenance

4.3.1. Bid Documents for Detailed Design

PERS will prepare the Bid Documents for detailed design. Bid Document will contain provisions related to environmental protection during the detailed design phase, including designer’s obligation to produce site-specific EMP documents for each sub-project. Also, DC will be obliged to produce EIA Study if necessary (depending upon the Ministry’s Decision) and to present it during the public consultation process.

4.3.2. Screening and Scoping

4.3.2.1. Screening

Design Consultant is obliged to perform all environmental screening activities as a process by which the appropriate level and type of EIA will be determined for a given subproject on the basis of its likely environmental impacts. The methodology for screening includes definition of environmental screening category, desk study, reconnaissance survey and literature available.

Screening Criteria: DC should note site-specific environmental risks and impacts, land zoning requirements and prepare documentation for environmental license/permit in accordance with procedure described within the chapter 2.6.1.

Screening Category: All RRSP sub-projects are classified as Environmental Category B, Depending on subproject EA Category, they could be additionally divided into “B” or “Low B” Category.

Project recognized as “Low B” environmental category requires only EMP, Checklist EMP or application of regulations/standards.

Project recognized as “B” environmental category contains all “Low B” requirements, together with the activities which are in detail presented within the chapter 2.6.1.

Desk Study: Purpose of this activity is to collect the secondary information and choose the methodology for carrying out EIA Study (if requested by MoEDEP) and determining responsibilities of EA team members for preparing site-specific Environmental Management Plan. It shall include:

- Gathering and reviewing existing environmental data (secondary data) relevant to the proposed development, in the form of topo sheets, physical maps, thematic maps showing details of soil type, geology, seismic activity, hydrology etc.
- Collect all the earlier carried out environmental and engineering studies in project area.

Reconnaissance survey – field research: Purpose of this activity is to collect the first hand information about the project area by verifying the data collected during desk study, assessing the likely impacts, identifying the major/main issues and preparing the methodology for detailed investigation.

Determining Degree of Impact

Once all project environmental aspects will be identified, the level of impact that may result from each of the activity will be assessed. In assessing the level of impact that an activity may cause, two key elements are considered namely:

Consequence: the resultant impact (positive or negative) of an activity’s interaction with the legal, natural and/or socio-economic environments; the categorization for consequence is presented in Table 4.1 .

Likelihood: the likelihood that an activity will occur. The categorization for likelihood is presented in Table 4.2.

Table 4.1: Consequence Categories and Rankings

Consequence Category	Addressed
Significant	Most severe, alternative will be proposed through environmental hazard risk management
Major	Severe, alternative/avoidance will be proposed through environmental hazard risk management
Moderate	Less severe, measures will be proposed to minimize impact
Minor	Less severe, mitigation measures will be proposed
Negligible	Less severe, mitigation and enhancement measures will be prepared if possible
None	No impact, enhancement measures will be proposed if possible
Positive	Positive impact

Table 4.2: Likelihood Categories and Rankings

Likelihood Category	Definition
Certain	The activity will occur under normal operating conditions.
Very likely	The activity is very likely to occur under normal operating condition.
Likely	The activity is likely to occur at some time under normal operating condition.
Unlikely	The activity is unlikely to but may occur at some time under normal operating condition.
Very unlikely	The activity is very unlikely to occur under normal operating conditions but may occur in exceptional circumstances.

4.3.2.2. Scoping

The next step in the EA preparation will be to define RRSP activities and the physical, regulatory and environment of the area in which development will occur. This will be achieved through scoping. Scoping will identify which of the activities has a potential to interact with the environment. Scoping will be conducted early in the EA process so that a focus on the priority issues (i.e. those that have the greatest potential to affect the natural and/or environment) can be established for the rest of the EA process.

Key elements/inputs to the scoping exercise will be as follows:

- Gathering and reviewing existing environmental data like atmosphere, climate, topography, congestion area, alternative requirement, land use pattern, hydrology and drainage pattern, major rivers and waterways, religious, cultural and archaeological sites and sensitive areas.
- Identifying project stakeholders; including PAPs, Government and non-government agencies, utility companies, DoEIA etc.

- Assemble and review relevant legislative requirements, environmental standards and guidelines (national and international) associated with the proposed development as well as WB Operational Policies and standards.
- Gathering existing information sources and local knowledge;
- Informing stakeholders of the project and its objectives and get input on the EA;
- Identifying the key environmental concerns related to a project and the relative importance of issues;
- Defining/preparing the EA work program, including a plan for public and stakeholder involvement;
- Carrying out monitoring of natural environment including air, water, soil, noise etc.
- Defining the range of project alternatives to be considered.
- Obtaining agreement/consensus on the methods and techniques to be used in EA studies and document preparation;
- Determining/freezing the spatial and temporal boundaries for the EA study.

Focus of scoping will be on the collection and analysis of pertinent data and the assessment of significant environmental attributes. The end result will be a work program which is well focused and cost-effective. The following issues will be addressed through scoping, but will not be limited to:

- To improve the quality of EA information by focusing scientific efforts and EA analysis on truly significant issues;
- To ensure environmental concerns identified and incorporated early in the project planning process, at the same time as cost and design factors are considered;
- To ensure research efforts are not wasted on insignificant issues, rather focused on core issues.
- Reducing the likelihood of overlooking important issues;
- Reducing the chance of prolonged delays and conflicts later in the EA process by engaging stakeholders in a constructive participatory process early in the EA process.

4.3.3. Environmental Management Plans, Request for Decision about Need for EIA and EIA Study

Design Consultants are obliged to produce Request for opinion regarding necessity of EIA procedure for each sub-project which is found to be completely or partially placed adjacent or within the nature/cultural protected area. DC will provide this Request to PERS together with other relevant project documentation, which mandatory include preconditions of institutions in charge of the environmental protection.

Based on the extent of environmental impact obtained from the environmental screening, the decision for further environment impact assessment will be made.

If MoEDEP decide that full EIA procedure is needed for the particular sub-project – DC will prepare EIA Study and complete public disclosure process (see chapter 2.3). The EIA Study should include, but not be limited to:

- **Project Description:** description of the existing as well as proposed scenario in respect to right of way, road maintenance, cross drainage structures, community facilities, traffic projections etc.
- **Environmental Regulatory Framework:** presents the legal and administrative framework of the Government of Serbia and WB environmental guidelines. This section should present various approvals applicable for the project at DoEIA.
- **Analysis of Alternatives** to be carried out during feasibility stage, covered in the Environmental screening and scoping report, and the approved alternative to be discussed in detail along with environmental attributes under impact.
- **Baseline Environmental Status,** the existing environmental conditions, by conducting a recognizance survey along with collection of secondary information. Primary data for various environmental parameters are to be generated using suitable monitoring devices.

- **Environmental Impacts**, addressing all the anticipated impacts on the physical and social environment of the subproject. The quanta of all the impacts on natural environment and social/cultural environment are presented in the forming Table 4.3.
- **Mitigation Measures**
- **Monitoring Plan**
- **Non-Technical Summary**

According to the Serbian Law on EIA, Report on Public Consultation is not consisting part of EIA Study. Nevertheless, public consultations must be performed for each subproject covered with the EIA Study and/or EMP. The consultation is to be carried out in order to hear and record reactions of the local population and the project affected people, to record their views on the impacts caused and the suggested remedies to be adopted.

For each RRSP sub-project DC is obliged to produce a site-specific EMP document. EMP is an Action Plan that indicates which of the EA report recommendations and alternatives will actually be adopted and implemented. EMP could be produced as a part of Detailed Design or as a free-standing document. It will ensure incorporation of the relevant environmental factors into the overall project design and will identify linkages to other safeguard policies relating to the project.

EMP also ensures that the environmental mitigation measures and their practical monitoring become a legal responsibility of PERS.

Recommended content of EMP document is:

- Executive Summary
- Project description
- Policy, legal and administrative framework
- Baseline conditions assessed during route survey
- Summary of predicted adverse environmental and social impacts related to project;
- Description of mitigation measures and plan
- Description of monitoring activities and plan
- Institutional arrangements and reporting procedures
- Stakeholder engagement – information disclosure, public consultations and participation

Table 4.3: Possible Impacts of Road Rehabilitation and Maintenance Related Activities

Impact on:	Earth works including quarrying	Laying of pavement	Vehicle & machine operation & maintenance and fueling	Concrete & crusher plants	Sanitation & waste (labor camps)	Project operation	Improper disposal of liquid and solid waste
Air	Dust generation	Dust due to aggregates	SPMs, NOx, SOx	Dust pollution	Odor / smoke	SPMs, NOx, SOx	
Noise	Noise pollution and vibration		Noise pollution	Noise pollution		Noise pollution	
Water		Possible water contamination from asphalt batch plant	Possible water contamination	Possible water contamination in equipment maintenance areas	Possible water contamination	Possible water contamination as consequence of accidents and emission build-up	Possible water contamination
Soil			Possible soil contamination				Possible soil contamination
Vegetation and local fauna	Lowered productivity loss of ground for vegetation		Removal vegetation	Lower productivity use as fuel wood	Felling of trees for fuel and poaching	Impact of pollution on vegetation, lowered productivity, toxicity of vegetation	
local community	Disturbance		Disturbance	Disturbance	Poaching and health & social related incidents	Collision with traffic	
Worker's health and safety	Increase of stagnant water and disease	Asphalt odor and dust	Collisions with vehicles, pedestrian and livestock. Accidental injury/death of workers operating road rehabilitation equipment	Impact on health due to inhalation of dust	Increase in communicable diseases	Collisions with pedestrians and livestock	

4.3.4. Bid Documents for Rehabilitation Works, including EMP and provisions from EFD

PERS will prepare Bid Documents for Road Rehabilitation Works. EMP document together with EFD will be an integral part of Bid Document for each project. In line with this, PERS will ensure following:

- Prepare cost estimates, to be incorporate in Bid Documents.
- Environmental Management Plan along with the good environmental guidelines (given in this EFD Document, chapter 7.3) to be incorporated in the bid document's work requirements.
- Preparation of work requirement (addendum/corrigendum to road specifications) and
- Corrigendum / Addendum to road specification as special provisions to be incorporated in bid document. Penalty clauses for not complying with EMP requirements to be incorporated.
- The contractor has to follow all traffic safety measures as defined in the technical specification. Damage shall be levied at the pre-determined rate per day per location for non – conformity of traffic safety measures as per the decision of the engineer.
- - The contractor has to follow all environmental mitigation measures as defined in the technical specification and in site-specific EMP. Damage shall be levied at the pre-determined rate per day per location for nonconformity of EMP-prescribed measures, as per the decision of the Engineer.
- - The contractor has to ensure that sufficient number of sets of good quality personnel protective equipment (PPE) should be provided to staff and labor engaged to work on site. Damage shall be levied at the pre-determined rate per day for non-conformity, as per the decision of the Engineer.

4.3.5. EMP Implementation

Construction/Rehabilitation Contractor is responsible for undertaking all activities related to environmental protection during road rehabilitation works. During the EMP preparation phase, potential negative environmental impacts should be identified and PERS will be obliged to ensure implementation of adequate mitigation measures.

4.3.6. Supervision

PERS is responsible for the supervision of the EMP implementation in the Project, which will be done through the consulting services (PSC).

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

Additionally, an independent Project Audit Consultant (PAC) will review works or contracts believed to have sensitive environmental or social impacts, or those requiring special oversight as determined by the EIB and WB. Among other issues, PAC's review will cover engineering designs and social and environmental safeguard related actions.

4.3.7. Monitoring

PERS and PSC will monitor overall environmental performance during project implementation. Each RRSP sub-project will have a site specific EMP document in which a monitoring plan(s) and check-lists are presented.

For each of the environmental components, the monitoring plan specifies the parameters to be monitored; location of the monitoring sites and duration of monitoring. The monitoring plan also specifies the applicable standards, implementation and supervising responsibilities. A generic Monitoring Plan for Road rehabilitation works is presented within the Annex 5 of this EFD document.

In addition to the critical locations selected during design stage, the environmental monitoring will also be done at the construction camp site and any other plant site as determined relevant during road rehabilitation works stage.

Monitoring and reporting arrangements are presented within the chapter 8 of this EFD Document.

4.4. Mitigation and Management Plan

4.4.1. Mitigation Measures

Mitigation measures will be considered starting with the Environmental Assessment process. Impacts identified severe in consequence category and or likelihood category will be further analyzed to identify additional mitigation measures that are potentially available to eliminate or reduce the predicted level of impact. Potential mitigation measures will include:

- habitat compensation program
- species specific management program
- engineering design solutions
- alternative approaches and methods to achieving an activity's objective
- stakeholders participation in finalizing mitigation measures
- construction practice, including labor welfare measures.
- operational control procedures
- management systems

Mitigation is an integral part of impact evaluation. It looks for better ways of doing things so that the negative impacts of the proposal are eliminated or minimized and the benefits are enhanced. As soon as significant adverse impacts are identified, discussions should be held to see if they can be designed out through changes in project design, location or operation. It is important therefore, that there is good integration between the EIA team and project design engineers.

Project specific environmental mitigation measures are consisting part of each EMP document. A wide list of possible impacts and proposed mitigation measures has been presented in chapter 7 of this EFD document⁸.

The EMP should be developed so as to counter the impacts assessed and also the likely impacts during the road rehabilitation and operational phase. Based on 3 already prepared EMP document, a Generic Mitigation plan for road rehabilitation projects is presented within the Annex 4 of this EFD document. Respecting the PERS experience in road management and IFI financed projects, a generic EMP has been presented in Table 4.4. This can be used as a reference material for comprehending the scope of the EMP.

4.4.2. Mitigation Plan

The findings and proposed mitigation measures should be compiled into an Environmental Mitigation Plan (see Annex 4). 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 (Institute for the Nature Protection and Secretariat for Environmental Protection), law and contract documents, approximate location, timeframe, and the responsibility for its implementation and supervision.

⁸ See chapter 7.3 - General Environmental Mitigation Measures (GEMM).

4.4.2.1. *Design Phase*

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 subproject. 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 (SLMP)).

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

4.4.2.2. *Contractor Management*

The EMP recommendations and proposed mitigation measures will be attached to the Bidding Documents and subsequently the resulting 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.

Each EMP will be submitted to WB for approval. To ensure compliance with WB environmental policies, all construction activities will be monitored and documented for mitigation of environmental impacts.

The Contractor will comply with WB, EBRD and EIB environmental procedures and appropriate Serbian environmental laws including sanitary standards, rules and regulations for construction activities and appropriate engineering practices.

Experience shows that inadequate application of EMP by the Contractor may occur due to weak linkages of EMP with the other contract documents. To prevent this occurring, EMP is to become integral part of the bid and contract documents. It is the Contractor's obligation to cost the implementation of the 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 implementation of the environmental compliance requirements as stated in EMP;
- the Contractor (and its sub-contractors) will comply with Republic of Serbia national laws, EU standards and Lender requirements.

During the rehabilitation, the Contractor will work according to the requirements of the Contractor's Environmental Plan (CEP), which is fully-compliant with the site-specific EMP. CEP will be prepared by the Contractor and approved by PERS. Supervision and monitoring of CEP activities will be undertaken as follows:

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

4.4.2.3. *Contractor's Camp and Facilities*

The location and development of the Contractor's facilities (this applies to all types of facilities, storage areas, workshops, labour camps (if needed), concrete batching areas, asphalt plants, etc.) will be approved by RE. Locations will be selected so that:

1. they do not interfere with the environment and social well-being of the surrounding communities in respect to noise, dust, vibration and other physical impacts.
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 ("Gazette of RS", 30/10, 93/12).
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 should be limited to absolute minimum for safe conduction of related activities.
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: (i) Limit the extent of excavation to reduce soil erosion potential; (ii) Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site; and (iii) Avoid excavation and operating machinery in wet ground conditions.
10. Where fuel in excess of 5,000 litres is stored on site, it will be stored in sealed tank(s) on a concrete base that is designed to hold 110% of the tank(s) capacity.
11. All workshops would be provided with oil and water separators.
12. The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills.
13. All waste oil, oil and fuel filters will be collected and disposed of in secure landfill areas or turned over to the Investor (as specified in the contracts). At the closure of the site, all contaminated soil will be excavated, removed and replaced with fresh topsoil.

4.4.2.4. *Environmental Documentation Plans During Rehabilitation Works*

Considering the possible impacts, it is essential for the Contractor to prepare and later conscientiously implement EMP-related activities throughout the duration of the project. The Contractor is obliged to produce the following documents before start of the works:

1. Layout of the work camp 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;
2. 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 (mechanism and organizational structure) detailing the means by which local people and other project affected persons can raise grievances arising from the rehabilitation process and how these will be addressed (e.g., through dialogues, consultations, etc.) ;
4. Soil Management Plan 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. Dust management plan 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, which applies to all of the 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. 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. The Plan 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 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.
8. Oil and fuel storage management plan. The Contractor's Plan 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.
9. In-river works management plan. The Contractor's Plan should cover procedures and plans for safeguarding aquatic habitats and fish during in-river work and will complement the Construction Method Statements.
10. Camp management plan. The Contractor's Plan should contain procedures for establishing and operating construction camps in order to safeguard nearby communities and environmental resources.
11. Emergency response plan. The Contractor's Plan 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. 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: Rehabilitation of construction sites and removal of contractor's facilities following successful completion of rehabilitation activities. This includes 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 and Law on Environmental Protection. Should the Contractor fail to remove the waste, PERS is entitled to withhold payment and arrange the clean-up and deduct the cost of the clean-up activities and administrative charges from the final payment.

4.4.2.5. *Health and 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 PSC for approval one week prior to starting of the 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 or first aid facilities on-site and employ a trained first aid person, in accordance with the Law on Safety and Health at Work.
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 PERS, will be an integral part of the bidding documentation, in order to ensure adequate H&S provisions during rehabilitation works.
6. Contractor is obliged to perform all project activities by respecting SLMP recommendations and all Serbian laws and sub-laws which are covering H&S issues.
7. Contractor is responsible to ensure workers are properly certified to use the equipment
8. Contractor is insured against accidents.

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

In order to safeguard the local communities from the increased vehicle movements, 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,
3. all loads are secured and all loads with potential dust generating materials 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 at all time.

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

4.4.2.6. *Operational (Post-Rehabilitation) Phase*

Traffic and People Safety: During operation, according to the assessment performed within the design phase, road safety features will include (i) measures to slow the traffic at sensitive places (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 a regular basis. Seasonal maintenance such as post-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.

Table 4.4: Generic Environmental Management Plan

Sl. No.	Environmental Parameter	Specification
Effective Implementation of Environmental Management Measures		
1. SOIL/Aggregate		
1.1	Disposal of Debris and Other Wastes	<p>No-objection from land owner / Revenue Authorities as may be applicable.</p> <p>Disposal Areas</p> <ul style="list-style-type: none"> * No residential areas are located downwind side of these locations; * Dumping sites are located at least 1000 m away from sensitive locations such as all notified forestlands, all water bodies, and productive lands * Available waste lands are given preference. <p>Specifications for Waste Disposal</p> <ul style="list-style-type: none"> * In case of bituminous wastes, debris are to be disposed in a minimum 60cm thick clay lined pits so as to eliminate any chances of leaching and top layer shall be covered with soil/good earth so as to enable natural re-vegetation of the disposed area/site. Care should be taken not to dispose these wastes near farmland and water bodies. * In case of filling of low-lying areas with wastes, it needs to be ensured that the level matches with the surrounding areas. In this case care should be taken that these low lying areas are not used for rainwater storage * In case oil and grease are trapped for reuse in a minimum 60cm thick lined pit, care shall be taken to ensure that the pit should be located at the lowest end of the site and away from the residential areas. * All arrangements for transportation during road rehabilitation works including provision, maintenance, dismantling and clearing debris, where necessary will be planned and implemented as approved and directed by the Engineer.
1.2	Borrowing of Earth (in case of opening of new borrow areas)	<p>Borrow Area Selection</p> <p>Borrowing within the ROW is prohibited. However, earth available from excavation for road side drains as per design, may be used as embankment material (if necessary and applicable), subject to approval of the Engineer, with respect to acceptability of material. Borrowing to be avoided on the following areas:</p> <ul style="list-style-type: none"> * Lands close to toe line and within 0.5 km from toe line. * Irrigated agricultural lands (In case of necessity for borrowing from such lands, the topsoil shall be preserved in stockpiles. * Grazing land. * Lands within 1km of settlements. * Environmentally sensitive areas such as reserve forests, protected forests, sanctuary, wetlands. Also, a distance of 500 m should be maintained from such areas. * Unstable side-hills. * Water-bodies (only if permitted by the local authority, and with specific pre-approved redevelopment plans by the

Sl. No.	Environmental Parameter	Specification
		<p>concerned authority and engineer-in-charge)</p> <ul style="list-style-type: none"> * Streams and seepage areas. * Areas supporting rare plant/ animal species; <p>Documentation of Borrow Pit</p> <p>The contractor must ensure that following data base must be documented for each identified borrow areas before commencing the borrowing activity that provide the basis of the redevelopment plan.</p> <ul style="list-style-type: none"> * Chainage along with offset distance; * Area (Sq.m); * Photograph and plan of the borrow area from all sides; * Type of access/width/ etc. from the roadway; * Soil type, Slope/drainage characteristics; * Water table of the area or identify from the nearest well, etc.; * Existing land use, for example barren / agricultural / grazing land; * Location/name/population of the nearest settlement from borrow area; * Quantity excavated (likely and actual) and its use; * Copy of agreement with owner/government; and * Community facility in the vicinity of borrow pit. * Rehabilitation certificate from the land owner along with at least four photograph of the rehabilitated site from different angles.
1.3	Contamination of Soil by Fuel and Lubricant	<p>Location of fuel storage and refilling areas at least 500m from all cross drainage structures and important water bodies and storing of fuel and lubricants on a sand flooring of at least 6" thick, done on brick edge flooring lined with polyethylene sheet</p>
1.4	Quarry Operations and Management (if new quarries are opened)	<p>To minimize the adverse impact during excavation of material following measures are need to be undertaken:</p> <ul style="list-style-type: none"> * Adequate drainage system shall be provided to the excavated area * At the stockpiling locations, the Contractor shall construct sediment barriers to prevent the erosion of excavated material due to runoff. * Construction of offices, laboratory, workshop and rest places shall be done in the up-wind of the plant to minimize the adverse impact due to dust and noise. * The access road to the plant shall be constructed taking into consideration location of units and also slope of the ground to regulate the vehicle movement within the plant. <p>The followings precautions shall be undertaken during quarry operations.</p> <ul style="list-style-type: none"> * Overburden shall be removed. * During excavation slopes shall be flatter than 20 degrees to prevent their sliding. * The Contractor shall ensure that all workers related safety measures shall be taken.

Sl. No.	Environmental Parameter	Specification
		<ul style="list-style-type: none"> * The Contractor shall ensure maintenance of crushers regularly as per manufacturer's recommendation. * During transportation of the material, measures shall be taken to minimize the generation of dust and to prevent accidents.
2. Water		
2.1	Labor Camp, Sanitation and Waste Disposal in Construction Camps	Construction labor camps shall be located at least 500m away from the nearest habitation complying all relevant legal requirements.
3. Air Pollution		
3.1	Generation of Dust	<ul style="list-style-type: none"> * All vehicles delivering materials should be provided with tail guard and shall be covered to avoid spillage of materials. * No fugitive dust emission at settlement sites arising from maintenance activities shall be allowed. All such operation leading to dust pollution in settlement areas shall be performed with necessary dust suppression by adequate water sprinkling to keep the dust below visible limit. Such measures shall be taken to ensure no dust pollution arises from construction stock piles
3.2	Concrete Mix Plants and Batching Plants	<ul style="list-style-type: none"> * Concrete mix plants to be used at least 1000m from the nearest habitation in the cross wind direction. * In case if new Concrete mix plants/Batching plants are set up, the conditions of DoEIA shall be strictly adhered
3.3	Odor from Construction Labor Camps.	<ul style="list-style-type: none"> * Construction worker's camp shall be located at least 500 m away from the nearest habitation. * The waste disposal and sewerage system for the camp shall be properly designed, built and operated so that no odour is generated.
3.4	Pollution from Crusher	All crushers used in construction shall confirm to relevant dust emissions control stipulated as per DoEIA norms
4. Noise Pollution		
4.1	Noise from Vehicles, Plants and Equipment	<ul style="list-style-type: none"> * Any activities related to road maintenance operations and/or associated facilities near settlements shall not be carried out during night time (10:00 PM to 6.00 AM). * Workers in vicinity of strong noise, and workers working with or in crushing, compaction, batching or concrete mixing operations shall wear earplugs.
5. Flora and Fauna		
	Loss or Damage of Vegetation	* All works shall be carried out in a fashion that ensures minimum damage or disruption to the flora. Prior tree felling permission under Forest Act will be obtained before felling any tree. Trees or shrubs will only be felled or removed that impinge directly on the permanent works or necessary temporary works with prior approval from the Engineer.

Sl. No.	Environmental Parameter	Specification
		<ul style="list-style-type: none"> * The Engineer shall approve such felling; only when the PERS secures receives an "Approval" for such felling from the Department of Forests, as applicable.
	Loss, Damage or Disruption to Fauna	<ul style="list-style-type: none"> * All works shall be carried out in a fashion to ensure minimum damage to the fauna. * Construction workers shall be instructed to protect natural resources and fauna, including wild animals and aquatic life, Hunting and unauthorized fishing are prohibited.
6. Disruption to Users		
6.1	Loss of Access	<ul style="list-style-type: none"> * At all times, the Contractor shall provide safe and convenient passage for vehicles, pedestrians and livestock to and from side roads and property accesses connecting the project corridor. Work that affects the use of side roads and existing accesses shall not be undertaken without providing adequate provisions to the prior satisfaction of the Engineer. * The works shall not interfere unnecessarily or improperly with the convenience of public or the access to, use and occupation of public or private roads, and any other access footpaths to or of properties whether public or private.
6.2	Traffic Jams and Congestion in Road Crossing Areas	<ul style="list-style-type: none"> * Detailed Traffic Management Plans (TMP) shall be prepared and submitted to the Engineer for approval 5 days prior to commencement of maintenance works on any cross-section with road. The traffic control plans shall contain details of temporary diversions, details of arrangements for road rehabilitation works under traffic and details of traffic arrangements after cession of work each day. * Temporary diversion for road traffic (including scheme of temporary and acquisition) will be constructed with the approval of the Engineer. * Special consideration shall be given in the preparation of the traffic control plan to the safety of pedestrians and workers at night * The temporary traffic detours in settlement areas shall be kept free of dust by frequent application of water.
6.3	Traffic Control and Safety	<ul style="list-style-type: none"> * The Contractor shall take all necessary measures for the safety of traffic during road rehabilitation works and provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as may be required by the Engineer for the information and protection of traffic approaching or passing through the cross section. * All signs, barricades, pavement markings shall be as per road specification
7. WORKERS' ACCIDENT RISKS		
	Risk from Operations	<p>The Contractor is required to comply with all the precautions as required for the safety of the workmen as per the International Labor Organization (ILO) convention. Contractor has to ensure that all operators of heavy or dangerous machinery are properly trained/certified, and also insured. The contractor shall supply all necessary safety appliances such as</p>

Sl. No.	Environmental Parameter	Specification
		safety goggles, helmets, masks, boots, etc., to the workers and staff. The contractor has to comply with all regulation regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress.
	Risk from Electrical Equipment	Adequate precautions will be taken to prevent danger from electrical equipment. No materials on any of the sites will be so stacked or placed as to cause danger or inconvenience to any person or the public. All necessary fencing and lights will be provided to protect the public. All machines to be used in the road rehabilitation will conform to the relevant Serbian Standards, will be free from patent defect, will be kept in good working order, will be regularly inspected and properly maintained as per BS provisions and to the satisfaction of the Engineer.
	Risk at Hazardous Activity	All workers employed on mixing material, cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, would be provided with welder's protective eye-shields. Stone-breakers will be provided with protective goggles and clothing and will be seated at sufficiently safe intervals.
8. WORKERS' RESIDENCE AND HEALTH CONCERNS		
	First Aid	<p>* Medical facilities shall be provided to the labor at the construction camp. Visits of doctor shall be arranged twice a month. A separate room for medical checkups and keeping of first aid facilities should be built. Workplaces remote and far away from regular hospitals will have indoor health units with one bed for every 250 workers. Suitable transport will be provided to facilitate take injured or ill person(s) to the nearest approachable hospital.</p> <p>* First Aid Box will be provided at every construction campsite and under the charge of a responsible person who shall always be readily available during working hours.</p>
	Rehabilitation of Labor and Construction Camp	<p>At the completion of road rehabilitation works, all construction camp facilities shall be dismantled and removed from the site. The site shall be restored to a condition in no way inferior to the condition prior to commencement of the works.</p> <p>Various activities to be carried out for site rehabilitation include:</p> <ul style="list-style-type: none"> * Oil and fuel contaminated soil shall be removed and transported and buried in waste disposal areas. * Soak pits, septic tanks shall be covered and effectively sealed off. * Debris (rejected material) should be disposed of suitably. * Underground water tank in a barren/non-agricultural land can be covered. However, in an agricultural land, the tank shall be removed. * If the construction camp site is on an agricultural land, preserve top soil and good earth can be spread back for a

Sl. No.	Environmental Parameter	Specification
		<p>minimum 30cm for faster rejuvenation of the land.</p> <p>* Proper documentation of rehabilitation site is necessary. This shall include the following:</p> <ul style="list-style-type: none"> - Photograph of rehabilitated site; - Land owner consent letter for satisfaction in measures taken for rehabilitation of site; and - Undertaking from contractor; <p>In cases, where the construction camps site is located on a private land holding, the contractor would still have to restore the campsite as per this specification. The rehabilitation is mandatory and should be include in the agreement with the landowner by the contractor. Also, he would have to obtain a certificate for satisfaction from the landowner.</p>
9. DAMAGE AND LOSS OF CULTURAL PROPERTIES		
9.1	Conservation of Religious Structures	<p>* All necessary and adequate care shall be taken to minimize impact on cultural properties which includes cultural sites and remains, places of worship including temples, churches, etc., graveyards, monuments and any other important structures as identified during design and all properties / sites / remains notified. No work shall spill over to these properties, premises and precincts. The design options for cultural property relocation and enhancement need to be prepared.</p> <p>* All conservation and protection measures will be taken up as per design. Access to such properties from the road shall be maintained clear and clean.</p>
9.2	Chance found Archaeological Property	<p>* During earth excavation, if any property is unearthed and seems to be culturally significant or likely to have archaeological significance, the same shall be intimated to the Engineer. Work shall be suspended until further orders from the PERS/PIT. The Archaeological Department shall be intimated of the chance find and the Engineer shall carry out a join inspection with the department. Actions as appropriate shall be intimated to the Contractor along with the probable date for resuming the work.</p> <p>* All fossils, coins, articles of value of antiquity and structures and other remains or things of geological or archaeological interest discovered on the site shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation.</p>
10. ENVIRONMENTAL ENHANCEMENT		
10.1	RRSP Landscape	Protect all the trees, re-vegetation of RRSP project embankments and other slopes, edge treatment of water bodies shall be taken up as per detailed design

5. IMPLEMENTATION ARRANGEMENTS

5.1. Introduction

The following section captures the institutional arrangements for EFD implementation by concerned officials of PERS, their consultants and working contractors. An organizational structure shall be developed at the corporate and site level to aid effective implementation of the EFD document.

PERS is the Implementing Agency for the Project and will be responsible for the implementation and compliance with the EFD, EMP and Monitoring Plan. PERS is also responsible for:

- Implementation of requests for environmental protection given by:
 - Government environmental authorities and EIA Studies (if requested by MoEDEP),
 - IFIs and other institutions,
 - Compliance with the Law on Environmental Protection,
- 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,
- Preparation of the final environmental reports.

Project Implementation Team (PIT) within PERS will be responsible for day to day project implementation. PERS uses its own staff to implement IFI financed projects and organizes them within the Investments Department. The Director for Investments heads the PIT and reports to the Deputy Director General of PERS. The majority of current PIT members were involved in TRP implementation from 2008 to the project's closing and five other IFI-financed loans. The PIT is staffed with specialists to manage financial management, procurement, environmental, social and technical aspects. The key positions of the PIT are listed below.

- Project Director
- Project Coordinator
- Project Procurement Specialist
- Project Financial Specialist
- Environmental and Social Safeguards Specialist(s)
- Road Safety Specialist
- Road Rehabilitation Manager
- Road Rehabilitation Specialists

5.2. Environmental Management Unit - Functions and Staffing Responsibilities

The Environmental Management Unit (EMU) will be formed as a part of PIT. Functions and staffing responsibilities of EMU are listed in Table 5.1. In order to effectively manage the EA process and EMP implementation, EMU will be established and made operational as soon as possible. The Environmental Specialist of PIT (ESPIT) and the Assistant Engineer (for the Environmental Aspects) will be engaged during the project implementation period as an EMU.

Table 5.1: Functions and Responsibilities of EMU

Designation	Function / Responsibilities
EMU	<ul style="list-style-type: none"> - Assist DC in conducting environmental screening and categorization of sub- projects; - Assist DC in the preparation of Environmental Assessment Studies (if requested by MoEDEP); - Assist PERS in implementation of EFD during the project implementation period; - Control of integration of EA and resulting EMP into the sub-project design and implementation plans (contract documents); - Ensure incorporation of appropriate environmental specifications (on the basis of screening and GEMM) into the respective bidding & contract documents; - Assist PERS Engineers at site by providing appropriate environmental advice, and developing appropriate environmental mitigation measures for the sub-projects; - Carry out participatory consultation during planning, design and implementation of the sub-projects; - Prepare periodic progress reports on the implementation of EFD and EMPs for transmission to the WB throughout the project implementation period.
Environmental Specialist of PIT (ESPIT)	<ul style="list-style-type: none"> - proper and timely implementation of EFD; - screening and categorization of sub-projects; - carry out site inspections, check and undertake periodic environmental monitoring and initiate necessary follow-up actions; - control of compliance of GEMM and EMP during sub-projects design and implementation including post-rehabilitation stage; - assist PERS/PIT in obtaining Environmental Approvals from the DoEIA; - review and approve the Contractor's Implementation Plans for the environmental measures, as specified in EMP; - dialogue with the local population to ensure that environmental concerns and suggestions are incorporated and implemented in the project;
Assistant Engineer Environment	<ul style="list-style-type: none"> - assist ESPIT in Environmental Assessments for the projects; - assist ESPIT in obtaining relevant Environmental Approvals for the project; - assist ESPIT and PAC DC in preparation of the training materials and in conducting training; - liaise with the contractors, PAC and DC and local communities on the implementation of EFD and EMP; - - carry out site inspections, check and undertake periodic environmental monitoring and initiate necessary follow-up actions; - assist in the preparation of periodic reports for dissemination to W B, EBRD, EIB, etc.

5.3. Implementation Support

5.3.1. Design and Supervision Consultants

Subcomponent 3A of RRSP covers the design and supervision costs for all the roads covered under phase 1 of NRRP (both RRSP and the EBRD Project).

Main activities of DC related to environmental protection during project preparation are:

- environmental screening and preparing sub-project specific environment screening/assessment report with EMP
- producing Request for Opinion about Need for EIA RONEIA for all sub-projects
- obtaining preconditions from relevant institutions (INP/IPCM)
- producing RDNEIA for each sub-project which is found to be adjacent or within the nature/cultural protected area
- producing EMP documents for all sub-projects
- producing Environmental Impact Assessment Studies (if requested by the MoEDEP)
- Ensure the implementation of the various mitigation measures proposed for the protection of bio diversity etc., prior to the commencement of road rehabilitation activities at that particular sub-section of the project road;

Main activities of PSC related to environmental protection during project implementation are:

- supervising the implementation of EMP(s)
- producing the Monthly Progress Reports and submitting them to PIT
- monitoring of project progress including EMP and GEMM implementation

5.3.2. Management Support Consultants

Subcomponent 3B of RRSP Project includes project management support (PMS) and capacity building to PERS, as may be necessary in procurement, financial management, environmental and social safeguards and annual program planning.

Project will finance consultants to provide project management support to the PIT during project implementation. They will support the PIT in, among others, the:

- (i) supervision of the implementation of civil works;
- (ii) environmental and social supervision of safeguards implementation;
- (iii) annual program planning and preparation including the economic analysis; and
- (iv) overall project management.

In addition to the consultants, PIT will draw staff members from other PERS departments as necessary. Prior to project start, the Bank together with EIB and EBRD provided a two-day training workshop for the PIT to manage the implementation of the Project.

5.3.3. Project Supervision Consultants

In respect to environmental requirements, the specific roles and responsibilities of Project Supervision Consultant shall include, but not limited to the following:

- Supervise the implementation of the EMP by the Contractors;
- Monitor and review the screening and categorization process for each sub-project;
- Review and approve site specific environmental enhancement/mitigation designs worked out by the Contractor;
- Hold regular meetings with the EMU;

- Review the Contractors Environmental Implementation Plans to ensure compliance with the Environmental Management Plan (EMP);
- Develop good practice construction guidelines to assist the contractors in implementing EMPs;
- Prepare and submit regular environmental monitoring and implementation progress reports;
- Continuously interact with the Environmental Engineers/Environmental specialist of EMU regarding the implementation of the environmental provisions;
- Ensure that proper environmental safeguards are being maintained at all ancillary sites such as brick fields, borrow areas, brick crushing area, materials storage yards, worker's camps etc. from which the contractor procures material for road rehabilitation works;
- Supervise the proper construction and maintenance of the facilities for the labour camps, including the provisions for the safety and health of workers and their families;
- Ensure that proper facilities are available for the monitoring of water quality and vehicular emissions as provided for in the environmental monitoring plan during the road rehabilitation period;

5.3.4. Project Audit Consultants

Subcomponent 3C of RRSP Project is Project Audits which includes: (i) the Integrated Performance Audit which will review engineering designs, management of social and environmental issues, procurement, quality assurance, contract management and compliance to agreed conditions, quality of project supervision, review of traffic safety implementation, and achievement of DLIs to trigger disbursement.

An independent Project Audit Consultant (PAC) will perform annual audits and results monitoring and evaluation. RRSP will also include observing social and environmental safeguards, as defined by the relevant policy framework documents and plans. A comprehensive review will be carried out by PAC on randomly-selected road sections of about 20 percent of the civil works contracts and other activities under the project. Besides the random selection of contracts, the review may also include works or contracts believed to have sensitive environmental or social impacts or requiring special oversight as determined by the EIB and WB.

5.4. Contractor

The Contractor will be responsible for implementation of all environmental related activities under the project.

Each Contractor is obliged to respect EFD and EMP provisions during project implementation, including preparation and delivering to PERS for approval the site specific implementation plans as listed within the chapter 4.4.2.4. of this EFD document.

Construction Contractor will make proposal for environmental protection, including safety of persons associated with the works and the public, during a pre-construction period. The proposal will be reviewed and approved by PERS. In this regard, attention will be given to:

1. taking all reasonable steps to protect the environment on and off-site to avoid damage or nuisance to persons or property arising from its operations,
2. maintaining conditions of safety for all persons entitled to be on site, and
3. 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.

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 planned mitigation measures.

The Contractor will be responsible for familiarizing themselves with the following “Chance Finds Procedures” in case culturally valuable materials are uncovered during excavation or any project activities, including:

- Stop work immediately following the discovery of any materials with possible archeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities and PERS;
- Protect artifacts using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artifacts;
- Prevent and penalize any unauthorized access to the artifacts; and
- Restart road rehabilitation works only upon the authorization of the relevant authorities.

5.5. Monitoring

The PIT will be responsible for collecting the data required for monitoring and evaluation which will in turn be reviewed by PERS. Indicators will be measured against the agreed targets and compared to the defined baselines. Project progress reports, including monitoring indicators and reporting on the implementation of the requirements set in the EMPs will be prepared on a quarterly basis and submitted for WB review. Monthly progress reports prepared by the supervision consultants will be submitted by PIT to WB for review upon a request.

The Construction contractor is obliged to perform all monitoring activities (sampling, measurement, etc.) prescribed within the Monitoring Plan of EMP document produced for sub-project on which the Contractor is engaged.

Supervision Consultant is responsible to monitor all construction activities, including environmental protection during project rehabilitation. PSC will be authorized to perform additional sampling in case he finds this needed.

5.6. Capacity Building

Subcomponent 3B of RRSP covers capacity building measures to PERS, as may be necessary in environmental and social safeguards and annual program planning.

Capacity building can be achieved by:

- Training program for the existing staff.
- Technical Assistance: knowledge sharing and on-the-job training and mentorship.

5.7. Institutional Development

Component 2 of RRSP (Institutional Strengthening) is focused on support to road safety which covers road safety inspections and the implementation of low cost road safety measures. The implementation of these measures will be covered out of PERS’s annual maintenance budgets. The subcomponent also includes road safety awareness campaigns, strengthening enforcement on the NRRP-improved roads and training on road safety audits and inspections.

6. PUBLIC CONSULTATION AND DISCLOSURE PROCESS/PROCEDURES

6.1. Introduction

Participatory consultation is both an essential criteria and important strategy for an integrated environmental and social analysis process, the project design and its implementation. Views of the project affected persons and NGOs have been fully taken into account during the project preparation and continue to form a basis for further design and implementation of the sub-projects throughout the RRSP implementation period. The purpose of the stakeholder consultation is to identify the views of local communities, major institutional and other stakeholders, and to assess any mitigation measures which may be undertaken to minimize any adverse impacts of the proposals under consideration.

6.2. Consultation and Information Disclosure

6.2.1. Public Consultation

As required by the IFIs Safeguards Policies, public consultations were undertaken for draft version of 3 EMP documents (produced for 3 sample sub-projects). Public consultation and information disclosure will be obligatory for all EMP documents which will be prepared under RRSP.

For all remaining EMP documents, following procedure will take place:

- PERS will announce invitation for public consultations for the public, institutions and organizations interested in EMP for road rehabilitation works on particular RRSP sub-projects.
- The in-country disclosure of EMP document will start when invitation to the interested parties will be 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 mitigation and monitoring measures.
- Public and other interested parties and organizations will be invited to participate in process of public consultation on draft EMP document.
- Prior to announcement in the newspapers, the EMP will be delivered to the local municipality.
- Representatives of the local municipality will inform the public through their local media of the time and place of public consultations. Invitation will also be placed on PERS web site. Insight into the EMP document will be ensured on following addresses:
 - o the premises of the PE “Roads of Serbia”, investment sector, 19a Vlajkovicева St., Belgrade, on the first floor, on working days from 11:00 AM to 01:00 PM
 - o the premises of the relevant local municipality, during normal working days.
 - o on PE “Roads of Serbia” web site: www.putevi-srbije.rs
- Public Consultation and presentation of EMP document will be held in the premises of the local municipality.
- Questions raised and clarification provided will be presented within the EMP’s Report on Public Consultations.
- Detailed Report on Public Consultation process will be presented within the final version of EMPs documents.

Beneficiary consultations will be conducted during the construction/road rehabilitation 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. The records will be kept in the project office in PERS.

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

- Newspaper articles in minimum one national and also in one local media.

- Posters on main notice board at all community centers
- Radio announcements of road diversions
- PERS and relevant contractors will also provide contact details of community liaison officers who are appointed to work with local communities.

6.2.2. Information Disclosure and Dissemination of EIA Studies

For all the sub-projects for which the EIA Study will be requested by MoEDEP, the documents including the mitigation measures and consultation process will be made available for public review in both English and Serbian. The summary EA will be published on PERS and WB websites.

The relevant information prior to public consultations in a timely manner and in a form that is meaningful for, and accessible to, the groups being consulted, will be disseminated as outlined above. The framework for the information disclosure is shown in Table 6.1.

Table 6.1: Information Disclosure Framework in case of EIA preparation

Stage of Consultation	Information dissemination tools
Initial Consultation, Decision about scope and Content of EIA Study	<p>Documentation of a summary of the project description and objectives, and potential adverse effects of the proposed project will be delivered to the MoEDEP/PSEP. Interested public will be invited to participate during process of decision making regarding Scope and Content of EIA Study</p> <p>This round of consultation will be announced in daily newspaper and on the PERS web site</p>
Draft EIA Study	<p>PERS will deliver a Draft EIA Study for approval to the MoEDEP/PSEP. Second round of public consultation will be organized and Draft EIA Study will be disclosed on PERS web site and delivered to the municipalities which are potentially affected with the project.</p> <p>MoEDEP will announce invitation to interested parties in order to participate this round of consultations. A public presentation of Draft EIA Study will be organized on a local level, in one of municipalities which is by MoEDEP recognized as a most relevant local community.</p>
Final Environmental Approval	<p>MoEDEP will inform, through local daily newspaper, interested parties about Decision made regarding Final Environmental Approval for EIA Study.</p> <p>Interested parties will be invited to protest in case they find EIA procedure was irregular and/or their complaints are not properly integrated within the Final EIA Study.</p>

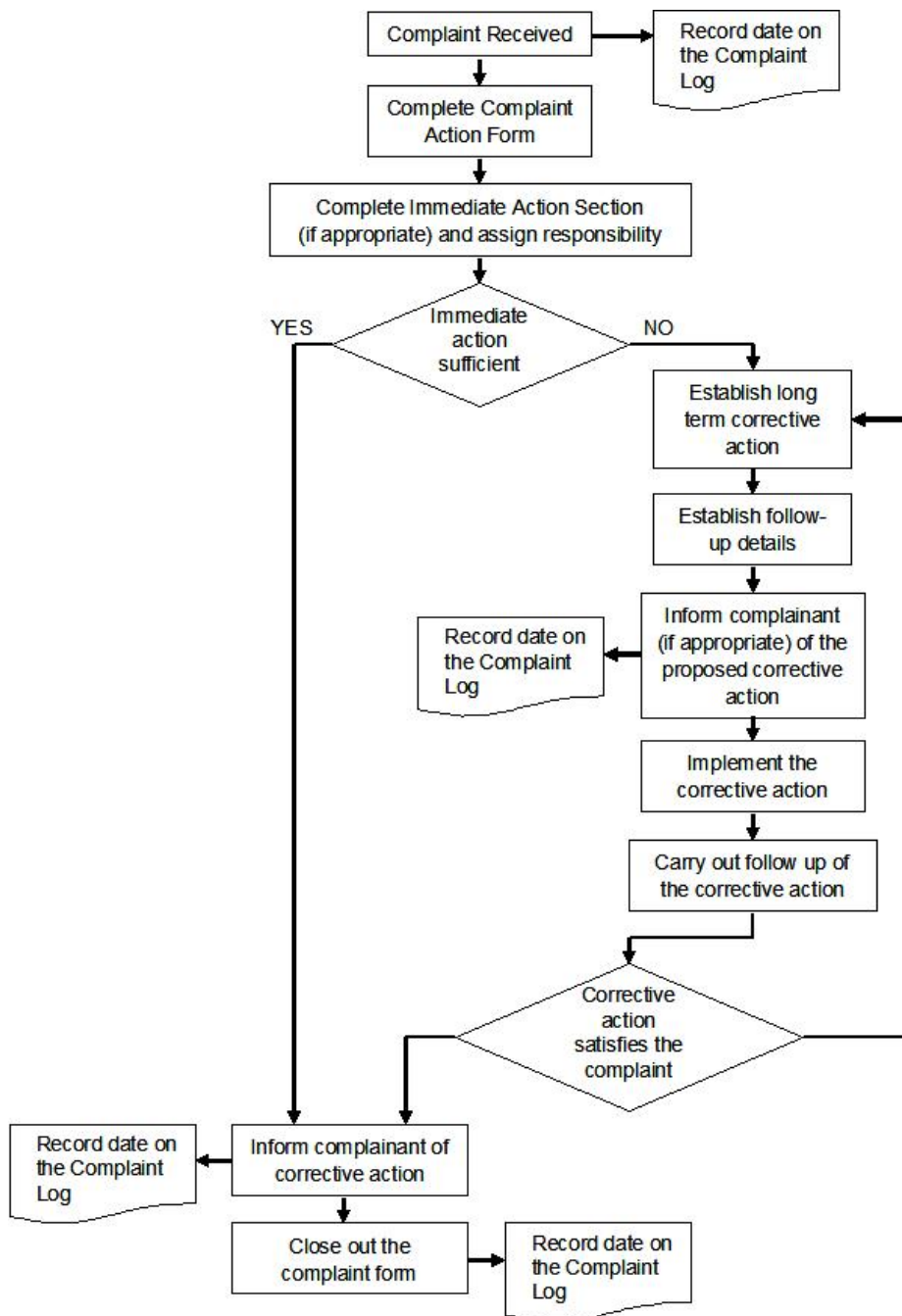
6.3. Grievances Redress Mechanism

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.

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.

The contractor, in coordination with PERS, shall set-up a grievance redress committee that will address any complaints during project implementation. Grievances should be resolved within 15 working days.

Figure 6.1 - Flowchart of Complaints/Grievance Procedure:



A grievance form is presented below and hard copies will be made available at community centres.

Figure 6.2 – Sample Grievance Reporting Form

Grievance Reference Number (to be filled in by [name]):			
Contact Details	Name:		
	Address:		
	Tel:		
	e-mail:		
How would you prefer to be contacted? Please tick box	By post	By phone	By e-mail
Name and the identification information (JMBG from identity card).			
Details of your grievance. Please describe the problems, how it happened, when, where and how many times, as relevant			
What is your suggested resolution for the grievance?			
How to submit this form to PERS	By Post to: [tbc]		
	By hand: please drop this form at [tbc]		
	By e-mail: Please email your grievance, suggested resolution and preferred contact details to: [tbc]		
Signature		Date	

7. ENVIRONMENTAL MITIGATION MEASURES

7.1. General

The environmental impacts identified at this stage are preliminary in nature and will need to be further elaborated specifically (subproject wise) and potential for occurrence has to be ascertained during further stages of subproject design and implementation.

This section details out the potential environmental impacts of the sub-projects funded by EIB and WB under RRSP.

. The overall mitigation measures will broadly fit in the following strategies:

- Impact avoidance: changing project location, design and road rehabilitation methods to avoid impacts.
- Impact minimization: where impacts cannot be avoided, implementing mitigation measures to reduce the impact to acceptable levels.
- Compensation: where impacts cannot be avoided or sufficiently mitigated, arranging compensation.
- Enhancement: measures, which, at little cost to the project, give appreciable environmental benefits.

The main activities of the subprojects are as follows:

- Construction Camp;
- Earth works for filling of deep potholes;
- Repairing of bridges/culverts;
- Bituminous pavement works for pothole & crack repairing;
- Slope protection repairing works for road & bridge/culvert
- Removal of construction waste.

The potential impacts along with possible mitigation measures due to the above subproject activities are given below.

7.2. Potential negative Impacts and recommended Mitigation Measures

Road rehabilitation works on proposed subprojects (road sections to be rehabilitated) will have only minor impacts on the environment (environmental category B). Most of the impacts are of temporary character and they will disappear after the road rehabilitation works are completed.

The possible temporary impacts as consequence of the road rehabilitation 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 road rehabilitation 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.

The potential impacts and recommended mitigation measures are described below as well as a sample subproject characteristic impacts and mitigation measures.

Table 7.1: Summary of key impacts during construction phase

impact	significance	comment
impacts on land use/ settlements,	low	There will be no land acquisition as defined by WB OP 4.01 during the project implementation. In case of any land acquisition – RFP document is prepared for this Project
ground and surface water,	low	Due to low amount of drainage water that can be potentially drained into any river which is bridged by the road sections the consequential impact is expected to be minimal to negligible. In any case, impact can be mitigated by following GEMM prescribed measures
air quality,	low	Temporary impact. 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 exhausts. Impact can be mitigated by following GEMM procedures
flora and fauna (protected areas and species),	low	Minimal loss or damage of vegetation and loss and damage or disruption to fauna can occur during works. Impacts can be offset or mitigated by following GEMM procedures. There will be no negative impacts on protected areas due to nature of works.
noise and vibration,	low	Only limited temporary impact during the rehabilitation phase. Mitigation measures in form of noise deflecting shields will be placed where the work-scheduling activities cannot have desired effect. Impact can be mitigated by following GEMM procedures.
soil quality,	low	Soil contamination can occur from: drainage of dredged materials, spillage of hazardous and toxic chemicals and erosion from road rehabilitation material Impact can be mitigated by following GEMM procedures
waste,	low	Health hazards and environmental impacts can happen due to improper waste management practices. Impact can be mitigated by following GEMM procedures
access/crossing points of the main road and local roads,	low	The rehabilitation and widening works will not affect existing crossing points.

impact	significance	comment
cultural and religious issues,	low	Regular rehabilitation activities could, if not properly managed, cause disturbance to the cultural and religious sites. Impact can be avoided by implementing EMP related measures.
cumulative impacts etc.	Medium/ moderate	Temporary, rehabilitation works may cause a slight increase of noise levels and air pollutants concentrations during the works only

Road sections which will be rehabilitated within RRSP belongs to the local and 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 settlements placed along the route of each road section. 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.

7.2.1. Environmental Impacts during Road Rehabilitation Phase

Erosion of embankment slopes

Impact - The earthworks for the road sub-project activities might cause negative impacts in form of erosion on embankment slopes, dust, noise and vibration to disturb the local people.

Mitigation Measures - Excavation and/or filling will be done in such a way that the slope of the road embankment should be within right of way and will not disrupt drainage problems. The Contractor should use erosion control measures such as re-vegetation of disturbed areas and placing of tarps. The Contractor shall stabilize the cleared areas not used for road rehabilitation activities with vegetation or with the appropriate surface treatments as soon as practicable following completion of activities.

Potential air pollution - Dust

Impact - Possible sources of air pollution will be dust due to maintenance activities, machinery movement and other sources. Road rehabilitation works involve breaking up, digging, crushing, transporting, and dumping small quantities of dry materials. Locally, the air quality may experience some moderate and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NO_x) and sulphur oxide (SO_x) from construction equipment exhausts. The dust may settle on vegetation, crops, structures and buildings.

Mitigation Measures - Spraying of water is the main way of controlling dust. Water is, in any case, required to be added to fill material during the rehabilitation of the road base. Spraying of road surfaces, including haul roads from borrow pits and quarries, should be undertaken during road rehabilitation works, particularly in the vicinity of settlements.

Potential water contamination

Impact - Water contamination may occur during the rehabilitation of the project road from site run off, spills from the equipment maintenance areas and sanitary wastewater effluent from the work camps. As for the potential pollution during operation, these are mostly limited to accidents. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

Paving/re-paving of the road stretches can cause the air and water contamination from new asphalt batch plant if there is a need to build it. However, construction of new asphalt plants is

not expected to be carried out under RRSP. The contractors will use asphalt from the already approved and licensed establishments.

Mitigation Measures - Fuel and lubricant spills can occur at the Contractor's work camp while maintaining and washing equipment and work vehicles. During the normal operations, these areas should be equipped with the adequately sized, gravity oil separator. Should spills occur in any part of the road, especially where the rivers are closest to the road, 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 Water Law.

Potential contamination of soils due to improper waste disposal

Impact - Potential contamination of soils and watercourses as a result of improper disposal of liquid and solid wastes from road rehabilitation activities.

Mitigation Measures - The mitigation measure to avoid contamination of soils and watercourses is to ensure that waste materials are properly disposed to the suitable locations. Partly, inert waste materials (for example concrete from bridge rehabilitation) can be used as filling material for rehabilitation of road sub-grade.

Contractor should produce a Waste Management Plan for the Project. Mitigation measures should, among other requirement, contain contractor obligations to:

- locate the garbage pit/waste disposal site min 500 m away from the residence so that peoples are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children to enter and play with. All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.
- In case oil and grease are trapped for reuse in a minimum 60cm thick lined pit, care shall be taken to ensure that the pit should be located at the lowest end of the site and away from the residential areas.
- In case of filling of low-lying areas with wastes, it needs to be ensured that the level matches with the surrounding areas. In this case care should be taken that these low lying areas are not used for rainwater storage

Impact on Fish habitat:

Impact – Adverse impact on fish habitat may occur by performing following activities: work within or adjacent to watercourse, deposition of toxic concrete or concrete leachate into watercourses, disposal of fine sediments in stream channel as a result of using earth cofferdams to isolate bridge foundation structures from the watercourse.

Mitigation Measures - to avoid the negative impacts following mitigation measures could be used:

- restrict in-stream work to periods outside fish spawning period;
- use clear-span bridge structures wherever possible to eliminate need for in-stream road rehabilitation work;
- ensure that concrete works (material) are isolated from the watercourse;
- ensure that concrete trucks and other equipment used to handle concrete are washed down in an area that is isolated from the watercourse so as not to allow toxic leachate to enter fish bearing streams;
- construct in-stream foundation works in the dry season so as to avoid the need for earth cofferdams; or use steel caisson type cofferdams instead of earth cofferdams so as to minimize risk of introducing sediments into a fish-bearing watercourse.

Equipment maintenance and fuelling

Impact - equipment maintenance and fuelling may cause contamination of soils and watercourses, including groundwater, if handling of lubricants, fuels and solvents is improper or careless.

Mitigation Measures - To avoid damage to natural environment there is a need to ensure proper handling of lubricants, fuels and solvents while maintaining the equipment.

Bridge deck paving and bridge painting

Impact – Negative impacts can occur due to incidental or careless deposition of toxic asphalt substances or toxic paints into watercourses.

Mitigation Measures -

- ensure that asphalt is not deliberately or accidentally deposited into watercourses;
- ensure that sand-blasting operations are contained within protective shrouds and that paint over-spray and dripping is contained by shrouds and tarps.

Occupational Health and Safety

Impacts - Roads in good condition will reduce traffic blocks, engine idle time and damage to motor vehicles. The ensuing benefits to public health and economy though marginal benefits will also add to the main benefit of smooth and faster traffic flow. Construction workers may be affected adversely due to hazardous working environments where high noise, dust, unsafe movement of machinery etc. may be present. Similarly, safety of road users may be affected during rehabilitation works.

Mitigation Measures - The Contractor shall instruct his workers in health and safety matters, and require from the workers to use the provided personal safety equipment. Contractor has to ensure that all operators of heavy or dangerous machinery are properly trained/certified, and also insured. He will have to provide first aid facilities, rapid availability of trained paramedical personnel, and emergency transport to nearest hospital with accident and emergency facilities. The contractor will be responsible for ensuring that all construction vehicles observe speed limits on the construction sites and on public roads.

Safety of the road users will be ensured by implementing adequate temporary traffic arrangements including signals, traffic lights etc. for the areas where the rehabilitation activities are carried out.

Noise

Impact - Noise caused by the rehabilitation works will have only a temporary impact. Although temporary and mostly moderate, road rehabilitation-related noise impacts in the vicinity of residential areas may cause negative health impact, if not mitigated.

Mitigation Measures - 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.

In sensitive areas (schools, nature parks, hospitals) special care regarding noise emission will be taken by the Contractor, strictly respecting the EMP requirements. In case of noise disturbance with noise emissions which are above permitted level, temporary noise barriers should be considered as appropriate mitigation measure. Awareness building and administrative measures should be taken to ensure proper maintenance of vehicles. In case of exceeded noise limits for sensitive areas the Contractor should erect temporary shields to prevent a free noise spreading to the sensitive receptors.

Potential Cumulative impacts

Impact- Rehabilitation of the road sections under RRSP Project will not result in any cumulative impacts.

7.2.2. Environmental Impacts During Operation Phase (post-rehabilitation phase)

Road Accidents

Impact - After completion of the rehabilitation activities there is a possibility that number of road accidents may increase due to higher number of vehicles using the roads at increased speeds.

Mitigation Measures - Traffic signs should be installed in accordance with the national legislation. The Contractor's Site Specific Implementation Plan should contain procedures for emergency response in the event of accidents or major incidents, in order to safeguard people, property and environmental resources.

Noise Quality

Impact-During operation, passing vehicles will generate noise. Noise levels may also marginally increase as more vehicles use the road at higher speeds. In open areas, traffic noise will disperse and will not create any impact. In the urbanized areas the impact of traffic noise due to operational activities after completion of the road sections rehabilitated within the RRSP Project would be minimal.

7.3. General Environmental Mitigation Measures During Road Rehabilitation Works

The requirements of General Environmental Mitigation Measures (GEMM), EMPs and of the Serbia standards will be included in all sub project civil works contracts through a set of special environmental clauses included in the Technical Specification of the bidding documents. The set of standard Special Environmental Clauses will be subject to revision for each sub-project to ensure the relevant issues for each sub-project are being adopted.

7.3.1. Site Preparation

The preparation of site for rehabilitation works involves: (i) clearing of land required for rehabilitation works; and (ii) management of activities such as traffic during road rehabilitation works. These activities have been detailed out for civil works of RRSP activities separately.

Site Preparation Activities by the Contractor

The activities to be undertaken by the contractor during the clearing and grubbing of the site are as follows: The clearance of site shall involve the removal of all materials such as trees, bushes, shrubs, stumps, roots, grass, weeds, part of topsoil and rubbish. Towards this end, the Contractor shall adopt the following measures: (i) Limiting the surface area of erodible earth material exposed by clearing and grubbing; (ii) Conservation of top soil and stock piling as per the measures suggested as part of GEMM (chapter 7.3.7 - Top Soil Management); and (iii) Carry out necessary backfilling of pits resulting from uprooting of trees and stumps with excavated or approved materials to the required compaction conforming to the surrounding area. To minimize the adverse impact on vegetation, only ground cover/shrubs that impinge directly on the permanent works shall be removed. Cutting of trees and vegetation outside the working area shall be avoided under all circumstances.

The locations for disposal of grubbing waste shall be finalized prior to the start of the works on any particular section of the road. The criteria for disposal of wastes shall be in accordance with the measures given in GEMM (chapter 7.3.2 - Waste Management).

In locations where erosion or sedimentation is likely to be a problem, clearing and grubbing operations should be so scheduled and performed that grading operations and permanent erosion and sedimentation control features can follow immediately, if the project conditions permit. Dismantling of structures and culverts shall be carried out in a manner as not to damage the remaining required portion of structures and other surrounding properties. The

disposal of wastes shall be in accordance with the provisions given in GEMM (chapter 7.3.2 - Waste Management). The following precautions shall be adopted:

- The waste generated shall not be disposed of in watercourses, to avoid hindrance to the flow.
- All necessary measures shall be taken while working close to cross drainage channels to prevent earthwork, stonework as well as the method of operation from impeding cross drainage at rivers, water canals and existing irrigation and drainage systems.

The designated sites duly approved by PERS shall be cleared of its existing cover for setting up of the construction sites, camps and related infrastructure facilities, borrow areas and other locations identified for temporary use during road rehabilitation works. The contractor shall comply with all safety requirements in consideration as specified in the GEMM (chapter 7.3.16 - Occupational Health and Safety). Before initiation of site preparation activities along these lands to be used temporarily during road rehabilitation works, it shall be the responsibility of the Contractor to submit and obtain approval of the site redevelopment plan from PERS. The letter/contract agreement between the owner(s) of the land parcel for temporary usage shall include site redevelopment to its original status. The adequate mitigation measures for the same are furnished in the GEMM (chapter 7.3.14. Construction Camp Management and 7.3.8 Borrow Areas Development & Operation).

Traffic management during road rehabilitation works

Traffic management during road rehabilitation works is an activity specific to the contractors. Contractors must ensure a reasonably smooth flow of traffic during road rehabilitation works. The following are the general principles to be followed for traffic management during road rehabilitation works:

- Partial pavement rehabilitation over long lengths will not be permitted. The contractor should concentrate his activities over sections such that he can complete continuous fronts of up to a maximum of 1 km before starting the adjacent front. The contractor may open more than one continuous 1 km front provided that he has the separate resources to do so. The resources working on a 1 km front may not be shifted to another front until no longer required on that front.
- The road rehabilitation activities should be staggered over sub-sections to the extent that the use of plant and equipment is optimized to maximum efficiency and to avoid idling. For road widening operations, excavation adjacent to the existing road shall not be permitted on both titles simultaneously. Earthworks must be completed to the level of the existing road before excavation work on the opposite side will be permitted.
- The road rehabilitation operations taking place on a particular front must be managed efficiently such that delays between successive pavement layers are minimized.

7.3.2. Waste Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
General Waste	Soil and water pollution from the improper management of wastes and excess materials from the construction sites.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Develop waste management plan for various specific waste streams (e.g., reusable waste, flammable waste, construction debris, food waste etc.) prior to commencing of road rehabilitation and submit to PERS for approval. * Organize disposal of all wastes generated during road rehabilitation works in an environmentally acceptable manner. This will include consideration of the nature and location of disposal site, so as to cause less environmental impact. * Minimize the production of waste materials by 3R (Reduce, Recycle and Reuse) approach.
		<ul style="list-style-type: none"> * Segregate and reuse or recycle all the wastes, wherever practical. * Prohibit burning of solid waste * Collect and transport non-hazardous wastes to all the approved disposal sites. Vehicles transporting solid waste shall be covered with tarps or nets to prevent spilling waste along the route * Provide refuse containers at each worksite. * Request suppliers to minimize packaging where practicable. * Maintain all construction sites in a cleaner, tidy and safe condition and provide and maintain appropriate facilities as temporary storage of all wastes before transportation and final disposal.
Hazardous Waste	Health hazards and environmental impacts due to improper waste management practices	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Collect chemical wastes in 200 liter drums (or similar sealed container), appropriately labeled for safe transport to an approved chemical waste depot. * Store, transport and handle all chemicals avoiding potential environmental pollution. * Store all hazardous wastes appropriately in banded areas away from water courses. * Make available Material Safety Data Sheets for hazardous materials on-site during road rehabilitation works. * Collect hydrocarbon wastes, including lube oils, for safe transport off-site for reuse,

7.3.3. Hazardous Materials Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Fuels and Hazardous goods.	Materials used in road rehabilitation have a potential to be a source of contamination. Improper storage and handling of fuels, lubricants, chemicals and hazardous goods/materials on-site, and potential spills from these goods may harm the environment or health of road rehabilitation workers.	<ul style="list-style-type: none"> * Prepare spill control procedures and submit the plan for PERS approval. * Train the relevant contractor personnel in handling of fuels and spill control procedures. * Store dangerous goods in bounded areas on a top of a sealed plastic sheet away from watercourses. * Refueling shall occur only within bounded areas. * Make available Material Safety Data Sheets for chemicals and dangerous goods on-site. * Provide absorbent and containment material (e.g., absorbent matting) where hazardous material are used and stored and personnel trained in the correct use. * Provide protective clothing, safety boots, helmets, masks, gloves, goggles, to the contractor personnel, appropriate to materials in use. * Make sure all containers, drums, and tanks that are used for storage are in good condition and are labeled with expiry date. Any container, drum, or tank that is dented, cracked, or rusted might eventually leak. Check for leakage regularly to identify potential problems before they occur. * Put containers and drums in temporary storages in clearly marked areas, where they will not be run over by vehicles or heavy machinery. The area shall preferably slope or drain to a safe collection area in the event of a spill. * Take all precautionary measures when handling and storing fuels and lubricants, avoiding environmental pollution. * Avoid the use of material with greater potential for contamination by substituting them with more environmentally friendly materials.

7.3.4. Water Resources Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Discharge from construction sites	During road rehabilitation works both surface and groundwater quality may be deteriorated due to road rehabilitation activities in the waterway/river, sewerages from construction sites and	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Install temporary drainage works (channels and bunds) in areas required for sediment and erosion control and around storage areas for road rehabilitation materials * Install temporary sediment basins, where appropriate, to capture sediment-laden run-off from site * Divert runoff from undisturbed areas around the

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
	work camps. The road rehabilitation works will modify groundcover and topography changing the surface water drainage patterns of the area including infiltration and storage of storm water. These changes in hydrological regime lead to increased rate of runoff increase in sediment and contaminant loading, increased flooding, groundwater contamination, and effect habitat of fish and other aquatic biology.	<p>construction site</p> <ul style="list-style-type: none"> * Stockpile materials away from drainage lines * Prevent all solid and liquid wastes entering waterways by collecting solid waste, oils, chemicals, bitumen spray waste and wastewaters from brick, concrete and asphalt cutting where possible and transport to an approved waste disposal site or recycling depot * Wash out ready-mix concrete agitators and concrete handling equipment at washing facilities off site or into approved bunded areas on site. Ensure that tires of construction vehicles are cleaned in the washing bay (constructed at the entrance of the construction site) to remove the mud from the wheels. This should be done in every exit of each vehicle to ensure the local roads are kept clean.
Soil Erosion and siltation	Soil erosion and dust from the material stockpiles will increase the sediment and contaminant loading of surface water bodies.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Stabilize the cleared areas not used for road rehabilitation activities with vegetation or appropriate surface water treatments as soon as practicable following earthwork to minimize erosion * Ensure that roads used by construction vehicles are swept regularly to remove sediment. * Water the material stockpiles, access roads and bare soils on an as required basis to minimize dust. Increase the watering frequency during periods of high risk (e.g. high winds)
Road rehabilitation activities in water bodies	Road rehabilitation works in the water bodies will increase sediment and contaminant loading, and effect habitat of fish and other aquatic biology.	<p>The Contractor Shall:</p> <ul style="list-style-type: none"> * Monitor the water quality in the runoff from the site or areas affected by dredge plumes, and improve work practices as necessary * Protect water bodies from sediment loads by silt screen or bubble curtains or other barriers * Minimize the generation of sediment, oil and grease, excess nutrients, organic matter, litter, debris and any form of waste (particularly petroleum and chemical wastes). These substances must not enter waterways, storm water systems or underground water tables. * Use environment friendly and nontoxic slurry during road rehabilitation works of piles to discharge into the river. * Reduce infiltration of contaminated drainage

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		through storm water management design * Do not discharge cement and water curing used for cement concrete directly into water courses and drainage inlets.

7.3.5. Drainage Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Excavation and earth works, and construction yards	Lack of proper drainage for rainwater/liquid waste or wastewater owing to the road rehabilitation activities harms environment in terms of water and soil contamination	The Contractor shall: * Prepare a program for prevent/avoid standing waters, which PSC will verify in advance and confirm during implementation * Provide alternative drainage for rainwater if the road rehabilitation works/earth-fillings cut the established drainage line * Establish local drainage line with appropriate silt collector and silt screen for rainwater or wastewater connecting to the existing established drainage lines already there * Rehabilitate road drainage structures immediately if damaged by contractors' road transports. * Construct wide drains instead of deep drains to avoid sand deposition in the drains that require frequent cleaning. * Provide appropriate silt collector and silt screen at the inlet and manholes and periodically clean the drainage system to avoid drainage congestion * Protect natural slopes of drainage channels to ensure adequate storm water drains. * Regularly inspect and maintain all drainage channels to assess and alleviate any drainage congestion problem. * Reduce infiltration of contaminated drainage through storm water management design

7.3.6. Soil Quality Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Filling of Sites with dredge materials	Soil contamination will occur from drainage of dredged materials	The Contractor shall: * Ensure that dredged sand used for land filling should be free of pollutants. Prior to filling, sand quality should be tested to confirm whether soil is pollution free. Sediments should be properly compacted. Top layer should be the 0.5 m thick clay on the surface and boundary slopes along with grass.

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		<p>Side Slope of Filled Land of 1:2 should be constructed by suitable soils with proper compaction as per design. Slope surface should be covered by top soils/ cladding materials (0.5m thick) and grass turfing with suitable grass.</p> <p>* Leaching from the sediments should be contained to seep into the subsoil or should be discharged into settling lagoons before final disposal.</p> <p>* No sediment laden water in the adjacent lands near the construction sites, and/or wastewater of suspended materials excessive of 200mg/l from dredge material storage/use area in the adjacent agricultural lands.</p>
Storage of hazardous and toxic chemicals	Spillage of hazardous and toxic chemicals will contaminate the soils	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Strictly manage the wastes management plans * Construct appropriate spill contaminant facilities for all fuel storage areas * Establish and maintain a hazardous materials register detailing the location and quantities of hazardous substances including the storage, use of disposals * Train personnel and implement safe work practices for minimizing the risk of spillage * Identify the cause of contamination, if it is reported, and contain the area of contamination. The impact may be contained by isolating the source or implementing controls around the affected site * Remediate the contaminated land using the most appropriate available method
Road rehabilitation material stock piles	Erosion from road rehabilitation material stockpiles may contaminate the soils	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Protect the toe of all stockpiles, where erosion is likely to occur, with silt fences, straw bales or bunds

7.3.7. Top Soil Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Land clearing and earth works	Earthworks will impact the fertile top soils that are enriched with nutrients required for plant growth or agricultural development.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Strip the top soil to a depth of 15 cm and store in stock piles of height not exceeding 2m. * Remove unwanted materials from top soil like grass, roots of trees and similar others. * The stockpiles will be done in slopes of 2:1 to reduce surface runoff and enhance percolation through the mass of stored soil.

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		<ul style="list-style-type: none"> * Locate topsoil stockpiles in areas outside drainage lines and protect from erosion. * Construct diversion channels and silt fences around the topsoil stockpiles to prevent erosion and loss of topsoil. * Spread the topsoil to maintain the physico-chemical and biological activity of the soil. The stored top soil will be utilized for covering all disturbed area and along the proposed plantation sites * Prior to the re-spreading of topsoil, the ground surface will be ripped to assist the bonding of the soil layers, water penetration and re-vegetation

7.3.8. Borrow Areas Development & Operation

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Development and operation of borrow areas	In case, the borrow pits developed by the Contractor, there will be impacts on local topography, landscaping and natural drainage.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Identify borrow pits in consultation with the local PERS staff. * Obtain the borrow material from: <ul style="list-style-type: none"> - barren land or land without tree cover outside the road reserve; - excavating land and creating new water tanks/ponds; - land acquired temporarily outside the road reserve; - excavation of proposed culverts; * Do not dig the borrow pits within 5m of the toe of the final section of the road embankment. * Dig the borrow pits continuously. Ridges of not less than 8 m widths shall be left at intervals not exceeding 300 m and small drains should be cut through the ridges to facilitate drainage * Slope the bed level of the borrow pits, as far as possible, down progressively towards the nearest cross drain, if any, and do not lower it than the bed of the cross-drain, to ensure efficient drainage. . * Do not locate the borrow pits within 500 m of any identified archaeological, religious or cultural sites if any. * Follow the below for restoration of borrow areas are: <ul style="list-style-type: none"> - Return stockpiled topsoil to the borrow pit if is used for agriculture; - Stabilize the banks of the borrow pit with the top soil if it is used for fish ponds by compaction; - Return stockpiled topsoil to the borrow pit and all

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		<p>worked areas to be stabilized through re-vegetation using local plants.</p> <p>* Control at each site by ensuring that base of the borrow pit drains into a sediment trap prior to discharging from the site.</p>

7.3.9. Air Quality Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Construction vehicular traffic	Air quality can be adversely affected by vehicle exhaust emissions and combustion of fuels.	<p>The Contractor should</p> <ul style="list-style-type: none"> * Fit vehicles with appropriate exhaust systems and emission control devices. Maintain these devices in good working condition. * Operate the vehicles in a fuel efficient manner * Cover haul vehicles carrying dusty materials moving outside the construction site * Impose speed limits on all vehicle movement at the worksite to reduce dust emissions * Control the movement of construction traffic * Service all vehicles regularly
Construction machinery	Air quality can be adversely affected by emissions from machinery and combustion of fuels.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Fit machinery with appropriate exhaust systems and emission control devices. Maintain these devices in good working condition in accordance with the specifications defined by their manufacturers to maximize combustion efficiency and minimize the contaminant emissions. Proof or maintenance register shall be required by the equipment suppliers and contractors/subcontractors * Focus special attention on containing the emissions from generators * Machinery causing excess pollution (e.g. visible smoke) will be banned from construction sites * Service all equipment regularly to minimize emissions * Provide filtering systems, duct collectors or humidification or other techniques (as applicable) to the concrete batching and mixing plant to control the particle emissions in all its stages, including unloading, collection, aggregate handling, cement dumping, circulation of trucks and machinery inside the installations
Road rehabilitation	Dust generation from construction sites, material stockpiles	<ul style="list-style-type: none"> * Water the material stockpiles, access roads and bare soils on an as required basis to minimize the potential for environmental nuisance due to dust.

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
activities	and access roads is a nuisance in the environment and can be a health hazard.	<p>Increase the watering frequency during periods of high risk (e.g. high winds). Stored materials such as gravel and sand shall be covered and confined to avoid their being wind-drifted</p> <ul style="list-style-type: none"> * Minimize the extent and period of exposure of the bare surfaces * Reschedule earthwork activities or vegetation clearing activities, where practical, if necessary to avoid during periods of high wind and if visible dust is blowing off-site * Restore disturbed areas as soon as practicable by vegetation/grass-turfing * Store the cement in silos and minimize the emissions from silos by equipping them with filters. * Establish adequate locations for storage, mixing and loading of construction materials, in a way that dust dispersion is prevented because of such operations

7.3.10. Noise and Vibration Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Construction vehicular traffic	Noise quality will be deteriorated due to vehicular traffic	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Maintain all vehicles in order to keep it in good working order in accordance with manufactures maintenance procedures * Make sure all drivers will comply with the traffic codes concerning maximum speed limit, driving hours, etc. * Organize the loading and unloading of trucks, and handling operations for the purpose of minimizing construction noise on the work site
Construction machinery	Noise and vibration may have an impact on people, property, fauna, livestock and the natural environment.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Appropriately site all noise generating activities to avoid noise pollution to local residents * Use the quietest available plant and equipment * Modify equipment to reduce noise (for example, noise control kits, lining of truck trays or pipelines) * Maintain all equipment in order to keep it in good working order in accordance with manufactures maintenance procedures. Equipment suppliers and contractors shall present proof of maintenance register of their equipment. * Install acoustic enclosures around generators to reduce noise levels. * Fit high efficiency mufflers to appropriate

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		construction equipment * Avoid the unnecessary use of alarms, horns and sirens
Road rehabilitation activities	Noise and vibration may have an impact on people, property, fauna, livestock and the natural environment.	The Contractor shall: * Notify adjacent landholders prior any typical noise events outside of daylight hours * Educate the operators of construction equipment on potential noise problems and the techniques to minimize noise emissions * Employ best available work practices on-site to minimize occupational noise levels * Install temporary noise control barriers where appropriate * Plan activities on site and deliveries to and from site to minimize impact * Monitor and analyze noise and vibration results and adjust road rehabilitation practices as required. * Avoid undertaking the noisiest activities, where possible, when working at night near the residential areas

7.3.11. Tree Cutting and Afforestation

This section discusses the issue of tree cutting and afforestation. Loss of trees creates adverse environmental impacts. In order to mitigate these impacts, suitable measures have been suggested.

Project Planning and Design Stage

During alignment finalization, design should be undertaken in such a way to minimize the loss of existing tree cover, encroachment of forest areas / protected areas etc. as specified in GEMM (Project Preparation). Tree felling, if unavoidable, shall be done only after compensatory plantation of at least three saplings for every tree cut is done.

The plantation/afforestation would be carried out by the forest department. It should be ensured that plantation is carried out only in areas where water can be made available during dry seasons and the plant can be protected during the initial stages of their growth. The species shall be identified giving due importance to local flora. It is recommended to plant mixed species in case of both avenue or cluster plantation.

Post-rehabilitation Stage

The maintenance of the saplings (including activities much as weeding, watering, planting of replacement saplings, etc. application of manure etc.) shall be the responsibility of the forest department.

7.3.12. Road Transport and Road Traffic Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Construction vehicular traffic	Increased traffic use of road by construction vehicles will affect the movement of normal road traffics and the safety of the road users.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Prepare and submit a traffic management plan to the PERS for his approval at least 30 days before commencing work on any project component involved in traffic diversion and management. * Include in the traffic management plan to ensure uninterrupted traffic movement during road rehabilitation works: detailed drawings of traffic arrangements showing all detours, temporary road, temporary bridges temporary diversions, necessary barricades, warning signs / lights, road signs etc. * Provide signs at strategic locations of the roads complying with the schedules of signs contained in the Serbia Traffic Regulations. * Install and maintain a display board at each important road intersection on the roads to be used during road rehabilitation works, which shall clearly show the following information in Serbian: <ul style="list-style-type: none"> - Location: chainage and settlement name - Duration of construction period - Period of proposed detour / alternative route - Suggested detour route map - Name and contact address/telephone number of the concerned personnel - Name and contact address / telephone number of the Contractor - Inconvenience is sincerely regretted.
	Accidents and spillage of fuels and chemicals	<ul style="list-style-type: none"> * Restrict truck deliveries, where practicable, to day time working hours. * Restrict the transport of oversize loads. * Operate road traffics/transport vehicles, if possible, to non-peak periods to minimize traffic disruptions. * Enforce on-site speed limit * The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills. * in case of accident the Contractor should follow recommendations given in its own Emergency Response Plan.

7.3.13. Erosion and Sedimentation Control

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Clearing of construction sites	Cleared areas and slopes are susceptible for erosion of top soils that affects the growth of vegetation which causes ecological imbalance.	<ul style="list-style-type: none"> * Reinstate and protect cleared areas as soon as possible. * Mulch to protect batter slopes before planting * Cover unused area of disturbed or exposed surfaces immediately with mulch/grass tree plantations
Road rehabilitation activities and material stockpiles	The impact of soil erosion are (i) Increased run off and sedimentation causing a greater flood hazard to the downstream, (ii) destruction of aquatic environment in nearby lakes, streams, and reservoirs caused by erosion and/or deposition of sediment damaging the spawning grounds of fish, and (iii) destruction of vegetation by burying or gullyng.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Locate stockpiles away from drainage lines * Protect the toe of all stockpiles, where erosion is likely to occur, with silt fences, straw bales or bunds * Remove debris from drainage paths and sediment control structures * Cover the loose sediments and water them if required * Divert natural runoff around construction areas prior to any site disturbance * Install protective measures on site prior to road rehabilitation, for example, sediment traps * Control drainage through a site in protected channels or slope drains * Install 'cut off drains' on large cut/fill batter slopes to control water runoff speed and hence erosion * Observe the performance of drainage structures and erosion controls during rain and modify as required

7.3.14. Construction Camp Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Siting and Location of construction camps	Campsites for construction workers are the important locations that have significant impacts such as health and safety hazards on local resources and infrastructure of nearby communities.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Locate the construction camps at areas which are acceptable from environmental, cultural or social point of view. * Consider the location of construction camps away from communities in order to avoid social conflict in using the natural resources such as water or to avoid the possible adverse impacts of the construction camps on the surrounding communities. * Local authorities responsible for health, religious and security shall be duly informed on the set up of camp facilities so as to maintain effective surveillance

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		over public health, social and security matters
Construction Camp Facilities	Lack of proper infrastructure facilities such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living standards and health hazards.	<p>Contractor shall provide the following facilities in the Campsites:</p> <ul style="list-style-type: none"> * Adequate housing for all workers * Safe and reliable water supply. Water supply from deep tube wells of 300 m depth that meets the national standards * Hygienic sanitary facilities and sewerage system. The toilets and domestic waste water will be collected through a common sewerage. Provide separate latrines and bathing places for males and females with total isolation by wall or by location. The minimum number of toilet facilities required is one toilet for every ten persons. * Provide in-house community/common entertainment facilities. Dependence of local entertainment outlets by the construction camps to be discouraged/prohibited to the extent possible.
Disposal of waste	Management of wastes is crucial to minimize impacts on the environment	<p>The Contractor should</p> <ul style="list-style-type: none"> * Ensure proper collection and disposal of solid wastes within the construction camps * Insist waste separation by source; organic wastes in one pot and inorganic wastes in another pot at household level. * Store inorganic wastes in a safe place within the household and clear organic wastes on daily basis to waste collector. Establish waste collection, transportation and disposal systems with the manpower and equipment/vehicles needed. * Locate the garbage pit/waste disposal site min 500 m away from the residence so that peoples are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children to enter and play with. * Do not establish site specific landfill sites. All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.
Health and Hygiene	There will be a potential for diseases to be transmitted	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Provide adequate health care facilities within construction sites. * Provide first aid facility round the clock. Maintain stock of medicines in the facility and appoint fulltime designated first aider or nurse. * Provide ambulance facility for the laborers during emergency to be transported to nearest hospitals.

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
		<ul style="list-style-type: none"> * Initial health screening of the laborers coming from outside areas * Carryout short training sessions on best hygiene practices to be mandatorily participated by all workers. Place display boards at strategic locations within the camps containing messages on best hygienic practices

7.3.15. Cultural and Religious Issues

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Road rehabilitation activities near religious and cultural sites	Disturbance from road rehabilitation works to the cultural and religious sites, and contractors lack of knowledge on cultural issues cause social disturbances.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Communicate to the public through community consultation and newspaper announcements regarding the scope and schedule of road rehabilitation, as well as certain road rehabilitation activities causing disruptions or access restriction. * Do not block access to cultural and religious sites, wherever possible * Restrict all road rehabilitation activities within the foot prints of the construction sites. * Stop road rehabilitation works that produce noise (particularly during prayer time) should there be any church/religious/educational institutions close to the construction sites and users make objections. * Take special care and use appropriate equipment when working next to a cultural/religious institution. * Resolve cultural issues in consultation with local leaders and PSC * Establish a mechanism that allows local people to raise grievances arising from the road rehabilitation process.

7.3.16. Occupational Health and Safety

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
Best practices	Road rehabilitation works may pose health and safety risks to the construction workers and site visitors leading to severe injuries and deaths. The population in the proximity of the	<p>The Contractor shall:</p> <ul style="list-style-type: none"> * Implement suitable safety standards for all workers and site visitors which should not be less than those laid down on the international standards (e.g. WB's 'Environmental Health and Safety Guidelines') and contractor's own national standards or statutory regulations, in addition to complying with the national standards of the Government of Serbia (e.g. 'The Serbia Labor Code') * Provide the workers with a safe and healthy work

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures
	<p>construction site and the construction workers will be exposed to a number of (i) biophysical health risk factors, (e.g. noise, dust, chemicals, construction material, solid waste, waste water, vector transmitted diseases etc.), (and (ii) road accidents from construction traffic.</p>	<p>environment, taking into account inherent risks in its particular road rehabilitation activity and specific classes of hazards in the work areas,</p> <ul style="list-style-type: none"> * Provide personal protective equipment (PPE) for workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection. Maintain the PPE properly by cleaning dirty ones and replacing them with the damaged ones. * Safety procedures include provision of information, training and protective clothing to workers involved in hazardous operations and proper performance of their job * Appoint an environment, health and safety manager to look after the health and safety of the workers
Accidents	<p>Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of the victims</p>	<ul style="list-style-type: none"> * Provide health care facilities and first aid facilities are readily available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work * Document and report occupational accidents, diseases, and incidents. * Prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice. * Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures. * Provide awareness to the construction drivers to strictly follow the driving rules * Provide adequate lighting in the construction area and along the roads
Water and sanitation facilities at the construction sites	<p>Lack of Water sanitation facilities at construction sites cause inconvenience to the construction workers and affect their personal hygiene.</p>	<ul style="list-style-type: none"> * The contractor should provide portable toilets at the construction sites, if about 25 people are working the whole day for a month. Location of portable facilities should be at least 6m away from storm drain system and surface waters. These portable toilets should be cleaned once a day and all the sewerage should be pumped from the collection tank once a day and should be brought to the common septic tank for further treatment. * Contractor should provide bottled drinking water facilities to the construction workers at all the construction sites.

8. MONITORING AND REPORTING ARRANGEMENTS

8.1. Monitoring

A generic monitoring plan for the proposed Project (Annex 5) 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
- Institutional responsibilities for monitoring and supervision.

A site specific monitoring checklist will be prepared by DC for each subproject, as an integral part of Site Specific EMP document. Monitoring checklist should be prepared based on the generic monitoring plan presented within this EFD document and respecting significant site specific impacts and proposed mitigation measures elaborated in site specific EMP document. The field monitoring checklist will be used by the supervising field engineers. The signed checklists will be provided to PERS, which will be responsible for the follow-up and compliance reporting.

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. Prior to the commencement of works PERS will submit to WB for its approval Environmental Management Plan for each particular road section which is subject of RRSP. 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, PERS will undertake the following:

- (i) 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 Annex 4 (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

- (iii) 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 specialist who will supervise implementation of the Contractor's environmental responsibilities and coordinate with 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, PERS shall monitor the compliance of the Contractor in respect to EMP provisions. It is proposed that PSC employ an environment specialist (with civil engineering/environmental management background) to assist the environmental supervision.

Upon Project completion, PERS will be in charge of the operation and maintenance of the rehabilitated road sections. Routine and random monitoring will be undertaken as scheduled in the monitoring plan. PERS is also responsible for supervision of the project through the consulting services for supervision and implementation of the Project and supervision of environmental monitoring.

Construction Contractor will make proposal for environmental protection, including safety of persons associated with the works and the public, during a pre-construction 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 PERS about suspension and order to proceed according to its directive.

During the implementation of RRSP, 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. Draft EMP document should be placed at PERS web site (www.putevi-srbije.rs). During process of public consultations interested public should collect all project information, including all environmental issues related to this project. Opinions and suggestions should be 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 planned mitigation measures.

8.1.1. Environmental Monitoring during Road rehabilitation Phase

PSC will supervise all contractors' monitoring activities prescribed within the Detailed Design and EMP document. Contractor is obliged to ensure measuring, sampling of requested potential pollutants and to engage certified laboratory to perform such activities.

PSC will control fulfillment of monitoring requirements, according to the Monitoring Check Lists which will be produced by DC as an integral part of EMP document for each Sub-project.

Monitoring activities will include, but not be limited on following issues:

Potential water contamination

- inspection of drainage works to ensure implementation of environmental best management practices (periodical inspection, should be done by the road inspection organization)
- test roadside soils for elevated levels of heavy metals, particularly lead and cadmium (long-term investigation, can be done as a contract work by a research institute)
- test aggregates to ensure they are contaminant free (periodical test, can be done by the road inspection organization)

Noise Quality

Contractor is obliged to perform noise level measurement according to the monitoring plan of EMP document. Within the zone with sensitive recipients Contractor will monitor the noise levels 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.

Waste Disposal

Periodic inspection of road rehabilitation works helps to ensure proper handling of waste materials.

Noise Quality

Contractor is obliged to perform noise level measurement according to the monitoring plan of EMP document. Within the zone with sensitive recipients Contractor will monitor the noise levels 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.

Bridge widening and culvert lengthening:

Monitoring of the influence of mitigation measures used in the bridge widening and culvert lengthening has following aspects:

- determination of optimal in-stream construction time window (should be known before starting of the operation but it is important information for other analogous cases)
- monitoring work to ensure in-stream work avoids or minimizes damage to fish habitat (foresees periodical inspection trips)
- periodic inspection of works to ensure aquatic habitat protection measures are being implemented
- inspection during concrete pours to ensure proper handling of concrete and proper cleanup and disposal of waste concrete
- inspection of foundation rehabilitation works to ensure application of environmental best management practice.

Equipment Maintenance and Fuelling

To avoid possible leakage of lubricants and fuel and following pollution, periodic inspection of equipment maintenance, fuelling and materials storage areas is needed to ensure the best management practices being implemented.

Bridge deck paving and bridge painting

- inspection of bridge paving works to ensure asphalt is being contained on bridge deck and not being allowed to spill over into watercourse

- inspection of sand blasting and painting operation to ensure that proper containment is in place.

Occupational Health and Safety

Worker Safety can be increased by periodic monitoring of on-the-job safety.

8.1.2. Construction Monitoring and Post Auditing

Construction Monitoring, including field inspections and surveys, should be carried out by an environmental expert to ensure that environmental protection requirements are being met. It is important to plan and budget for environmental monitoring as part of the project. If road rehabilitation works are to be contracted out, RRSP to reconfirm that specific environmental requirements during road rehabilitation works (as already specified) are built into bidding documents and contracts.

For all RRSP sub-project which will belong to the group of project for which full EIA procedure is mandatory (see chapter 2.3) a Post Rehabilitation Monitoring will be organized by PERS in order to identify environmental changes resulting from the implementation of the project.

In the context of EIA Studies, post rehabilitation monitoring programs are carried out to achieve the following results:

- to ensure that the facility is meeting all environmental regulatory requirements, and that commitments made in the EIA Study and/or the conditions of approval are being met;
- to test impact hypotheses, and to verify the predictions and assessment of environmental impacts, thus contributing to better assessments in the future;
- to evaluate the performance effectiveness of mitigation;
- to compare actual and predicted changes to the environment, so that immediate actions can be taken to mitigate unanticipated impacts;
- to strengthen confidence by both government and the public in the EIA process, the decisions made the road design etc.

8.2. Reporting Arrangements

8.2.1. Design Consultant to PERS

DC will prepare a site specific EMP document for each subproject, as a part of detailed design.

DC will prepare EMP presentation and will organize and perform EMP presentation and consultation to the interested parties and stakeholders.

DC will prepare and submit to PERS a Detailed Report on Public Consultation. Comments, remarks and suggestions collected during public consultation process should be integrated within the final EMP document.

8.2.2. Contractor to PERS

The Contractor will prepare his compliance reports in respect to 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 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 of the environment quality according to the mitigation and monitoring plan which are part of EMP (Appendix I of EMP document – Mitigation Plan and Appendix II – Monitoring Plan).

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

If any kind of accident or endangerment of environment happens, reporting will be immediate. PERS and the Contractor have joint responsibility for reporting and investigating incidents. The Contractor is obliged to inform the project manager and local authorities about accident 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).

Annual Environmental & Social Report

Each Contractor is obliged to produce and deliver to PERS an Annual Environmental and Social Report (AESR) covering all project activities during a calendar year.

AESR document should be produced respecting the proposed template – a sample screening checklist for AESR presented within the Annex 3 of this EFD document.

Each contractor should deliver an AESR to the PERS latest on February 28th on each calendar year.

8.2.3. Project Supervision Consultant to PERS

The findings of the regular monitoring activities, including activities specified in the Generic Monitoring Plan (Annex 5) carried by the Contractor will be included in the quarterly PSC progress reports.

8.2.4. PERS to MoT, WB, EBRD and EIB

Annual Environmental Health and Safety (AEHS) reports, including monitoring indicators and reporting on the implementation of the requirements set forth in the EMPs will be prepared by PERS and submitted for IFIs review. IFIs will review the reports and verify their contents through periodic site visits. 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 WB and EIB.

Monitoring and compliance in accordance with EFD and site specific EMPs, including monitoring of implementation of site-specific measures on each sub-project/section during project implementation will be undertaken by PERS and its implementation unit, and reported in writing to the Bank on semi-annual basis. An environmental specialist will be appointed to the Project by PERS to ensure quality in the implementation of EMPs.

8.3. RRSP Results Monitoring and Evaluation

The PAC will perform annual audits and results monitoring and evaluation. PAC's review may, among other issues, also include works or contracts believed to have sensitive environmental or social impacts or requiring special oversight as determined by EIB and WB. PAC will report on project implementation progress, compliance as defined in the Project Operations Manual and other project documents, shortfalls in performance if any, the reasons and actions to remedy them. PAC's review will also cover engineering designs (with attention on EMP document and Detailed Design of Environmental Protection) and social and environmental safeguards.

9. TRAINING AND CAPACITY BUILDING RECOMMENDATIONS

Although PERS has significant experience with Bank projects and procedures since 2004, given the large size and scope of the new project, PERS may experience some difficulties in adequately managing and implementing the road rehabilitation program including the environmental aspects with the current staff. In addition, given that the PIT consists primarily of regular PERS employees, they may have other institutional responsibilities beyond the project.

RRSP will finance consultants to provide project management support to PIT during project implementation. They will support PIT in, among others, the: (i) supervision of the implementation of civil works; (ii) environmental and social supervision of safeguards implementation; (iii) annual program planning and preparation including the economic analysis; and (iv) overall project management. In addition to the consultants, PIT will draw staff members from other PERS departments as necessary.

Training on Road Safety Inspection and Audit; and Road Safety Awareness Campaigns

Training and testing to be carried out according to prevalent EU directives until the equivalent Serbian legislation is established. Road safety campaigns to pre-selected schools in the vicinity of the roads to be rehabilitated under the first phase of NRNP. The terms of reference for the training and the campaigns will be agreed with EIB and WB. The schools will be identified prior to start of construction.

PAC will review the teaching and testing materials and records of the awareness campaigns. PAC will also interview a 20 percent random sample of trainees and visit a 20 percent sample of the schools interviews students and school administrators. Implementation will be evaluated against the ToR.

Training plan for PERS and other stakeholders

Subcomponent 2A of RRSP (Support to road safety) includes road safety awareness campaigns, strengthening enforcement on the NRNP-improved roads and training on road safety audits and inspections.

Respecting the fact that the Contractors' staff was not adequately trained for implementing this type of contract and PERS's staff was not adequately trained for supervision and monitoring of Performance Based Maintenance Contracts (PBMC), a Subcomponent 2C of RRSP (Strengthening maintenance management) includes the training for staff and contractors on PBMC.

9.1. Modes of Environmental Training

9.1.1. Training Strategy

A key concept in training programs is to provide training through a combination of formal classroom training and practical on-the job sessions. Technical assistance should be made available to provide training, guidance and advisory support in all aspects of works implementation in order that the key players (environmental as well as technical team) become fully conversant with, and capable of carrying out their respective duties. Training for the various categories of staff needs to be carried out with varying durations and through different approaches, such as on-site and classroom training, workshops, seminars and practical on-the-job training.

9.1.2. Concept of Training

Training is always an effective up-front quality assurance measure. Experience shows that there is a great demand for training in technical subjects for the government staff in charge of work supervision. Effective training programs involve both the introduction of new technology as well as in-depth studies of the particular skills required in each position in PERS. As the training content for these reasons relate to practical hands-on skills, the training often consists

of dissemination of best practices and work methods which have been proved most effective in projects with similar tasks and working conditions.

9.1.3. Training Methods

The most effective way of addressing such training needs is by carrying out the training in an environment which to the extent possible resembles the real situation in which the trainees will eventually operate.

9.1.4. Classroom Sessions

Although training needs to focus on practical skills, which are best, taught in the field, there is always a demand for a certain theoretical foundation on which the practical skills are placed. For example, experience shows that it is useful to review basic methodology and regulations, which in turn is explained in the context of environmental management system in civil works. Also for technical subjects such as impact categorization, selection of mitigation measures, EMP as part of bidding document and others, there is a demand for an introduction to the subjects in a classroom environment, during which (i) the theory is reviewed, and (ii) a general briefing of the field exercises is conducted, before the field sessions commence.

After the initial classroom training and skills development sessions, further practical training should be carried out in a full-scale demonstration situation. This includes establishing training/demonstration sites fully equipped with the same type of tools and equipment that contractors will be using.

9.1.5. On-the-job Training

It has been proved that on-the-job training is the most effective method of training most categories of government staff. This involves the extensive use of practical demonstrations and skill training at full-scale training sites. This approach is very effective for the training of managers, engineers and supervisors with the on-site training being supported by classroom components tailored for the various categories of staff.

9.1.6. Workshops

Intensive refresher courses for periods of one to three days are useful for addressing specific problem areas. Such workshops are organized to supplement on-the-job training for some of the technical and administrative staff. Short workshop can either be arranged through the provision of technical assistance, an in-house training facility, or by contracting other training institutions within the country.

9.1.7. Seminars

Seminars are useful as a means for disseminating data and information, in particular for senior government officials at central and local level, as well as representatives of other government agencies. Seminars can be an effective platform for policy makers, planners and administrators to review the importance of an Environmental Management System. Equally important, this type of seminar is important in terms of creating awareness of the potential of utilizing new organizational arrangements, work methods, and involvement of the private sector, beyond the boundaries of a particular program.

9.2. Training Program for Contractors, Project Supervisors and Project Staff

A comprehensive training program should be planned for the project by the Project Implementation Team (PIT) intended to address all components of the RRSP. Developing a comprehensive idea about the Environmental requirements, PIT will fix the role/responsibility to effectively manage the environment components involved. As discussed earlier PIT may or may not take the services of external agency. In general the training program is proposed by the planning consultant, during the design stage of project.

The program should be intended for all Contractors, PSC and the project staff. As and when found necessary PIT in consultation with EMU will select appropriate modules for the training of contractors and for the training of engineers responsible for supervision and maintenance work.

List of appropriate training modules and their time frames is discussed in subsequent paragraphs.

The training components may be broadly divided into the following categories:

- Principles and policies for (natural and social) environmental mitigation in development projects;
- Legal and institutional aspects; project mandates;
- Probable (natural and social) environmental impacts and losses in road strengthening and widening; and waterways projects;
- The EMP
- Monitoring, evaluation and reporting methods and mechanisms and,
- Inter-sectoral and inter-agency collaboration, etc.

ANNEXES:

Annex 1: List of Road Sections to be Maintained under RRSP Project - 1st Year

Annex 2: Sample Report on Public Disclosure and Consultation for Road Section Arandjelovac - Krcevac

Annex 3: Sample Screening Checklist for the Annual Environmental and Social Report

Annex 4: Generic Mitigation Plan for Road Rehabilitation Projects

Annex 5: Generic Monitoring Plan for Road Rehabilitation Projects

Annex 6: Sample of the Detailed Project-Specific Environmental Baseline for Road Section Uzice – Pozega – Kratovska Stena, and Road Section Zabalj - Zrenjanin

Annex 7: Sample Environmental Checklist

Annex 8: Relevant National Legislation as of January 2013

Annex 9: Report on Public Disclosure and Public Consultation

ANNEX 1 LIST OF ROAD SECTIONS TO BE MAINTAINED UNDER RRSP PROJECT - 1ST YEAR**2013/2014 WB+EIB+PERS financing**

1	M-4S (0218-0219) Arandjelovac 3 - Krcevac	8.650 km
2	M-9S (0365) Vlasotince - Svodje	12.730 km
3	M-8S (0342-0343) Stavalj - Susica	8.900 km
4	M-4S (0212-0215) Lazarevac 4 - Arandjelovac 1	13.670 km
5	M-21V (0441-0443) Iriski Venac-Ruma 2 (Putinci) / Irig 2 (Vrdnik)-Ruma 2 (Putinci) M-21V (0444-0450) Ruma 2 (Putinci)-Sabac 6, Ruma 2 (Putinci)-Ruma 1 (autoput)	15.706 km
6	M-5S (0252) Uzice 3 - Pozega M-5S (0253) Pozega - Kratovska Stena	31.290 km
7	M-23S (0619-0621) Topola 2 - Cerovac M-23S (0622) Cerovac - Kragujevac 5	29.500 km
8	M-21.1S (0481) Pozega - Arilje M-21.1S (0482-0483) Arilje - Ivanjica	40.342 km
9	M-21V (0439) Paragovo - Iriski Venac M-21V (0440) Iriski Venac - Paragovo	8.036 km
10	M-4S (0188-0191) Zavlaka 2 (Likodra) - Valjevska Kamenica	24.750 km
11	M-25S (0702-0703) Kladovo - Brza Palanka	24.280 km

2013/2014 EBRD financing

1	M-7V (0312) Zabalj 1 - Zrenjanin 1 (obilaznica)	24.248 km
2	M-1V (0003) Adasevci - Kuzmin 1 (autoput)/ M- 1V (0004) Kuzmin 1 (autoput) - Adasevci	26.960 km
3	M-25S (0719-0722) Vratarnica - Knjazevac 2	23.600 km
4	M-21S (0471) Bela Zemlja - Knezevici M-21S (0470) Uzice 3 - Bela Zemlja	14.985 km

ANNEX 2: SAMPLE REPORT ON PUBLIC DISCLOSURE AND CONSULTATIONS FOR ROAD SECTION ARANDJELOVAC - KRCEVAC

This annex is enclosed in order to illustrate how a Report on Public Consultation should be prepared.



PE "ROADS OF SERBIA"
Sector for Investments
19a, Vlajkovičeva Street
11000 Belgrade, Serbia
Phone/Fax: +381 11 30 34 744
www.putevi-srbije.rs

**ROAD REHABILITATION AND SAFETY PROJECT
(RRSP)**

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

REPORT ON PUBLIC CONSULTATION

for

ENVIRONMENTAL MANAGEMENT PLAN

**road rehabilitation works on State Road of the IB Category No.23 (old
marking: M-4), section:**

ARANDJELOVAC – KRCEVAC

- Environmental Category B -

Belgrade, December 2012

BACKGROUND

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. 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 "Roads of Serbia" (PERS).

Road rehabilitation works on 8.7 km long road section Arandjelovac – Krcevac, on State Road of IB Class No.23 (old marking: M-4) 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 Environmental Management Plans (EMPs) are prepared.

The Project has been classified as Environmental Category B. i.e. a project requiring an EMP pursuant to IFIs Safeguard Policies. According to the current Serbian legislative, particularly following Serbian Law on EIA (Official Gazette of RS, No 135/04, 36/09) – EIA is not required for road rehabilitation projects.

PE "Roads of Serbia" – Sector for investments prepared draft EMP document for the rehabilitation of the State Road of IB Class No.23 Arandjelovac – Krcevac which was submitted to WB, EBRD and EIB for comments and remarks during November 2012. EMP has been prepared in order to ensure application of the good environmental practice and project compliance with the requirements of the International Financing Institutions (IFIs) which will finance Serbian Road Rehabilitation and Safety Project (RRSP). The preparation of 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.

On Dec 02, 2012 WB comments on EMP document were delivered to the PERS. PERS addressed the comments received and started public consultations and disclosure.

On Dec 05, 2012 PERS announced invitation for Public Consultations for the public, bodies and organizations interested in EMP for road rehabilitation works on Arandjelovac - Krcevac road section. Public and other interested parties and organizations were invited to participate in process of public consultation on draft EMP document. Prior to announcement in the newspapers, the EMP was delivered to the Municipality of Arandjelovac. Representatives of the local municipality informed the public through their local media of the time and place of public consultations. Invitation was placed on PERS web site too. Insight into the EMP document was ensured on following addresses:

- the premises of the PE "Roads of Serbia", investment sector, 19a Vlajkovicева St., Belgrade, on the first floor, on working days from 11:00 AM to 01:00 PM (local time), within 7 days starting from December 05, 2012.
- the premises of Arandjelovac Municipality, Venac slobode 10, 34300 Arandjelovac, on working days, within 7 days starting from Dec 05, 2012.
- on PE "Roads of Serbia" web site: www.putevi-srbije.rs

Public Consultation and presentation of EMP document were held in the premises of Arandjelovac Municipality, on Dec 12, 2012, from 00:00 PM to 02:00 PM and **there were no complaints** on prepared draft EMP document. Question raised and clarification provided are presented within this Report on Public Consultations.

REPORT ON PUBLIC CONSULTATION, ARANDJELOVAC, DEC 12, 2012

In accordance with OP/BP 4.01, PERS has prepared EMP document for Road rehabilitation works on 8.7 km long road section Arandjelovac - Krcevac.

The in-country disclosure of the EMP document started on Dec 05th 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 Arandjelovac 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 12th 2012 when the public meeting was held in city of Arandjelovac.

There were 9 attendees on public consultation meeting in Arandjelovac⁹. Two of them were local citizens. Among the others, there were local municipals, PERS representative, local environmental officer and designer's representative - civil and environmental engineers.

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 Strizovic | Arandjelovac municipality – Chief of Department for Real Estate Affairs, Urban Planning, Construction and Housing and Utilities, |
| 2. Mrs. Aleksandra Lukic | Arandjelovac Municipality |
| 3. Mrs. Nada Petrovic | Arandjelovac Municipality |
| 4. Mrs. Dusica Popovic | Arandjelovac Municipality |
| 5. Mrs. Javorka Stojkovic | Arandjelovac Municipality |
| 6. Mrs. Sladjana Milovanovic | Arandjelovac Municipality |
| 7. Mr. Zoran Popovic | Arandjelovac Municipality |
| 8. Mrs. Anka Lukovic | Technology High School |
| 9. Mrs. Ljiljana Plecevic | Technology High School |



Picture 1: Public consultation in Arandjelovac, December 12, 2012

⁹ List of participants is presented within the Chapter 3.



Picture 2: Public consultation in Arandjelovac, December 12, 2012



Picture 3: Public consultation in Arandjelovac, December 12, 2012

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.

The Remarks, Question and Answers:

Q1: **Mr. Zoran Popovic:** Will appropriate safety measures take place in the zone of primary school in Banja Settlement?

A1: Yes, safety is an integral part of each RRSP sub-project and increasing of safety is recognized as one of the major project tasks. Special attention will be paid to the area of primary school in Banja settlement (at km 3+485). That location will be particularly treated from the safety improvement point of view. The existing sidewalks will be

rehabilitated, new ones will be designed on locations of interruptions and where the sidewalks are missing by km 5+000, since there is a school at km 3+500 and the pedestrian movement is intensive. Special safety workshops/courses for school children will be held in many schools which are placed along the roads which are subject of RRSP Project. Additionally, during design phase, it will be requested that designers provides design with proper traffic warning signs and speed limitations within the zone of primary school, and to consider possibility to implement vibro-acoustic trips as appropriate design solution for ensuring driver awareness about the particularly sensitive area in safety point of view.

- Q2: Mr. Zoran Popovic: How existing access/crossing points of the main road and local roads will be treated through project implementation?
- A2: The rehabilitation and widening works won't affect existing crossing points.
- Q3: **Mr. Zoran Popovic:** How protection of different water bodies (streams and river Kubursnica) will be ensured during Project implementation? Are the works on existing culverts and bridges also treated in a manner to ensure protection of water bodies from any kind of pollution?
- A3: The Rehabilitation Contractor will operate construction site in a way to reduce the risk of generating sediments and wastewater that may pollute local soils or receiving water bodies. The Contractor's Site Specific Implementation Plan (SSIP) will cover procedures and plans for safeguarding aquatic habitats and fish during works over all water bodies, including the ones connected with Kubrsnica River, and will complement the Construction Method Statements. All request related to possible water pollution will be ensured through environmental management - waste and wastewater management plan will be prepared and implemented.
- Q4: **Mr. Zoran Popovic:** How oily wash-water or accidental spills are treated through the project? In case of spillage, will oils and fuels be drained into appropriate reservoirs or it will be allowed to leak directly or indirectly into watercourse?
- A4: The construction Site will be properly drained. The oily wash-water will be passed through an adequately sized, gravity oil separator prior to discharge. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to drain to an oil and water separator. The contractor will have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills. The Rehabilitation contractor will prepare Oil and fuel storage management plan. 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. The Contractor's SSIP will cover all procedures for storage, transportation and usage of oils and fuels, refueling 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. Fuel storage areas will not be located within 20m of a water course.
- Q5: **Mrs. Ljiljana Plecevic:** Will contractor equipment and machinery be certified regarding noise and air pollution emissions? Suggestion to PERS to carefully control including of subcontractors into the rehabilitation works.
- A5: Rehabilitation Contractor is obliged to prove that 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).

Q6: **Mrs. Ljiljana Plecevic:** How noise, water and soil pollution monitoring activities will look like during project implementation?

A6: Noise disturbance to workers and neighboring population: noise levels will be monitored with appropriate equipment (hand held analyser), 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.

Water and soil pollution: water and soil quality (suspended solids, oils, pH value, and conductivity) will be monitored by unannounced sampling; analysis will be done at accredited laboratory with necessary equipment. These activities will be performed 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.

Q7: **Mrs. Anka Lukovic:** Which party is obliged to produce Waste Management Plan (WMP) during project preparation?

A7: Rehabilitation Contractor is obliged to produce his own WMP based on EMP requirements. WMP is one of five site specific implementation plans which are necessary to be produced by the Contractor and Approved by the PERS.

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 Arandjelovac municipality in order to have insight into the EMP document.

Consultation ended at 02:00 PM, local time.

1. LIST OF PARTICIPANTS

Предмет ЈАВНИХ КОНСУЛТАЦИЈА: ПЛАН УПРАВЉАЊА ЗАШТИТОМ ЖИВОТНЕ СРЕДИНЕ (Environmental Management Plan – EMP)		Место одржавања ЈАВНИХ КОНСУЛТАЦИЈА: Аранђеловац, зграда Скупштине Општине, Венац Слободе 10	
Пут: М-4 Деоница: Аранђеловац - Крћевац		Датум јавних консултација: 12. децембар 2012.	
Р.б.	Име и презиме	Организација / адреса	Телефон.; Факс; E-mail
КС-1	Јелена Стризовић	ОПШТИНА АРАНЂЕЛОВАЦ ВЕНАЦ СЛОБОДЕ 10 АРАНЂЕЛОВАЦ	06418669334 JSTRIZOVIC@ARANDJELOVAC.RS
КС-2	Aleksandar Lukic	ОПШТИНА АРАНЂЕЛОВАЦ, ВЕНАЦ СЛОБОДЕ 10, АРАНЂЕЛОВАЦ	064/8669-336 a.lukic@ARANDJELOVAC.E5
КС-3	НАДА ПЕТРОВИЋ	ОПШТИНА АРАНЂЕЛОВАЦ, ВЕНАЦ СЛОБОДЕ БР.10, АРАНЂЕЛОВАЦ	064/8669-338 NADA.60LUBOVIC@GMAIL.COM
КС-4	Dusica Popović	ОПШТИНА АРАНЂЕЛОВАЦ ВЕНАЦ СЛОБОДЕ 10, АРАНЂЕЛОВАЦ	064/8669333 DUSKA.POPOVIC@GMAIL.COM
КС-5	ЈАВОРКА СТОЈКОВИЋ	ОПШТИНА АРАНЂЕЛОВАЦ ВЕНАЦ СЛОБОДЕ 10, АРАНЂЕЛОВАЦ	064/8669143 JAVORKA-STOJKOVIC@GMAIL.COM
КС-6	Слађана Миловић	ОПШТИНА АРАНЂЕЛОВАЦ ВЕНАЦ СЛОБОДЕ 10, АРАНЂЕЛОВАЦ	064/866-9-368 sladjana.milovanovic@gmail.com
КС-7	Зоран Поповић	ОУ АРАНЂЕЛОВАЦ САРАЈНИК 34 КИСЛОВЕ ЗНС	064/8669146 ZPOPOVIC@YAHOO.COM
КС-8	Анка Луковић	VIŠKA TEHNIČKA ŠKOLA STRAJKOVICH STUDIJE ARANDJELOVAC	064 161 8895 anka.lukovic@VBSAR.edu.rs
КС-9	Љиљана Плесковић	— —	063/615 610 ljiljanaplesovic@gmail.com

DOCUMENTATION

5. decembar 2012.
asi@politika.rs

ОГЛАСИ/ЈАВНИ ПОЗИВИ

PBB
PRIVREDNA BANKA BEOGRAD AD

Привредна банка Београд а.д. Београд
објављује

ЈАВНИ ПОЗИВ

**за достављање пријава за учешће у поступку избора саветника
за докапитализацију, припајање, односно продају акција
Привредне банке Београд а.д. Београд у власништву Републике Србије
(број ЈП – 460/12)**

Предмет поступка је избор финансијског и правног саветника за пружање услуга у поступку докапитализације и/или припајања и/или продаје акција Привредне банке Београд а.д. Београд у власништву Републике Србије.

Привредна банка Београд а.д. Београд, као наручилац позива све заинтересоване понуђаче којима релевантно искуство и капацитет за пружање наведених услуга да поднесу пријаве за учешће у поступку.

Правно учешћа у поступку имају кандидати који испуњавају услове из конкурсне документације. Испуњеност услова се доказује документима и обрасцима садржаним у конкурсној документацији.

Од дана објављивања јавног позива у листовима „Политика“ и „Вечерње новости“ овлашћеним представницима заинтересованих понуђача биће омогућен непосредан увид у конкурсну документацију на адреси Наручиоца, сваког радног дана од 9 до 15 часова.

Заинтересовани понуђачи могу откупити конкурсну документацију. Накнада за откуп конкурсне документације је неповратна и износи 3.000 динара. Накнада се уплаћује на текући рачун Наручиоца број: 908-25501-08, позив на број: 03710, сарка уплате: „Откуп конкурсне документације ЈП – 460/12“ (након презентовања доказа о уплати накнаде за откуп конкурсне документације, заинтересовани понуђач може преузети конкурсну документацију на адреси Наручиоца, сваког радног дана од 9 до 15 часова. Адреса наручиоца је:

Привредна банка Београд а.д. Београд
11000 Београд
ул. Булевар краља Александра 70

На захтев заинтересованог понуђача, конкурсна документација може бити достављена поштом или електронским путем на адресу заинтересованог понуђача, након достављања доказа о уплати накнаде.

Рок за достављање пријава за учешће у поступку је 13. децембар 2012. године, и то најкасније до 12 часова.

Пријаве за учешће се достављају непосредно или путем поште на адресу Наручиоца из тачке 5. овог позива. Пријаве за учешће се достављају у затвореној и запечатеној коверти са назнаком: „Пријава за учешће у поступку избора саветника ЈП 460 – НЕ ОТВАРАТИ, ОСИМ У ПРИСУСТВУ КОМИСИЈЕ“. Изполеђени коверте мора бити назначен назив и адреса подносиоца пријаве. Пријаве се достављају на српском језику у два примерка. Пријава треба да садржи: пријаву за учешће у поступку, доказе о испуњености услова из конкурсне документације, техничку понуду и финансијску понуду. Начин припреме и достављања пријаве ближе је описан у конкурсној документацији.


Благовременим ће се сматрати пријаве које су до назначеног рока приспале код Наручиоца, без обзира на начин на који су послате. Неблаговремене пријаве неће бити узете у разматрање и биће враћене подносиоцима пријава неотворене по окончању поступка отварања пријава.

Избор кандидата ће се обавити на основу података које су доставили подносиоци пријава, применом критеријума за оцену понуда који су дати у конкурсној документацији.

Наручилац ће у примереном року донети одлуку о избору кандидата. О донетој одлуци Наручилац ће писмено обавестити све подносиоце пријава.

Додатне информације или појашњења у вези са припремањем пријаве, подносиоци пријава могу добити писаним путем на адресу nkomazec@pbb-banka.com и ymedic@pbb-banka.com

11215023-1



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 IV реда број 22 (ранија ознака М-4), деоница:
АРАНЂЕЛОВАЦ – КРЧЕВАЦ

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


- 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
- у просторијама СО Аранђеловац, Венац слободe 10, 34300 Аранђеловац, у року од 7 дана од дана објављивања овог обавештења
- на интернет страници ЈП „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 12. 12. 2012. године, са почетком у 12 часова биће одржане јавне консултације и презентација предметног Плана у просторијама СО Аранђеловац, Венац слободe 10, 34300 Аранђеловац.

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
е-mail: igor.radovic@putevi-srbije.rs



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.22 (old marking: M-4), section:
ARANDJELOVAC – KRCEVAC

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

- the premises of the PE "Roads of Serbia", investment sector, 19a Vojkovicева 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 Arandjelovac Municipality, Venac slobode 10, 34300 Arandjelovac, on working days, within 7 days in regards to the date of public announcement of this invitation
- 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 Vojkovicева St., Belgrade. Remarks can be also provided on following internet address: office@putevi-srbije.rs

On December 12th, 2012, at 12:00 PM (local time), public consultations and presentation of the subject EMP document will be organized on the premises of Arandjelovac Municipality, Venac slobode 10, 34300 Arandjelovac. If you need any additional information, please contact:

PE "Roads of Serbia"
Sector for investments
19a Vojkovicева Street, 11000 Belgrade, Serbia
tel./fax. +381 11 / 32 34 744
E-mail: igor.radovic@putevi-srbije.rs

11215023-1

Picture 2: Announcement of public consultation in daily newspaper ("Politika", December 05, 2012)




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 **IV** реда број **22** (ранија ознака **M-4**), деоница:
АРАНЂЕЛОВАЦ – КРЂЕВАЦ

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

- 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
- у просторијама СО Аранђеловац, Венац слободе 10, 34300 Аранђеловац, у року од 7 дана од дана објављивања овог обавештења
- на интернет страници ЈП „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 12. 12. 2012. године, са почетком у 12 часова биће одржане јавне консултације и презентација предметног Плана у просторијама СО Аранђеловац, Венац слободе 10, 34300 Аранђеловац.
 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



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.22 (old marking: **M-4**), section:
ARANDJELOVAC – KRCEVAC

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

- the premises of the PE “Roads of Serbia”, investment sector, 19a Vljakoviceva 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 Arandjelovac Municipality, Venac slobode 10, 34300 Arandjelovac, on working days, within 7 days in regards to the date of public announcement of this invitation
- 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 Vljakoviceva St., Belgrade. Remarks can be also provided on following internet address: office@putevi-srbije.rs
 On December 12th, 2012, at 12:00 PM (local time), public consultations and presentation of the subject EMP document will be organized on the premises of Arandjelovac Municipality, Venac slobode 10, 34300 Arandjelovac.
 If you need any additional information, please contact:
 PE “Roads of Serbia”
 Sector for investments
 19a Vljakoviceva Street, 11000 Belgrade, Serbia
 tel./fax. +381 11 / 30 34 744
 E-mail: igor.radovic@putevi-srbije.rs

11215028-1

Picture 3: Announcement of public consultation in daily newspaper (“Politika”, Dec 05, 2012)

ANNEX 3: SAMPLE SCREENING CHECKLIST FOR THE ANNUAL ENVIRONMENTAL & SOCIAL REPORT

1. General		
Is the project materially compliant with all relevant Performance Requirements (taking account of agreed action plans, exemptions or derogations)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	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 <input type="checkbox"/> No <input type="checkbox"/>	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 <input type="checkbox"/> No <input type="checkbox"/>	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 <input type="checkbox"/> No <input type="checkbox"/>	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:

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

Have these visits resulted in any penalties, fines and/or corrective action plans?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe, including status of implementing corrective actions to address any violations found:
Has the Company engaged any contractors for project-related work in the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state for which types of work, and how the company has monitored the compliance of contractors with Performance Requirements and the Environmental and Social Action Plan:
Were any of the violations stated above the responsibility of contractors?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details, including how the Company is ensuring that corrective actions are implemented by the Contractor?
Have any operations been reduced, temporarily suspended or closed down due to environmental, health, safety or labour reasons?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe:
<p>Please describe any environment or social programmes, initiatives or sub-projects undertaken during the reporting period to improve the company's environmental or social performance and/or management systems:</p> <p>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:</p>		

2. Status of the Environmental and Social Action 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 Data¹⁰

Please provide the name and contact details for your environmental manager:

Parameter ¹¹	Value ¹²	Unit	Compliance Status ¹³	Comments ¹⁴
Waste Water				
Total waste water generated				
BOD				
COD				
Suspended Solids				
Phosphorus				
Nitrates				
Heavy metals				
[Other]				
Air Emissions				
SO ₂				
NO _x				
Particulates				

¹⁰ 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 be used instead.

¹¹ 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.

¹² Please ensure that the units of measurement are clearly stated

¹³ Please report on compliance against the standards for this project (typically local, EU and/or World Bank Group)

¹⁴ In addition to any other comments, please indicate whether the measurements reported apply to all or only some process operations at the facility

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

Please provide the name and contact details for your environmental manager:				
Parameter¹¹	Value¹²	Unit	Compliance Status¹³	Comments¹⁴
CO ₂				
CH ₄				
N ₂ O				
HFCs				
PFCs				
SF ₆				
[Other]				
Other Parameters				
Noise				
[Other]				
Solid Waste				
<p>Please provide details of the types and amounts of solid wastes generated by the project. Indicate where wastes are classified as hazardous. Indicate the final re-use, recycle or disposal method for each waste type.</p>				

4. Resource Usage and Product Output			
Parameter	Value	Measurement Unit	Comments¹⁵
Fuels used			
Oil			
Gas			
Coal			
Lignite			
Grid Electricity			
Heat Purchased			
Feedstocks and raw materials consumed			
Name 1			
Name 2			
Product output			
Product 1			
Product 2			

¹⁵ 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)

5. Human Resources 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 collective redundancies during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	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 redundancies to the workforce in the next year?	Yes <input type="checkbox"/> No <input type="checkbox"/>	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 trade union representation at Company facilities during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details, and summarise engagement with trade unions during reporting period:	
Were there any other worker representatives (e.g. in the absence of a trade union)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details and summarise engagement with them during reporting period:	
Were there any changes in the status of Collective Agreements?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details:	

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

<p>Have employees raised any grievances with the project during the reporting period?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please state how many, split by gender, summarise the issues raised in grievances by male and female staff and explain how the Company has addressed them:</p>
<p>Have employees raised any complaints about harassment or bullying during the reporting period?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please state how many, split by gender, summarise the issues raised by male and female staff and explain how the Company has addressed them:</p>
<p>Have there been any strikes or other collective disputes related to labour and working conditions at the Company in the reporting period?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please summarise nature of, and reasons for, disputes and explain how they were resolved</p>
<p>Have there been any court cases related to labour issues during the reporting period?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please summarise the issues contested and outcome:</p>
<p>Have there been any changes to the following policies or terms and conditions during the reporting period in any of the following areas:</p> <ul style="list-style-type: none"> • 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 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please give details, including of any new initiatives:</p>

<ul style="list-style-type: none"> • Wages (wage level, normal and overtime) • Overtime • Working hours • Flexible working / work-life balance • Grievance mechanism for workers • Health & safety 		
--	--	--

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 ¹⁶ :		
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) ¹⁷ :		
Number of lost workdays ¹⁸ resulting from incidents:			Number of cases of occupational disease:		

¹⁶ If you have not already done so, please provide a separate report detailing the circumstances of each fatality.

¹⁷ Incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.

¹⁸ 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.

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

Number of sick days:					
Accident causes (falling, heavy loads, struck 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:					

7. Stakeholder Engagement	
Please provide the name and contact details for your external relations or community engagement manager:	
<p>Please provide information on the implementation of the stakeholder engagement plan and summarise interaction with stakeholders during the reporting period, including:</p> <ul style="list-style-type: none"> - 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:

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

<p>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?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>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.</p>
<p>Have any vulnerable groups been identified?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, list the groups that were identified and describe any additional measures undertaken in order to mitigate impacts specific to these groups.</p>
<p>If applicable, have all transit allowances been paid?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>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.</p>
<p>Has legal support been provided to all the affected persons?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, specify how many persons effectively made use of the legal support.</p>
<p>Have all outstanding land and/or resource claims been settled?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/></p>	<p>If no, specify how many claims are still outstanding and state what the expected timing is for settling them.</p>
<p>Have there been any new land acquisition-related complaints or grievances?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please state how many and summarize their content.</p>

<p>Has the company regularly reported to the affected communities on progress made in implementing the RAP?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please state how many meetings were held and how many participants attended.</p>
<p>New Land Acquisitions If the company acquired any new land for the project during the reporting year, please provide documents to show closure of land acquisition transactions. Please attach new/revised RAP covering the new land acquisition and describe mitigation measures, compensation, agreements reached, etc., and provide in tabular form a list of affected people and status of compensation.</p>		
<p>Have any persons been physically displaced?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, how many?</p>
<p>Have any persons been economically displaced?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, how many?</p>
<p>Was it a government assisted resettlement?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	

9. Community Interaction and Development

Please summarise any social or community development initiatives undertaken by the company during the reporting period, and any associated expenditure:

ANNEX 4: GENERIC MITIGATION PLAN FOR ROAD REHABILITATION PROJECTS

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
PRE-CONSTRUCTION		Detailed Design			
	Bid documents prepared without access to or use of the this EMP in a translated version	No bid documents will be prepared without the authors having incorporated a (Serbian) copy of the mitigation and monitoring plan EMP, which shall be included in the safeguard clauses of the Technical Specifications in the contracts and commitment to comply with Lender Requirements	Detailed Design Consultant; PERS	Technical Control of Detailed Design; PERS; PIT	
	Obtaining preconditions from Institute for Nature Protection of Serbia / Provincial Institute for Nature Protection	According to the Law on EIA and its sub-laws, it is necessary to obtain preconditions from the institutions relevant for nature protection for all projects which will be implemented within or in the vicinity of nature protected area	Detailed Design Consultant; PERS	Technical Control of Detailed Design; PERS; PIT	
	Obtaining preconditions from Institute for Protection of Cultural Monuments / Provincial Institute for Protection of Cultural Monuments	According to the Law on EIA and its sub-laws, it is necessary to obtain preconditions from the institutions relevant for protection of cultural monuments for all projects which will be implemented within or in the vicinity of nature protected area	Detailed Design Consultant; PERS	Technical Control of Detailed Design; PERS; PIT	
	Request for Decision about Need for EIA	Based on preconditions obtained from Institutions relevant for Nature/Culture Protection, Design	Detailed Design	Technical Control of	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
	(RDNEIA)	consultant will produce Request for Decision about Need for EIA (RDNEIA) or Environmental Impact Assessment (EIA) for all projects which will be implemented within or in the vicinity of nature/culture protected area. Request will be submitted to the relevant Ministry/Provincial Secretariat. Department for EIA within the relevant Ministry will make decision if EIA Study is necessary to be produced for particular project or not.	Consultant; PERS	Detailed Design; PERS; PIT	
	Environmental Impact Assessment Study	For the sub-projects for which full EIA procedure is necessary to be conducted – EIA Study, public presentation and disclosure and Final EIA approval obtained from relevant institutions are mandatory part of such projects, Detailed Designers are obliged to produce EIA Studies, collect preconditions from relevant institutions and prepare and ensure public presentation of EIA Study. PERS is obliged to organize and perform Public Consultations for such projects and to obtain a Final Environmental Approval for them.	Detailed Design Consultant; PERS	Technical Control of Detailed Design; PERS; PIT	
	The location and development of the contractors' facilities will be approved by the PE. Locations will be selected so that:	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. secondary impacts)
			Install	Supervision	
		<p>release into surface water systems, in accordance with the Law on water (“Official Gazette of RS”, 101/05).</p> <p>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</p> <p>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.</p> <p>Clearing of sites and removal and disposal of vegetation:</p> <p>Wherever possible limit area to be cleared and avoid excessive machine disturbance of the topsoil.</p> <p>Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements.</p> <p>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:</p> <p>Limit the extent of excavation to reduce soil erosion potential.</p> <p>Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site.</p> <p>Avoid excavation and operating machinery in wet ground conditions.</p>			

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
	Site selection for construction camps, near or within existing settlements. Impact on public health and sociological setting	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 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.	Detailed Design Consultant	Technical Control of Detailed Design 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. Planning for public awareness meetings	Detailed Design Consultant	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				
	Contractor to prepare implement the following plans as described in the EMP to ensure compliance with legislative and Lender requirements. <ul style="list-style-type: none"> • Site organisation plan; • Sewage and septage management; • Project grievance mechanism; 				

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
	<ul style="list-style-type: none"> • Soil Management Plan; • Dust management Plan; • 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; • Waste and wastewater management plan in accordance with the Law on Waste management; • Oil and fuel storage management plan; • In-river works management plan; • Camp management plan; • Emergency response plan; • Rehabilitation Plan; • Safety and Hazard Assessment; • Safety and Labour Management Plan (SLMP). 				
CONSTRUCTION		Site Induction			
	All workers and visitors to site shall be given a Health, Safety and Environment Induction and instructed on the need to use of PPE.				
CONSTRUCTION		Material supply			
	Asphalt plant dust, fumes, workers health and safety,	use existing asphalt plants; requirement for official approval or valid operating license	Asphalt plant	Asphalt plant	to be specified in bid documents-

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
	ecosystem disturbance				Conditions for selection of subcontractors for material supply
	Stone quarry dust, workers health and safety, ecosystem disturbance	use existing stone quarries, requirement for official approval or valid operating license	Stone quarry	Stone quarry	
	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	
	School children safety	Reduction of vehicular speed prior to settlements and schools should be considered in the design using necessary measures such as rumble bars and speed limit signs.	Detailed Design Consultant	Technical Control of Detailed Design PERS	
CONSTRUCTION	Material transport				
	Stone, sand and gravel Dust	wet or cover truck load, particularly in sections where critical receptors (residential areas and schools) are located	Truck operator	Truck operator	
	Asphalt dust, fumes	All trucks are to be covered	Truck operator	Truck operator	to be specified in bid documents-
	Stone	wet or cover truck load	Truck	Truck operator	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
	Dust		operator		Technical Specifications for realization of works
	Sand and gravel dust	wet or cover truck load	Truck operator	Truck operator	
	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	
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. The Contractor has to make all possible efforts to keep the noise production at the lowest possible level when carrying out his works in the vicinity of schools. Contractor should erect temporary barriers in case he needs to reduce the noise levels during construction. Mitigation measures need to be implemented if the levels are higher than legally prescribed. Noisy equipment will	Construction Contractor	Construction Contractor	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
		be located as far as possible from residential or other sensitive receptors.			
	Dust	<p>water construction site and organized material storage sites organized as appropriate, limited speed of vehicles, particularly in sections where critical receptors (residential areas and schools) are located</p> <p>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.</p>	Construction Contractor	Construction Contractor	
	Vibrations	<p>limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities)</p> <p>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.</p>	Construction Contractor	Construction Contractor	
	Traffic disruption during construction activity	traffic management plan with measures to redirect traffic that are easily seen or easy to follow; include	Construction Contractor	Construction Contractor	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
		<p>traffic police assistance if needed</p> <p>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</p>			
	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	appropriate lighting and well defined safety signs and protection measures.	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper material storage, management and usage	<p>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.</p> <p>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).</p> <p>Soil Management Plan shall be prepared for the controlled removal of top soil, storage and reuse.</p>	Construction Contractor	Construction Contractor	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
		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	Transport of waste in marked vehicles designed to	Construction	Construction	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
	from improper disposal of waste materials	the type of waste to minimise the risk of release of materials (hazardous and non-hazardous materials) 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.	Contractor	Contractor	
	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 covers crop and native endemic species and monitors its effectiveness. Where initial plantings were not successful, replacement plantings will be carried out.			
OPERATION – POST REHABILITATION PHASE		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	to be specified in maintenance contract documents- Technical Specifications

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
					for realization of maintenance works
	Possible air, water and soil pollution dust, vehicle exhaust, fuel and lubricants spills	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 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; dispose waste material at location protected from washing out	Maintenance Contractor	Maintenance Contractor	
	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	

ROAD REHABILITATION AND SAFETY PROJECT – RRSP

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
OPERATION – POST REHABILITATION PHASE	Maintenance				
	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
	Possible air, water and soil pollution dust, vehicle exhaust, fuel and lubricants spills	ensure proper handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and properly dispose; properly 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; dispose waste material at appropriate location protected from washing out	Maintenance Contractor	Maintenance Contractor	
	Erosion, rockfall, hazardous conditions	install warning signs (rockfall, landslide, wet or slippery conditions, dangerous curve, animal or	Maintenance Contractor	Maintenance Contractor	

Phase	Issue	Mitigating measure	Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Supervision	
		pedestrian 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			

ANNEX 5: GENERIC MONITORING PLAN FOR ROAD REHABILITATION PROJECTS

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Operate
CONSTRUCTION			Material supply			
Asphalt plant	possession of official approval or valid operating license	asphalt plant	Inspection / supervising engineer	before work begins	assure compliance environment, and requirements	plant with health safety 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

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Operate
CONSTRUCTION			Material transport			
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
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

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Operate
CONSTRUCTION			Construction Site			
Noise disturbance to workers and neighbouring population	noise levels	job site; nearest homes at settlements and schools	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
Dust	air pollution (solid particles)	at and near job site particularly in residential areas and schools	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

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Operate
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 appropriateness	at and near job site	observation	random checks at least once per week in the evening		Supervision Contractor
Water and soil pollution from improper material storage, management and usage	water and soil quality (suspended solids, oils, pH value, conductivity)	Rivers, streams and other water bodies within the project area	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
Workers safety	protective equipment; organization of bypassing traffic Methods of work	job site	inspection	Unannounced inspections during work. It is recommended to use proposed template for this purpose		Supervision Contractor

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Operate
OPERATION – POST REHABILITATION PHASE			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

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Operate
OPERATION – POST REHABILITATION PHASE			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

ANNEX 6: SAMPLE OF THE DETAILED PROJECT-SPECIFIC ENVIRONMENTAL BASELINE FOR ROAD SECTION UZICE – POZEGA – KRATOVSKA STENA AND ROAD SECTION ARANDJELOVAC - KRCEVAC

Baseline Environment for Road Rehabilitation works on the State Road of the IA Category No. 4, section Uzice – Pozega – Kratovska Stena

Subproject Description

Road rehabilitation works on proposed 37.1 km long road section Uzice – Pozega – Kratovska Stena 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

Proposed road section is located in Western Serbia, Zlatibor Administrative District, and it goes through the territories of City of Uzice and Municipality of Pozega (to the borders of territory of City of Cacak and Moravica Administrative District).

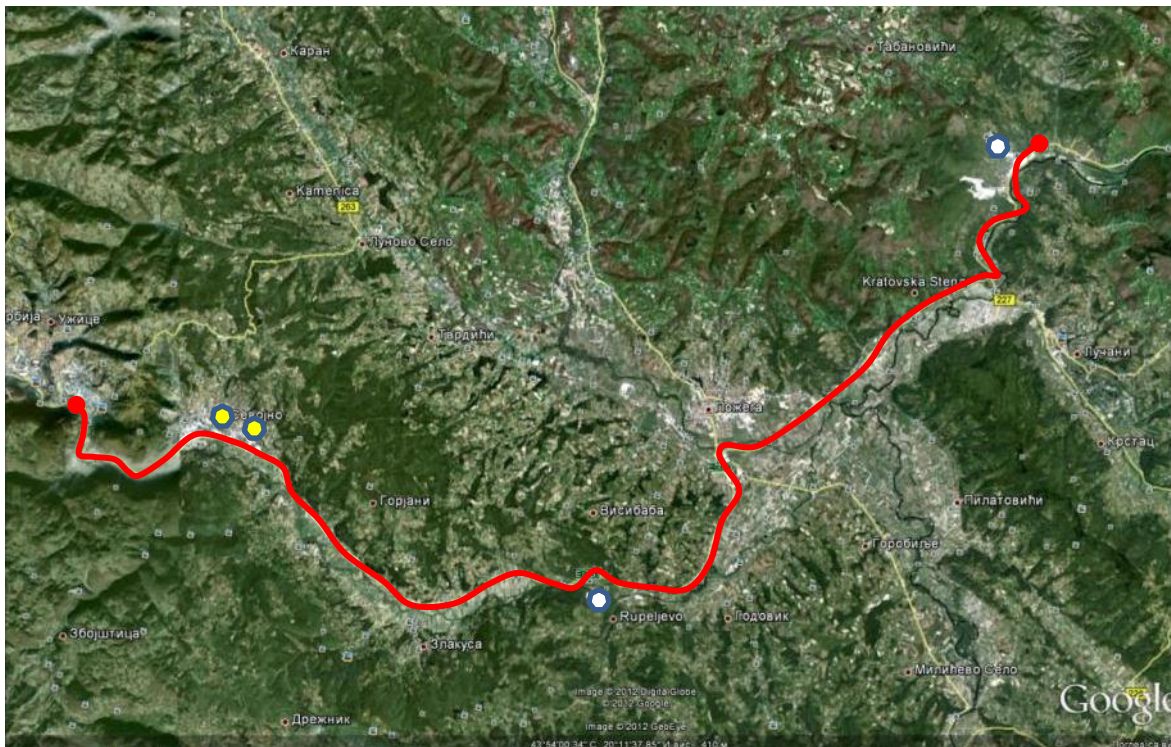


Figure 3.1: Location of Uzice – Pozega – Kratovska Stena road section

The section belonged to the arterial road M-5 according to the old network classification, while according to the new classification, it is categorized as a state road of the IA category No. 4, B&H border (Vardiste) – Pojate (state road of the IA category No. 1). The chainages to be used for the diagnostics are km 0+000 (Uzice) as starting point and km 37+106 as ending point.

The start of the section is in Uzice and it goes to km 1+530, although the whole stretch is free of residential buildings. The following settlements are located along the section: Sevojno, Gorjani, Uzici, Rasna, Pozega and Gugalj.

There are de-levelled interchanges (overpasses) at two locations: km 0+140 and km 2+908. With several de-levelled interchanges, mostly tunnels under the road, there is a railway Pozega-Stalac, which goes in parallel with the road from Pozega to Asanovac. The section in question intersects the state road of the IB category No. 13 (delevelled intersection) at 21+710. There is an access of state road of the II category No. 154 at km 29+626 (surface intersection). There are numerous accesses of streets, municipal roads, unclassified roads and private accesses.



● rolling mill ● stone quarries

Figure 3.2: Location of Uzice – Pozega – Kratovska Stena road section

Important structures along the road: “Seval” aluminium rolling mill, “Sevojno” copper rolling mill, “Sengolj” and “Jelen Do” stone quarries.

Drainage: Transversally to gutters, over the shoulders into the ditches or along the slopes of embankments. Longitudinally by gutters and ditches to culverts or watercourses. 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 the existing road with no change of the alignments. Through the Detailed Design Phase it will be reconsidered if some widening is possible. In that case it is expected to perform widening on 4 curves, up to 2m. Additionally, widening of existing carriageway up to 0.2m is proposed on 500 m long sub section ending on Kratovska Stena. All widening will be taken 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.

Physical Environment

Geography

Road section Uzice – Pozega – Kratovska Stena in the length of 37.1 km belongs to the road link Vardiste (border of Bosnia-Herzegovina) - Pojate on the main road E-761, in Western Serbia, Zlatibor Administrative District. Road goes through the territories of City of Uzice and Municipality of Pozega (to the borders of territory of City of Cacak and Moravica Administrative District).

Watercourses

There are two watercourses that go in parallel with the road: the Djetinja River at part from Uzice to Pozega, while from Pozega to Asanovac there is the river Zapadna Morava. The section is intersected by several streams and one river flow (the Skrapez river at km 23+117).

The water quality standard of the river is II class according to the Serbian categorization of watercourses. Due to the nature of road rehabilitation works of the watercourses will not be affected by the works through the implementation of good construction management practices. There are no sensitive species (fish) in Zapadna Morava and Skrapez River that could be impacted by the project works.

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). 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.



Figure 3.3: Bridge over Skrapez River

Air Quality

Within the corridor of road section Uzice – Pozega – Kratovska Stena there are two existing point sources of air pollution. They are “Sengolj” and “Jelen Do” stone quarries. It is up to the designers and the Contractor to decide if these stone quarries will be used by the project.

PERS will monitor all Contractors activities, including possession of valid working permits and environmental approvals for all subcontractors.

The existing road (E-761) is linear sources which cause additional emission of air pollutants along the corridor of proposed road section.



Figure 3.4: Road, Railway and Stone Quarry “Jelen Do”

Industrial structures are present within the studied area (“Seval” aluminium rolling mill, “Sevojno” copper rolling mill) and they cause increased levels of concentrations of pollutants in the atmosphere when operating in full capacity or without applying air-pollution reduction measures. However, the measurements and action in respect to operation of these facilities are outside the jurisdictions of institutions involved in preparation and execution of this project.

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

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

Noise Quality

Noise is another threat to the quality of the project environment. Many heavy vehicles such as trucks, buses, cars, move on the road during day & nights and these vehicles generate high noise in this subproject area.

There are two dominant noise sources on proposed road section Uzice – Pozega – Kratovska Stena:

- Existing State Road of the IA Category No.4 (E-761) as linear source
- Existing major railway “Belgrade – Bar”

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

Biological Environment

The composition of plant community includes low growing grasses and herbaceous vegetation as well as other flora. No wild animals inhabit and endangered species are present in this area. No forestland is involved in this area are found surrounding the proposed subproject locations.

Socio-economic Environment

Settlements

The start of the section is in Uzice and it goes to km 1+530, although the whole stretch is free of residential buildings. The following settlements are located along the section: Sevojno, Gorjani, Uzici, Rasna, Pozega and Gugalj.

Roads and Railways

Belgrade – Bar railway goes in parallel with the section Uzice-Pozega. There are de-levelled interchanges (overpasses) at two locations: km 0+140 and km 2+908. With several de-levelled interchanges, mostly tunnels under the road, there is a railway Pozega-Stalac, which goes in parallel with the road from Pozega to Asanovac. The section in question intersects the state road of the IB class no. 13 (delevelled intersection) at 21+710. There is an access of state road of the second class no. 154 at km 29+626 (surface intersection). There are numerous accesses of streets, municipal roads, unclassified roads and private accesses.



Figure 3.5: Road section Uzice – Pozega and Belgrade – Bar Railway

Land Use

Most of the surrounding areas are developing industrial & rural in nature. There are many industries operating in the area. Commercial activities are found around the project site.

Industries and Commerce

Industrial structures are present within the studied area (“Seval” aluminium rolling mill, “Sevojno” copper rolling mill) and they cause increased levels of concentrations of pollutants in the atmosphere when operating in full capacity or without applying air-pollution reduction measures.

Socio-cultural, Religious and Archeological Sites

There are no archaeological structures / monuments or sites that are of significance in the vicinity of the subproject locations.

Important Environmental Features/Hotspots

Locations of major environmental hotspots/features along the road are shown in the **Table 3.1**.

Table 3.1: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Uzice – Pozega – Kratovska Stena Sub-project

Chainage (km)	IEFs	Road Side	Comments
5+000	“Seval” aluminium rolling mill	LS	It is located at about 50m far from the CL of the road
6+000	“Sevojno” copper rolling mill	LS	It is located at about 50m far from the CL of the road
33+000	“Sengolj” stone quarry	LS	It is located at about 50m far from the CL of the road
35+000	“Jelen Do” stone quarry	LS	It is located at about 50m far from the CL of the road

Baseline Environment for Road Rehabilitation works on the State Road of the IB Class No. 20, section Zabalj Intersection - Zrenjanin

Subproject Description

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-Noví Sad-Zrenjanin-Zitiste-Nova Crnja-Srpska Crnja Border Crossing). Length of the section is 24.2 km.

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.

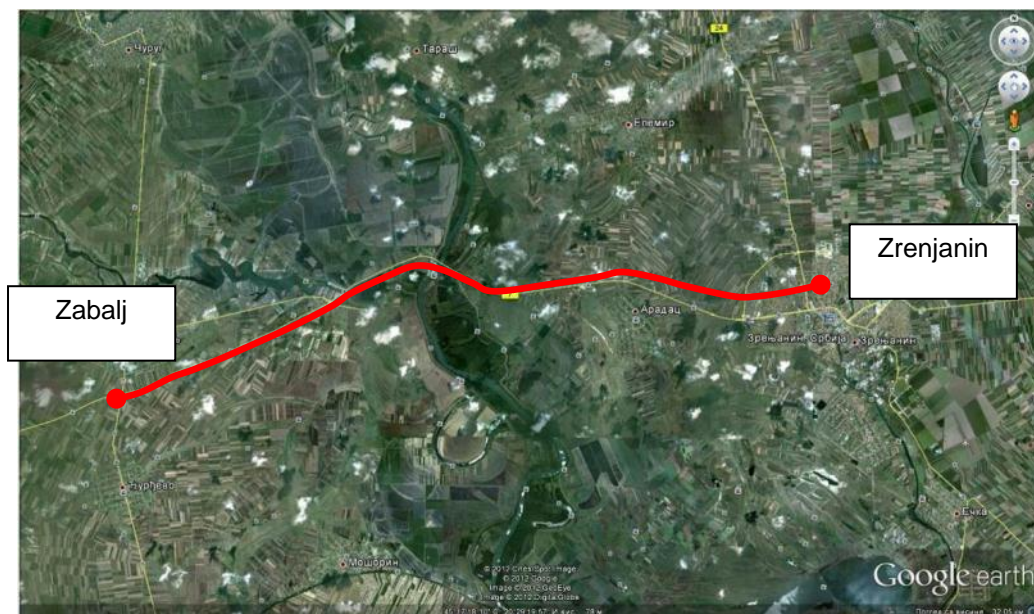


Figure 3.10: Location of Zabalj Intersection – Zrenjanin road section

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.

Physical Environment

Geography

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.

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).



Figure 3.11: Bridge over Tisa River

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.



Figure 3.12: Bridge over Jegricka River

Air Quality

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.

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.

Noise Quality

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. There are no noise affected zones within the proposed road corridor due to the fact that whole stretch is free of residential buildings. There are no sensitive receptors (schools, hospitals, etc.) along the route.

Biological Environment

No wild animals inhabit and endangered species are present in this area. No forestland is involved in this area are found surrounding the proposed subproject locations.

Socio-economic Environment

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.

Land Use

Most of the surrounding areas are agricultural in nature. There are no industries operating in the area. Commercial activities are found around the project site (snail breeding complex, but non-working in recent years).

Industries and Commerce

There are no industries operating in the area.

Socio-cultural, Religious and Archeological Site

There are no archaeological structures / monuments or sites that are of significance in the vicinity of the subproject locations.

Important Environmental Features/Hotspots

Locations of major environmental hotspots/features along the road are shown in the **Table 3.3**.

Table 3.3: Important Environmental Features (IEFs)/Hotspots at the Road Sides along the Zabalj Intersection – Zrenjanin Sub-project

Chainage (km)	IEFs	Road Side	Comments
8+000 to 9+000	Nature Park "Jegricka"	LS	It is located at about 500m far from the CL of the road,
9+000	Jegricka Canal	CL	It is located directly under the bridge, but bridge works are excluded from this project



Figure 3.13: Bridge over Jegricka Canal and information about protected area

ANNEX 7: SAMPLE ENVIRONMENTAL CHECKLIST

Note: this document could be used as a support material in order to ensure that the major environmental issues have been taken into consideration during preparation of the section-specific EMP.

Check appropriate column as Yes (Y), Maybe (M), No (N) or Beneficial (B). Briefly explain Y, M and B checks in next Section, "Explanations". A "Y" response does not necessarily indicate a significant effect, but rather an issue that requires focused consideration.

Y. M. N or B

- 1. Earth Resources**
 - a. grading, trenching, or excavation in cubic meters or hectare _____
 - b. geologic hazards (faults, landslides, liquefaction, un-engineered fill, etc.) _____
 - c. contaminated soils or ground water on the site _____
 - d. offsite overburden/waste disposal or borrow pits required in cubic meters or tons _____
 - e. loss of high-quality farmlands in hectares _____

- 2. Agricultural and Agrochemical**
 - a. impacts of inputs such as seeds and fertilizers _____
 - b. impact of production process on human health and environment _____
 - c. other adverse impacts _____

- 3. Industries**
 - a. impacts of run-off and run-on water _____
 - b. impact of farming such as intensification or extensification _____
 - c. impact of other factors _____

- 4. Air Quality**
 - a. substantial increase in onsite air pollutant emissions (construction/operation) _____
 - b. violation of applicable air pollutant emissions or ambient concentration standards _____
 - c. substantial increase in vehicle traffic during construction or operation _____
 - d. demolition or blasting for construction _____
 - e. substantial increase in odor during construction or operation _____
 - f. substantial alteration of microclimate _____

- 5. Water Resources and Quality**
 - a. river, stream or lake onsite or within 30 meters of construction _____
 - b. withdrawals from or discharges to surface or ground water _____
 - c. excavation or placing of fill, removing gravel from, a river, stream or lake _____
 - d. on-site storage of liquid fuels or hazardous materials in bulk quantities _____

- 6. Cultural Resources**
 - a. prehistoric, historic, or paleontological resources within 30 meters of construction _____
 - b. site/facility with unique cultural or ethnic values or protected heritage site within 30 metres of construction _____

- 7. Biological Resources**
 - a. vegetation removal or construction in wetlands or riparian areas _____
 - b. use of pesticides/rodenticides, insecticides, or herbicides in hectare _____
 - c. construction in or adjacent to a designated wildlife refuge _____
 - d. existence of protected natural resources – water, flora, fauna _____

- 8. Planning and Land Use**
 - a. potential conflict with adjacent land uses _____

- b. non-compliance with existing codes, plans, permits or design factors _____
- c. construction in national park or designated recreational area _____
- d. create substantially annoying source of light or glare _____
- e. relocation of individuals for +6 months _____
- f. interrupt necessary utility or municipal service > 10 individuals for +6 months _____
- g. substantial loss of inefficient use of mineral or non-renewable resources _____
- h. increase existing noise levels >5 decibels for +3 months _____

9. Traffic, Transportation and Circulation

- a. increase vehicle trips >20% or cause substantial congestion _____
- b. design features cause or contribute to safety hazards _____
- c. inadequate access or emergency access for anticipated volume of people or traffic _____

10. Hazards

- a. substantially increase risk of fire, explosion, or hazardous chemical release _____
- b. bulk quantities of hazardous materials or fuels stored on site +3 months _____
- c. create or substantially contribute to human health hazard _____

11. Other Issues (to be used for categories not captured under 1 through 10 above)

- a. Substantial adverse impact _____
- b. Adverse/negative impact _____
- c. Minimal impact _____

B. EXPLANATION OF ENVIRONMENTAL CONSEQUENCES: explain Y, M and B responses

C. RECOMMENDED ACTION (Highlight Appropriate Action):

1. The project has no potential for substantial adverse environmental effects. No further Environmental Management Plan is required.*
2. The project has potential for adverse environmental concerns (baselines section and water quality issues) and/or environmental impacts; however the recommended mitigation measures will be developed and incorporated in to the project design phase. The recommended mitigation measures will be approved by the MEO in consultation with the BEO. Monitoring of mitigation done will be documented in a monitoring report and sent to the BEO.
3. The project has substantial but mitigatable adverse environmental effects and required measures to mitigate environmental effects. Mitigation and Monitoring (M&M) Plan must be developed and approved by the BEO and/or REO prior to implementation. M&M Plan is to be attached to the Scope of Work.*
4. The project has potentially substantial adverse environmental effects, but requires more analysis to form a conclusion. A Scoping Statement must be prepared and be submitted to the BEO for approval. Following BEO approval an Environmental Assessment (EA) will be conducted. Project may not be implemented until the BEO approves the final EA. For activities related to the procurement, use, or training related to Pesticides a PERUSAP will be prepared for BEO approval.
5. The project has potentially substantial adverse environmental effects, and revisions to the project design or location or the development of new alternatives is required.
6. The project has substantial and unmitigable adverse environmental effects. Mitigation is insufficient to eliminate these effects and alternatives are not feasible. The project is not recommended for funding.

D. IDENTIFIED SIGNIFICANT ENVIRONMENTAL IMPACTS (including **physical, biological and social**), if any: (Use EMP tools such as **Leopold Matrix** to identify significant environmental impacts)

E. RECOMMENDED MITIGATION MEASURES (if any):

F. RECOMMENDED MONITORING MEASURES (if any):

ANNEX 8: RELEVANT NATIONAL LEGISLATION AS OF JANUARY 2013

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, 88/10)
8. Law on water ("Official Gazette of RS", 30/10, 93/12)
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. 72/10)
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

20. 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)

22. European Environment and Health Committee. Serbia. Copenhagen, WHO Regional Office for Europe, 2006 (http://www.euro.who.int/eehc/implementation/20061010_9 accessed 29 December 2009).
23. Global status report on road safety: time for action. Geneva, World Health Organization, 2009 (http://whqlibdoc.who.int/publications/2009/9789241563840_eng.pdf, accessed 30 December 2009).
24. National Assembly. Law on Protection against Environmental Noise. Official Gazette of the Republic of Serbia, No. 36/09, 88/10.
25. National Assembly. Law on Waste Management. Official Gazette of the Republic of Serbia, 2009, No. 36/09.
26. National Assembly. Constitution of the Republic of Serbia. Official Gazette of of the Republic of Serbia, 2006, No. 98/06.
27. National Assembly. Law on Environmental Protection. Official Gazette of the Republic of Serbia, 2004, No. 135/04.
28. National Assembly. Law on Air Protection. Official Gazette of the Republic of Serbia, 2009, No. 36/09.
29. National Assembly. Law on Management of Chemicals. Official Gazette of the Republic of Serbia, 2009, No. 36/09.
30. National Assembly. Law on Biocidal Products. Official Gazette of the Republic of Serbia, 2009, No. 36/09.
31. National Assembly. The Law on Environmental Protection. Official Gazette of the Republic of Serbia, 2009, No. 36/09.
32. National Assembly. Law on Occupational Safety and Health. Official Gazette of the Republic of Serbia, 2005, No. 101/05
33. National Assembly. Law on Environmental Impact Assessment. Official Gazette of the Republic of Serbia, 2004, No. 135/04 (<http://www.basel.int/legalmatters/natleg/serbia-02e.pdf>, accessed 11 January 2010).
34. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. Official Journal of the European Union, 2006, L396:1–849.
35. Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC. Official Journal of the European Union, 2003, L156:17–24.
36. Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment. Official Journal of the European Communities, 1991, L135:40–52 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0271:EN:HTML>, accessed 25 January 2010).
37. Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption. Official Journal of the European Communities, 1998, L330:32–33 ([ENVIRONMENTAL MANAGEMENT FRAMEWORK DOCUMENT, FINAL](http://eur-</div><div data-bbox=)

lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1998:330:0032::EN:PDF, accessed 25 January 2010).

38. Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise – Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise. Official Journal of the European Communities, 2002, L189:12–25 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:189:0012::EN:PDF>), accessed 25 January 2010).

39. Federal Assembly. Regulation on permitted level of noise in the environment. Official Gazette of of the Republic of Serbia, 2010, No. 72/10.

40. National Assembly. Law on Integrated Pollution Prevention and Control. Official Gazette of the Republic of Serbia, No. 135/04 (<http://www.basel.int/legalmatters/natleg/serbia-04e.pdf>), accessed 11 January 2010).

41. Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air. Official Journal of the European Communities, L163:41–60.

ANNEX 9: REPORT ON PUBLIC DISCLOSURE AND PUBLIC CONSULTATION

BACKGROUND

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. 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 "Roads of Serbia" (PERS).

Environmental Management Framework Document (EFD) is required for the RRSP to identify the required environmental management measures that need to be taken during the planning, design, road rehabilitation and operations phase of the road maintenance, in order to ensure compliance with the GoS own requirements and those of the WB. All the major environmental impacts along with mitigation and management measures have been compiled in the form of EFD.

On Jan 24th, 2012 Public Enterprise "Roads of Serbia" (PERS), on its web site, announced invitation for Public Consultations for the public, bodies and organizations interested in EFD document for RRSP Project. Additionally, PERS has invited interested parties also by sending E-mails to the different relevant institutions (Ministry, NGOs, and representatives of local Municipalities, Institute for Nature Protection and Institute for Protection of Cultural Monuments, Road Designers). Public and other interested parties and organizations were invited to participate in process of public consultation on draft EFD document. Prior to announcement in the newspapers, the EFD was placed on PERS web site. Invitation was announced in daily newspaper "Politika" too, on Jan 26th, 2013. Insight into the EFD document was ensured on following addresses:

- o the premises of the PE "Roads of Serbia", investment sector, 19a Vlajkovicева 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.
- o on PE "Roads of Serbia" web site: www.putevi-srbije.rs

Public Consultation and presentation of EFD document were held in the premises of the PE "Roads of Serbia", investment sector, 19a Vlajkovicева St., Belgrade, on Jan 31st, 2013, from 12:00 PM to 02:00 PM and **there were no complains** on prepared draft EFD document.

REPORT ON PUBLIC CONSULTATION, BELGRADE, JAN 31, 2013

In accordance with OP/BP 4.01, PERS has prepared EFD document for Road Rehabilitation and Safety Project.

The in-country disclosure of the EFD document started on Jan 24th 2013 when invitation to the interested parties, together with the DRAFT EFD Document were placed on PERS web-site. Invitation was published in the daily newspaper "Politika" too, 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.

Disclosure of draft EFD document finished on January 31st 2013 when the public meeting was held in city of Belgrade, PERS Office, Vlajkovicева Street.

There were 17 attendees on public consultation meeting. There were representatives of different institutions which will/could be involved during project implementation.

The meeting was attended by:

1. Mr. Dragan Cvijic Institute for Nature Protection of Serbia (INP)
2. Mrs. Dragana Petras Institute for Nature Protection of Serbia (INP)

- | | | |
|-----|---------------------------|--|
| 3. | Mrs. Jasmina Predojevic | Provincial Institute for Nature Protection of Serbia (PINP) |
| 4. | Mrs. Jadranka Delic | Provincial Institute for Nature Protection of Serbia (PINP) |
| 5. | Mrs. Sabina Ivanovic | Ministry of Energy, Development and Environmental Protection (MoEDEP), Department of EIA (DoEIA) |
| 6. | Mrs. Vukica Popadic | Technical comity of MEDEP - EIA Study evaluation |
| 7. | Mrs. Nevena Stevic | Traffic Institute CIP |
| 8. | Mrs. Dragica Ilic | Traffic Institute CIP |
| 9. | Mrs. Gorica Aleksic | Traffic Institute CIP |
| 10. | Mrs. Ivana Matic | PERS Environmental Department |
| 11. | Mrs. Mimoza Jelcic | PERS Environmental Department |
| 12. | Mr. Djordje Mitrovic | PERS Environmental Department |
| 13. | Mrs. Snezana Radulovic | Highway institute Belgrade, Environmental Dep. |
| 14. | Mrs. Aleksandra Jovanovic | Highway institute Belgrade, Environmental Dep. |
| 15. | Mikan Jankovic | JP Directorate for Development, Pozega |
| 16. | Mrs. Ana Carapina | WWF Serbia |
| 17. | Dr. Nina Drndarski | NGO Ploebus, Pancevo |

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

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

Consultation ended at 02:00 PM, local time.

2. LIST OF PARTICIPANTS

SPISAK PRISUTNIH NA JAVNIM KONSULTACIJAMA

<i>Predmet JAVNIH KONSULTACIJA:</i> OKVIRNI DOKUMENT ZA UPRAVLJANJE ZAŠTITOM ŽIVOTNE SREDINE (Environmental Management Framework Document – EFD)	<i>Mesto održavanja JAVNIH KONSULTACIJA:</i> Beograd, prostorije JP „Putevi Srbije“, Vljakovićeva 19a
<i>Projekat:</i> PROJEKAT REHABILITACIJE PUTEVA I UNAPREĐENJA BEZBEDNOSTI SAOBRAĆAJA (Road Rehabilitation and Safety Project – RRSP)	<i>Datum javnih konsultacija:</i> 31. januar 2013.

R.b.	Ime i prezime	Organizacija / adresa	Telefon.: Faks; E-mail
1	DRAGAN VUŠIĆ	ZAVOD ZA ZAŠTITU PREDELA SRBIJE, IVANA RIBAROVA 91a	064/85-00-703
2	Др Анастасија Петровић	- 11 -	065/20-63-250
3	Tamara Prodanović	POKRAJINSKI ZAVOD ZA ZASTITU PRIRODE	064/895-88-99
4	me JADRANKA DELIĆ	- 11 -	066/381-496
5	Ana ČARAPINA (u ime Duške Dimović)	WWF SRBIJA PalmočićeVA 17	063/381490, serbia@wwfdcp.org
6	Dr Nina Dondarević, dipl. inž.	NEO Pbeobus - Pamčavo	061/11 28 014
7	Nevena Stević	CIJ SAOBRAĆAJNI INSTITUT	064/0780274

R.b.	Ime i prezime	Organizacija / adresa	Telefon.:Faks; E-mail
8	MIKHAJ JANKOVIĆ	J.P. DIREKCIJA ZA IZSPL 011/30-40-2222	031. 3 810 584; 583 direkcija@pozega @ GMAIL.COM
9	Зорана Матић	СИ ИИП - МЕДИЦИНА 6/IV Београд	323-50-57 dragica @ sicip-trg. com
10	Борис Алексић	Садмедицини институт СИП Кемеровина 6/IV	3235 058 aleksic@ sicip- trg. com
11	Ивана Матић	ЈП ПУТЕВИ СРБИЈЕ БУЛ. КРАЈА АЛЕКСАНДРА 282	011/30-40-632 ivana.matic @ putevi-srbije.rs
12	Мимоза Јеличић	ЈП ПУТЕВИ СРБИЈЕ БУЛ. КРАЈА АЛЕКСАНДРА 282	011/30-40-604 mimozajelicic @ putevi-srbije.rs
13	СНЕЖАНА РАДУЛОВИЋ ЈЕВРЕМОВИЋ	ИНСТИТУТ ЗА ПУТЕВЕ, БЕОГРАД	011/6458555/LOU 136 SRADULOVICJEVREMOVIC @ GMAIL.COM.
14	ALEXSANDRA DOVANOVIĆ	ИНСТИТУТ ЗА ПУТЕВЕ БЕОГРАД	011/6458555/LOU 136 DOVAUELS67 @ YAHOO.COM
15	Đorđe Mitrović	JP Putevi Srbije	011/3040735 djordje.mitrovic @ putevi-srbije.rs
16	САБИНА КУМОВИЋ	МИНИСТАРСТВО ЕНЕРГЕТИКЕ, РАЗВОЈА И ЗАШТИТЕ Е.С.	011/3131396 sabina.kumovic @ ucil.gov.rs
17	ЊУЖИЦА ПОПАДИЋ	РЗ "KOLUBARA"	011/8124-966 nuzica.popadic @ RZkolubara.rs
18	IGOR RADOVIĆ	JP PUTEVI SRBIJE	011/3206-811 062/491-345
19			

3. DOCUMENTATION



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 FRAMEWORK
DOCUMENT (EFD)**
for

Road Rehabilitation and Safety Project – RRSP

Interested parties can get an insight into the EFD document on following addresses:

- o the premises of the PE “Roads of Serbia”, investment sector, 19a Vojkovičeva 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.
- o on PE “Roads of Serbia” web site: www.putevi-srbije.rs

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

On January 31st, 2013, at 12:00 PM (local time), public consultations and presentation of the subject EFD document will be organized on the premises of the PE “Roads of Serbia”, investment sector, 19a Vojkovičeva St., Belgrade, on the first floor.

If you need any additional information, please contact:

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

11301254-2

Picture 1: Announcement of public consultation in daily newspaper (“Politika”, Jan 26, 2013)



Сагласно оперативној политици Светске банке (ОП 4.01)

Јавно предузеће „Путеви Србије“

позива на

ЈАВНЕ КОНСУЛТАЦИЈЕ

јавност, органе и организације заинтересоване за

ОКВИРНИ ДОКУМЕНТ ЗА УПРАВЉАЊЕ ЗАШТИТОМ ЖИВОТНЕ СРЕДИНЕ

за

Пројекат рехабилитације путева и унапређења безбедности саобраћаја

Увид у предметни Оквирни документ за управљање 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 на интернет страници ЈП „Путеви Србије“: www.putevi-srbije.rs

Примедбе и мишљења у вези са Оквирним документом за управљање 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 31. 1. 2013. године, са почетком у 12 часова биће одржане јавне консултације и презентација предметног Оквирног документа у просторијама ЈП „Путеви Србије“, сектор за инвестиције, Влајковићева 19а, Београд, први спрат.

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

11301254-1

Picture 2: Announcement of public consultation in daily newspaper (“Politika”, Jan 26, 2013)