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ENVIRONMENTAL & SOCIAL ACTION PLAN

BANJA LUKA TO DOBOJ MOTORWAY:

SECTION 1: BANJA LUKA TO PRNJAVOR

January 2013

ENVIRONMENTAL & SOCIAL ACTION PLAN

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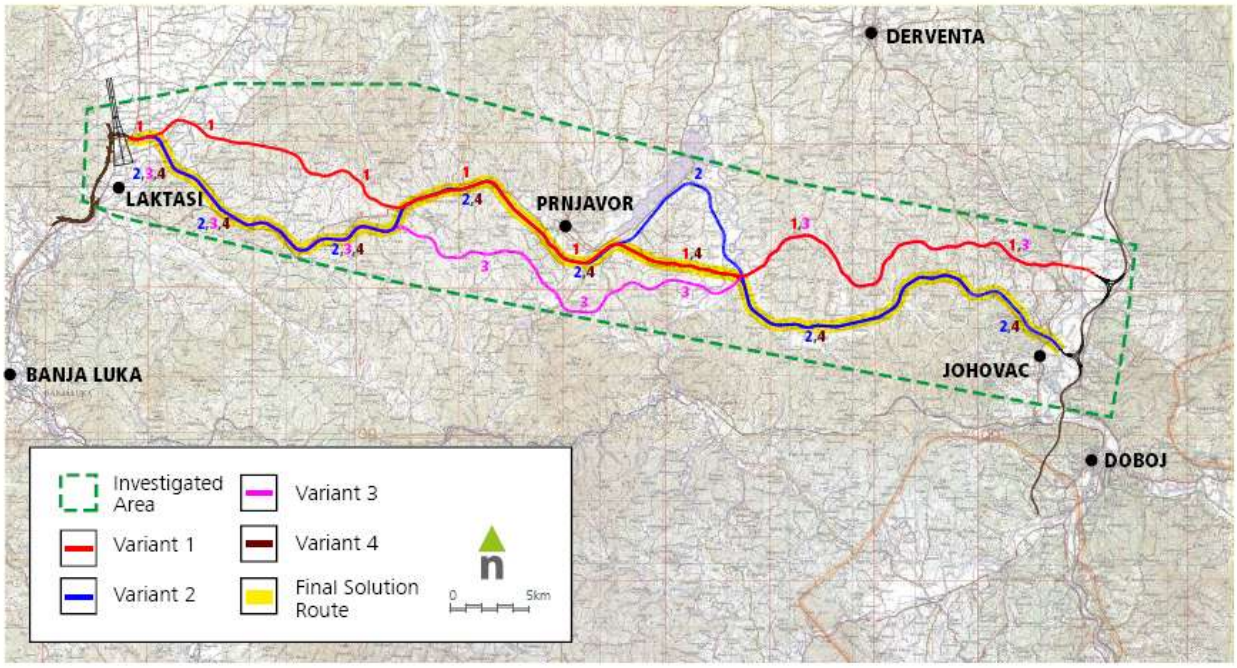
FINAL



January 2011

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GLOSSARY OF ABBREVIATIONS

BiH	Bosnia and Herzegovina
CESMS	Construction Environmental & Social Management System
CESMP	Construction Environmental & Social Management Plan
EBRD	European Bank for Reconstruction & Development
EIB	European Investment Bank
ESHS	Environmental, Social and Health & Safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EIS: BL-Dob	Environmental Impact Statement: Banja Luka to Doboj Motorway: Final Solution January 2011
EMAS	Eco-Management and Audit Scheme
ESAP	Environmental & Social Action Plan
ESIA	Environmental & Social Impact Assessment
HESMP	Handover Environmental & Social Management Plan
HMMP	Hazardous Materials Management Plan
HR	Human Resources
IFC	International Finance Corporation
ILO	International Labour Organisation
ISO	International Organisation for Standardisation
LRF	Livelihoods Restoration Framework
MMP	Materials Management Plan
NTS	Non-Technical Summary
OHS	Occupational Health & Safety
OESMS	Operational Environmental & Social Management System
OESMP	Operational Environmental & Social Management Plan
O.G.	Official Gazette
PR	Performance Requirement
RS	Republika Srpska
RSM	Republika Srpska Motorway
RAP	Resettlement Action Plan
SA	Social Accountability
SEP	Stakeholder Engagement Plan
SMP	Site Management Plan
SocialMP	Social Management Plan
SoilMP	Soil Management Plan
WMP	Waste Management Plan

1. INTRODUCTION

The public company Republika Srpska Motorway (RSM) intends to implement the construction the Section 1: Banja Luka to Prnjavor (*the **'Project'***) of the proposed Banja Luka to Doboj Motorway.

The European Investment Bank is considering providing a sovereign loan to the public company Republika Srpska Motorway (RSM) to finance the construction of the Project.

This document is the Environmental and Social Action Plan (ESAP) describing the environmental & social mitigation and monitoring measures, the criteria for their successful implementation and organisational measures to be implemented during the pre-construction, construction and operation of the Project. This document has been developed by RSM based on the RS legislative requirements and those of the European Bank for Reconstruction and Development (EBRD) who has provided the loan for the Section 2: Prnjavor to Doboj, and works have already started.

Due to the fact that the EIS (Environmental Impact Study) has been done and approved for the whole corridor Banja Luka – Doboj, and in order to follow the same principles in the Section 1, as it was on the Section 2, the same environmental procedures (i.e. EBRD procedures) shall be applied.

The 71.91 km long Banja Luka to Doboj motorway will be the key regional link in Republika Srpska in Bosnia and Herzegovina. It will form the connection between the Gradiška to Banja Luka motorway (E-661) and the Corridor Vc motorway. The route runs east to west between the Mahovljani junction near Banja Luka and the Johovac junction with the Corridor Vc motorway interchange near Doboj. The motorway has been divided into two sections either side of the interchange at Prnjavor which connects the motorway to the existing trunk road (M16-1) and local roads:

- Section 1: Banja Luka (Mahovljani Junction) to Prnjavor: 35.3km
- Section 2: Prnjavor to Doboj (Johovac Junction): 36.61km

The ESAP is a 'live' document which needs to evolve with the Project. RSM and their Contractor will regularly review and update as required the ESAP to ensure it reflects any changes in the project implementation and organisation. Following amendment RSM and their Contractor will ensure the updated ESAP is communicated to all relevant parties and stakeholders.

1.1 Pre-Construction Phase

The approval process for the Project is ongoing with the environmental permit application currently underway which is required in order for the construction permit to be issued. The ESAP comprises of actions which need to be undertaken during the current pre-construction phase, some of these actions are necessary as part of the ongoing permitting process and in order to further inform and refine environmental and social mitigation plans. In addition measures have been identified in order to achieve compliance with legal and EBRD's Performance Requirements. The ESAP will need to be updated for any additional environmental and social requirements identified in the Environmental Permit when received.

Further it is recommended to RSM that the environmental and social mitigation and monitoring measures contained within the ESAP and other relevant project documentation and approvals (e.g. the EIS) are referenced within tender documentation for selection of the construction contractor.

1.2 Construction Phase

The actual construction work will be undertaken by a road construction contractor to be appointed by Public Company Republika Srpska Motorways (RSM). Many of the ESAP requirements will be the responsibility of the construction contractor to implement. At the time of preparing the ESAP the method of contracting and construction contractor (hereafter referred to as the 'Contractor' has not been determined[1]. Further details regarding the sub-contractors/suppliers and the nature of the workforce are not available at the time of preparing the ESAP; therefore the consequences of the social impacts from the influx of this potential workforce cannot be fully defined. In the absence of defined construction information from the Contractor, this ESAP outlines precautionary measures to

[1] There is the possibility that more than one main Contractor could be appointed, therefore at contract award the ESAP will need to be reviewed to ensure it fully reflects the project circumstances.

minimise social impacts and regarding the required standards for working conditions for the workforce.

Under EIB procurement policies engaging contractors in public sector projects requires Conditions of Contract to be used which meet Performance Requirement 2 on Labour and Working Conditions. The contracting method for the construction of the road will be required to meet EIBs procurement policies. The conditions will also require the works to be carried out in accordance with Republika Srpska laws, including Labour Laws[2] and Health & Safety Laws[3]. Further as Bosnia and Herzegovina have ratified the International Labour Organisation (ILO) Conventions the Contractor will have to comply with the relative requirements contained within these Conventions. Specific requirements in relation to labour and working conditions, including Occupational Health & Safety, are contained within the ESAP.

The requirements for environmental protection and social management contained within the ESAP, SEP and relevant project documentation and approvals (e.g. the EIS and environmental permit) will be an obligatory part of the conditions of contract for the construction Contractor. The Contractor will be obliged to adopt and follow good environmental and social management practices during construction and minimise potential impacts on water resources, soil, flora and fauna, air, noise, landscape, cultural heritage resources, communities and population health.

RSM is ultimately responsible for the implementation of measures outlined within the ESAP. With the objective of ensuring effective implementation of the ESAP, SEP and other project requirements, RSM will appoint resources to undertake environmental and social reviews of the Contractor during the construction phase. Where responsibility for actions is assigned to the Contractor, the Contractor will be responsible for ensuring its sub-contractors understand the requirements contained within the ESAP and have contract conditions in place to ensure applicable elements of the ESAP are achieved.

An Environmental and Social Management System will be established for the construction and operation of the Project. The Contractor will establish a Construction Environmental & Social Management Plan (CESMP) which will form a comprehensive mitigation plan.

1.3 Operational phase

The ESAP details environmental and social measures for the operation of the motorway including the requirement to establish and implement an Environmental and Social Management System. Details regarding the management of the operation of the motorway, which will be tolled, are not confirmed at this stage however, RSM will ultimately be responsible for the operational management and monitoring. Therefore responsibility for implementation of measures during the operational phase are assigned in the ESAP to RSM, however if a contract is let for the operation of the motorway the 'Operator' would also be obliged to adhere to the requirements within the ESAP, SEP and relevant project documentation and approvals (e.g. the EIS and environmental permit). Further any 'Operator' will be responsible for ensuring its sub-contractors understand the requirements contained within the ESAP and have contract conditions in place to ensure applicable elements of the ESAP are achieved.

1.4 Structure of the ESAP

It is a requirement of EBRD policy that the project is undertaken inline with national law. The requirements described in this ESAP therefore reference Republika Srpska (and Bosnia and Herzegovina) law, existing requirements of the EIAs and supporting documentation, such as permitting documents. These requirements have been supplemented, where necessary, with measures needed to meet EBRD requirements[4] and relevant international good practice[5]. These measures are intended to complement the requirements under Republika Srpska (and Bosnia and Herzegovina) law, including ones contained in Project approval documentation (e.g. EIA & permits), and these measures should be implemented except where such implementation conflicts with Republika Srpska (and Bosnia and Herzegovina) law.

The ESAP (see Table 1) has been structured into the following requirements sub-sections:

1 General Requirements for Environmental and Social Management

[2] Labour Law O.G. RS No.55/07
[3] Law on Occupational Safety O.G. RS No. 01/08 & 13/10
[4] EBRD Environmental & Social Policy 2008 and EBRD Performance Requirements (1, 2, 3, 4, 5, 6, 8,& 10)
[5] For example: IFC Environmental Health & Safety Guidelines for Toll Roads

2 Stakeholder Engagement Requirements

3 Land Acquisition, Involuntary Resettlement & Economic Displacement Requirements

4 Environmental Requirements

5 Social Requirements

6 Labour & Working Conditions Requirements (including Occupational Health & Safety (OHS))

7 Other Requirements

The ESAP monitoring requirements (see Table 2) have been structured into the following sub-sections:

M1. General Requirements – Environmental & Social Management

M2. Stakeholder Engagement

M3. Land Acquisition, Involuntary Resettlement & Economic Displacement

M4. Environmental Monitoring

M5. Social Monitoring

M6. Labour & Workforce Monitoring (including OHS monitoring)

Table 1: ESAP for all Phases (Pre-consrtruction, Construction & Operation)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
1	**GENERAL REQUIREMENTS: ENVIRONMENTAL AND SOCIAL MANAGEMENT**						
1.1	***Review & Update of ESAP & SEP:*** RSM and their Contractor will regularly review and update, as required, the ESAP and SEP to ensure it is responsive to changes in project circumstances. Specifically the ESAP & SEP shall be reviewed at the following key milestones: • Following agreement of contracting method RSM will review the ESAP & SEP to make it more specific to the structure of the proposed contracting method and include the updated ESAP & SEP in the tendering documents. • Following appointment of the Contractor RSM will review the ESAP & SEP to make it more specific to the construction works. • Following agreement of operating method/organisation for the Project and any appointment of an Operator RSM will review the ESAP & SEP to make it more specific to the operation phase of the motorway. Following amendment RSM (and their Contractor) will ensure the updated ESAP & SEP is communicated to all relevant parties and stakeholders. Changes to the ESAP & SEP must be agreed with the Bank.	Changes/ development of the implementation and organisation plans for the Project (and future regulatory changes) may effect the ability of the ESAP to address environmental & social issues, impacts and benefits, and meet the Project requirements.	PR1	Responsibility: RSM & Contractor Resources: Designated ESHS[7] Resources are required by Contractor & RSM.	All phases: Pre-Construction Construction Operation	ESAP to be reviewed and updated at key Project milestones.	Include a brief description in progress reports submitted to EIB of reviews and updates to the ESAP.
1.2	***Review of Impact and Identification of Mitigation for Implementation of Banja Luka to Doboj in 2 Sections:*** Undertake a review of the implementation of the Project (Section 2 of the overall Banja Luka to Doboj motorway scheme) to identify any required additional mitigation for the intervening period. Application for environmental permit to include the review of potential impact and any additional mitigation required for the intervening period.	Identification and mitigation of environmental and social impacts in intervening period from implementing Section 2 Banja Luka to Doboj Motorway.	Law of Environmental Protection of RS (Official .Gazette. (O.G.) RS No. 28/07, 41/08, 29/10) PR1	Responsibility: RSM Resources: RSM will require environmental and social resource to undertake	Pre-Construction Phase	Proof of environmental permit containing review and additional mitigation for the intervening period.	

[6] EBRD Performance Requirements contained with EBRD Environmental & Social Policy 2008
[7] ESHS: Environmental, Social, Health & Safety

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
				review.			
1.3	***Applicable Standards:*** The Project shall be managed, constructed and operated in a manner that is compliant with applicable national, EU and international law and conventions, and relevant Lenders requirements, policies and guidance, including inter alia: • Republika Srpska (and BiH) law, including decrees and regulations; • Applicable EU Directives (including ones identified within the NTS, SEP and ESAP); • International conventions and treaties (including the Aarhus Convention) • Industry good practice • Lenders' environmental and social management requirements (i.e. EBRD's Environmental Policy 2008 (including ESAP and SEP), IFC EHS guidelines [8]	The Project is undertaken in compliance with environmental and social applicable national, EU and international laws and conventions, and relevant Lenders requirements, policies and guidance.	PR1 RS Law	Responsibility: RSM & Contractor Resources: Designated ESHS resources are required by Contractor and RSM.	All phases: Pre-Construction Construction Operation	Necessary approvals/consents /permits are in place during pre-construction. Performance monitoring demonstrates compliance with environmental and social requirements.	(Include a brief description in progress reports submitted to EIB of compliance monitoring and any issues identified of non-compliance (including identifying future potential risks of non-compliance).)
1.4	***Obtain Permits & Approvals:*** Obtain and maintain all necessary ESHS permits/approvals for the works including the Environmental Permit and Construction Permit for the works.	Legal consents required for the works from the Competent Authority(s).	Law of Envl Protection (O.G. RS No. 41/08, 29/10) Law on Physical Planning (O.G. RS No. 84/02, 14/03, 112/06 and 53/07) and New Law on Physical Planning and Construction (O.G. RS No. 55/10)	Responsibility: RSM (& Contractor where appropriate) Resources: Designated ESHS Resources are required by Contractor & RSM.	All phases: Pre-Construction Construction Operation	Approval of the Permit(s) by Competent Ministry.	Construction Permits can only be issued if an approved EIS is lodged and an Environmental Permit is already issued. (Include a brief description in progress reports submitted to EIB of permit applications and approvals.)
1.5	***Compliance with Permit Requirements & Approvals:*** The Project will comply with all Environmental, Social, Health and Safety permit requirements and approvals, including inter alia: • Urban/Planning The decision on land-use permit (*or 'urban consent of JP „Putevi RS")* for highway construction Banja Luka-Doboj: Decision No. 15-364-691/09 of Ministry of Physical Planning, Construction & Ecology dated 4 May 2010 • Decision on the Approval of the EIS: Decision No. 15-96-135/10 of the Ministry of Physical Planning, Construction and Ecology: 21 March 2011 (Decision on EIS)	The Project is undertaken in-line with national laws.	PR1 Law of Env Protection of RS (O.G. RS No. 41/08, 29/10) Law on Physical Planning (O.G. RS No. 84/02, 14/03, 112/06 and 53/07) and	Responsibility: RSM & Contractor Resources: Designated ESHS Resources are required by	All phases: Pre-Construction Construction Operation	Performance monitoring demonstrates compliance with environmental and social requirements.	(Include a brief description in progress reports submitted to EIB of permit compliance monitoring and any issues identified of non-compliance with permits (including identifying future potential risks of non-

[8] International Finance Corporation (IFC) Environmental, Health & Safety Guidelines for Toll Roads

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	• Environmental Permit *(when obtained)* • Construction Permit *(when obtained)*		New Law on Physical Planning and Construction (O.G. RS No. 55/10)	Contractor and RSM.			compliance).)
1.6	***Applicable Project Documentation:*** RSM & the Contractor will implement and comply with all measures specified within the relevant Project Documentation, including inter alia: • ESAP • Stakeholder Engagement Plan (SEP) • Project contractually binding documents, including the Employer Requirements • Environmental Impact Assessment/Statements and related Decisions from Competent Ministry	All the following requirements are addressed: Environmental & Social; Health & safety Labour & working conditions; Land acquisition, involuntary resettlement & economic displacement Stakeholder engagement ; and Other 'Specified' requirements	PR 1	Responsibility: RSM & Contractor Resources: Designated ESHS resources are required.	All phases: Pre-Construction Construction Operation	Performance monitoring demonstrates compliance with environmental and social requirements.	(Include a brief description in progress reports submitted to EIB of compliance monitoring and any issues identified of non-compliance with requirements contained within 'Project Documentation' (including identifying future potential risks of non-compliance).)
1.7	***RSM Environmental & Social Resources & Organisation:*** RSM will establish within their organisation the environmental & social management capacity and capability to undertake inter alia: • reviews of the environmental and social performance of Contractor (and Operator of the Motorway in the event a separate contract is issued for this phase) • co-ordinate the implementation of actions/measures under the ESAP which are the responsibility of RSM • overall review compliance with the ESAP obligations • review and update to ESAP to ensure it reflects project circumstance.	Monitoring compliance with the ESAP and environmental and social performance to ensure the Project is being implemented to minimise risk and maximise benefits.	EIS: BL-Dob PR 1	Responsibility: RSM Resources: RSM require designated ESHS resources including a person designated with responsibility for ESHS.	All Phases: Pre-Construction Construction Operation	RSM to establish sufficient environmental and social management capacity and capability for each phase.	
1.8	***Construction Environmental & Social Management System (CESMS)*** As part of the Site Management Plan the Contractor will develop and implement a *Construction* Environmental & Social Management System (CESMS) to support the implementation of the ESAP & SEP and support good environmental & social management practices. The CESMS will be developed and implemented in-line with international standards (i.e. ISO 14001, EU EMAS & SA 8000) and include inter alia: • Organisation, responsibilities and resources • Construction Environmental & Social Management Plan (including supplementary plans e.g. Waste Management Plans, Hazardous Materials Management Plans, management of Labour	All environmental and social issues, impacts and improvements in relation to the Project are appropriately managed, monitored and addressed.	EIS: BL-Dob PR 1 International good practice	*see comment* * Responsibility: Contractor Resources: Designated ESHS Resources are required – to	Construction Phase	CESMS must be in place prior to construction. Draft Manual to be provided for review by RSM within 45 days of contract award.	* In the event more than one main contractor is appointed then one overarching Project CESMS should be established for ALL Contractors to adopt and RSM will need to ensure they have sufficient resources in

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	(including HR policies) etc): (see below) • Monitoring Plan (see Section 3: Monitoring Requirements) • An audit process and programme (including performance audits, audits on labour & working conditions and road safety audits etc.) • Training programme • Reporting of Environmental & Social (including OHS **) performance.			include a designated ESHS Manager; ESHS Site Literature & Training materials (e.g. ESHS notice boards, site booklets, toolbox talks etc)			place to develop, implement and monitoring the overarching Project CESMS. ** The Construction Occupational Health & Safety Management System (see ESAP Ref. No. 6.1 below) may form part of the CESMS or be a separate system; however a standard alone OHS system must be designed to complement the CESMS).
1.9	***Construction Environmental & Social Management Plan (CESMP):*** The Contractor (*) shall establish, implement and maintain a CESMP which will as a minimum encompass the measures described in the ESAP and seek to improve environmental and social performance of the Project. The CESMP will include the following supplementary plans and as determined to be required during the execution of the Project: • mitigation plans for specific topics: e.g. noise & vibration, water protection, dust mitigation plan, biodiversity (flora & fauna) mitigation plan, surface & ground water mitigation plan (including erosion/sedimentation etc) • Social Management Plan • Waste Management Plan • Materials Management Plan • Hazardous Materials Management Plan • River Crossings Management Plan *(for each of the major river crossings)* • Soil Management Plan • Stakeholder Engagement Plan • Emergency Plan • Rehabilitation Plan • (Environmental & Social) Monitoring Plan • Handover Environmental & Social Management Plan (HESMP) – *to be supplied by the Contractor following completion of construction.*	All environmental and social issues, impacts and improvements in relation to the Project are appropriately managed, monitored and addressed.	EIS: BL-Dob PR 1 International good practice	*see comment* * Responsibility: Contractor Resources: Designated ESHS Resources are required – to include a designated ESHS Manager	Construction Phase	The CESMP must be in place prior to construction. Draft CESMP to be provided for review by RSM within 45 days of award.	* In the event more than one main contractor is appointed then one overarching Project CESMP (and supplementary plans) should be established for ALL Contractors to adopt and RSM will need to ensure they have sufficient resources in place to develop, implement and monitor the overarching Project CESMP. (Include a brief description of the implementation of the CESMP in reports submitted to RSM and EIB/Lenders (as required).)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	Also the CESMP will set out environmental and social requirements and monitoring for (inter alia): • 'off-site' facilities (e.g. Concrete and Asphalt Plants) • transport of materials to site • workforce (covering relevant requirements within ESAP)						
1.10	***CESMS Resources & Organisation:*** The Contractor shall appoint an appropriately qualified ESHS Manager who will be responsible for the development and implementation of the CESMS and co-ordination to ensure the provisions of the ESAP are complied with. The ESHS Manager shall have appropriate qualifications, training, authority & responsibility and resources. The ESHS Manager shall have assigned responsibilities including, but not limited to: • Implementation and maintenance of the CESMS (including audits, corrective actions, etc). • Implementation of the ESAP. • Implementation and co-ordination of CESMP (and associated management & mitigation plans). • Preparation of quarterly reports for compliance with ESAP (and other applicable standards/documents) and related to CESMS & CESMP. • Managing an incident reporting system (including near-misses). • Preparation and submission of environmental monitoring reports to RSM and reports as required to EBRD/Lenders which will include review of compliance with ESAP obligations.	All environmental and social issues, impacts and improvements in relation to the Project are appropriately managed, monitored and addressed.	EIS: BL-Dob PR 1	*see comment* * Responsibility: Contractor Resources: A designated ESHS Manager	Construction Phase	Designated ESHS Manager must be appointed at contract award and be in place for the duration of construction until handover of the motorway to RSM.	* In the event more than one main contractor is appointed then one overarching designated ESHS Manager for construction will need to be put in place by RSM to co-ordinate overarching CESMS. ALL Contractors will be required to have a designated ESHS Manager in the instance more than one main contractor is appointed..
1.11	***Managing Contractors:*** Contracting method for construction will be required to meet EIB's procurement policies; in this regard the Employers Requirements will contain EIB's Particular Conditions of Contract (or similar approved by EIB) which contain provisions for PR2:Labour & Working Conditions and the ESAP.	Contractually binding that Project is implemented inline with EBRD's PRs, including specific provisions contained within the ESAP, to ensure all environmental and social issues, impacts and improvements in relation to the Project are appropriately managed, monitored and addressed.	PR1 & PR2	Responsibility: RSM	Pre-Construction Phase	Employers Requirements to contain EIB Particular Conditions of Contract and the ESAP.	
1.12	***Social Management Plan:*** ***As part of the CESMP the Contractor and RSM/Operator for the construction phase and***	All social issues in relation to the	PR 1 International	Responsibility: Contractor:	All phases: Pre-	Social Management Plan	

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	operation phase respectively, will maintain and implement a dedicated Social Management Plan (SocialMP). The Social Management Plan will support the implementation of the social requirements of the ESAP, SEP and Grievance Mechanism (and if necessary the RAP and LRF) and provide the basis for Project reporting on social issues.	Project are appropriately managed and addressed.	good practice	*Construction phase* RSM/Operator: *Operation Phase (also during the pre-construction phase RSM will provide social management of issues where required)* Resources: Designated ESHS Resources are required – to include a designated m,anager and support staff for management of social issues.	Construction : *RSM to provide coverage for management of social issues* Construction Operation	in place prior to construction. Include a brief description of the system in reports submitted to EIB.	
1.13	***Site Management Plan (SMP):*** Preparation and implementation of Site Management Plan for construction , including inter alia: • Location of borrow pits and waste dumps to be used • Location of concrete and asphalt plants to be used • Haulage routes • Site Clearance plan • Construction Travel Plan (including volume and type of construction vehicles etc) & Traffic Management • Location of workforce accommodation camps • Location of site compounds • Security plan Within the Site Management Plan the Contractor must demonstrate how they intend to ensure clear delineation of the 'Project Area' (i.e. site) to ensure construction activities (including site clearance, movement of machinery & vehicles etc) does not go outside specified area approved in main design. An	Avoid, minimise and prevent local construction disturbance/nuisance and environmental damage occurring outside approved Project Area.	EIS: BL-Dob PR1 & PR4	Responsibility: Contractor Resources: Management time & costs of implementation of Site Management Plan requirements.	Construction Phase	The SMP must be in place prior to construction. Draft SMP to be provided for review by RSM within 45 days of award.	(Include a brief description in progress reports to RSM and EIB/Lenders (as required)of the implementation of the SMP, highlighting any Community complaints regarding local disturbance/nuisance issues and corrective action taken .)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	appropriate fence (or similar approved method) should be established at the beginning of construction to enable clear delineation of the site.						
1.14	***Sub-contractor/Supplier Management:*** The Contractor will apply contractual agreements for securing services of sub-contractors and suppliers which ensure they are obliged to comply with all environmental and social requirements contained with applicable Project documentation and standards. The Contractor will advise their sub-contractors and suppliers of their Environmental, Social, Health & Safety (including Labour & Working Conditions) responsibilities, including relevant requirements within the ESAP. Applicable ESHS requirements shall be contained within contractual agreements, including the requirement for sub-contractors to pass requirements to any of their sub-contractors and establish provisions for EHS reporting.	Contractually binding that Project is implemented inline with EBRD's PRs, including specific provisions contained within the ESAP, to ensure all environmental and social issues, impacts and improvements in relation to the Project are appropriately managed, monitored and addressed.	EIS: BL-Dob PR1 & PR2	Responsibility: Contractor Resources: Management time including designated ESHS Manager; ESHS Site Literature & Training materials (e.g. ESHS notice boards, site booklets, toolbox talks etc)	Construction Phase	Sub-contractor & supplier agreements to contain ESHS requirements.	
1.15	***Operational Environmental & Social Management System (OESMS)*** The Operator* of the motorway will develop and implement an Operational Environmental & Social Management System (OESMS) to support the implementation of ESAP & SEP and support good environmental & social management practices. The OESMS will be developed and implemented in-line with international standards (i.e. ISO 14001 & SA 8000) and include (but not be limited to) the following: • Organisation, responsibilities and resources • Operational Environmental & Social Management Plan (OESMP) (including supplementary plans e.g. waste management plans, hazardous materials management plans etc): (see ref. no. • Operational Monitoring Plan (see Section 3: Table 2: Monitoring Requirements) • An audit process and programme, including performance audits and road safety audits • Training programme • Reporting of Environmental & Social performance.	All environmental and social issues, impacts and improvements in relation to the Project are appropriately managed, monitored and addressed.	EIS: BL-Dob PR1 International good practice	*see comment* * Responsibility: RSM/Operator Resources: Designated ESHS Resources are required – to include a designated ESHS Representative	Operation Phase	OESMS must be place in prior to commissioning and operating of motorway. If appropriate: Draft Manual to be provided for review [by RSM] 45 days before commissioning. (Include a brief description of the system in reports submitted to EBRD.)	* Responsibility for implementation of measures during the operational phase are assigned in the ESAP to RSM, however if a contract is let for the operation of the motorway the 'Operator' would also be obliged to adhere to the requirements within the ESAP, SEP and relevant project documentation and approvals (e.g. the EIS and environmental permit).
1.16	***Contractor Environmental & Social Progress Reports to RSM:*** The Contractor will provide to RSM quarterly reports on environmental and social performance and the implementation of the ESAP and SEP.	Monitoring compliance with the ESAP and environmental and social performance to ensure the	PR1	Responsibility: Contractor Resources: Designated	Construction Phase	Quarterly environmental and social progress reports to be prepared by Contractor for RSM	Quarterly reports to be made available to EIB.

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
		Project is being implemented to minimise risk and maximise benefits.		ESHS Manager; Senior Management Time		senior management.	
1.17	***Progress reports to EIB & Monitoring Visits:*** RSM will provide to EIB progress reports on the implementation of the ESAP and SEP. RSM will facilitate the monitoring visits by Bank's environmental & social specialists and/or consultants acting on Bank's behalf.	Monitoring compliance with the ESAP and environmental and social performance to ensure the Project is being implemented to minimise risk and maximise benefits.	PR1	Responsibility: RSM & Contractor Resources: RSM: Designated ESHS Representative & Senior Management Time Contractor: ESHS Manager & Senior Management Review Time	Construction Phase Operation Phase *(as determined to be required)*	Environmental and social progress reports to be prepared by RSM with necessary information from Contractor and to be provided as part of RSM's regular reporting to EIB. Frequency anticipated of monitoring visits to be bi-annually during construction but subject to change at key project milestones and if environmental & social risks identified.	
2	**STAKEHOLDER ENGAGEMENT REQUIREMENTS (re: PR10)**						
2.1	***Stakeholder Engagement Plan:*** Maintain and implement a Stakeholder Engagement Plan (SEP), to ensure that all stakeholders are identified, that sufficient information about issues and impacts arising from the Project (e.g. construction impacts) and proposed mitigation are disclosed in a timely manner and that all stakeholders are consulted in a meaningful and culturally appropriate way throughout project implementation. Determine whether any vulnerable / disadvantaged groups or communities are likely to be disproportionately or permanently and adversely affected by the Project and identify and implement appropriate mitigation measures, for example: Community Development Programmes.	Management of risks and impacts on communities affected by the Project and achievement of enhanced community benefits.	PR10 International good practice including Aarhus Convention	Responsibility: RSM & Contractor Resources: ESHS resources responsible for stakeholder engagement/ social management	All phases: Pre-Construction Construction Operation	Stakeholder Engagement Plan in place prior to construction.	(Include description of stakeholder engagement activities in reports submitted to EIB (e.g. public consultation meeting minutes, identification of vulnerable or disadvantaged groups and measures undertaken to assist them, etc.))
2.2	***Disclosure & Stakeholder Engagement of Detailed Mitigation Plans & Findings from Additional Studies/Surveys :*** As part of the SEP disclose and engage with stakeholders on detailed mitigation plans and findings from additional studies/surveys for the Project (e.g. noise protection plans developed in Preliminary Design,	Ensure the local community are kept informed of the Project proposals and have	EIS: BL-Dob PR1 & PR10 International good practice	Responsibility: RSM Resources:	Pre-construction Phase Construction & Operation	Detailed mitigation plans should be disclosed to public and subject to stakeholder	

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	additional studies in relation to cultural and natural heritage to further define protection measures etc).	opportunity to input to mitigation proposals. Assist local community to 'learn to live' with the Project.	including Aarhus Convention	ESHS resources responsible for stakeholder engagement/social management; expert time to explain detailed mitigation plans to stakeholders	Phase: *as & when mitigation plans develop*	engagement before construction and if they are detailed further during ongoing SEP activities.	
2.3	***Grievance Mechanism:*** Maintain and implementation of a Grievance Mechanism to ensure stakeholders are able to raise their concerns about the Project and that these concerns are addressed promptly, and acknowledge the grievance has been received with 5 days and responded to within 20 working days.	Management of risks and impacts on communities affected by the Project and achievement of enhanced community benefits.	PR10 International good practice	Responsibility: RSM & Contractor Resources: ESHS resources responsible for stakeholder engagement/social management	All phases: Pre-construction Construction Operation	Grievance Mechanism in place prior to construction.	(Include description of grievance management in reports submitted to EIB (e.g. received grievances, how they were addressed, etc.))
2.4	***Emergency Preparedness & Response:*** In the even of a major accident/incident during construction and operation which potentially could effect the local community the Contractor & Operator/RSM (during operation of motorway) will provide support to all emergency response providers, including the police, fire response service and medical response providers, and will undertake appropriate communication with the local community.	Management of risks and impacts on communities affected by the Project. Management of risks and impacts to construction workforce.	EIS: BL-Dob PR3, PR4 & PR10	Responsibility: Contractor (Construction) Operator/RSM (Operation Phase) Resources: ESHS Resources responsible for emergency planning & response and those for stakeholder engagement	Construction Phase Operation Phase	To be included within Emergency Plans for construction and operation. Measures within plans to prevent negative consequences to local community. In the incident report system monitor number and type of major accidents/incidents; to inform corrective & preventative action.	(Occurrences of major accidents/incidents should be included within progress reports to EIB)
3	**LAND ACQUISITION, INVOLUNTARY RESETTLEMENT & ECONOMIC DISPLACEMENT REQUIREMENTS (re: PR5)**						
Note: At the time of preparing this ESAP the Project's detailed design is not definite. It is not confirmed if further land acquisition will be needed and therefore the potential impacts cannot be assessed. This ESAP outlines a number of precautionary measures to minimise possible impacts. When the detailed design is defined, if additional impacts associated with land acquisition are assessed as being significant, particularly if they include physical displacement, a Resettlement Action Plan (RAP) or Livelihoods Restoration Plan (LRF) may have to be developed and implemented.							

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3.1	***Land Acquisition, Involuntary Resettlement and Economic Displacement:*** Ensure all affected owners / users of land (including those who are using land informally) are appropriately informed, consulted and compensated for their assets and any losses: • Primarily through negotiated settlements. • At full replacement cost. • Prior to displacement. • With any additional resettlement assistance needed. Re-disclose the assessment and selection process of route alternatives, as well as any changes in the final Project footprint. Upon re-assessment of mitigation measures during permitting and project development (e.g. in relation to potential for pollution concentrations to limit production of vegetables/herbs etc along the motorway (see 4.5.1 below)) determine whether any economic displacement is to occur. If YES then a LRF will need to be developed and implemented in this regard to meet PR 5 requirements.	Economic displacement, both permanent and temporary (e.g. for construction purposes), as a result of land acquisition or restriction of access to properties	RS legislation PR5 International good practice	Responsibility: RSM Resources: Financial resources for compensation, resettlement costs and management time	Pre-construction Construction Phase	Affected people are informed about final Project footprint. All project affected people have restored their livelihoods and standards of living. Monitor number and type of submitted grievances.	(Include description of land acquisition related issues in reports submitted to EIB (e.g. number of people / households affected, temporary or permanent land acquisition, description of compensation or assistance provided, etc.))
4	**ENVIRONMENTAL REQUIREMENTS**						
4.1	**Cultural, Archaeology & Natural Heritage**						
4.1.1	***Additional Study (and supporting surveys) during Pre-Construction:*** RSM will undertake the required further study, along with any required supporting surveys, in relation to cultural and natural heritage to further refine the protection measures. The findings of this study will be disclosed to affected communities and form part of the stakeholder engagement. The ESAP will be reviewed and updated with protection measures identified from this study.	Minimising risks to cultural, archaeological and natural heritage.	EIS: BL-Dob PR1, PR6 & PR7	Responsibility: RSM Resources: Management time; ESHS resources including Expert time & cost of study and surveys.	Pre-Construction Phase	Study must be undertaken before construction commences and inform detailed mitigation and management plans.	Requirement for additional study contained with Annex 1: EIS: Expert Opinion from the Institute for the Protection of Cultural, Historical and Natural Heritage.
4.1.2	***Protection of Natural Resources:*** Protection measures shall be implemented to prevent pollution and degradation of natural resources (e.g. forest areas, orchards, agricultural crops etc).	Minimising risks to natural resources.	EIS: BL-Dob PR1, PR6 & PR7	Responsibility: Contractor (Construction) Operator/RSM (Operation Phase) Resources: ESHS Resources	Construction Phase Operation Phase	Protection of sites of natural value from degradation and pollution. Satisfaction of requirements of EIS (and other environmental approvals) and PR7.	

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4.1.3	***Chance Finds:*** A Chance Finds procedure shall be prepared that outlines actions to be taken in the event that previously unidentified archaeological remains and natural resources are found.	Preservation of and minimising risks to archaeological remains.	EIS: BL-Dob PR7	Responsibility: Contractor Resources: ESHS Resources	Construction Phase	Chance Finds procedure to be in place prior to any site clearance or groundworks.	Training should be undertaken for appropriate workforce (e.g. earthworks crews) with regard to identifying potential archaeological remains/sites and natural resources.
4.2	**Landscape**						
4.2.1	***Landscape Protection & Landscape Plan:*** Landscape protection measures (including in relation to the earthworks design) are provided in the Decision document and EIS (and other applicable project documents). These measures should be consolidation along with other measures contained within the ESAP within a Landscape Plan which will include inter alia: landscape design, proposed planting, specifications for materials etc. The Landscape Plan shall be developed so to integrate motorway and traffic into the environment and landscape, and contain Protective Forest Belts and planting schemes to reduce the monotony of the landscape design along the highway. Earthworks design to minimise landtake by steepening slopes for cutting and embankments, whilst considering integration of motorway within the wider landscape. Planting plans of disturbed areas shall use native species. Where possible local species shall be sourced and used. Planting and landscaping shall prevent erosion of soils, particularly in sensitive areas. Provisions for maintenance of landscaping during Operation should avoid use of herbicides for weed elimination in grass and grass along the route.	Protection of landscape from adverse impacts, including visual effects and minimising impacts	EIS: BL-Dob Decision on the Approval of the EIS PR1 IFC EHS Guidelines for Toll Roads	Responsibility: RSM/Designer Contractor *(develop Landscape Plan and implement it)* RSM/Operator: *maintenance plan for landscaping* Resources: Landscape engineer required for design & planning for construction; costs of landscaping & maintenance.	Pre-Construction Phase: *Design* Construction Phase Operation Phase: *re: maintenance activities*	Landscape plan design & specifications shall be prepared during pre-construction. Contractor will prepare as part of the CESMP and implement a full Landscape Plan during the works. The Landscape Plan shall be submitted to RSM for approval prior to commencing works.	
4.2.2	***Bridge Design & Temporary Works:*** Bridges shall be designed and constructed in-line with the measures contained within the EIS and Decision document (and other applicable project documents) including the aims to fit bridge within landscape, minimise disturbance/entering the riverbeds and riverbanks. Contractor to prepare and implement for major river crossings a River Crossing Management Plan and prepare procedure for works over all watercourses *(see also 4.3: Flora & Fauna requirements)*.	Protection of landscape from adverse impacts, including visual effects.	EIS: BL-Dob Decision on the Approval of the EIS PR1	Responsibility: RSM/Designer Contractor Resources: Architectural advice/ Landscape engineer required for design &	Pre-Construction Phase : *Design* Construction Phase	Sensitive bridge design & specifications shall be prepared during pre-construction. Contractor will prepare a River Crossings Management Plan and procedure for working over all	

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				planning for construction; Cost of utilising construction methods to minimise temporary works in river bed and on banks.		watercourses (i.e. to include protection measures) in draft CESMP for approval by RSM.	
4.2.3	***Tunnel Portals/Structures/Retaining Wall Finishes:*** The structures (including ancillary facilities), tunnel portals and retaining walls finishes shall be designed, specified and constructed so as to integrate into surrounding environment. Tunnel portals shall be lined and finished with stone which matches with surrounding rock. Supporting and retaining walls (including tunnel portals) shall be clad with natural stone or where it is technically feasible should utilise a dry-walling technique. The design and construction of ancillary service facilities shall be undertaken sensitively including consideration of : height, natural environment & local architecture, type of building materials (i.e. use natural stone as much as possible), and using local plant species.	Protection of landscape from adverse impacts, including visual effects'	EIS: BL-Dob Decision on the Approval of the EIS PR1	Responsibility: RSM/Designer Contractor Resources: Architectural advice/Landscape engineer required for design & planning for construction; Costs of sensitive design, construction and use of local materials (i.e. natural stone etc).	Pre-Construction Phase : *Design* Construction Phase	Landscape plan design & specifications shall be prepared during pre-construction. Contractor will prepare as part of the CESMP and implement a full Landscape Plan during the works. The Landscape Plan shall be submitted to RSM for approval prior to commencing works.	
4.2.4	***Protective Forest Belts:*** Design and construction of protective forest belts as part of Landscape Plan inline with requirements within EIS and Decision document.	To enrich highway corridor and winter landscape. To reduce potential adverse side effects from heavy traffic (e.g. exhaust emissions, dust, soot, noise & vibration, protection of existing flora etc.)	EIS: BL-Dob Decision on the Approval of the EIS PR1	Responsibility: RSM/Designer Contractor Resources: ESHS Expert advice including Landscape engineer required for design & planning for construction; Capital cost of building protective forest	Pre-Construction Phase : *Design* Construction Phase	Protective Forest Belts to be included in Landscaping Plan.	

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				belts.			
4.3	**Flora & Fauna**						
4.3.1	***Pre-construction Flora & Fauna Surveys:*** Detailed pre-construction flora and fauna surveys are to be undertaken in order to inform the further study in relation to the effects on cultural and natural resources to further define protection measures (see: 4.1.1). Surveys to be scoped by RSM with Expert Advice and to be made available to EIB. Depending on survey results mitigation measures should be developed taking account of different types and value of habitats and species potentially effected, specifically in relation to where any endangered or protected habitats/species are identified and into the river & watercourse crossings. Findings of surveys and overall study should inform the detailed biodiversity (flora and fauna) mitigation plans for both the temporary construction period and permanent works (see:4.3.2 below).	Avoiding, reducing and minimising impacts on biodiversity (flora and fauna). Biodiversity conservation. Habitat protection & conservation.	EIS: BL-Dob PR1 & PR6	Responsibility: RSM Resources: Management time; ESHS resources including Expert time & cost of study and supporting surveys.	Pre-Construction Phase	Study & surveys must be undertaken before construction commences and inform detailed mitigation and management plans.	Requirement for additional study contained with Annex1: EIS: Expert Opinion No. 07/1.30/625-461/10 from the Institute for the Protection of Cultural, Historical and Natural Heritage.
4.3.2	***Detailed biodiversity (flora and fauna) mitigation plans:*** Flora and fauna mitigation measures are provided in the Decision document and EIS (and other applicable project documents). These measures should be consolidated along with other measures contained within the ESAP and identified from the further study/pre-construction surveys (see above) within detailed biodiversity (flora & fauna) mitigation plans containing protection measures for the temporary and permanent works, including but not limited to: • Timing of site clearance/works to limit disturbance • Fencing off sensitive habitats and restriction of workers accessing sensitive areas/areas of natural value (e.g. forests) • Specific measures to protect fauna species identified • Measures to prevent fragmentation of habitats and migration/movements of species • Appropriate planting treatments • Procedures to safely remove and prevent spreading of noxious and invasive plants • Translocation of species (if required) • Measures to protect rare or endangered species if identified during additional surveys The Contractor will implement all measures contained within the detailed biodiversity mitigation plans. Requirements and specifications for the biodiversity (flora & fauna) mitigation plans (e.g. location and number of animal passages etc) shall be prepared during pre-construction by RSM/designer based on the measures contained within the Decision document of the EIS, EIS, ESAP (and other applicable project documents) and findings of the further study/pre-construction surveys.	Avoiding, reducing and minimising impacts on biodiversity (flora and fauna). Biodiversity conservation. Habitat protection & conservation.	EIS: BL-Dob Decision on the Approval of the EIS PR1 & PR6 IFC EHS Guidelines for Toll Roads	Responsibility: RSM/Designer: *Requirements & specification* Contractor Resources: Management time; ESHS resources including Ecologist/Expert time; costs of implementing measures within biodiversity mitigation plans.	Pre-Construction Phase Construction Phase	RSM/Designer to prepare requirements & specification for inclusion in tender documentation. Contractor will prepare as part of the CESMP and implement the biodiversity mitigation plans . The biodiversity mitigation plans shall be submitted to RSM for approval prior to commencing works.	
4.3.3	***Noxious & Invasive Plants:*** Contractor will implement procedures to safely remove and prevent spreading of noxious and invasive plants during the works.	Prevention of spreading of noxious and invasive plants.	PR6 International good practice IFC EHS Guidelines for	Responsibility: Contractor	Construction Phase	Procedure to be in place at start of construction. Flora & Fauna monitoring to	

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			Toll Roads	Resources: ESHS resources including Ecologist/Expert time; costs of safe removal etc.		confirm implementation of procedure is effective and preventing the spread of noxious and invasive plants.	
4.3.4	***Limiting Disturbance to Habitats and Species:*** The Contractor will implement measures during construction to limit disturbance to habitats and species, including: • Limit site clearance of vegetation and the movement of transport/plant/machinery to within the approved site area • Site clearance and works will be undertaken to limit disturbance to habitats and species, in this regard consider the schedule of works in relation to wildlife breeding or nesting periods. • Fence off /protect sensitive habitats and restrict workers accessing sensitive areas/areas of natural value (e.g. forests). • To protect the surrounding fauna and prevent disturbance; plant & machinery to be in good working order and have lowest possible level of emission of exhaust fumes, noise and vibration. • Make passages and accesses to water, feeding and breeding places by means of effective site management. • Plan suitable haulage routes away from sensitive receptors if possible and to limit damage to vegetation.	Limit habitat loss and disturbance to habitats and species. Prevent habitat fragmentation and minimise restrictions of movement or species (including to watering, feeding and breeding sites) during construction phase.	EIS: BL-Dob Decision on the Approval of the EIS PR1 & PR6 International good practice IFC EHS Guidelines for Toll Roads	Responsibility & Resources: Contractor	Construction Phase	Flora & fauna monitoring to confirm mitigation measures are effectively limiting disturbance to habitats and species. (Satisfaction of requirements of EIS (and other environmental approvals) and PR6).	
4.3.5	***River Crossings Management Plan: Working Over & In Water & River/Watercourse Crossings:*** The Contractor will implement preventative measures during construction for when working over water and construction of bridges/overpasses, including: • During working over water (e.g. construction of bridges over rivers) implement measures to minimise impact on flora • Adapt construction and design solution for bridges to minimise them going into the rivers (e.g. minimise the number of piers) *(see also 4.1: Landscape requirements).* • Measures to prevent unnecessary damage to bankside, in-stream flora and fauna and wetlands. In order to minimise risks from in-river construction activities and activities working over water the Contractor is to prepare and implement for major river crossings a River Crossing Management Plan and prepare procedure for works over all watercourses within the CESMP. Protection measures within River Crossings Management Plan will incorporate ones contained within EIS, Decision on EIS and ESAP (and other applicable project documents) and may include : • Minimise construction activities working in and over water and during sensitive periods (e.g. certain flow conditions and seasons) • Appropriate use of specialised equipment • Protection measures to prevent river bank impacts/erosion and ensure reinstatement of river	Impacts on water regime affecting aquatic species and habitats. Disturbance to habitats due to construction, including pollution.	EIS: BL-Dob Decision on the Approval of the EIS PR1 & PR6 International good practice	Responsibility: Contractor: *to prepare and implement construction River Crossings Management Plan* RSM: *to approve construction River Crossing Management Plan* Resources: ESHS resources including Ecologist/Expert time; costs of	Construction Phase	Contractor will prepare a River Crossings Management Plan and procedure for working over all watercourses (i.e. to include protection measures) in draft CESMP for approval by RSM. River Crossings Management Plan to be in place prior to construction. Flora & Fauna monitoring to confirm implementation of River Crossings	

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	banks • Pollution control measures to prevent release of construction materials, sediments and wastes into river/watercourses. Emergency Response plans will also take account of potential incidents during in-river and working over water construction.			implementing measures		Management Plan and preventative measure contained herewith are effective.	
4.3.6	***Operational Maintenance Activities Over Major Rivers:*** RSM/Operator to prepare and implement for major river crossings an Operational River Crossings Maintenance Plan as part of OESMP, to include procedure for maintenance activities over water during operation of motorway and incorporate appropriate protection measures (including ones identified in Decision on EIS, EIS, ESAP and identified during further study/surveys).	Impacts on water regime affecting aquatic species and habitats. Disturbance to habitats and species due to pollution from operation of the road.	EIS: BL-Dob Decision on the Approval of the EIS PR1 & PR6 International good practice	Responsibility: RSM/Operator: *prepare and implement Operational River Crossing Management Plan* Resources: ESHS resources including Ecologist/Expert time; costs of implementing measures	Operation Phase	Operational River Crossings Management Plan must be place in prior to commissioning and operating of motorway. If appropriate: Draft Manual to be provided for review [by RSM] 45 days before commissioning.	
4.3.7	***Implementation of Biodiversity Mitigation Measures Within Permanent Works:*** As part of the permanent works the Contractor will implement/construct the biodiversity (flora & fauna) mitigation measures for the operational phase as identified within the Decision on EIS, the EIS, further study/surveys, ESAP and contained within the detailed biodiversity mitigation plans (and other applicable project documents), including: • construct a permanent fence to prevent animals accessing • passages for animals to allow crossing of route. • pipe outlets of every 5-10km of highway. • all underpasses of local and non-defined roads to be adapted to allow passage of wildlife • Native species shall be planted in disturbed areas and where possible local species will be used. Additional measures, such as ones identified within the EIS & Decision on Approval of the EIS, will be incorporated if from monitoring measures found to be insufficient.	Avoiding, reducing and minimising impacts on biodiversity (flora and fauna). Prevent traffic collisions with animals. Minimise habitat fragmentation effects on species.	EIS: BL-Dob Decision on the Approval of the EIS PR1 & PR6 International good practice	Responsibility: Contractor Resources: ESHS resources including Ecologist/Expert time; Capital cost of implementing measures/required infrastructure; Native species will need to be sourced and purchased.	Construction Phase	All measures in-place before operation motorway. Flora & Fauna monitoring during operation to confirm if preventative measures have been effective and are sufficient. If determined to be insufficient additional measures will be introduced.	
4.4	**Water Quality**						
4.4.1	***Protection of Surface Water and Ground Water Quality During Construction:*** Surface water and groundwater resource protection measures to be implemented during construction by	Avoiding, reducing and minimising impacts on surface	EIS: BL-Dob Decision on the	Responsibility & Resources:	Construction Phase	All measures in place during construction and	

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	the Contractor are contained within the EIS and Decision on EIS (and other applicable project documents). These measures, along with ones contained in ESAP, should be consolidated within the CESMP and implemented by the Contractor, and will include but not be limited to: • Protection measures of working near or over water; including restricting the maintenance of plant, use and store clean materials in the vicinity etc: including preparation & implementation of River Crossings Management Plan (see 4.3.5 above). • Provide impermeable areas for maintenance and storage of plant and hazardous substances in appropriate locations. • Compliance with wastewater discharge limit values from relevant regulations. • Measures to prevent disturbing ground water flows and aquifer recharge. • Storage and erosion protection on excavated materials. • Measures to prevent materials being deposited on riverbeds or banks and use of appropriate construction materials close to water courses/features. • Water management guidelines for site compounds, asphalt plants, borrow pits and other site facilities. • Protection measures for banks of watercourses: minimise activities, avoid waste disposal near banks, limit removal of trees on banks; measures to prevent turbidity in river etc. • Grassed/vegetated buffer zones between motorway and water courses/features. • Flood prevention & management. • Obtain required water management permits.	water and ground water resources.	Approval of the EIS PR3 Regs.on discharge for wastewaters into surface waters: O.G. RS 44/01 Regs. on waste water treatment & drainage: O.G. RS 68/01 IFC EHS Guidelines for Toll Roads	Contractor		monitoring (of CESMP, off-site facilities and water quality) to confirm measures effective and implemented.	
4.4.2	***Sanitary Wastewater & Water Supply for Workers & Construction Sites:*** The Contractor inline with requirements within EIS & Decision on EIS must provide appropriate and adequate water supply, sanitation measures and systems for workers. Wastewater from site must be collected in tanks and appropriately treated before discharge. Ecological toilets must be provided for workforce on site. Discharge of wastewaters cannot be done without the permission/necessary approvals of relevant competent authorities.	Pollution of waters and land from discharge of waste waters. Health risks to workforce and local community.	EIS: BL-Dob Decision on the Approval of the EIS PR3 & PR4 Regs. O.G. RS 44/01 Regs. O.G. RS 68/01 IFC EHS Guidelines for Toll Roads	Responsibility & Resources: Contractor	Construction Phase	In place for the construction phase.	
4.4.3	***Surface Water Drainage, Pollution Control & Wastewater Treatment System for Motorway:*** As part of the permanent works the Contractor will implement/construct the surface water drainage system, pollution control system and wastewater treatment system including the protection measures for the operational phase as identified within the Decisions on EIS, the EIS, further study/surveys, and ESAP (and other applicable project documents), including: • Capacity of motorway drainage run-off system designed to ensure safe evacuation off storm water	Avoiding, reducing and minimising impacts on surface water and ground water resources.	Regs. O.G. RS 44/01 Regs. O.G. RS 68/01 IFC EHS Guidelines for	Responsibility & Resources: Contractor (Capital Costs of systems)	Construction Phase	All measures in-place before operation motorway. Water quality monitoring during operation to	

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	and in case of accidents. • Pollution control measures for motorway wastewater including closed drainage systems, interceptor & retention systems, monitoring of treated wastewater before discharge. • Wastewater treatment facilities and collector tanks. • Road signage marking areas with sensitive water resources.		Toll Roads EIS: BL-Dob Decision on the Approval of the EIS Banja Luka to Doboj Preliminary Design: Drainage & Waterproofing design PR3 & PR4			confirm if preventative measures have been effective and are sufficient.	
4.4.4	***Protection of Surface Water and Ground Water Quality During Operation:*** Surface water and groundwater resource protection measures to be implemented during Operation by RSM/Operator are contained within the EIS and Decision on EIS (and other applicable project documents). These measures, along with ones contained in ESAP, should be consolidated within the OESMP and implemented by RSM/Operator, and will include but not be limited to: • Compliance with wastewater discharge limit values from relevant regulations. • Obtain required water management permits and comply with approvals. • Monitor and control operation of motorway drainage, pollution control and wastewater treatment systems. • Prepare and implement maintenance plan for wastewater facilities/collection systems (where sewerage could not be directed to existing systems in nearby communities).	Avoiding, reducing and minimising impacts on surface water and ground water resources.	Regs. O.G. RS 44/01 Regs. O.G. RS 68/01 IFC EHS Guidelines for Toll Roads EIS: BL-Dob Decision on the Approval of the EIS PR3 & PR4	Responsibility & Resources: RSM/Operator	Operation Phase	Water quality monitoring during operation to confirm if preventative measures have been effective and are sufficient.	
4.4.5	***Seasonal(Winter) Pollution Control (applies to water quality & land quality):*** During Operation the following measures for reducing pollution of water resources and land from winter maintenance activities should be considered: • Use of mechanical de-icing methods (e.g. plough etc) • Sodium chloride should be replaced by other substances of similar or better defrosting effect. • If sodium chloride is used for maintenance of the motorway care should be taken to ensure it is application is optimised and applied in accurate quantities and with accurate timing. Employees should be trained in this regard. • Sodium chloride (or other materials used for de-icing) must be stored in covered structures on impermeable surfaces.	Pollution of waters and land.	EIS: BL-Dob Decision on the Approval of the EIS PR3 & PR4 IFC EHS Guidelines for Toll Roads	Responsibility: RSM/Operator Resources: ESHS resources; Capital & operator costs: mechanical de-icing equipment/ storage structures; Training costs.	Operation Phase	Winter maintenance procedures to be established as part of OESMS. As part of monitoring programme in OESMS and review of monitoring of land in vicinity of route and waters : to consider if winter maintenance operations are resulting in	

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						negative effects and review if protection measures sufficient.	
4.5	**Land Quality (Soil)** (*In addition to relevant measures in ESAP in relation to protection of water quality, landscaping, waste management & material management,)*						
4.5.1	***Soil Management Plan (SoilMP):*** Soil protection measures are contained within the EIS, Decision on EIS (and other applicable project documents). These measures should be consolidated with the further measures outlined within the ESAP within a Soil Management Plan and should include, but not be limited to: • Measures to protect areas sensitive to erosion. • Measures to avoid over-compaction of soil. • Rehabilitation Plan to be established and sites areas including temporary areas of land-use should be rehabilitated in-line with plan. • Specific management and protection measures for all borrow pits and waste dumps to prevent degradation of soil, and for tunnel spoil. • For activities related to the site but not covered by the Project which require conversion of agricultural land a new assessment or revised assessment of impacts must be undertaken. • Storage and erosion protection on excavated materials. • Measures to prevent materials being deposited on riverbeds or banks and use of appropriate construction materials close to water courses/features. • Careful removal, handling and storage surface soil (which will be used as fill material within the site). • Measures for dealing with fertile soil. • Requirements of the Waste Management Plan: including controlled care of waste in a prescribed manner. • Use of properly maintained machinery and construction equipment to avoid land contamination from leaking oils etc.	Avoid, reduce and minimise impacts on land quality, including land degradation and soil pollution.	EIS: BL-Dob Decision on the Approval of the EIS PR3 Good practice	Responsibility & Resources: Contractor (RSM Resources for review of SoilMP)	Construction Phase	SoilMP to be submitted within 45 days from contract award to RSM for approval.	
4.5.2	***New Assessment on Potential Soil Pollution Concentrations Along the Motorway to Identify Mitigation Measures Required:*** In the EIS & Decision of EIS measures to prohibit production of vegetables and medicinal herbs due to potential impact on surrounding agricultural land due to contamination from operation of the road are proposed. Assumptions used in assessment which determined these measures need to be reviewed and updated. A new assessment (as part of environmental permit application) will be undertaken in this regard in order to determine detailed mitigation. The ESAP will be updated following this new assessment and mitigation measures identified incorporated.	Potential pollution of soil along road is of concern particularly at close distances to the road and will be relative to traffic loading resulting in limitations on the use of agricultural land immediately in vicinity of the route.	EIS: BL-Dob Decision on the Approval of the EIS PR1 & PR3	Responsibility: RSM Resources: ESHS resources; RSM will require environmental and social resource to undertake assessment include Experts	Pre-Construction Phase Operation Phase (mitigation measures identified)	New assessment to be undertaken during pre-construction phase. Proof of environmental permit contains new assessment and mitigation.	(Assumptions used for air pollution assessment should be reviewed in-line with new assessment for soil pollution with regard to concentration levels from deposition of air-bourne pollutants.)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
				Time.			
4.6	**Noise & Vibration**						
4.6.1	***General: Noise Protection Measures:*** The Contractor will implement the noise mitigation measures for construction and operational phases of the motorway as identified in the EIS, Decision on the EIS and Preliminary Design (which contains locations and specification of noise barriers) (and other applicable project documents). This will include the installation of noise barriers and broadleaf planting along the highway at possible locations. During construction measures shall include, but not be limited to: • Construction work to be planned and undertaken in-line with relevant regulations and standards. • Restricting working hours and use of machinery during night-time, and use of protective equipment by workers. • Contractor must adhere to normal working hours during the day. • Construction equipment must adhere to European requirements (EU Directive EC/2000/14) regarding noise emissions and vibration. In the event noise levels exceed the allowed limits, Contractor to ban the use of equipment producing excessive noise and use modern and approved equipment. • Special measures to be implemented for noisy activities Special care should be given to avoiding adverse effects on fauna from noise activities (e.g. piling). Where piling is required in close vicinity of social and environmental sensitive areas (e.g. settlements etc), quieter techniques should be used in preference (e.g. vibro-piling rather than pneumatic/driven piling). • No blasting is planned during the construction of the motorway, however if there is such a need it will be necessary to apply regulations (and seek necessary approvals) and implement required special mitigation measures for such works. • Locate noise generating equipment away from residential and/or other noise sensitive areas. If monitored noise & vibration levels identified to exceed permissible levels Contractor to implement additional measures/review current measures on site.	Where traffic levels are reduced on existing roads due to the new road there may be improvements in the current noise environment in these areas. Mitigation of potential negative impacts on the noise environment in settlements along route.	EIS: BL-Dob Decision on the Approval of the EIS BL- Dob: Preliminary Design: Noise Miitigation Plans PR3 EU Directive EC/2000/14 International Good Practice: IFC EHS Guidelines for Toll Roads	Responsibility: Contractor: Resources: Cost of measures; ESHS resources; Capital Costs of appropriate infrastructure.	Construction Phase	During construction the impact of noise shall not exceed the permissible limits of daytime and night time noise levels. All measures shall be in place during construction and monitoring of construction noise & vibration to confirm measures effective and implemented.	
4.6.2	***Operational Management of Noise:*** RSM/Operator shall maintain noise barriers and implement additional noise protection measures if from monitoring noise levels during operation they are found to be above permissible levels.	Mitigation of potential negative impacts on the noise environment in settlements along route.	EIS: BL-Dob Decision on the Approval of the EIS BL-Dob: Preliminary Design: Noise Miitigation Plans PR3 International Good Practice. IFC EHS	Responsibility: RSM/Operator Resources: ESHS resources ; Capital Costs of maintenance & additional appropriate infrastructure.	Operation Phase	Maintenance procedures & plan to be established as part of the OESMS.	(The noise levels along the entire alignment to determine the noise emission level and compare it with allowable noise limit. In the case the limit is exceeded it is necessary to plan additional measures of noise protection (e.g. additional barriers or lower noise

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
			Guidelines for Toll Roads				running surfacing).)
4.7	**Air Quality**						
4.7.1	***General: Air Quality Protection Measures:*** The Contractor will implement the air protection mitigation measures for construction and operational phases of the motorway as identified in the EIS, Decision on the EIS and Preliminary Design (and other applicable project documents). This will include the planting of broad leaf tree barriers in the first instance. During construction measures shall include, but not be limited to: • Construction equipment must adhere to European requirements regarding emissions (including Emissions Standards for Non-road Diesel Engines) • All plant will be in good working order and regularly maintained & inspected. • Dust management measures including o damping down of earthworks in dry conditions o damping down of materials during loading and for transport o wash-down facilities & procedure for construction vehicles exiting and within site (e.g. vehicle tyre wash facilities) o covering of construction materials during transportation. o maintenance and damping down of access roads o consider minimising volume of water used to control dust by using where possible sweeping practices • Special conditions (and additional approvals) will be required to limit effects on air quality during demolition. • Contractor should not burn waste. • No blasting is planned during the construction of the motorway, however if there is such a need it will be necessary to apply regulations (and seek necessary approvals) and implement required special mitigation measures for such works. If issues are identified with monitored air quality levels during construction Contractor to implement additional measures/review current measures on site.	Where traffic levels are reduced on existing roads due to the new road there may be improvements in the current air quality in these areas. Mitigation of potential negative impacts on the air quality in settlements along route.	EIS: BL-Dob Decision on the Approval of the EIS PR3 EU Directive EC/2000/14 International Good Practice. IFC EHS Guidelines for Toll Roads	Responsibility: Contractor: Resources: ESHS resources; Cost of measures; Capital Costs of appropriate infrastructure.	Construction Phase	All measures shall be in place during construction and monitoring of air pollution during construction to confirm measures effective and implemented.	
4.7.2	***Operational Management of Air Quality:*** If monitoring indicates that limit values for air are exceeded the following measures shall be implemented: additional air pollution barriers (either artificial barriers and/or broadleaf planting).	Mitigation of potential negative impacts on the air quality in settlements along route.	EIS: BL-Dob Decision on the Approval of the EIS PR3 International Good Practice.	Responsibility: RSM/Operator Resources: ESHS resources; Capital Costs of maintenance &	Operation Phase	Maintenance procedures for broadleaf planting to be established as part of the OESMS.	(The air pollution levels along the alignment will be monitored. In the case where the limit values are exceeded it is necessary to plan additional measures (e.g. artificial barriers and/or additional

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
				additional appropriate infrastructure.			broad-leaf planting).)
4.8	**Waste**						
4.8.1	***Construction Waste Management Plan:*** As part of the CESMP the Contractor will prepare and implement a Waste Management Plan (WMP) in compliance with the RS Law on Waste Management for the construction phase, including as a minimum the following measures: • All construction waste will be collected and deposited in appropriate locations before removal from site. • At construction sites closed containers will be provided for collection of solid waste. • Petroleum waste products will be stored and collected in dedicated secure areas with disposal by licensed waster operators. • Classification of waste (under Waste Catalogue). Specific measures for the management of hazardous waste. • Authorised waste operators will be used. • Measures to prevent uncontrolled dumping of waste (in compliance with RS Regulations on waste classification by catalogue). • Specific management and protection measures for all waste dumps used by project to prevent degradation of soil. • Waste avoidance, minimisation and re-use measures. Where avoidance, minimisation or re-use not possible consider option for recycling, treatment and disposal of the waste. • Training for workforce.	Project is likely to generate significant quantities potentially of waste. Measures: To avoid generation of waste. To implement waste hierarchy and dispose of waste in an environmentally sound manner/by authorised waste operators.	EIS: BL-Dob Decision on the Approval of the EIS Law on Waste Management (O.G. RS No. 53/02) Regs on Waste Classification (O.G. RS 39/05) PR3 International Good Practice: IFC EHS Guidelines for Toll Roads	Responsibility: Contractor Resources: ESHS resources; Costs of preparation and implementation of WMP;	Construction Phase	The WMP should be in place before construction and submitted to RSM for approval within 45 days of contract award.	
4.8.2	***Operational Waste Management Plan:*** As part of the OESMP RSM/Operator will prepare and implement a Waste Management Plan (WMP) in compliance with the RS Law on Waste Management for the operation of the motorway phase, including as a minimum the following measures: • All operational waste will be collected and deposited in appropriate locations before removal from site. Appropriate waste collection facilities/containers will be provided. • Petroleum waste products will be stored and collected in dedicated secure areas with disposal by licensed waster operators. • Classification of waste (under Waste Catalogue). Specific measures for the management of hazardous waste. • Authorised waste operators will be used. • Measures to prevent uncontrolled dumping of waste (in compliance with RS Regulations on waste classification by catalogue) • Waste avoidance, minimisation and re-use measures. Where avoidance, minimisation or re-use not possible consider option for recycling, treatment and disposal of the waste.	Measures: To avoid generation of waste. To implement waste hierarchy and dispose of waste in an environmentally sound manner/by authorised waste operators.	EIS: BL-Dob Decision on the Approval of the EIS Law on Waste Management (O.G. RS No. 53/02) Regs on Waste Classification by Catalogue (O.G. RS 39/05) PR3 International	Responsibility: RSM/Operator Resources: ESHS resources; Costs of preparation and implementation of WMP; Capital costs of any waste infrastructure.	Operation Phase	The WMP should be in place before operation.	

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	• Training for operational workforce.		Good Practice.				
4.9	**Materials & Hazardous Materials**						
4.9.1	***Materials Management Plan (MMP) for Construction:*** Measures for the sourcing, handling, transport & storage of materials are contained within the EIS, Decision on ESIA (and other applicable project documents). These measures should be consolidated with the further measures outlined within the ESAP within a Materials Management Plan (to form part of the overall CESMP) for the construction phase and should consider/include: • Hazardous Materials Management Plan (see below) • Measures relating to raw materials supply and extraction (see below) • Measures in relation to asphalt and concrete plants and suppliers (see below) • Measures for the storage of materials (e.g. where appropriate storage areas should be covered and impermeable etc) • Minimisation, where possible, of use of materials ((including fuel).	Good management of materials sourcing, handling, transport and storage in order to minimise environmental & social risks.	EIS BL-Dob Decision on the Approval of the EIS PR3 International good practice.	Responsibility: Contractor Resources: ESHS resources; Costs of preparation and implementation of MMP;	Construction Phase	The MMP should be in place before construction and submitted to RSM for approval within 45 days of contract award.	
4.9.2	***Management & Transport of Hazardous Materials During Construction:*** During construction the Contractor will prepare and implement a Hazardous Materials Management Plan (HMMP) covering the relevant measures identified in the EIS, Decision on EIS (and other applicable project documents) and the ESAP. The plan should consider the nature and volume of hazardous materials and outline responsibilities for the supply, labelling, transportation, signage, storage and use of hazardous materials. The Contractor should where possible use less hazardous alternatives. This plan should cover any use of hazardous materials during construction maintenance, and form part of the overall Materials Management Plan for the site. Appropriate hazardous waste disposal measures should be contained within them WMP and emergency response measures to deal with spillages/releases of hazardous substances should be established within the emergency response arrangements (e.g. Emergency Plan).	Minimise risks from use and transport of hazardous materials during construction.	EIS BL-Dob Decision on the Approval of the EIS PR3 International good practice (including EU requirements) RS & EU Legislation on transport of hazardous materials	Responsibility: Contractor Resources: ESHS resources; Costs of preparation and implementation of HMMP;	Construction Phase	The HMMP should be in place before construction and submitted to RSM for approval within 45 days of contract award.	
4.9.3	***Borrow Pits (Raw Materials Extraction) :*** The Contractor will develop detailed plans for the use of borrow pits for extraction of raw materials and transport of materials between the site. Any additional approvals for borrow pits outside of the Project assessments and new borrow pits will be subject to approval of required permits. The locations of borrow pits to be used should be included within the Site Management Plan and the Contractor will be required to establish the environmental and social performance/management and monitoring of these off-site facilities (as outlined in the CESMP). The Contractor will advise any such sub-contractors/suppliers of their Environmental, Social, Health & Safety (including Labour & Working Conditions) responsibilities and applicable ESHS requirements shall be contained within contractual	Minimise environmental & social impacts of materials extraction and transport of materials to site.	EIS BL-Dob Decision on the Approval of the EIS	Responsibility: Contractor Resources: ESHS resources; Costs of	Construction Phase	Contractual agreements with suppliers/sub-contractors to contain appropriate clauses regarding environmental & social requirements.	

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	agreements, including the requirement to pass requirements to any sub-contractors. Contractor to implement corrective action if monitoring of such off-site facilities identify areas of non-compliance with environmental & social (including health & safety) requirements or complaints are received from local community regarding the operation and transport of materials from such off-site facilities.			implementing measures including monitoring at off-site facilities;		Monitoring of borrow pits/off-site facilities and transport of materials to ensure they are in accordance with environmental & social requirements (including health & safety). Review any complaints from communities in relation to operation and transport of materials from off-site facilities and take corrective action.	
4.9.4	***Concrete and Asphalt Production & Supply:*** The Contractor shall use existing licensed asphalt and concrete production plants and suppliers if possible. Any new facilities will be subject to approval of required permits. The Contractor shall consider environmental controls and performance when selecting asphalt suppliers and ensure they have appropriate environmental & social management plans. The locations of asphalt and concrete plants to be used should be included within the Site Management Plan and the Contractor will be required to establish the environmental and social performance/management and monitoring of these off-site facilities (as outlined in the CESMP). The Contractor will advise any such sub-contractors/suppliers of their Environmental, Social, Health & Safety (including Labour & Working Conditions) responsibilities and applicable ESHS requirements shall be contained within contractual agreements, including the requirement to pass requirements to any sub-contractors. Contractor to implement corrective action if monitoring of such off-site facilities identify areas of non-compliance with environmental & social (including health & safety) requirements or complaints are received from local community regarding the operation and transport of materials from such off-site facilities.	Minimise environmental & social impacts from production, supply and transport of concrete and asphalt.	EIS BL-Dob Decision on the Approval of the EIS PR3	Responsibility: Contractor Resources: ESHS resources; Costs of implementing measures including monitoring at off-site facilities;	Construction Phase	Contractual agreements with suppliers/sub-contractors to contain appropriate clauses regarding environmental & social requirements.	(Monitoring of concrete plants/asphalt plants/off-site facilities and transport of materials to ensure they are in accordance with environmental & social requirements (including health & safety). Review any complaints from communities in relation to operation and transport of materials from such off-site facilities and take corrective action.)
4.9.5	***Materials Management Plan (MMP) for Operation:*** Measures for the sourcing, handling, transport & storage of materials are contained within the EIS, Decision on ESIA (and other applicable project documents). These measures should be consolidated with the further measures outlined within the ESAP within a Materials Management Plan (to form part of the overall OESMP) for the operation phase and should consider/include:	Good management of materials sourcing, handling, transport and storage in order to minimise environmental &	EIS BL-Dob Decision on the Approval of the EIS PR3	Responsibility: RSM/Operator Resources:	Operation Phase	The MMP should be in place before operation.	

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	• Hazardous Materials Management Plan (see below) • Measures for the storage of materials (e.g. where appropriate storage areas should be covered and impermeable etc) • Minimisation, where possible, of use of materials (including fuel).	social risks.	International good practice.	ESHS resources; Costs of preparation and implementation of MMP;			
4.9.6	***Management & Transport of Hazardous Material During Operation:*** During operation RSM/Operator will prepare and implement a Hazardous Materials Management Plan (HMMP) covering the relevant measures identified in the EIS, Decision on EIS (and other applicable project documents) and the ESAP. The plan should consider the nature and volume of hazardous materials and outline responsibilities for the supply, labelling, transportation, signage, storage and use of hazardous materials. RSM/Operator should where possible use less hazardous alternatives. This plan should cover any use of hazardous materials during winter maintenance activities, and form part of the overall operational phase Materials Management Plan for the site. Appropriate hazardous waste disposal measures should be contained within the WMP and emergency response measures to deal with spillages/releases of hazardous substances should be established within the emergency response arrangements (e.g. Emergency Plan).	Minimise risks from use and transport of hazardous materials during operation.	EIS BL-Dob Decision on the Approval of the EIS PR3 International good practice (including EU requirements) RS & EU Law on transport of hazardous materials	Responsibility: RSM/Operator Resources: ESHS resources; Costs of preparation and implementation of HMMP;	Operation Phase	The HMMP should be in place before operation.	
4.10	**Emergency Response & Preparedness**						
4.10.1	***Emergency Plan During Construction:*** Prior to commencement of construction the Contractor will develop a written Emergency Plan to deal with measures to be undertaken in the event of an accident or emergency during construction. The plan should consider all accident and emergency scenarios (including leakage of hazardous materials) and in relation to the environment and health & safety (of both workforce and the community). Appropriate discussions will be undertaken with stakeholders (e.g. emergency responders in the area etc) and will need to be approved by RSM. A copy of the plan shall be provided also to EBRD for review upon request. This plan, as a minimum, will cover: • All requirements within the EIS, Decision on EIS, ESAP (and other applicable project documents/approvals) • Procedures for dealing with spillages/releases of hazardous substances. • Training of personnel. • Reporting procedures to authorities and protocol for informing public to avoid risks to health & safety. • Materials & equipment to deal with spillages: e.g. absorbent pads, pumps, spill kits etc. • Assessment of potential locations for high risk for spillages/leakages to occur : e.g. fuel storage areas • Procedures for safe removal and disposal of contaminated materials. • Transport of hazardous & toxic materials.	Environmental accidents associated with both motorway construction and operation might include accidents resulting in the loss of fuels and other hazardous materials resulting in pollution of surrounding area, fire and risks to human health.	EIS BL-Dob Decision on the Approval of the EIS PR3 International good practice (including EU requirements & IFC EHS Guidelines for Toll Roads) RS Legislation	Responsibility: Contractor Resources: ESHS resources; Costs of preparation and implementation of Emergency Plan;	Construction Phase	The Emergency Plan should be in place before construction and submitted to RSM for approval within 45 days of contract award.	

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
4.10.2	***Emergency Plan During Operation:*** Prior to commencement of operation the Contractor will develop a written Emergency Plan to deal with measures to be undertaken in the event of an accident or emergency during operation. The plan should consider all accident and emergency scenarios (including leakage of hazardous materials) and in relation to the environment and health & safety (of both operatives and the community) . Appropriate discussions will be undertaken with stakeholders (e.g. emergency responders in the area etc). A copy of the plan shall be provided also to EBRD for review upon request. This plan, as a minimum, will cover: • All requirements within the EIS, Decision on EIS, ESAP (and other applicable project documents/approvals). • Procedures for dealing with spillages/releases of hazardous substances (e.g. materials used for winter maintenance activities etc). • Training of personnel. • Reporting procedures to authorities and protocol for informing public to avoid risks to health & safety. • Materials & equipment to deal with spillages: e.g. absorbent pads, pumps, spill kits etc. • Assessment of potential locations for high risk for spillages/leakages to occur : e.g. fuel storage areas • Procedures for safe removal and disposal of contaminated materials. • Transport of hazardous & toxic materials. • Protective measures during operation of the motorway in case of spillage of oil and petroleum products from tankers, and in the instance of burning of oil and petroleum products.	Environmental accidents associated with both motorway construction and operation might include accidents resulting in the loss of fuels and other hazardous materials resulting in pollution of surrounding area, fire and risks to human health.	EIS BL-Dob Decision on the Approval of the EIS PR3 International good practice (including EU requirements) RS Legislation	Responsibility: RSM/Operator Resources: ESHS resources; Costs of preparation and implementation of Emergency Plan;	Operation Phase	The Emergency Plan should be in place before operation.	
4.11	**Decommissioning of Construction Sites**						
4.11.1	***Rehabilitation Plan:*** A Rehabilitation Plan is required for all temporary construction sites to ensure they are returned as a minimum to their original condition prior to commencement of construction. Landscaping of temporary construction areas shall be considered within the Rehabilitation Plan and integrate/adhere to appropriately provisions within the Landscape Plan. All access roads shall also be reinstated to original condition.	Minimising environmental and social impacts (e.g. avoid permanent loss of land, landscape & visual impacts etc) by reinstating temporary site areas to original condition as a minimum.	EIS: Banja Luka to Doboj Motorway: Final Solution: January 2011 PR 1	Responsibility: Contractor Resources: Management time/Expert fees for Rehabilitation Plan; Costs of rehabilitation.	Construction Phase	Applies to all temporary construction sites. Rehabilitation plans for each temporary site should be drafted before construction activities commence on a site.	(Include overview of planned rehabilitation of temporary sites, including worker accommodation camps, in reports submitted to EIB.)
4.11.2	***Debris & Materials from Decommissioning of Temporary Sites:*** All debris and materials arising from the decommissioning of the temporary sites will be removed from site and re-used/recycled/recovered where possible. Any residual waste will be disposed of in an environmentally friendly manner and by reputable waste carriers.	Minimise waste going to landfill. Maximise re-use/recycling/recovery.	PR3 EIS: BL-Dob	Responsibility: Contractor Resources: Management time; Costs of	Construction Phase	Residual waste going to landfill minimised. Materials residual waste arising from decommissioning	

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				waste management/residual waste disposal.		will be considered within the Materials Management Plan and Waste Management Plan.	
4.12	**Greenhouse Gas Emissions**						
4.12.1	***Greenhouse Gas Assessment:*** RSM to undertake an Initial Screening Assessment (following EBRD GHG Guidance) to determine if a Greenhouse Gas (GHG) Assessment is required (as not mandatory for road schemes).	Promote reduction of greenhouse gas emissions.	PR3 EBRD Methodology for Assessment of Greenhouse Gas Emissions http://www.ebrd.com/downloads/about/sustainability/ghgguide.pdf	Responsibility: RSM Resources: Expert Time	Pre-construction Phase (Pperation Phase if determine to be required)	RSM to prepare initial screening assessment to determine if a required GHG assessment and reporting required. Identify data to be collected for assessment & reporting.	Annual greenhouse gas emissions monitoring & reporting: PR3.
5	**SOCIAL REQUIREMENTS**						
5.1	**Land-Use (including Socio-Economic)**						
5.1.1	***Land Acquisition & Economic Displacement:*** Develop a list of affected people (categorised by the type of impact they are experiencing), list of entitlements and types of assistance for each category, develop a plan for implementation, monitoring and improvements in living standard. Provide fair compensation for land, access to land and houses. Process and present all land acquisition data from previous period (how much land was acquired / how many structures, type of land, how many households affected, type of compensation provided, how much compensation paid, etc.) in a report to EIB.	Acquisition and destruction of residential structures (physical displacement). Loss of land or access to construction land, agriculture land, forests, meadows and pastures, vineyards and orchards (economic displacement).	RS legislation PR5 International good practice	Responsibility: RSM Resources: Financial resources for compensation, resettlement costs and management time	Pre-construction Phase Construction Phase	All project affected people have restored their livelihoods and standards of living. Monitor number and type of submitted grievances.	(Include description of land acquisition related issues in reports submitted to EIB (e.g. number of people / households affected, temporary or permanent land acquisition, description of compensation or assistance provided, etc.))
5.1.2	***Vulnerable Groups:*** Provide specific assistance for vulnerable groups to be defined within the list of entitlements.	Inability to restore livelihoods and standards of living, particularly for vulnerable groups (elderly, poor, landless people,	RS legislation PR5 International good practice	Responsibility: RSM Resources: Financial resources for	Pre-construction Phase Construction Phase	All project affected people have restored their livelihoods and standards of living. Monitor number and type of	(Include description of provided resettlement assistance in reports submitted to EIB.)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
		small business owners, single mothers, etc.)		resettlement assistance and management time		submitted grievances.	
5.1.3	***Business/Employment Benefits:*** Inform people about expected benefits of the Project in relation to business / employment opportunities, which will enable them to plan and prepare (for example: attend skills training, establish small businesses, etc.)	Improved access to employment, markets and creation of business opportunities (e.g. petrol stations, hotels, restaurants, repair shops, agriculture and/or tourism related activities, etc.).	International good practice PR10	Responsibility: RSM Resources: Management time	Pre-construction Phase Construction Phase	Affected communities informed about business / employment opportunities.	Reports on stakeholder engagement submitted to EIB.
5.1.4	***Economic Activity:*** Inform people in a timely manner about the possible impacts on economic activity in surrounding areas and expected timings of impacts, which will enable them to plan and prepare.	Reduced economic activity on surrounding roads, as a result of reduced traffic.	International good practice PR10	Responsibility: RSM Resources: Management time	Pre-construction Phase Construction Phase	Affected communities informed about possible impacts on economic activity.	Reports on stakeholder engagement submitted to EIB.
5.1.5	***Access:*** Restoration of all roads destroyed by construction. Construction of underpasses and overpasses.	Economic displacement and loss of livelihoods as a result of restricted or loss of access to properties.	RS legislation PR4 & PR5 International good practice	Responsibility: RSM Resources: Financial resources for road repairs, overpasses and underpasses	Construction Phase	All roads repaired and overpasses / underpasses constructed where needed. Monitor number and type of submitted grievances.	
5.2	**Population Health**						
5.2.1	***Inform & Consult with Affected Population:*** Regularly inform and consult all affected people / communities on expected impacts and mitigation measures, including project timelines.	Stress, depression and tensions caused by physical and economic displacement and inability to restore livelihoods and standards of living.	EIS: BL-Dob RS legislation International good practice PR 4, 5 & 10	Responsibility: RSM & Contractor Resources: Management time	All Phases: Pre-construction Construction Operation	All project affected people have restored their livelihoods and standards of living. Monitor number and type of submitted grievances.	(Include description of land acquisition related issues in reports submitted to EIB.)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
5.2.2	***Community Health & Safety:*** All construction related activities must be organised in a way to preserve community health and safety, for example: • waste management, • prevention of oil/fuel spills, • prevention of water contamination • minimisation of noise (i.e. limiting construction hours during the day) Install noise barriers along the motorway, in the vicinity of residential structures	Health related impacts and impacts on the quality of life of the population living in the vicinity of the project.	EIS: BL-Dob RS legislation PR4 International good practice	Responsibility: Contractor Resources: Financial resources for ESHS measures Management time	Construction Phase	All health and safety measures in place, no major incidences or issues during construction. Monitor number and type of submitted grievances.	Include description of health / safety related issues in reports submitted to EIB.
5.2.3	***Utilities:*** Ensure construction does not interrupt electricity and water supply. If supply is interrupted, undertake immediate repairs or undertake other measures (e.g. distribute drinking water, provide temporary accommodation, etc.)	Loss of access to water (small underground wells or public water supply) or electricity caused by construction.	EIS: BL-Dob RS legislation PR4 International good practice	Responsibility: Contractor Resources: Financial resources for repairs or other measures; Management time	Construction	Water and electricity supply available in project affected area. Monitor number and type of submitted grievances	
5.3	**Community**						
5.3.1	***Construction Information:*** Prevention of informal construction along the motorway in a timely manner.	Uncontrolled development along the motorway disrupting existing community environment	RS legislation	Responsibility & Resources: RSM & RS authorities	Construction Phase Operation Phase	No informal construction along the motorway.	
5.3.2	***Severance Mitigation:*** The design will include for construction of underpasses and overpasses to prevent separation of communities. The project shall consult with potentially affected people in the design and siting of access arrangements.	Physical separation of communities, leading to loss of social cohesion.	EIS: BL-Dob RS legislation PR4 International good practice	Responsibility: RSM: *design* *(Contractor : to construct motorway in-line with design)*	Pre-Construction Phase(design) Construction Phase	All overpasses / underpasses constructed where needed. Monitor number and type of submitted grievances.	
5.3.3	***Enhance employment / business opportunities*** Enhance employment / business opportunities, for example by encouraging contracting of local	New employment / business opportunities for	RS legislation International	Responsibility & Resources:	All phases	Opening up of employment / business	

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	workforce, suppliers, etc.	the local population and economic growth.	good practice	RSM		opportunities for the local population. Include description of employment / business opportunities in reports submitted to EIB.	
5.4	**Road Safety**						
5.4.1	***Road Safety Design & Audit:*** The road will be designed in accordance with Republika Srpska and EU standards (e.g. Trans European North-South Motorway[9]) and where appropriate to the standards outlined in the IFC Guidelines on Toll Roads. RSM will carry out a Road Safety Audit of the design (in-line with EU Directive 2008/96/EC) and any recommendations within audit report should be implemented within the detailed design.	Reduction in traffic accidents and their costs. The new motorway will divert traffic away from less suitable local road network resulting in potential improvements in road safety.	PR4 EU Directive 2008/96/EC IFC EHS Guidelines for Toll Roads	Responsibility & resources: RSM	Pre-Construction Phase: *Design*	The Road Safety Audit will be undertaken before construction and in time to inform detailed design.	
5.4.2	***Road Safety During Construction:*** The Contractor will ensure construction areas are clearly signed and implement measures to avoid/reduce the risk of accidents. The qualifications of drivers should be confirmed and the policy on drug and alcohol use will apply to all drivers connected to the Project works. The Contractor shall consider implementation of road safety initiatives including regarding pedestrian safety during the works, where appropriate.	Avoidance/ reduction in risk of traffic accidents.	PR4	Responsibility & Resources: Contractor	Construction Phase	All measures in relation to be implemented at start of construction and contained with SMP.	
5.5	**Public Infrastructure**						
5.5.1	***Protection Measures for Public Infrastructure:*** In-line with the provisions contained within the EIS, Decision on EIS, ESAP (and other project documents/approvals) the Contractor will implement measures to minimise disruption to existing public infrastructure and ensure access is retained for users of public infrastructure. Measure will include: • Maintenance and reconstruction of local roads used for highway construction. • Provision of alternative routes to access agricultural plots, buildings and residential properties during construction and provision as necessary within design of road. • Implement required measures to ensure continuity of electricity supply to local communities/	Minimise impacts, including disturbance, on exiting public infrastructure and communities using them.	EIS: BL-Dob Decision on the Approval of the EIS PR4 International good practice.	Responsibility & Resources: Contractor	Construction phase	All measures to prevent disruption to public infrastructure and communities using public infrastructure to be implemented. Review any complaints	

[9] : TEM Standards and Recommended Practice, Third Edition February 2002, as well as the agreement on European traffic corridors (UNESC Road Transport Infrastructure: European Agreement on Main International Traffic Arteries (AGR), April 2002)

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	businesses etc. • Implement measures where a collision with local water supply is anticipated to ensure uninterrupted supply during construction. Contractor to take corrective action in the event of complaints from local communities with regard to use and access of public infrastructure.					regarding access or use of existing public infrastructure during construction and take corrective action.	
5.6	**Influx of Workers (See also Labour & Working Conditions Requirements) : (Construction related workforce);**						
5.6.1	***General Management of Workforce:*** The Contractor will assess the number and origin of construction workforce and implement within the CESMP suitable measures to manage and support the workforce in order to minimise social impacts. These measures shall build on the provisions and requirements set out within the EIS and Decision on the EIS. If significant numbers of non-local (i.e. migrant) construction workers will be employed for the Project the Contractor will develop a specific plan to manage the influx of workers on the Project. The CESMP (or specific plan) will consider: • Provision of Project and site induction training and briefing • Provision of general welfare facilities & utilities • Provision of and access to healthcare/medical facilities • Provision of recreational activities & facilities • Provision of accommodation (see below) • Cultural issues (including translation requirements for key project documentation (e.g. EHS literature) • Medical fitness standards • Drug & Alcohol policy for the Project and workforce	Short term influx of workers can result in: • additional strain on existing services and infrastructure • demands for goods and services: including for short-term accommodation • community health issues • community tension between residents and workers.	EIS BL-Doboj Decision on the Approval of the EIS PR2 & PR4 IFC EHS Guidelines for Toll Roads International Good Practice Law on Environmental Protection (O.G. RS No. 41/08, 29/10) RS National Action Plan for Health & Environment (contained in O.G. RS 56/02 Law on Occupational Safety O.G. RS. 01/08 & 13/10	Responsibility: Contractor Resources: ESHS Resources: Capital Costs for Welfare/Utilities/ Workforce Accommodation/ Healthcare facilities *(as required)*	Construction Phase	Measures shall be incorporated within CESMP OR specific plan within the CESMP. Code of Conduct for Workers shall be submitted for approval to RSM within 45 days of award of Contract. Monitoring of protection measures for influx of workers shall be undertaken as part of the overall environmental and social monitoring plan (see below); this will include monitoring of workforce accommodation.	
5.6.2	***Personal Protective Equipment for workers:*** The Contractor shall ensure all workers are provided with and training in the use of appropriate PPE.						
5.6.3	***Disease Prevention & Preventative Health Examinations*:** As part of the CESMP the Contractor shall detail and implement communicable & vector-borne disease prevention and control measures proportionate to level of risk. These measures shall build upon the commitments within the EIS and Decision on EIS (other applicable project documents and approvals) and the ESAP, including where appropriate: • Preventative health examinations for workers. • Immunisation programme for workers. • Training & education on disease prevention, risks and access to treatment & available treatments • Provision of education/information and health related products (e.g. condoms) to reduce risks of sexually transmitted diseases.						
5.6.4	***Local Skills & Labour:***						

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	The Contractor should use where possible local workforce and skills, along with the use of local suppliers.						
5.6.5	***Workforce Code of Conduct:*** The Contractor shall prepare and implement a Code of Conduct for workers setting out expectations for behaviour and integration in the local communities.						
5.6.6	***Workforce Accommodation:*** Accommodation needs will be assessed and any required worker camps will be developed as a minimum, in-line with international good practice[10] and the Contractor shall: • Agree location of accommodation camps with relevant stakeholders, including local authorities, taking account of environmental & social impacts, and avoiding sensitive areas. • Safe sanitary and waste facilities, and energy supply . • Ensure accommodation is fit-for-purpose (including clean, safe and meets the needs of the workforce). • Ensure as a minimum national standards for accommodation are achieved and if not available that international standards are applied, including: welfare facilities; drinking water supply, heating & ventilation, appropriate health & safety measures (including fire safety & protection measures); first aid and medical facilities. • Minimise impacts on local communities and their services.						
5.7	**Local Disturbance/Nuisance**						
5.7.1	***Temporary Construction Sites:*** All temporary construction sites shall be located in areas following consideration of the potential environmental and social impacts, which shall include a review of EIS (and other applicable project approvals (e.g. Permits) and documentation) and relevant stakeholder engagement (i.e. with local authorities). Further environmental and social protection measures required shall be identified and implemented. All necessary approvals/permits for temporary construction sites not covered by Project environmental permits and approvals shall be obtained by the Contractor. Temporary construction sites/facilities are not to be located within vulnerable or sensitive areas, such as near local communities or surface/groundwater sensitive areas. All such temporary facilities will implement sanitary, water supply and pollution control measures.	Minimising environmental and social impacts including preventing local disturbance and nuisance and environmental damage.	EIS: Banja Luka to Doboj Motorway: Final Solution: January 2011 PR 1 International good practice.	Responsibility & Resources: Contractor	Construction Phase	Site selection stage shall consider requirements for locating sites. Necessary approvals/permits shall be obtained and protection measures identified prior to any construction commencing at a site.	
5.7.2	***Construction Site Traffic/Transport Management:*** As part of the SMP the Contractor shall include provisions in relation to haulage routes, a Construction Travel Plan (including volume and type of construction vehicles etc) and Traffic Management. These provisions should build upon the measures to limit disturbance and nuisance to the local community and environment and specifically:	Construction of new roads can result in local disturbance and nuisance issues which can include:	EIS: BL-Dob PR1 & PR4	Responsibility: Contractor Resources: Management	Construction Phase	The SMP must be place in prior to construction. Draft SMP to be provided for review by RSM within 45	(Include a brief description in progress reports to RSM and EIB/Lenders (as required)of the implementation of the

[10] Including: 'Workers' accommodation processes and standards: A guidance note by IFC and EBRD': IFC EBRD August 2009: http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/p_WorkersAccommodation/$FILE/workers_accomodation.pdf

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
	• Construction work will be managed to comply with all regulations of environmental protection and working environment. • Contractor must prevent damage to local access roads and any damage which occurs as a result of the works must be repaired. • Prevent mud accumulation on local roads. • Construction traffic should be routed to avoid sensitive areas where possible, and consideration should be given to potential disturbance at certain times of day; for example certain routes being excluded from use at night time etc (Mechanisms within the Stakeholder Engagement Plan to ensure communication routes with community are available and grievance procedure to address complaints regarding local nuisance and disturbance. The Contractor will implement corrective action in this regard.)	• Temporary road congestion due to slow moving plant • Access restrictions and diversions • Dust and noise issues • Visual impacts		time & costs of implementation of Site Management Plan requirements.		days of award.	SMP, highlighting any Community complaints regarding local disturbance/nuisance issues and corrective action taken .)
5.7.3	***Scavenging Animals:*** Construction site waste shall be managed to prevent animals being attracted. Construction workforce shall not harass, hunt or feed wild animals; this will be clearly communicated to the workforce during site induction, training, site notice boards & literature etc.	Minimising impacts on wild animals.	PR6 International good practice.	Contractor	Construction Phase	CESMS training/induction programme to include.	Site supervision to monitor any signs of incidents in this regard.
6	**LABOUR & WORKING CONDITIONS REQUIREMENTS (including Occupational Health & Safety (OHS))**						
6.1	**Occupational Health & Safety**						
6.1.1	***Construction Occupational Health and Safety Management System (OHSMS**):*** Building on the commitments within the EIS, Decision on EIS (, other applicable project documents), the ESAP and the RS legislative requirements (O.G. RS 01/08 & 13/10) the Contractor shall establish an occupational health and safety management system inline with EU OHS Framework Directive, OHSAS 18001 & IFC General EHS Guidelines (2007) and develop a Project specific Health & Safety Plan. The Contractor will ensure that agreements with sub-contractor require them to also follow the Project Health & Safety Plan and occupational health and safety management system. (Note **: The Construction Occupational Health & Safety Management System may form part of the CESMS or be a separate system;)	Protection of Health and Safety of workforce and develop robust H&S management systems. Establish safe working practices and implement systems which accord with national, EU and international legislation, standards & guidance.	EIS: BL-Dob Decision on the Approval of the EIS PR 2 OHSAS 18001 Law on Occupational Safety (O.G. RS 01/08 & 13/10) EU Directive (89/391 EC) International good practice: inc: IFC General	*see comment* * Responsibility: Contractor Resources: Designated ESHS Resources are required – to include a designated ESHS Manager; Health & Safety Site Literature & Training materials (e.g. Health & Safety notice boards, site booklets,	Construction Phase	Construction Occupational Health & Safety management systems must be place in prior to construction. Draft Manual to be provided for review by RSM within 45 days of awards. Contractor will prepare and submit to RSM Health & Safety reports on a quarterly basis (as part of the overall CESMS reporting). Summarises of these reports will	* In the event more than one main contractor is appointed then one overarching Project OHSMS & Health & Safety Plan should be established for ALL Contractors to adopt and RSM will need to ensure they have sufficient resources in place to implement and monitoring the overarching Project OHSMS & Health & Safety Plan.

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
			EHS Guidelines (2007)	toolbox talks etc)		be provide to EIB in progress reports.	
6.1.2	***Operational Occupational Health and Safety Management System (OHSMS***):*** Building on the commitments within the EIS, Decision on EIS (,other applicable project documents), the ESAP and the RS legislative requirements (O.G. RS 01/08 & 13/10) RSM/The Operator shall establish an occupational health and safety management system inline with EU OHS Framework Directive, OHSAS 18001 & IFC General EHS Guidelines (2007) and develop a Project specific Health & Safety Plan for the operation of the motorway. (To cover operational workforce/sub-contractors involved in operation and maintenance of motorway etc). (Note ***: The Operational Occupational Health & Safety Management System may form part of the OESMS or be a separate system;)	Protection of Health and Safety of workforce and develop robust H&S management systems. Establish safe working practices and implement systems which accord with national, EU and international legislation, standards & guidance.		Responsibility: RSM/Operator Resources: Designated ESHS Resources are required – to include a designated ESHS Manager; Health & Safety Site Literature & Training materials (e.g. Health & Safety notice boards, site booklets, toolbox talks etc)	Operation Phase	Operational Occupational Health & Safety management system must be place in prior to commissioning and operating of motorway. If appropriate: Draft Manual to be provided for review [by RSM] 45 days before commissioning.	* Responsibility for implementation of measures during the operational phase are assigned in the ESAP to RSM, however if a contract is let for the operation of the motorway the 'Operator' would also be obliged to adhere to the requirements within the ESAP, SEP and relevant project documentation and approvals (e.g. the EIS and environmental permit). Further any 'Operator' will be responsible for ensuring its sub-contractors understand the requirements contained within the ESAP and have contract conditions in place to ensure applicable elements of the ESAP are achieved.
6.2	**Labour & Working Conditions : refers to construction workforce, however requirements will also apply during operation of the motorway to RSM/the Operator of the motorway.**						
6.2.1	***General Requirements : Labour & Working Conditions:*** The Contractor will comply with Labour Laws (RS 55/07) and the relevant requirements of the International Labour Organisation (ILO) as ratified by RS. The Contractor will prepare and implement HR Policies; these shall include, amongst other things, provisions to prohibit use of child labour and forced labour, and include rights for non-employees (inline with ILO conventions and EBRD PR2). The Contractor will ensure that sub-contractors apply the same standards and that workforce are provided with fair wages, fair working hours, welfare facilities and health & safety provisions.	Good human resource management and working conditions in accordance with national labour laws and international labour conventions.	PR2 Labour Law (O.G. RS 55/07) ILO Conventions	Responsibility: Contractor Resources: ESHS & HR Resources; Costs associated with	Construction Phase	In place immediately following contract award (provisions for PR2 will form part of conditions of contract within the Employers Requirements).	HR Policies shall be developed in accordance with RS laws and the Conditions of Contract.

Ref. No.	Mitigation Measure/Action	Environmental/ Social Risks /Benefits	Source Reference: Legislative/ EBRD PR[6]	Responsible Party(s) and Investment/ Resources required	Timeframe/ Project Phase	Target/evaluation criteria for successful implementation	Comment
6.2.2	***Workforce Grievance Mechanism:*** The Contractor will develop and implement a grievance mechanism for workers (& their organisations if applicable e.g. sub-contractors) in line with EBRD PR2 (Para.18) to enable individuals/groups to raise reasonable workplace concerns. The grievance mechanism shall be communicated to workers (& organisations if applicable) and shall be easily accessible for all parties.			communication of policies and grievance mechanism;	Construction Phase	In place immediately following contract award (provisions for PR2 will form part of conditions of contract within the Employers requirements).	
6.2.3	***Supply Chain:*** The Contractor will take reasonable steps to review and inquire about the use of child and forced labour in its supply chain in relation to goods and materials which are required by the Project.	To ensure that adverse impacts associated with supply chains are considered where low labour cost is a material factor in the competitiveness of goods/materials supplied.	PR2 Principles and standards embodied within ILO Convention related to abolition of child labour & elimination of forced labour.	Responsibility: Contractor Resources: Supply chain management time/resources	Construction Phase	Continually.	
7	**OTHER REQUIREMENTS**						
7.1	**Unexploded Ordnance**						
7.1.1	***Chance Finds of Unexploded Ordnance:*** A procedure will be established by the Contractor during construction for Chance Finds of unexploded ordnance in accordance with RS law. On the discovery of chance finds of unexploded ordnance the Contractor will immediately inform the authorised officials (e.g. police or municipal civil protection department), visibly mark and secure area until authorised officials arrive.	Preservation of and minimising risks to workforce and local community.	Law on Civil Protection (O.G. RS 26/02. 39/03 & 29/10) BiH Law on Demining (Zakon deminiranju, BiH O.G. 5/02)	Responsibility: Contractor Resources: ESHS Resources	Construction Phase	Chance Finds procedure to be in place prior to construction.	

Table 2: Monitoring Requirements

Ref. No.	Monitoring Requirement	Timeframe / Project Phase	Responsible Party and Investment/ Resources required	Source Reference
ENVIRONMENTAL MONITORING				
M1. **General Requirements- Environmental and Social Management**				
M1.1.	***Monitoring Plans:*** Comprehensive monitoring plans shall be developed as part of the CESMS & OESMS for construction and operation phases respectively by the Contractor (construction phase) and RSM/Operator (operation phase) covering all relevant environmental & social aspects. The monitoring plans shall include the monitoring requirements set out within the EIS, Decision of the Approval of the EIS and the ESAP (and other applicable documents/approvals, including permits). The information regarding monitoring parameters, number & location of monitoring sites, frequency (including allowance for seasons) and other necessary information shall be contained within the plans. Adequate resources shall be allocated for monitoring including environmental and social experts during construction, as required. For certain elements of monitoring under the EIS and other approvals requirements only authorised companies can be engaged to undertake this monitoring. Provision must be made in the monitoring plan for audits/inspections by the Competent Authority and progress reporting to the Supervisor (on behalf of Client i.e. RSM/other designated party) of the site who will review the monitoring results. Plans with include but not be limited to: • monitoring of the implementation of social management activities required to ensure the provisions of the ESAP are effectively being implemented and as defined in this ESAP, for example the number of staff involved in implementation of social issues, division of responsibilities, difficulties encountered, etc; • monitoring of the compliance of sub-contractors with the provisions of the ESAP; • monitoring of the implementation of environmental management activities required to ensure the provisions of the ESAP are effectively being implemented and as defined in the ESAP; • monitoring of compliance with labour & working conditions requirements within the ESAP; • monitoring of protection measures for influx of workers as contained within the ESAP; this will include monitoring of workforce accommodation; • Occupational Health & Safety monitoring as required under the occupational health and safety management system; • monitoring of impacts of construction transport, including transport of materials; and • monitoring of off-site facilities (including borrow pits, asphalt plant and concrete plants);	All phases Monitoring Plan for the Construction Phase will be submitted to RSM (or Supervisor) for approval within 45 days of contract award.	Responsibility: Contractor – *construction phase* RSM /Operator – *operation phase* Resources: ESHS Resources & mangers: (including staff responsible for environmental, social and Health & Safety management) Authorised Company for specific monitoring.	EIS: BL-Dob Decision on the Approval of the EIS PR 1 International good practice
M1.2.	***Review of Monitoring:*** • The Supervisor (RSM/other designated party) will review monitoring plan, progress reporting and monitored results in order to undertake overall review of compliance with the ESAP requirements and identify any corrective action required.	All phases	Responsibility: Supervisor of Site (RSM/other party) Resources: ESHS Resources & mangers:	PR 1 International good practice
M2. Stakeholder Engagement				
M2.1.	The number and types of stakeholder engagement activities should be monitored and reported on – activities need to be processed and analysed for example: how many public meetings were held, how many people attended, what issues were discussed, what were the comments/grievances about, how will they be addressed, etc. The number and types of grievances received should also be monitored and reported on. This should also involve processing and analysis, for example: categorisation of grievances (those related to land acquisition, economic displacement, health and safety, construction nuisances, community impacts, etc.), average time to respond, outstanding grievances, etc.	All phases	Responsibility: RSM Resources: Staff responsible for social management	PR 10 International good practice
M3. Land Acquisition, Involuntary Resettlement & Economic Displacement				

M3.1.	Activities related to land acquisition should be recorded in an appropriate manner to allow for data processing, monitoring and reporting, for example: number of people / households affected, type of impact - temporary or permanent land acquisition, type of compensation packages or assistance provided, identified and assisted vulnerable groups, number of negotiated settlements, number of court or administrative appeals, etc.)	Pre-construction Phase Construction Phase	Responsibility: RSM Resources: Management time	PR 5 International good practice
M4. Environmental Monitoring				
M4.1.	Procurement of Materials: to ensure that asphalt plants & borrow pits (for stone, sand & gravel) facilities are in accordance with the requirements of environment, health & safety their possession of valid approvals and/or permits will be inspected. This measure should be extended to concrete batching plants.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob (ESAP addition of inspection of concrete batching plants)
M4.2.	Transport of Materials: to ensure that materials including asphalt, stone, sand and gravel are transported to site are covered and stone/sand/gravel are damped down.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob
M4.3.	Allowed Routes: monitoring that designated routes are being used to transport materials to site.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob
M4.4.	Noise & Vibration Monitoring: monitoring of noise levels on construction sites and at nearest residential properties once a week and in the event of a complaint. Monitoring of overall vibration levels.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob
M4.5.	Air Pollution & Dust: monitoring of air pollution during construction and delivery of materials on or near the site using a mobile laboratory.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob
M4.6.	Water & Soil Pollution: monitoring of quality of water and soils using mobile laboratory including: during the delivery of materials and construction, at locations due to improper disposal of waste; from improper maintenance of equipment and from fuel supplies.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob
M4.7.	Protection of cultural, historical and natural heritage: monitoring & inspection.	Construction Phase	Responsibility & Resources: Contractor/Authorised supervisor from Institute for the protection of cultural, historical and natural heritage	EIS: BL-Dob
M4.8.	Flora & Fauna: Monitor destruction of crops, trees, meadows etc during the delivery of materials and construction.	Construction Phase	Responsibility & Resources: Contractor/Authorised monitoring company	EIS BL-Dob
M4.9.	Air Pollution: monitoring of air pollution on locations near motorway.	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company	EIS BL-Dob
M4.10.	Noise Monitoring: The noise levels along the entire alignment to determine the noise emission level and compare it with allowable nose limit. In the case the limit is exceeded it is necessary to plan additional measures of noise protection (e.g. additional barriers or lower noise running surfacing).	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company	EIS BL-Dob
M4.11.	Water quality: monitoring of water quality in major rivers including: Vrbas, Crkvena & Lisnja	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company	EIS BL-Dob
M4.12.	Wastewater discharges: monitoring of wastewater discharges from motorway at outlets.	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company	EIS BL-Dob
M4.13.	Soil quality: monitoring of concentrations of heavy metals in the soil in agricultural land along the highway at a number of locations once per year.	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company	EIS BL-Dob
M4.14.	Flora: monitoring after completion of construction to determine the condition of the flora along whole section.	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company/ecological	EIS BL-Dob

			engineer	
M4.15.	Flora & Fauna (Noxious Plants & Invasive Species): Monitoring of safe removal of noxious and invasive species and limiting spreading.	Construction & Operation Phase		
M4.16.	Fauna: During operation using infrared sensors monitor the movement of medium and large animals across highway. Monitor the incidence and distribution of injured animals.	Operation Phase	Responsibility: RSM Resources: Authorised monitoring company/ecological engineer	EIS BL-Dob
M5. Social Monitoring				
M5.1.	Record the number of job vacancies resulting from the Project and the number of vacancies taken up by residents of affected local communities.	All phases	Responsibility: RSM Resources: Management time	International good practice
M5.2.	Monitoring effects on population by reporting on a number of question including regarding impacts of road, improvements that could be made and specific problem identified by local residents.	Operation Phase	Responsibility: RSM Resources: Management time/resources responsible for social monitoring	
M6. Labour & Workforce Monitoring				
M6.1.	Monitoring of protection measures for influx of workers shall be undertaken as part of the overall environmental and social monitoring plan; this will include monitoring of workforce accommodation.	All phases	Responsibility: Contractors Resources: ESHS resources: Staff responsible for social management	EIS: BL-Dob
M6.2.	Monitoring the safety of workers.	Construction Phase	Responsibility & Resources: Contractor	EIS BL-Dob