Republic of Serbia
Ministry of Construction, Transport
and Infrastructure
Nemanjina 22-26, 11000 Belgrade

PHASE 2 OF THE MULTI-PHASE PROGRAMMATIC APPROACH

SERBIA RAILWAY SECTOR MODERNIZATION

(DRAFT for APPRAISAL)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

June 2023

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Abbreviations/Definitions

CFU	Central Fiduciary Unit
DfR	Directorate for Railways
E&S	Environmental and Social
EA	Environmental Assessment
EHSG	World Bank Group Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESSs	Environmental and Social Standards
IZS	Serbian Railways Infrastructure
LMP	Labor Management Procedure
MCTI	Ministry of Construction, Transport and Infrastructure
MoEP	Ministry of Environment Protection
MoI	Ministry of Interior
MPA	Multiphase Program Approach
O&M	Operation and Maintenance
OP	Operational Procedure
PE	Population Equivalent
PITs	Project Implementation Teams within the IZS, SC, SV and DfR
PIU	Project Implementation Unit within the MCTI
PSEP	Project Level Stakeholder Engagement Plan
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RS	Republic of Serbia
SC	Serbia Cargo
SEA	Sexual Exploitation and Abuse
SPSEP	Sub-Project Level Stakeholder Engagement Plan
SH	Sexual Harassment
SOE	State Owned Enterprise
SR	Serbian Railways
SRSM	Serbia Railway Sector Modernization
SV	Serbia Voz

EXECUTIVE SUMMARY

1. Serbia Railway Sector Modernization Project background

The World Bank (WB) aims to support the Government of Serbia in continuation of institutional, physical and operational modernization of the railway sector in an integrated manner through providing financial support to Serbia Railway Sector Modernization Project (hereinafter: **the Program**) as part of the Multiphase Programmatic Approach to be implemented in three phases over the ten-year period. Sectoral changes are planned to: (1) strengthen the management of the sector, giving companies clear and achievable contractual arrangements; (2) infrastructure improvement; (3) encouraging railway companies to increase their corporate efficiency and achieve their commercial goals; (4) improving the reliability and safety of railway services through the use of modern technology, modern safety systems, energy efficiency measures and consideration of resilience; and (5) increasing rail modal participation by working on last-kilometer connectivity, urban integration, multimodal logistics centers and the concept of integrated territorial development.

Phase 2 of the Program (hereinafter: **the Project**), the subject of this ESMF, would prioritize investments in the overhaul maintenance workshops and refurbishment of existing rail maintenance machinery with procurement of new rail maintenance machinery thus strengthening the railway sector on the field of maintenance. This is expected to be the largest phase by investment amount. The Project will utilize the knowledge originated in Phase 1 on rail asset management, ownership structure, further corporatization, modal shift interventions and commercialization of the sector, with special emphasis on railway infrastructure maintenance. In addition, it would scale up and finish implementation of the SMS to improve safety performance and establish a safety culture together with continuation of introduction of digital solution in operational activities. These efforts will be coupled with scaled-up infrastructure investments coherent with the main objective of the Project. The Project may also begin the utilization of intelligent transportation systems (ITS) and pilot integration of rail and bus services. The integration of intercity and urban rail services (freight and passenger) with other modes will be continuing to improve operational safety. The next three pilots for ITD will be conduct, as a continuing activity from Phase 1. These measures would not only benefit wider local communities but also provide climate co-benefits. Also, the Project will recognize private investments opportunities throughout the analysis of construction of new logistics centers and intermodal terminals with and cargo-oriented developments (COD) that will provide clear opportunities for the private sector to participate.

2. Context of the Project

Railways are more cost-efficient than road transport for products that are in bulk, heavy, and moved over relatively long distances. For such goods, rail transport also is more energy- and emissions- efficient per ton and saves on road maintenance. With a modern rail system, Serbia can capitalize on its favorable location as a hub for main east-west and north-south corridors to capture both regional and longer-distance trade opportunities.

The total length of the Serbian railway network is 3,348 kilometers. The length of single-track railways is 3,059.4 kilometers, while the length of double-track railways is 288.7 kilometers, or 8.6% of the total. On the network, there are four main railway junctions: Belgrade, Nis, Novi Sad, and Subotica.

The "axis" of the railway network is part of the Pan-European transport corridor X, which runs along the route Salzburg-Ljubljana-Zagreb-Sid-Belgrade-Nis-Preevo-Skopje-Veles-Thessalonica and branches in Belgrade to Budapest as a branch of Corridor X and in Nis to via Sofia to Istanbul as a branch of Corridor Xc. This essential corridor through Serbia is 872 kilometers long, which represent 26 percent of the total length of the network. The length of electrified railways with a single-phase AC 25 kV 50 Hz power supply system is 1,273 kilometers, or 38% of the total length of railways, which is substantially less than the EU average of 57%.

The efficiency of the Serbian rail network is subject to temporary speed restrictions. This is due to the unsatisfactory track conditions caused by insufficient investments in the maintenance and development. In addition, as a consequence of dissolution of the former Yugoslavia and the transition period during the 1990's, traffic on most parts of the Serbian railway network rapidly declined. Over the last 15 years the number of passengers, as well as the number of passenger trains, was in constant decline. There are external and internal reasons for this. Firstly, the decrease of railway passenger traffic is a consequence of conflicts in the former Yugoslavia and the economic crisis during the 1990's. Secondly, the rail infrastructure was inadequately maintained during that period. Lastly, there have been structural changes to the rail market.

In 2015, the Government of Serbia (GoS) initiated sector reforms to reduce the large fiscal burden of railway subsidies and to start bringing its system in line with the standards of the European Union (EU). The 2008–2015 transport strategy for railway, road, inland waterway, air and intermodal transport and the 2011 and 2013, Railway Law and Railway Safety Interoperability Laws all set targets in line with the EU legal and regulatory framework.

Railway infrastructure modernization is essential to address various cross-cutting performance issues. Decades of low and non-strategic investments, outdated management structures and practices, and neglect of maintenance have led to serious deterioration of the network infrastructure, and low service quality. The financial, institutional, and operational reforms carried out so far have laid an essential foundation for railway modernization and must be followed up; however, Serbia's railways also need significant capital investments in order to recover traffic and generate public benefits.

Since 2013 a total of EUR 1,5 billion has been invested in reconstruction and modernization of approximately 390 kilometers of main railway lines in addition to construction of the new Zezelj bridge and completion of phase 1 of the main railway station Prokop in Belgrade. Investments were supported by the European Investment Bank, European Bank for Reconstruction and Development, the Russian Federation, Kuwait fund, IPA funds, EU Connectivity Agenda for the Western Balkans and the state Budget. In addition, approximately 450 km of regional and local lines, which are of particular importance to freight transport, are renewed in amount of EUR233 million.

In 2016, Serbia opened negotiations with the EU under Chapters 14 and 21 of the Acquis Communautaire on transport policy and trans-European networks, respectively. Under Chapter 14, the objectives of EU transport policy are establishing efficient transportation systems offering a high level of sustainable mobility throughout the Union, ensuring high standards for safety, security and passenger rights, and improving working conditions. Under Chapter 21, the EU seeks to create a modern infrastructure to ensure connectivity for passengers and freight.

3. Development Objectives

The Project Development Objective (PDO) of the second phase of the Serbia Railways Sector Modernization Program is to maintain the quality of infrastructure and safety of railway operations through enhanced maintenance of existing railway assets.

4. Components of the Project

Phase 2 is structured along the same three components as in the Program first phase. The overall focus on Phase 2 is on railways infrastructure routine maintenance, yet includes activities that: (i) build up on Phase 1 activities; and (ii) prepare Phase 3 activities. In particular, Phase 1 establishes the Railway Infrastructure Asset Management System (RIAMS) that will be IZS's keystone to plan and optimize asset management, including maintenance. Phase 2 content is defined based on the need to initiate MPA Phase 2 and on the lessons learned from Phase 1.

The Project will be implemented through three components and accompanied sub-components:

Component 1: Infrastructure Investments and Asset Management: Sub-Component 1.1: Heavy duty machinery for railways infrastructure maintenance, Sub-Component 1.2: Modernization of railways maintenance facilities, Sub-Component 1.3: Outsourcing railways routine maintenance**,** Sub-Component 1.4: Railways asset management and planning**,** Sub-Component 1.5: Preparation of technical documentation for railway lines

Component 2: Institutional Strengthening and Project Management: Sub-Component 2.1: Sectoral governance and commercial approac**h**, Sub-Component 2.2: Human Capital Development, Sub-Component 2.3: Project Management and Citizen Engagement

Component 3: Railway Modernization Enablers: Sub-Component 3.1: Growing Cargo Traffic, Sub-Component 3.2: Growing Passenger Traffic.

5. Project Beneficiaries.

The primary Project beneficiaries include rail users, freight companies, industry, railway sector companies state owned and private alike and the citizens of Serbia at large. Regional economic development through an increased

trade and investment as a result of lower transport costs and improved rail connectivity will also be supported. Belgrade and regional area citizens, GoS, and in particular IZS, Serbia Cargo, and Serbia Voz, will benefit from reduced public sector expenditures due to more efficient operation of the rail system.

The participating government entities and State-Owned Enterprises (SOE) will benefit directly from the institutional, legal and regulatory strengthening and capacity building activities. The Project will benefit users of urban transport when rail services become better integrated with it. In the long run, the Project may also benefit the private sector which will benefit from last mile connections, if feasibility is proven. Social impacts, including gender, will be addressed. As passenger rail services are addressed, there would be scope for improved mobility for people in rural areas, people with disabilities, and/or the elderly to gain better access markets and jobs. The gender implications of the Project, as women's experiences with transport systems differ from those of men, particularly as related to decision-making, facilities planning, safety, reliability, affordability, and accessibility. With the Bank's technical advice, the Government of Serbia (GoS) has completed a country-wide Gender in Transport study. This study analyzes gendered mobility patterns of transport users, with a view to enhance transport service provision for men and women alike, and to create better access to employment opportunities for females and improve their workplace advancement. The Project will operationalize the study's recommendations insofar as railway transport is concerned. A new Human Resource (HR) strategy for the SOE railway sector companies aiming to create better access to employment opportunities for females and improving their workplace advancements is being developed as part of Phase 1 of the Project. The following activities are being undertaken: (i). incorporating female passenger-friendly features such as breastfeeding rooms and sanitation facilities; (ii). application of appropriate safety and security design elements, e.g. lighting; and (iii). training of staff on SEA/SH and bystander intervention. Efforts in relation to HR improvements will continue in the Project.

6. Project Duration.

The Project Phase 2 is envisaged to be implemented within the period 2023-2028.

7. Purpose of the Environmental and Social Management Framework (ESMF).

The Project includes a number of subprojects that have not been identified during the preparation phase and the list of planned activities is only tentative. This is why the Framework approach is deemed appropriate. The ESMF provides a roadmap on environmental and social due diligence procedures that ensure implementation of the Project compliant to and in line with the ESF. This includes guidelines for identification of environment and social risks and impacts (screening) and how these will be managed at subproject level. This includes application of the mitigation hierarchy, exclusion of activities likely to put at high risk the nature and communities, assessment of risks and tailoring appropriate mitigation measures and communicating the implementation of environmental assessments and mitigation plans to stakeholders, including the general public. The ESMF incorporates mandatory screening procedures each subproject will undergo, including mandatory Environmental Health and Safety (EHS) Audits for projects already commenced. Sub-Project activities will be screened against environmental and social risks, risks assessed, and further instruments developed to apply mitigation measures (including measures to address residual risks) compliant to WB's ESF applicable Standards. Activities classified as substantial-risk and high-risk will not be financed under this Project. Provisions on EHS Guidelines of the World Bank, including the EHS Guidelines (EHSG) for Railways and other applicable WB EHSG requirements and Environmental and Social Law and Regulations of the Republic of Serbia will be applicable, with those more stringent prevailing. This document serves as a guidance tool for the Project Implementing Unit (PIU) and Project Implementation Teams (PITs) and any other stakeholder relevant to risk management, to ensure risks are identified, impacts anticipated and mitigation measures designed and implemented to minimize adverse environment and social impacts. To track the Project E&S performance, requirements for environmental and social monitoring and reporting have been included.

Any activity to be financed under this Project will be subject to an Environmental and Social Assessment (ESA) to ensure that sub-projects are environmentally and socially sound and sustainable, compliant to the WB ESF. The ESAs will be proportionate to the risks and impacts of the project activities/sub-projects (while only low and moderate risk can be supported) and conducted using the process and tools defined under this ESMF.

While high-risk and substantial-risk activities are excluded from financing under this Project, for "Moderate Risk" and "Low Risk" subprojects (including Technical Assistance activities) the assessment will be carried out in line

with the ESF (including WB EHSG and GIIP), WB Environmental and Social Standards and Serbian environmental and EIA laws and will include preparation of an ESIA, site-specific Environmental and Social Management Plan (ESMP), or ESMP in the format of a checklist (ESMP Checklist) compliant to this ESMF and ESF relevant standards. For activities financed under the Project that already commenced, an Audit will be conducted to assess the Environmental Health and Safety performance during the first phase of construction to ensure current operations are in accordance with the WB requirements. Any material gaps shall be remedied by incorporating measures into the project design to achieve compliance with the WB requirements. Any assessment shall include stakeholder engagement as an integral part of the assessment.

This document outlines the project background and context, the policy and regulatory framework, a brief description of project activities and entailed environmental and social risks and impacts associated with them, environmental review procedures, including ESA procedures and guidelines, institutional arrangements, consultations and disclosure procedures, and monitoring, evaluation, reporting and supervision procedures as well as distribution of responsibilities. Generic Environmental and Social Management Plan (ESMP) and ESMP Checklist for some of the typical anticipated type of investments, guidelines for proposed small to micro-scale construction subprojects in the form of an ESMP checklist as well as ESMP template are also provided as part of this document in the Annexes.

8. Institutional capacities to manage environmental and social risks and impacts.

The Project is being managed by MCTI through a Project Implementation Unit (PIU), supported by Project Implementation Teams (PITs) in IZS, Serbia Cargo, Serbia Voz and DfR. The PIU has primary responsibility for Project execution ensuring that the Project development objectives are met and ensuring that financial resources are budgeted, disbursed, expended, accounted and audited. MCTI's PIU was already established before the Project, to manage the Serbian part of the recently approved Western Balkans Trade and Transport Facilitation (WBTTF) Project supported by the World Bank, and new positions have been defined to cover the needs of this Project. During the Phase 1, the PIU has been strengthened with appropriate managerial and technical capacity to enable it to (i) manage and monitor progress of the entire Project, (ii) carry out and be responsible of day-to-day implementation of Project activities, (iii) oversight of all other Project activities implemented by the companies; (iv) prepare technical documentation for activities that will be financed under the Project; (v) ensure strong environmental and social sustainability of the project, including ESF and national legislation compliance (stricter one prevailing) during the Project implementation; and (vi) participate in tender preparation and evaluation. The PIU has been supported by full-time Environmental and Social specialists and a part-time Occupational & Health (OHS) specialist throughout project implementation.

MCTI, through the PIU, is directly responsible for implementation and performance of the Project. While the PIU is implementing the components, PITs will act as subordinate implementing agencies to provide technical support for specific Project sub-components or activities of the Project that pertain to their area of expertise. MCTI is channeling Project funds to PITs to strengthen their structures, such as hiring technical staff to support the Project. PITs are providing specific technical support. Both the PIU and PTIs are responsible for implementation of Project Phase2 in line with the national environmental and social legislation, ESF and ESMF. PITs have also appointed E&S Focal Points to support the Environmental, Public communication, social and citizen engagement and OHS specialist respectively in the PIU.

Due to the existing arrangements for implementation of World Bank's projects in the Republic of Serbia, the PIU is supported by the Central Fiduciary Unit (CFU), established within the Ministry of Finance (MoF). As the CFU was established to provide fiduciary support (procurement and financial management activities) to all World Bank-supported projects in Serbia since 2018, it is carrying out the overall coordination, management, implementation and oversight of procurement and finance for the Project.

9. Potential environmental impacts.

The overall Project environmental risk is classified as moderate.

The environmental impacts of the project are expected to be of easy to envisage, of low to medium impact, temporary and of local impact, therefore relatively easy to mitigate and manage for all Project activities. Throughout the Project is planned to outsource one part of the routine maintenance work on railway infrastructure which might produce typical construction related adverse impacts: dust and noise due to rearranging the ballast and other operations of heavy machinery, management of wastes (some sleepers, oily

parts, network elements, etc.) and accidental spillage of machine oil, lubricants, fuel, and other hazardous substances, potential encroachment to a private property, landslide risk, and traffic disturbance, OHS risks and other.

Adverse impacts to the environment during the project implementation are a direct consequence of operating machinery, as well as execution of civil engineering, assembly, construction works at a location, use of renewables and non-renewables, earthworks, etc. Rehabilitation of existing lines that are placed in nature valuable locations is likely to localized and limited impacts due to the human presence, disturbance of animals, right of way. However, no works that significantly impact valuable and sensitive areas will be supported by the Project. No significant long-term negative impacts are envisaged if the Project is implemented with due care and observing the relevant procedures. Project activities at this stage are not fully defined and environmental impacts identified at this stage are preliminary in nature and will need to be further elaborated specifically (subproject wise).

The Project will also have moderate positive environmental impact, including avoiding greenhouse gas emissions, by raising the efficiency of the railway and by attracting freight and passenger traffic that might have otherwise used less efficient road transport.

Pollution likely to occur in various stages of construction, reconstruction, rehabilitation and/or repair is expected predominantly to be temporary in its scope and nature - and can be mitigated through the application of relevant national E&S regulation, WB ESF, WB EHSG, mitigation measures and good practices in engineering design, application of the code of good construction practice, and regular operation and maintenance.

Urgent repairs to the railway infrastructure, due to the specific nature of the activities and the micro-locations (railroad corridors and vicinity), produce a number of typical impacts, with scope varying to the sub-projects scope. The major concentrate to:

The production of hazardous waste, in particular: removed treated wooden sleepers (with creosote oils etc.), contaminated stone aggregate, oily rags, clothes and work material, transformer oils, old transformers and other parts of infrastructure, electronic waste, oily metal waste, anti-corrosion agents, paints, hazardous material canisters, etc. is identified in the preliminary screening as the largest environmental impact.

During construction works, production of substantial quantities of non-hazardous waste is also expected: construction waste, excavation soil, tracks, and other metal waste.

Beside waste, impacts that might occur during construction work include soil erosion and landslides, accidents (such as fires and electric shocks), water contaminations, material damage to the infrastructure, risks related to Occupational Health and Safety (OHS), etc. in the operational phase, the risk include, but are not limited to transport of dangerous goods, community safety, including collisions and traffic accidents, noise.

OHS risks are manageable through application of the guidelines in this ESMF, the national laws, policies and rules, the WB EHS Guidelines and GIIP which will allow prevention and protection measures to be introduced following the order of priority: Eliminate the hazard, controlling the hazard and eliminating or minimizing and mitigating it (if the elimination is not possible). The risk of informal labor and associated lack of protection will be identified in screening and mitigated through conducting and defining ESA (either ESMP or ESMP Checklist). Mitigation measures will be reflected in labor and working conditions commitments signed by any third party, labor and working conditions reporting requirements during contract implementation and by providing access to the Project workers grievance mechanism. Contractors will be required to develop construction OHS Management Plans.

Project also supports Technical Assistance (TA) in the form of technical design of future interventions, analytics, and other that may have downstream E&S risks. These risks can include impacting watercourses, generation of large quantities of waste sleepers and contaminated aggregate, impact to cultural heritage, etc. For this reason TA will also undergo E&S due diligence process.

10. Potential social impacts.

Beneficial impacts. The modernization of the rail network and its facilities will bring economic, social, health and ecological benefits, to population and local communities. Experiences of similar projects show that the project

will have many positive effects on society through the creation of conditions for population's standard growth in almost all segments (education, health protection, additional employment, moderate yet present reduced out migration due to direct and indirect increases in employment opportunities). Furthermore, the Project will facilitate trade and transport with lower emission, lower cost and improved connectivity and market access country wide and beyond the borders. The interventions are expected to act as a catalyst for several cross-sector investments and project dependent and other improvements, particularly in the areas of:

Economy. The enhancements to rail transport will result in an admirable positive contribution to national economy by enabling safe, cost effective and reliable transport service. Business and communications between regions in the country and beyond will be enabled and export opportunities might present with a more competitive price as the transportation cost are likely to decrease. The enhanced passenger and freight transport can improve market access, reduce transport costs to/from lagging regions and in the long run facilitate improved regional trade across countries.

Employment. Long term social benefits due to increased social support generated through additional employment (i). Increase in the number of work positions during the investment implementation (temporary effect) ;(ii). Increase in the number of work positions due to needs for maintenance activities; (iii). New work positions as a consequence of economic development enabled by the investment implementation.

Safety. Long term benefits due to increased safety and raised awareness on the risks for all modules of transport through public safety outreach leading to behavioral change when it comes to safety in traffic. This will also beneficially impact the road transport sector as the high-risk spots are related to intersection of rail and road routes.

Gender impacts. Improved gender balance in state owned railway companies by operationalizing the recommendations of the country-wide Gender in Transport Study insofar as railway transport is concerned.

Adverse impacts. The Project's negative social impacts are currently considered as moderate. The key potential adverse social impacts are presented below and are focused on labor and OHS risks from on and off rehabilitation and maintenance site activities, engagement of security personnel, community health and safety risks.

Land acquisition, restrictions on land use and involuntary resettlement. The railway maintenance investment will not involve land acquisition or resettlement. However, there is a slight possibility of other downstream risks, including on land access, depending on the scope and outcome of planned Technical Assistance (TA) feasibility studies in Phase 2. Precautionary measures will be taken to mitigate any potential risks and impacts that may arise from the scope and outputs of the technical assistance activities. ToR for the TA and relevant outputs work plans or other documents defining the scope and outputs of technical assistance activities will be drafted by the Client and reviewed by the WB so that the advice and other support provided are consistent with the ESSs. The RPF created for Phase 1 will be adapted to guide any potential direct and indirect ESS5-related risks specific to Phase 2

Labor risks (as defined by ESS 2, GIIP and national requirements). The scale of labor use will be complex for management as a consequence of multiple small to medium scale individual construction/rehabilitation sites established to complete intended activities. Labor risks related to the construction activities and unsafe labor and working conditions, shall be mitigated by adequate enforcement of the LMP (adapted to meet the needs of Phase 2) with focus on the elevated monitoring level based on specific circumstances of construction activities and therewith associated risks with consideration of cumulative impacts stemming from the road and rail traffic ongoing during the construction works. All reasonable precautions to protect the health and safety of workers commensurate to the risks will be implemented, including hiring contractors that have the technical capability and positive track record in managing the occupational health and safety issues of their employees. Employee GM have been included in the LMP prepared for the Phase 2 as a standalone document as have the SEA/SH Code of Conduct.

Risk to community health and safety (ESS4). The major risks tied to Community health and Safety relates project activities taking place outside project boundaries, but nonetheless also the project operation within the limits of the small-scale rehabilitation sites. One of the prominent risks is the traffic and road safety risks to workers, affected communities, and road and rail interface users throughout the construction period. Adequate Traffic management plans shall be in place. Emergency Preparedness and Response Plan that is commensurate with the risks of the facility will be prepared for each project and unplanned event when a project operation loses control, or could lose control, of a situation that may result in risks to human health, property, or the environment, either

within the facility or in the local community. These stem from increased traffic on haulage routes to be used by the Contractors during construction works. Increased risk from hazardous waste and material, use of chemicals and their improper disposal. Health and safety risks posed by the influx of workers or people providing support services into an area are almost considered negligent, while Gender-Based Violence (SEA/SH) or Sexual Exploitation and Abuse (SEA) of children, or communicable diseases are not assessed as a likely risk in relation to the project. Nevertheless, the LMP includes a CoC to inform all workers what is considered acceptable behavior.

1. INTRODUCTION

1.1. Context

The Republic of Serbia is located in the central part of the Balkan Peninsula, on an increasingly important route linking Europe and Asia. Serbia's international road, railway, and inland waterway networks are connected to the broader Western and Central European corridors, as well as to intercontinental routes linking Central and South-eastern Europe with the Middle East, Asia and Africa. Serbia's geographic position opens up significant opportunities to deepen regional trade and economic integration.

The total length of the Serbian railway network is 3,348 kilometers. The length of single-track railways is 3,059.4 kilometers, while the length of double-track railways is 288.7 kilometers, or 8.6% of the total. The length of electrified railways with a single-phase AC 25 kV 50 Hz power supply system is 1,273 kilometers, or 38 percent of the total length of railways, which is substantially less than the EU average of 57%.

Railways are more cost-efficient than road transport for products that are in bulk, heavy, and moved over relatively long distances. For such goods, rail transport also is more energy- and emissions- efficient per ton and saves on road maintenance. With a modern rail system, Serbia can capitalize on its favorable location as a hub for main east-west and north-south corridors to capture both regional and longer-distance trade opportunities.

Railway infrastructure modernization is essential to address various cross-cutting performance issues. Decades of low and non-strategic investments, outdated management structures and practices, and neglect of maintenance have led to serious deterioration of the network infrastructure, and low service quality. The financial, institutional, and operational reforms carried out so far have laid an essential foundation for railway modernization and must be followed up; however, Serbia's railways also need significant capital investments in order to recover traffic and generate public benefits.

1.2. Objectives of the Environmental and Social Management Framework

To address the potential environmental and social impacts attributable to Project (Phase 2 of the MPO), this Environmental and Social Management Framework (ESMF) is developed with its objective to identify, assess, evaluate and manage impacts in a manner consistent with the relevant WB Environmental and Social Standards (ESS), relevant EU requirements and national legal requirements and standards. The ESMF has designed steps, processes, and procedures for screening, preparation and implementation, risk commensurate assessment, management, reporting and monitoring of environmental and social risks and impacts of each Phase 2 subcomponent (or subproject) compliant to the WB ESF requirements.

The document provides an overview of Phase 2 of the Project, and includes key findings of the early Environmental and Social risk analysis for activities planned under the Project. The risks were assessed against the environmental and socioeconomic ESF requirements and standards, baseline conditions, and how the project activities, known and anticipated, could affect the environment and people.

The ESMF includes guidelines for defining measures and plans for prevention, reduction, mitigation and/or compensation of unavoidable adverse risks and impacts, rules for estimating and budgeting costs of such measures, as well as information on the agency or agencies responsible to manage the risks and impacts. It provides Information on subproject sittings, including any potential environmental or social vulnerability of particular importance for management of impacts and mitigation measures commensurate to the scale of the impacts. Guidelines include E7S due diligence of Technical Assistance activities supported under the project.

All of the activities to be financed under Phase 2 of the Project are subject to project specific environmental and social screening, following the procedures laid out in this Framework. The screening aims at identifying E&S risks and potential impacts at the subproject level so adequate avoidance, minimization or offset measures may be applied. This ESMF is intended to be used as a practical tool during program formulation, design, implementation, and monitoring of Project activities. The purpose of this framework is to specify the procedures that the Project stakeholders will follow during implementation, with the objective that all activities supported under the Project will be environmentally and socially sound and sustainable, consistent with WB E&S Standards, ESF (including WB EHSG and GIIP) and Serbian national legislation. In the case they differ, the stricter one prevails.

Finally, the ESMF provides guidance for the process and the content of Environmental and Social Management Plans (ESMPs) and Checklist ESMPs for all subprojects which will be implemented under the Phase 2 of the Project, and Associated Facilities (if any occur).

2. PROJECT DESCRIPTION

2.1. **Project overview**

The Project is a comprehensive endeavor aimed at addressing the current needs and challenges of the railway system while unlocking its potential for future growth. The rationale behind this Project lies in the recognition of the importance of a well-maintained, efficient, and modern railway infrastructure in ensuring safe and reliable transportation for passengers and goods. By investing in infrastructure, asset management, institutional strengthening, and modernization enablers, this project seeks to address critical gaps and drive positive transformations in the railway sector.

One of the key needs addressed by this Project is the development of in-house maintenance capacity within the IZS. By acquiring heavy-duty machinery and refurbishing existing machinery, equipment and workshops, the Project aims to ensure the sustainability of capital investments and improve the level of service and safety for railway users. This investment in machinery and maintenance facilities will not only enhance the efficiency of routine maintenance operations but also contribute to the long-term preservation and operational readiness of the railway infrastructure.

Outsourcing routine maintenance in the initial stages of the project serves two important purposes. Firstly, it ensures that newly rehabilitated or upgraded railway infrastructure meets quality and safety standards until the in-house maintenance machinery becomes available. This safeguards the investments made and ensures uninterrupted service for passengers and goods. Secondly, outsourcing provides an opportunity to build capacity within IZS by transferring knowledge and expertise through performance-based maintenance contracts. This capacity building aspect is crucial for the sustainability and effectiveness of future railway maintenance operations.

The project's focus on asset management and planning is driven by the need to establish robust systems for maintaining and managing railway assets. By implementing the Railways Infrastructure Asset Management System (RIAMS) and expanding its coverage to local branches, the Project aims to optimize asset utilization, streamline maintenance activities, and improve decision-making processes. Additionally, the development of predictive maintenance capabilities based on artificial intelligence will enable proactive maintenance interventions, leading to cost savings, enhanced reliability, and reduced downtime.

The Project also recognizes the importance of institutional strengthening and project management to ensure effective implementation and long-term success. By investing in digitalization, capacity building, and human capital development, the Project aims to enhance governance, commercial approaches, and overall professionalism within the railway sector. Strengthening the human resources departments, benchmarking compensation packages, providing training, and developing academic curricula will foster a skilled and competent workforce, ensuring the sector's sustainable growth and innovation.

Furthermore, the Project's focus on growing cargo and passenger traffic is essential for maximizing the railway system's utilization and promoting economic development. By improving last-mile railway connectivity through the establishment of logistics centers and encouraging private sector collaboration, the Project aims to attract additional freight traffic and enhance the efficiency of cargo transportation. Similarly, the execution of Integrated Territorial Development pilot projects and the development of business plans for rail stations will enable the growth of passenger rail traffic, improving accessibility, safety, and integration with urban transport systems.

2.2. **Project Components**

Component 1: Infrastructure and Asset Management (US$115.0 million)

Subcomponent 1.1 – Heavy duty machinery for railways infrastructure maintenance (US$76.5 million). The

rationale for this subcomponent is to develop capacity within IZS for in-house maintenance. As outlined in the *Sectoral and Institutional Context* section, developing maintenance capacity is key to ensure passenger and good transport level of service and safety. This heavy-duty machinery is intended to be used for routine maintenance of recently rehabilitated / upgraded / constructed railways infrastructure, aiming at the sustainability of the capital investment undertaken.

The typology of new machinery to be acquired is the following:

(a) **Lot 1**: Heavy duty track maintenance machinery. This lot covers equipment for two track maintenance and intervention brigades, covering lining ang and tampering machinery, universal tamper and ballast regulators.
(b) **Lot 2**: Wagons. This lot cover wagons necessary for the transport of material and spare parts – wagons for continuous loading/unloading of materials and flatbed wagons, but also self-propelled wagons for the automatic assembly and disassembly of overhead contact line (OCL).
(c) **Lot 3**: Construction and repair machinery. This lot covers vehicles for small-scale track-related civil works intervention: backhoe loaders, bucket trucks, dump trucks. Vehicles will be rail and road capable.
(d) **Lot 4**: Monitoring equipment and motorcars. This lot covers inspection self-propelled equipment to monitor the infrastructure condition: track, OCL. The lot also includes heavy-duty rail-road motorcars with cranes and buckets.
(e) **Lot 5**: Intervention machinery for turnouts. This lot includes equipment for maintenance and replacement of track turnouts.

The typology of existing machinery to be refurbished is the following: (i) machinery and equipment for rail track condition monitoring: track geometry measuring and recording railcars; and (ii) machinery and equipment for rail track maintenance: tamping machines, ballast cleaners, dynamic track stabilizers, ballast regulator and profiler equipment.

This machinery will enable IZS to undertake the maintenance of existing railways infrastructure:

(a) **Routine maintenance** is the most common type of maintenance. For tracks, this includes inspections and condition recording, replacing worn-out parts, greasing points, cleaning, repacking ballast, and other general upkeep activities.
(b) **Preventive maintenance** addresses to railway maintenance in a proactive way, anticipating potential problems before they happen and taking steps to address them before they become major issues. Examples of preventive maintenance include inspecting running rails for wear or cracks, using special tools to detect weak spots in rail joints, regularly checking under bridges for damage, and performing routine tests on equipment such as turnouts, signals, crossings, etc.
(c) **Corrective maintenance** involves identifying issue at stakes and taking corrective action to fix it. For tracks, corrective maintenance may include repairing broken rails or ties, replacing damaged parts, realigning tracks, fixing drainage issues, removing vegetation from around tracks, repairing switches or other faulty components.
(d) **Emergency maintenance** is critical when an urgent need for repair due to an unforeseen event occurs, e.g.: natural disaster or accident, which could put passengers, operators, third parties and the environment at risk if not addressed rapidly. For tracks, emergency repairs may involve anything from replacing damaged rails or ties to clearing debris off the tracks after a storm event.

Infrastructure maintenance will focus on the following existing railways subsystems within IZS' network in Serbia: (i) track and turnouts, including ballast and subgrade; (ii) wayside signaling and telecommunication systems; (iii) power supply, from substations, and distribution systems (OCL). Maintenance will be undertaken within the Safety Management System developed by the first phase of the Program. Annex 2 provides further information on the nature of the maintenance machinery to be supplied, and on related maintenance activities.

Subcomponent 1.2 – Modernization of railways maintenance facilities (US$3.0 million). The rationale for this subcomponent is for IZS to have the adequate facilities to maintain and services the machinery to be acquired within Subcomponent 1. These facilities (among others across Serbia) will also be used to store spare parts and the equipment necessary for the routine maintenance and emergency interventions on the network.

Subcomponent 1.3 – Outsourcing railways routine maintenance (US$30.0 million). The rationale for this subcomponent is two-fold: (i) ensuring quality of service and safety standards of new/rehabilitated/upgraded railways infrastructure while the routine maintenance equipment in subcomponent 1.1 is not yet available; (ii) providing capacity building to IZS on railways routine maintenance, including the management of a

performance-based maintenance contract.

Subcomponent 1.4 – Railways asset management and planning (US$2.0 million). Fully aligned with Phase 2's maintenance focus, the rationale for this subcomponent is also to give continuity to activities initiated in the first phase of the Program. The on-going Phase 1 is designing IZS' Railways Infrastructure Asset Management System (RIAMS) and will set-it up. This subcomponent builds on this.

Subcomponent 1.5 – Technical documentation (US$3.5 million). The rationale for this subcomponent is to prepare Phase 3 activities, which will focus on network rehabilitation and upgrade.

Component 2: Institutional Strengthening and Project Management (US$8.3 million)

Subcomponent 2.1 – Sector governance and commercial approach (US$5.3 million). The rationale for this subcomponent is to continue the digitalization work initiated in Phase 1, and follow-on implementation of the scoping and preparatory work completed in Phase 1. Information Technology (IT) strategies are being developed within Phase 1, while RD, IZS, Serbia Voz and Serbia Cargo have progressed in mainstreaming digital tools for their business processes. Digitalization is expected to drive a significant companies' efficiencies, both for their internal

Subcomponent 2.2 – Human capital development (US$1.5 million). Complementing the investment in fixed capital in Phase 2, this subcomponent finances a mix of technical assistance and capacity building activities to establish mechanisms and frameworks for long term development of human resources and knowledge sharing in the sector. This subcomponent also supports an internship program with majority of females within RD, IZS, Serbia Voz, and Serbia Cargo, aiming at increasing attractiveness of railways as employee and increasing the female workforce in traditionality male-dominated functions, with the view that part of these interns gets permanent positions in the industry.

Specifically on gender aspects, Subcomponent 2.2. finances: (i) setting up the Memorandum of Understanding (MoU) between the rail agencies and the university/ies and vocational schools, (ii) developing the internship program curriculum, (iii) providing onboarding training to the interns and the capacity building to the client staff who will mentor the interns, (iv) running the internship program successfully from onboarding to awarding the completion certificates to the program graduates. Sixty percent of internship candidates should be women.

Subcomponent 2.3 – Project management and citizen engagement (US$1.5 million). This subcomponent aims at strengthening Project management and ensuring transparency and accountability of the Project's interventions and results. It will complement similar financing under Phase 1, factoring in additional skillsets for PIU/PITs and the exceeding time of Phase 2 beyond Phase 1.

Component 3: Railway Modernization Enablers (US$6.5 million)

Subcomponent 3.1 – Growing cargo traffic (US$3.0 million). Complementing the overall focus on railways maintenance of Phase 2, this subcomponent includes activities aiming at increasing cargo rail traffic, thru the developing Strategy for logistic Centers of Serbia, but also at promoting Private Capital Mobilization (PCM) and private sector participation in intermodal interventions. This responds to the existing demand for improved "last-mile" railway connectivity in Serbia, whereby the private sector has already approached the MCTI with a variety of railway "last mile" connectivity propositions that would bring additional freight traffic to the IZS network. Initial data identified that connecting 20 facilities across Serbia could result in additional 2 million tons of freight traffic per year[1]. As rail cargo markets in Serbia are traditional, bulk and low value, developing further intermodality and containerization, targeting higher-value goods and increased revenues.

Subcomponent 3.2 – Growing passenger traffic (US$3.5 million). Also complementing the overall focus on railways maintenance of Phase 2 but also building on Phase 1 on-going activities, the rationale for this subcomponent is to enable the growth of passenger rail traffic. The Integrated Territorial Development (ITD) prolongs the Phase 1 and early pilots on this topic, while the focus on passenger stations extends Phase 1 interventions on the Prokop station in Belgrade, as well as expected outcomes from a technical cooperation on passenger stations that AFD and the French Railways are preparing with IZS.

[1] This equates to 22% of the freight volumes transported by Serbia Cargo as the operator with approximately 75% market share.

2.3. **Project Beneficiaries**

The Project beneficiaries include rail passengers, population at large, railway sector companies, private business and the SOEs operating the rail network and sector, people living at risk of poverty who are or may be affected positively or negatively, directly or indirectly, by railway operations and activities and cargo operators They will benefit from economic development, enhanced transport standards, lower costs and time savings, safety, environmental benefits in terms of reduced GHG emissions, and possibly other positive externalities. Regional economic development through an increased trade and investment as a result of lower transport costs and improved rail connectivity will be supported. Belgrade in particular but citizens from other parts of Serbia, the Government of Serbia, and railway and rail freight operators, will benefit from reduced public sector expenditures due to more efficient operation of the rail system. The participating government entities and SOEs will benefit directly from the institutional, legal and regulatory strengthening and capacity building activities. he Project will benefit users of urban transport when rail services become better integrated with it. In the long run, the Project may also benefit the private sector which will benefit from last mile connections, if feasibility is proven. Continued work on human resources will continue to bring in benefits for women, creating better gender balance, in line with the key findings and recommendations of the Gender Equality in Transport Study in Serbia [2].

Following the unbundling of Serbia Railways into separate companies, the key stakeholders in the railway sector in Serbia are now:

- **Ministry of Construction, Transport and Infrastructure (MCTI**) responsible for policy direction and funding of railways;
- **The Directorate for Railways (DfR)** as the market regulator and provider of safety oversight and interoperability of rail transport;
- **Serbian Railways Infrastructure (IZS)** an SOE for infrastructure management, responsible for construction, maintenance, and operation of the railway network**;**
- **Serbia Voz (SV)** - SOE responsible for organization and delivery of rail passenger transport services,
- **Serbia Cargo (SC)** - SOE responsible for organization and delivery of rail freight services.
- **Serbian Railways AD** - a temporary organization with the remit of generating revenue from various non-core railway assets and settling the court cases involving the former vertically integrated railway company.
- **Private rail cargo operators** licensed by the Directorate for Railways.

2.4. **Implementation arrangements**

The Project is being managed by the MCTI through a Project Implementation Unit (PIU), supported by Project Implementation Teams (PITs) housed in Infrastructure Železnice Srbije (IZS), Serbia Cargo (SC), Serbia Voz (SV) and Directorate for Railways (DfR). The PIU has primary responsibility for Project execution ensuring that the Project development objectives are met and ensuring that financial resources are budgeted, disbursed, expended, accounted and audited. MCTI's PIU was already established to manage the Serbian part of the Western Balkans Trade and Transport Facilitation (WBTTF) Project supported by the World Bank, In the Phase 1.the PIU has been strengthened with appropriate managerial and technical capacity, including E&S staff: a full-time Environmental specialist, a full-time social and citizen engagement specialist, and a part-time Occupational & Health (OHS) Specialist. This staff composition will be maintained throughout project implementation including the Phase 2.

The PIU is being supported by the Central Fiduciary Unit (CFU), established within the Ministry of Finance (MoF) to provide fiduciary support (procurement and financial management activities) to all World Bank-supported projects in Serbia since 2017. The CFU carries out the overall coordination, management, implementation and oversight of procurement and finance for the Project.

[2] https://www.rodnaravnopravnost.gov.rs/sites/default/files/2020-02/GETS%20MS2%20izve%C5%A1taj%20FINAL%2011.02.2020..pdf

2.5. **Exclusions**

The Project will not finance (i) any of the activities listed in the World Bank Group IFC Exclusion List given in Annex 02 nor (ii) any substantial-risk and high- risk activities (as defined by the ESF and other WB E&S Operational Policies, as presented in the table); (iii) purchase of the large amount of chemicals and/or pesticides and their application.

3. BASELINE DATA

3.1. **Baseline Country and environmental background**

Serbia is landlocked country rapidly managing evolving political and economic background after having passed through dramatic transitions and is now a candidate country for the accession to the European Union. Demographically, the Serbian population is getting smaller, older, and rapidly losing potential human capital to develop the economy. The country showed a negative growth rate of -4.5 per 1,000 of the population between 2007 and 2017. During the same timeframe, proportions of different age ranges also declined. For example, the percentage of young people (0-14) fell from 15.5% in 2007 to 14.4% in 2017, while the percentage of the population aged 65 and over increased from 17.2% (2007) to 19.6% (2017). The average age of the population has also increased from 40.9 years in 2007 to 43 years in 2017. Longer term projections show that the population of Serbia would be lower in 2041 than in 2011. Another important demographic factor influencing the country's developmental trajectory is the loss of skilled professionals through migration. The Organization for Economic Co-operation and Development (OECD) estimates that around 245,000 people migrated from Serbia between 2012 and 2016. Serbia has a population of 6 945 235 million across nearly 88,499 square kilometers of territory with a rural population accounting for 40.6 percent. Despite its small size, however, the environment of Serbia is highly diverse compared to other countries in Europe. The reasons for this comparative richness include: the variety of climate, topography, and geology and the long- term ecological and evolutionary history of the region as a biological crossroads.

50% of the total population live in rural areas, and 17% derive their living from agriculture and associated industries. The ROS has three major landforms – the plain areas in Vojvodina and the flood plains of the Danube, Sava and Drina rivers; the Morava valley in its main-stream and two southern arms; and the mountainous areas which cover most of the country south of the Sava and Danube. The water resources in addition to rainfall are dominated by the river inflows from upstream riparian sources estimated at 85% of available water. The balance is derived from the river Morava from within the country. Due to seasonal variations there are some 160 storage dams, some of which have hydro-electric generation facilities.

The Law on Safety and Health at Work (LSHW, 2005, 2015, 2017) is the key legislative act in this area. It regulates the implementation and improvement of occupational safety and health for persons involved in working processes or found in work environments, in order to prevent injuries at work, occupational diseases and work-related illnesses. The employer must ensure that measures have been taken to provide a safe and healthy workplace and work environment for any employee (any person working or undertaking training at the employer, regardless of their employment status) to work. The Law stipulates the obligations and responsibilities of the employer in relation to ensuring safety and health at work (general obligations, special obligations and training for employees) and assessing and mitigating labor-related risks and hazards, provides for appointment of persons (licensed OHS officers or legal entities) responsible for ensuring labor compliance and creating a safe working environment, and determines preventive measures for ensuring occupational safety and health. It also regulates the rights and obligations of employees, the way of organizing the task of occupational safety and health, provision of the first aid at the workplace, the possibility of selecting representatives among the employees for occupational safety and health, obligations of the employer related to keeping records, information exchange and cooperation with relevant institutions, the issue of the professional exam and licensing, the competence of the Occupational Safety and Health Administration. The provisions of the LSHW are further elaborated in numerous by-laws, for the purpose of regulating the specific implementation procedures.

The LSHW is applicable to all domestic and foreign employers regardless of their size and to all domestic and foreign employees regardless of their employment status. The law has been harmonized with the ratified ILO Conventions and the EU Directives and complies with WB ESS2 to a large extent. Wherever certain gaps between the Serbian legislation and ESS2 appear, the LMPs will address such issues.
On average, Serbia has 60 fatal cases of industrial accidents each year, mostly associated
to lack of enforcement of relevant laws

3.1.1.Soil erosion and contamination

Across the Republic of Serbia different forms of erosion dynamic processes are present (landslides, landfalls, screes, erosions…). Besides the natural factors which drive these processes, inadequate usage of terrain also contributes to the making, development and intensifying of these processes. Terrain instability, with occurring landslides, landfalls, screes and collapsing of riverbed banks vary in dimension and activity, is present in about 25 – 30% of Serbian territory. Soil erosion is one of the main processes of land degradation in the Republic of Serbia and the cause of deterioration of soil quality. It is estimated that soil erosion affects about 80% of agricultural land to various extent. There are 2.228 registered landslides in 26 different municipalities in the Republic of Serbia. Terrain instability processes with the occurrence of landslides, mudslides, etc. of different dimensions and activities, cover approximately 25-30% of the territory of the Republic of Serbia. Water erosion is predominant in central and mountainous areas, whereas wind erosion is prevalent in the Province of Vojvodina in northern Serbia which affects about 85% of agricultural land. Some parts of the territory are exposed to recurring landslides. The organic matter content in agricultural soil is low with the tendency of further reduction.

3.1.2.Water

The Republic of Serbia abounds in waters that are its great natural wealth and has a dense river network, numerous lakes and numerous sources of hot and mineral water. Water quality in Serbia differs significantly from one region to the next. Monitoring data have identified presence of: ammonia, nitrates, sulfides, iron and mineral oils in the Tisa River Basin; evaporable phenols and manganese in wells in the area of Backa; and, in some cases, suspended solids – for example, in the South Morava Basin. Throughout Serbia, the most problematic physicochemical water quality parameters are turbidity, iron, manganese, nitrates. In Central Serbia the main problem is bacteriological contamination.

50% of municipal water supply systems provide water with adequate physic-chemical and microbiological quality as measured against national parameters. Existing systems for water supply require reconstruction to reflect the capital maintenance backlog which has arisen over years. Greatest constraint for implementation of EU Drinking Water Directive is poor condition of infrastructure, as a consequence of the comparatively weak financial conditions of the Public Utility Companies, insufficient financing from the Local Self Government Units, state budget and other sources. The Water supply system is reasonably well developed. A total of 81% of the population has access to public water supply. The percentage is lower in central Serbia (71%). In certain parts of the country (e.g. parts of Vojvodina and the Velika Morava Valley), water quality is not satisfactory, while other parts (e.g. Šumadija, southern Serbia and part of Banat) have both water quality and water quantity issues. According to the draft Water Pollution Protection Plan, about 55% of the overall population has access to public sanitation. Almost 75% of the population lives in settlements larger than 2000 inhabitants, in which the average connection rate to sewers is 72%, with about 27% connected to septic tanks. In settlements with less than 2000 inhabitants, the connection rate to sewers is less than 5% on average. Today, underground waters are supplying 65% of water needs for households and industries in Republic of Serbia, and in Vojvodina this is the only way of water supplying. It is estimated that 29% of the surface area of the country and 2.67 million ha (or 52%) of agricultural land is affected by poor drainage. Drainage infrastructure was affected, including both collector canals and pump stations used to help discharge the excess water collected on lower land when it cannot flow by gravity to the recipient river. Substantial attention is needed to these flood protection facilities in order to reduce increased risks of flooding. It is estimated that some 1.57 million ha, especially in areas adjacent to the large flood plain rivers, are subject to flooding. Of this area, 1.45 million ha are in Vojvodina and the plains east of Belgrade; the rest are in Central Serbia.

3.1.3.Air Quality

The Republic of Serbia has 8 established agglomerations: Belgrade, Novi Sad, Nis, Bor, Užice, Kosjerić, Smederevo, Pančevo. The pollutants that are being monitored are: SO2, NO2, PM10, PM2.5, CO, Pb and C6H6. The quality of air has been listed into 3 categories: 1) in line with the border values, 2) above the border values but in the tolerance zone, 3) above the tolerance zone for more than 1 pollutant monitored. Sectors from which the monitored pollutants originate from are classified in the following categories: production and distribution of energy, fugitive emissions, air water and rail transportation, the usage of energy in industry and industrial processes, use of solvents and industrial products, waste, heating power plants with the capacity less than 50 MW and individual boiler rooms, agriculture, road transportation. For SO2 and NO2 the major source of pollution was the production of electrical and heat energy, together with road transportation. The PM10 and PM2.5 were the major pollutants coming from other stationary fuel burning facilities, and they were also the main cause of 3rd category of air quality (the non-compliant) for the following agglomerations: Belgrade, Pančevo, Smederevo, Kosjerić and Užice. Air Quality assessment is done in accordance with the requirements of the EU directives.

3.1.4.Climate change and Floods

Serbia faces significant environmental challenges and climate-related risks. The country is prone to natural disasters such as floods and droughts, which can cause significant damage to infrastructure and livelihoods, especially among vulnerable groups. Climate change may intensify the frequency and scale of natural disasters. In 2014, a low-pressure cyclone hit Serbia, bringing the heaviest rain in the 120 years of record-keeping. The event affected over 1.6 million people in Serbia and caused several fatalities, mostly due to high levels of fast flowing rivers. The damage for Serbia was estimated at EUR 1.55 billion. Moreover, rising temperatures are of increasing concern. Temperatures in August over the last several years were above 42°C. Meanwhile, low efficiencies in energy, transport, water, waste management, and agriculture are producing a high carbon footprint, significant losses of extracted water, and elevated levels of air pollution in major cities. Addressing environmental challenges together with climate change is essential to sustain progress and ensure long-term economic development.

According to the World Meteorological Organization, the estimated effects of climate change on Serbia will be of medium range. Serbia, as well as south-east Europe, is likely to have hotter summers, decreased precipitation and, therefore, an increased risk of summer drought. According to data trend over the past 35 years an increase of yearly air temperature by 1°C is noted in the last 100 years. Shorter periods have greater positive values which means that the increase of temperature at yearly level has intensified over the last couple of decades. Although there are periods with positive and negative trends, since 1982 negative trends ceased and only an increase in temperatures was noted and it lasts still today.

Global warming is increasing moisture in the atmosphere, making storms wetter, bringing more rainfall to the region. The storms are also moving slower, so they drop more rain over river catchments, causing massive floods more frequently comparing to previous period. Floods are caused or amplified by both weather- and human-related factors. Major weather factors include heavy or prolonged precipitation, snowmelt and thunderstorms. Human factors include altered drainage and poor maintenance of hydraulic and flood protection infrastructure.

The Serbian Agency for Environmental Protection (SEPA) is monitoring the green-house gas emissions (GHG) and is in charge of its inventory. The most substantial contribution to the total emissions of ozone precursors (NOx, CO, CH4, NMVOC) is being given by "Road Traffic" about 18.6% for CO, "Heat output less than 50 MW and individual heating" (CO - 66.7%, NMVOC with 20.5%). Negligible share in NMVOC emissions also include "Fugitive emissions" 27.3%, "Solvent use and industrial products "19.4% and "Agriculture" with 14.3%.

The number of people affected by flooding is estimated at about 200,000 on average per year, at an estimated cost of US$1 billion in GDP. Serbia ranks fourth among European and Central Asia countries in output affected by a 100-year flood. The risk posed by climate change is high for Serbia, as the country ranked 8th in 2017 and 35th in 2018 out of all countries on the German Climate Risk Watch Index in terms of losses relative to GDP. Major floods in May 2014 caused damages equivalent to 2.7 percent of GDP and pushed an estimated 125,000 people into poverty. More recently, parts of central and western Serbia were affected by heavy rain and flash floods in June 2019, with twenty municipalities declaring a state of emergency. The government

launched a national disaster risk management program in December 2014, subsequently adopting the NDRMP Action Plan; Disaster Risk Financing and Insurance Strategy; Guidelines for Vulnerability Assessment and Protection and Rescue Plans in Emergency Situations; and the Law on Natural and other Hazard Risk Reduction and Emergency Management[3].

3.1.5.Waste

Regarding waste management, there is a good level of alignment with the EU acquis and the new Law on Waste Management is fully harmonized with the EU acquis Communautaire, and the numerous sub-laws that are currently being developed. The most acute problem is hazardous waste, which is not separately collected and disposed of – currently it is processed in regular waste disposal sites. In general, over 50% of disposal sites do not meet the technical requirements of sanitary landfills, and are actually just fenced and mapped dump areas. There are illegal dump sites of various sizes in rural areas. Moreover, leakage from these dump sites poses a threat to groundwater, surface water and soil, due to the high content of organic matters and heavy metals.

Untreated municipal and industrial waste waters are still the greatest source of pollution. The response of pollutants is still unsatisfactory for fulfillment of their legal obligations and reporting about emissions in waters.

According to a report by the Serbian Environmental Protection Agency (SEPA) on waste management between 2011-2017, a total of 2.15 million metric tons of waste was generated, of which 1.80 million metric tons, or 83.7%, was collected by municipal public utilities. The median daily amount of municipal waste landfilled per capita was 0.84 kg, and the annual figure was 0.30 metric tons. This does not include some 20% of generated municipal waste which ends up in illegal dump sites. In 2017 construction waste and demolition waste was estimated at 1700 thousand tons, while in 2019 the greatest share of generated hazardous waste was from the mining and quarrying at a share of 29.2% of total generated waste which is an increase of 39,2% when compared to the 2018 data. A total of 15.686.066 tons in Mining and quarrying and 1.569 tons from construction waste was generated.

In the waste management sector, the most visible and probably the most complex problems concern municipal waste management, where Serbia lags seriously behind comparable countries in Central and Eastern Europe in virtually all stages of the process – from collection to disposal, while municipal waste treatment hardly even exists. Statistics in Serbia is devastating – the percentage of municipal waste recycled, according to official data, was about 3% in 2016, while the bulk of the generated waste ended up in landfills.

For the time being, the quantities of hazardous chemical wastes and industrial effluent sludges collected separately and reported by the generators of industrial and commercial wastes in Serbia seem to be low. For the time being, the quantities of used oils collected separately and reported by the generators of industrial and commercial wastes in Serbia seem to be low. In addition, there is no exact data available on the used oils generated by households and similar establishments. It is expected that the collected and reported quantities of used oils will rise in the coming years.

As stated in the draft Serbian National Waste Management Plan for Waste Oils, with the implementation of increasing environmental standards in Serbia, e.g. by widely used oil/water separators at petrol stations, garages etc. relevant additional amounts of oil containing wastes from these installations will be generated.

In the draft Serbian Waste Management Plan for Hazardous Construction and Demolition Waste forecasts have been made for the quantities of hazardous construction and demolition waste generated in 2020 in Serbia. The forecasts are based on the assumption, that the GDP of the construction sector in Serbia will increase 5% annually. In addition, an assumed lack of reporting of 35% was taken into account. The results of the forecast are shown in Table 2 below.

Waste code	Reported Amount (t) 2014	Estimated Amount (t) 2020
Mixed C&D	2	4

[3] World Bank. 2020. Serbia Systematic Country Diagnostic: Update. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/33736 License: CC BY 3.0 IGO

Wood	202	365
Metals	8	14
Cables	37	67
Soil	1,812	3,278
Asbestos	6	11
Tar	89	161
Asbestos Cement	103	186
Total Hazardous	2,259	4,087

Table 1: National forecast for hazardous construction and demolition waste.

Waste management in Serbia consists of a set of activities of joint interest which comprise implementation of prescribed action plans to be carried out within waste collection, transport, storing, treatment and disposal, including supervision of these activities and responsibility for waste management facilities and aftercare. Basic activities are:

- Selection at the collection of hazardous waste
- Categorization and characterization of collected waste.
- Securing conditions for temporary storage of waste, particularly hazardous waste, preventing soil and water pollution
- Measuring and recording waste
- Implementing measures for the prevention of the creation and reduction of the amounts of created waste
- Recycling of collected waste
- Handover of waste for treatment to licensed companies.
- Reporting to the Ministry and Environmental Protection Agency on waste flow
- Close cooperation with competent bodies

Serbia has minor capacity for treatment of hazardous waste, and according to the latest revision of Law of waste management HW can be temporally storage up to three years and mostly HW are exported on treatment. For asbestos waste there are few landfills with special cells for that waste.

3.1.5.1. Internal procedures of the Infrastructure Railway Serbia (IZS) for Hazardous Waste Management

In April 2016, the Board of Directors of IZS adopted a Hazardous waste Manual governing management, disposal, deposit and selling of materials characterized as hazardous. The Manual is aligned with the National Strategy on Waste Management, the Law on waste Management and the applicable secondary laws.

The Manual in particular treats management of PCB containing waste, absorbents, filter material and oil, wooden sleepers, asbestos containing waste.

Existing waste management system of the PE “Serbian Railways” Company is presented within the Annex 16 of this ESMF document.

3.1.6.Chemicals

There is a high level of alignment with the acquis on chemicals. A national poison control center and sanction regime to ensure compliance are in place. Alignment is still pending for legislation on animal experiments, asbestos and biocides. As of 2018, metallic mercury is prohibited for professional use. Serbia needs to boost its administrative capacity to implement the legislation in these areas, and ensure proper monitoring of persistent organic pollutants..

Serbia is signatory to Stockholm convention and Montreal protocol, applies partially SEVmESO III Directive (2012/18/EU) and adopted REACH Regulation (EC 1907/2006)

National legislation implementing the GHS was adopted on 29 June 2010. It was published in the Official Gazette of the Republic of Serbia on 10 September 2010 and entered into force on 18 September 2010. The competent authority for implementation of this legislation is the MOEP.

This GHS implementing legislation aligns Serbian system of classification, labeling and packaging of chemicals with the United Nations Globally Harmonized System (GHS) and is in compliance with EU CLP Regulation (Regulation (EC) 1272/2008).

A lot of GHS capacity building activities were undertaken in the last years through activities within the project "Chemicals Risk Management in Serbia" with the Swedish chemicals agency in order to establish effective implementation/enforcement of new legislation.

Two systems of classification and labeling are introduced into the national legislation: (i) System of classification, packaging and labeling of hazardous substances and preparations in accordance with Directives 67/548/ EEC and 99/45/EC (Classification, packaging and labeling of dangerous substances and preparations - DSD/DPD) and (ii) Globally Harmonized System of Classification and Labeling of Chemicals in accordance with Regulation 1272/2008 (Globally Harmonized System of Classification and Labeling of Chemicals - GHS).The Ratified international Conventions in the area of Chemicals are presented in chapter

3.1.7.Biodiversity, flora, fauna

In general, Serbia has rich and diverse biodiversity, flora and fauna, a number of different types of ecosystems of particular environmental importance, but specific diversity in Serbia is under-researched or documented. According to available data, specialists estimate that around 60000 taxa (species and subspecies) exist. These includes: forest ecosystems representing different types of forests; high mountain regions with characteristic mountain ecosystems well-represented or preserved, some of which are found on borders and would require trans-boundary management efforts; mountain regions in which traditional human activities have maintained and even increased biodiversity through centuries of maintaining the open pastures of mountain meadows; gorges and canyons that have been identified as important centers for relict and endemic species; steppe and sands of Vojvodina, as well as lakes, wetlands swamps, marshes, ponds which provide key habitat for migratory birds from elsewhere in Europe and have been identified as wetlands of the Ramsar Convention; karst regions in parts of Serbia, with their numerous caves and pits, supporting a rich fauna; and mountain bogs around mountain and glacial lakes.

It is estimated that in Serbian territory over 1000 species of flora are endangered, according to the Red list of Serbian flora (2002). Most of the endangered plants in Serbia is in the IUCN category of "rare plants". The most endangered part in Serbia's biodiversity considers the forest ecosystems and especially sensitive ecosystems (e.g. wetland habitats, prairie habitats, continental salt marshes, sandy terrains, mountain habitats) some of which are refugee habitats for relict and endemic species. The Law on Nature Conservation recognizes 7 types of protected areas, namely: a strict nature reserve, a special nature reserve, a national park, a monument of nature, a protected habitat, an outstanding natural landscape and a nature park. They further fall into 3 sub-categories: areas of exceptional (international, national), major (provincial/regional) and local importance.

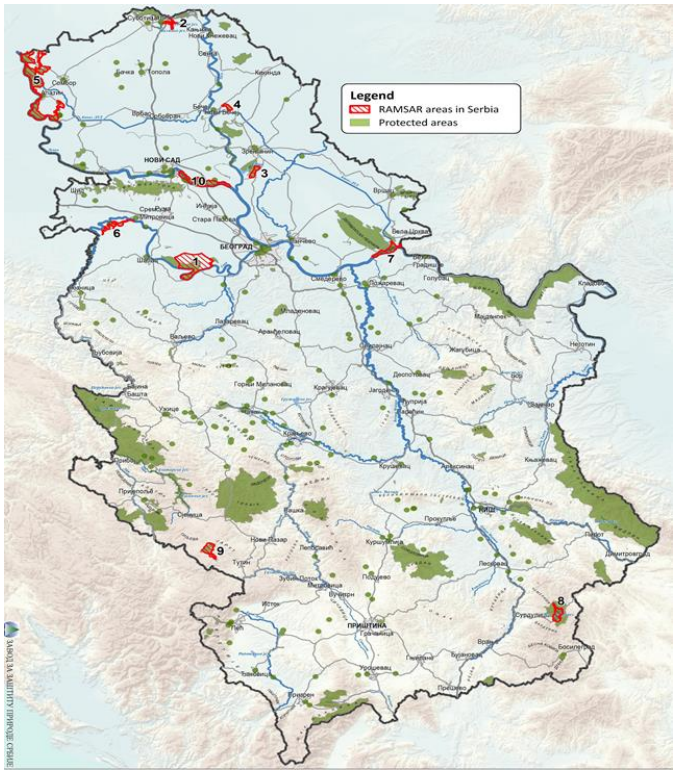
Serbia has a total of 5 national parks i.e. Đerdap, Fruška Gora, Kopaonik, Tara and Šar Planina; nature parks Sićevo Gorge, Šargan - Mokra Gora, Stara Planina, Zlatibor, Golija, Grmija and Radan.

The Institute for Nature Conservation of Serbia has established a preliminary list of 68 potential Ramsar areas in Serbia. So far, 10 areas of international importance have been designated, covering a total area of 63.919 ha. Đerdap National Park has been in the process of nominating and gaining Ramsar status since 2013. The Figure 5 above depicts the Ramsar areas in Serbia[4]

[4] http://www.zzps.rs/wp/ramsarska/?lang=en&script=lat

State Enterprise for Forest Management "Srbija Šume" manages protected areas on a land surface area of 338,640,20 ha, which makes up ca. 50% of the total surface area of protected areas in Serbia. 33 protected areas of national importance on a surface area of 332,659.16 ha established by the Decrees of the Government of the Republic of Serbia, and 21 protected areas of local importance on a surface area of 5,981.04 ha established by local governments and the City of Belgrade. The surface area structure of the protected areas by ownership is as follows: state-owned – 159,791.00 ha (47%); private and other ownership – 178,849.19 ha (53%).

With the aim of conserving biodiversity and natural gene pool, that is, species of special importance for the Republic of Serbia from ecological, ecosystem, biogeographical, scientific, health, economic and other aspects, a total of 1783 species are strictly protected, of which as many as 1042 are animal species, with the most numerous invertebrates. Among the strictly protected species are 50 species of mammals, 307 species of birds, 18 species of amphibians and 18 species of reptiles, 38 species of fish and 610 invertebrates. In addition, 75 species of fungi and lichens, 641 plant species (moss, ferns and seed plants) and 25 algae species are strictly protected.



Pursuant to the Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi lists a total of 860 wild plant, animal and fungal species are protected species, of which 253 are animal species (30 mammal species, 35 bird species, 2 reptile species, 3 amphibian species, 29 fish species and 154 invertebrate species), 37 fungal species and lichens and 570 species of plants.

Figure 5: Ramsar areas in Serbia

3.1.8.Mineral resources extraction

Mineral resources, ground water resources, geothermal resources as well as the other geological resources shall be the natural assets in the ownership of the Republic of Serbia may be used under the conditions and in the manner set forth by the Law on mining and geological explorations ("Official Gazette of RS", No. 101/2015 and 95/2018 – other law). Mineral resources or mineral raw materials of strategic importance for the Republic of Serbia are:

1) Oil and natural gas;
2) Coal;
3) Copper and gold ore;
4) Lead and zinc ore;
5) Boron and lithium ore;
6) Oil slates (oil shales or shales);
7) Other mineral resources, as determined by a separate Act of the Serbian Government on a proposal of the Ministry responsible for geological explorations and/or mining.

3.1.8.1. Fossil fuel/energy resources

The Republic of Serbia has a total of 27 Coal basins, over 90 Oil and Gas fields, over 250 Oil and Gas deposits, 11 Oil shales potential, 9 Ore deposits of uranium and number ore occurrences. Active are 2 Open pit coal

mines, 1 underwater coal mine, 7 Underground coal mines, 70 Oil and Gas Fields and Exploration fields of oil and gas.

3.1.8.2. Solid minerals raw materials – metals

Republic of Serbia has more than 1000 metals ore occurrences, of which more than 30 ore deposits of Cu, (+Au), Pb-Zn (+Ag), Mo, Sb and Fe).

Active are 6 Underground mines of metals, 2 Open pit of metals, 60 Exploration field of metals and Exploitation field of metals.

3.1.8.3. Solid minerals raw materials – non-metals/industrial minerals

Serbia has more than 1 500 ore-occurrences and ore deposits of solid minerals. Active are about 150 Open pits: technical and decorative stone, brick clay, gravel and sand, and industrial minerals.

Ecology mineral raw materials of Serbia are: zeolite, sepiolite, diatomite, chalk "chalk saprolite" and sugilit (medical properties). New, world class ore deposits of Li (jadarite) + B is located near Loznica city Western Serbia.

3.1.8.4. Hydro - geothermal resources

160 natural sources of thermal waters with temperatures higher than 15 oC are evident in Serbia. The most popular are Vranjska spa, 96 oC, Jošanička spa 78 oC, Sijarinska spa,72 oC, Kuršumlijska spa 68 oC and Novopazarska spa 54 oC. The total yield of all-natural sources is about 4000 l/s. In the Province of Vojvodina, artificial geothermal sources, i.e. geothermal wells 62 is about 550 kg/s and the thermal power of about 50 MW. On the rest of Serbia, from 48 wells 108 MW, or a total of 158 MW. Serbia also has 60 Convective hydro-geothermal systems, deep up to 3 km /100 Geothermal waters up to 3 km depth. Active are 110 Geothermal wells with total of 156 MW.

3.1.8.5. Petro - geothermal resources

Republic of Serbia has very favorable petro-geothermal power options. Many granitoid intrusions of uneven age, which can be used for the production of electricity, such as Cer, Bukulja, Besna Kobila, Božica, Neresnica, Stara Planina, Kopaonik etc. In these intrusions according to the current level of research for the period of 30 years of exploitation and the capture factor are about 16,000 MW for thermal purposes and about 15,000 MW for electricity generation. The geothermal potential from the depth of which the systems for exploitation using vertical heat exchangers are installed is about 100,000 MW.

3.1.8.6. Production of fossil fuel/energy resources, solid minerals- metals and non- metals

The production of coal is about 37 Mt/y (mean calorical value ≈ 7 500kJ/kg) (for thermo-power electricity of 5 171 MW (5 blocs), It is 65% of electricity production in Serbia. The Oil and Gas production was 1,1 Mt of Oil and 460 Mm3, in 2014. It is 25% and 15% of demand of Serbia. The Cu-ore and Pb, Zn -ore produce was of 17 845 250 t and 815 543 t/y**.** The production of technical stone is about 13 497 264 t/y.

3.1.9.Forestry and wood production

Forest based industries in Serbia have always played an important role in the country's economic development. The regulations of these industries are divided between two ministries:

Ministry of Agriculture, Forestry and Water Management - As one of the prime natural resources of Serbia, forests are managed by the Directorate of Forests within the Ministry of Agriculture. Their responsibilities include approval of annual forest cutting plans for public enterprises.

Ministry of Economy - Activities related to timber and wood processing, as well as involving economic development, are managed by the Ministry of Economy.

Forests in Serbia are both - state and privately owned. In order to control illegal logging, all activities conducted in privately and state-owned forests are done under the supervision of two Public Enterprises: Srbijašume and Vojvodinašume.

Out of the total area of 2,252,400ha of forests in Serbia, 39,8% ha is state owned and 52,2% ha is privately held. Privately owned forests are fragmented and small in size. Bigger holdings with more substantial potential for development are rare, but produce high quality hardwood timber used in solid wood furniture manufacturing.

Serbia's logging is managed by public enterprises Srbijašume and Vojvodinašume. These enterprises determine the quantity of wood required from domestic sources and make allocations to companies/ individuals engaged in logging. Allocations are revised and adjusted depending on market requirements, availability and accessibility of timber. At the end of each year, companies may conclude an annual contract with Srbijašume and Vojvodinašume to ensure the supply for the coming year. State owned forest has FSC certificate.

Forest structure is dominated by hardwood 91,1% while the main forest species are beech 40,5% and oak 31,4% Conifers represent a relatively small share of the total amount supplied and cut while hardwood is the most available wood with annual supply of 2.7 million m3.

3.1.10. Noise

Traffic in the Republic of Serbia is dominant source of noise. Traffic noise is the main source of disturbance and present a health hazard for the Serbian residents in city areas and others that live close to traffic noise sources (highways and railways).

The Serbian Law on noise is harmonized with the European directive and the strategic noise mapping a process ongoing through last decade. Hundreds of kilometers of noise protection barriers are constructed along the Serbian arterial traffic network, mainly on highway sections that are part of trans-European network.

Table 1 Limit values

zone	Spaces	Noise level dB (A)	
		day	night
1.	Rest and recreation areas, hospital zones and convalescent centers, cultural and historical sites, large parks	50	40
2.	Tourist areas, camps, and school zones	50	45
3.	Purely residential areas	55	45
4.	Business-residential areas, commercial-residential areas, and children's playgrounds	60	50
5.	City center, craft, trade, administrative-administrative zone with apartments, zone along highways, highways, and city roads	65	55
6.	Industrial, storage and service areas and transport terminals without residential buildings	At the border of this zone, the noise must not exceed the limit value in the bordering zone	

3.1.11. Social baseline and background

3.1.11.1. Socio Economic Trends in the Republic of Serbia

The total population of the Republic of Serbia in 2022 is 6.647.003 (2022 census). Observed by sex, 51,4% are women, and 48,6% men. Depopulation trend continued, meaning that the population declined by approx. 0.5 million people relative to the previous census from 2011[5]. Demographically, Serbia is characterized by a strong

[5] https://publikacije.stat.gov.rs/G2022/HtmlL/G20221350.html

depopulation trend, low fertility, relatively high (in European terms) specific mortality rates, high average age population (42 years of age for men and 44.9 years of age for women) and unfavorable age structure.

Life expectancy at birth for both sexes has declined in the past few years. In 2017, it was 77.9 years for women and 73 years for men, while in 2021 it was 75.6 years for women and 70 years for men. Life expectancy in the Republic of Serbia remains shorter than the EU average by more than five years. The elderly dependency index in 2017 was 29.7% with projections of reaching a value of 36.3% in 2041.

Rough estimates based on data from different statistical sources indicate an average annual negative external migration balance of between 20.000 and 25.000 persons (data from the Statistical Office of the Republic of Serbia and the Commissariat for Refugees and Migration).

The Serbian Labor Force Survey in the last quarter of 2022 reports that a total of 2.888.700 people were employed and a total of 291.100 people were unemployed in the Republic of Serbia. The rate of employment in this period was 50.1% while the rate of unemployment was 9.2%. Compared to the last quarter of 2021, the rate of unemployment is slightly lower, while the employment rate is marginally higher. Informal employment has decreased in this period while formal employment is almost the same. The total number of informally employed persons within that year has decreased by 29.100, of whom more than half in agriculture.

In 2021, the at risk of poverty rate was 21,2% (20,4% for men and 21,9% for women) and compared to 2020, this rate is lower by 0,5%. This is the percentage of the population whose available equivalent income is less than the defined poverty risk threshold, which in 2021 was 24.064 RSD per month for a single headed household. Around 12,6% of the population falls within the category of people who are extremely materially deprived. Analyzing by age, persons between 18 and 24 are the most exposed to the risk of poverty (27,7%), as well as the elderly over 65 years if age (22,7%). Households comprising two adults and three or more dependent children are also at the highest risk of poverty (38,8%). The at-risk-of-poverty rate by most common status in the labor market (lasting more than six months) indicates that the unemployed are in the worst position (48,6 %, i.e. almost every other unemployed person is at risk of poverty). Employment significantly reduces the risk of poverty, but the quality of employment remains a key factor in ending poverty (the self-employed have a significantly higher at-risk-of-poverty rate than employees hired by another employer, 14,5 % vs. 5,4 %). Retirees are also at a considerable risk (19,9 %), which is close to the overall percentage. Education is a decisive factor for a person's economic status and ability to generate income, and it is therefore not surprising that lower-educated people are above average at risk of poverty.

3.1.11.2. Education and skills

Unfortunately, data on education levels from the 2022 census was not available at the time of developing this document. The 2011 Serbia census identified 164,884 or 2.68 % of illiterate residents in Serbia. The number was halved compared to the 2002 census. A total of 850,000 residents, or 14 percent of the population, have no formal education or only few elementary school grades. Incomplete elementary school education has 677,000 residents of Serbia, or 11 percent. According to the latest available labor market survey (2022), only 0,8% of the population between 15 and 89 years of age have no formal education (of whom close to 73% are women), 25,5% have completed elementary school (of whom 59% women), 53,4% have completed high school (of whom 47% women) and 20,3% have higher education (of whom 55% women). In 2022, a total of 75,9% of the population has used a computer in the last three months (79,2% men and 72,7% women), while a total of 83,5% of the population has used internet in the last three months (85,9% men and 81,2% women).

Research from 2011 shows that 18.5% of rural women did not complete high school education because pressures by the family to stay and work in the household or on the farm, 26% because of the attitude of the family that women do not need to attain higher education levels, 18% because of a lack of financial resources, and 10% because of early marriage and family care. Differences in educational attainments are much more prominent when adult population of urban and rural areas are compared. Data from population census and the labor survey indicate less favorable education structure of population in rural areas with higher share of persons without any school particularly among women (these are mainly older women). On the other hand, share of persons with higher and university education is much lower among rural than urban population.

3.1.11.3. Railway network, railway safety and transport patterns

The length of the railway network in the Republic of Serbia is 3.333,4 km. Out of that, 3.044,7 km are single-track and 288,7 km are double-track, while the length of the main lines is 1.744,4 km, and the length of electrified lines is 1.589,0 km, based on the IŽS network statement for 2023, from IZS from November 17th, 2021.

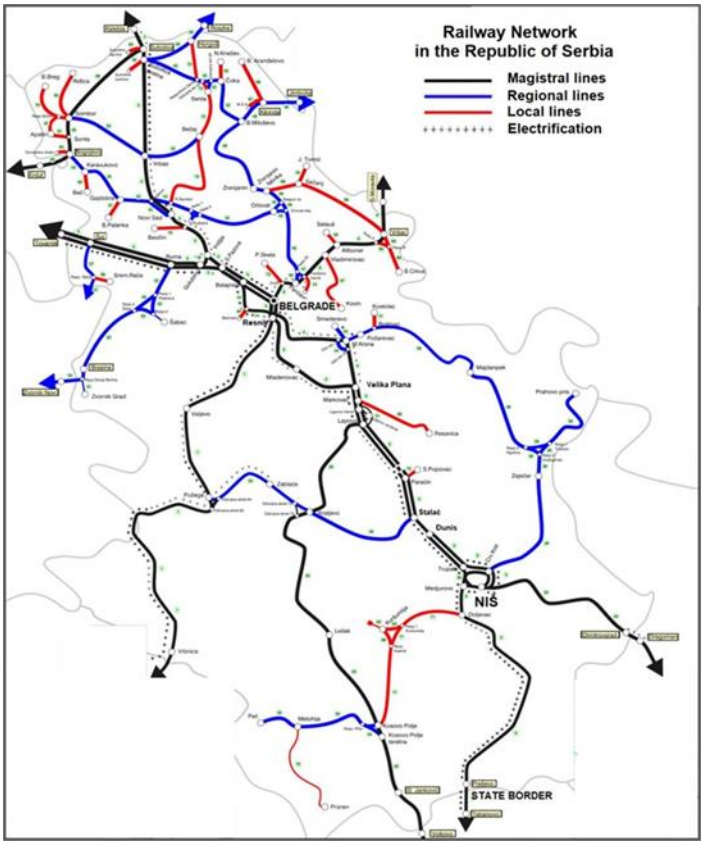


Figure 6: Serbian Railway Network

Serbia links via rail with almost all of its neighboring countries. On rail transport, Serbia's state railways consist of a holding company and separate subsidiaries for infrastructure management, passenger and freight operations. Work on ensuring the operational and financial sustainability of independent railway service/infrastructure operators is ongoing. Serbia regularly updates its railway network statement. The new methodology for track access charges is currently under preparation. Further efforts are needed to ensure full compliance with both the acquis and Serbia's negotiating framework. Serbia continues to make good progress on rail market opening with nine private freight companies operating on the market in 2020 but further efforts are required to ensure full opening of the rail market, including on the issuance of train drivers' licenses and safety certificates for railway undertakings and mutual recognition of the rolling stock. In May 2018, Serbia adopted new laws on railways, railway safety and railway interoperability achieving a high level of alignment with EU legislation on establishing a single European railway area. Further improvements regarding training capacity, examination methods and licensing procedures are still pending as is the publication of the remaining technical specifications for interoperability. In May 2023, the Government of Serbia made a proposal of the law on changes and amendments of the law on railways, which is yet to be adopted. Sustainable and costed railway infrastructure maintenance plans need to be developed. The Directorate for Railways in its function as a regulatory body and safety authority needs to be further strengthened and its decisions implemented. Railway transport is decreasing in size and role. The overall length of tracks was reduced from 3,819 km in 2014 to 3,752 in 2019 and the number of departed passengers from 6.3 million in 2014 to 4.8 million in 2018[6]. As one example, an average of 39 percent of scheduled passenger and 37 percent of scheduled freight trains were cancelled during the period 2016-2018. The Railway transport is dominant for transport of agriculture and energy products, automobiles and components, construction materials, chemicals, equipment, food, metals, minerals, paper, and pulp. Table 3 shows the volume of goods transported for years 2016-2018, disaggregated by type of commodities.

International traffic	2016		2017		2018		2019*	
	000 tons	%	000 tons	%	000 tons	%	000 tons	%
Containers	1,122	8.9	1,090	8.8	1,374	11.5	1,115	13.9
Empty wagons	2,338	18.6	2,174	17.6	2,073	17.3	1,300	16.2
Cereals, products of the milling industry, grains, seeds and fruits	345	2.7	394	3.2	344	2.9	356	4.4

[6] RZS, 2019: 329-330

Oil and its derivatives	1,270	10.1	1,004	8.1	799	6.7	435	5.4
Vehicles	244	1.9	181	1.5	124	1	70	0.9
Metals	1,469	11.7	1,713	13.9	2,010	16.8	1,389	17.3
Bulk cargo, ore and minerals	3,349	26.6	3,142	25.4	2,864	23.9	2,077	25.9
Chemicals	1,520	12.1	1,710	13.8	1,489	12.4	797	9.9
Sugar, residues and waste from the food industry, etc.	369	2.9	383	3.1	375	3.1	143	1.8
Wood, cellulose, paper	331	2.6	265	2.1	284	2.4	185	2.3
Building Materials	97	0.8	82	0.7	99	0.8	35	0.4
Others	149	1.2	223	1.8	128	1.1	130	1.6
Total	**12,602**	**100**	**12,361**	**100**	**11,962**	**100**	**8,032**	**100**

Table 2: Goods transported by rail in Serbia, 2016-2018 (Source Serbian Rail cargo study prepared by a consortium of Compass Lexecon and Karanović & Partners on behalf of the World Bank Group and the Commission for Protection of Competition of the Republic of Serbia

Table 4 shows that the rail Modal Shift between Serbia and its neighbors for bulk traffic is quite low in general and should be reversed to achieve the higher shares in the railways. Interestingly, the rail Modal Shift is relatively higher for movements with Hungary and Romania, but quite low for movements with Croatia.

Border Crossing(s)	**Rail %**	**Road %**
Serbia-Croatia	25.8%	74.2%
Serbia-Hungary	42.4%	57.6%
Serbia-Romania	44.3%	55.7%
Serbia-Montenegro	64.0%	36.0%

Table 3: Bulk freight movements between Serbia and its neighbors (adapted from The World Bank Project PAD, 2020)

The current design state of the railway lines enables operation of rolling stock from 12 t/axle to 22.5 t/axle, with the latter maximum load capacity possible on only 1,886 km, which is an obstacle to growth of rail freight traffic. Services are greatly hampered by the current severe regime of continuous speed restrictions across the network. The average speed is low at 38 km/h, and the network has many slow and dangerous spots.

Serbia's derailment rate is far above peer countries. In 2018, the level crossing accident rate in Serbia was 3.45 per million train-km, compared with only 1.14 in Bulgaria, 0.5 in Croatia, and 0.09 in Germany.
Passenger services currently do not have an efficient multimodal interface, and stations, which have not been renovated for decades, do not play an important role in the transport environment. While newly procured wagons are designed for people with disabilities, train stations are not adjusted for people with special needs or for vulnerable groups like women. Even so, provided that Serbia Voz implements measures to become more market oriented and complementary infrastructure investments are made, rail passenger services will remain a key element of the Serbian transport system, as they are in Europe generally.

Railway safety

Decades of low and non-strategic investments, outdated management structures and practices, and neglect of maintenance have led to serious deterioration of the network infrastructure, and low service quality. The national passenger rail market share has slightly increased from the 2020 baseline to Dec. 2022, presenting 4.8 per cent of all passenger transport in Serbia. Likewise, fatality rates on the railway's network show a positive downward trend. However, railway safety is still a serious challenge in Serbia. Serbia's derailment rate is far above peer countries. Derailments are the leading cause of accidents on the system (39 percent), followed by level crossings (22 percent). In 2017, the level crossing accident rate in Serbia was 5 per million train-km, compared with only 1.14 in Bulgaria, 0.5 in Croatia, and 0.09 in Germany. If this problem is not addressed now, it is likely that more accidents and fatalities will occur once train speeds increase. Implementation of Asset Management Systems (AMS) and Safety Management Systems (SMS) coupled with cost-effective technologies will bring safety in the Serbian rail sector to a level comparable with regional standards. Investments in level crossings in the first phase of the MPA are expected to reduce accidents by 25 percent, with more improvements to be expected as subsequent phases are implemented.

3.1.11.4. Gender and gender equality

Out of the total population of Serbia, 51.4% are female and 48.6% are male inhabitants. The Constitution of the Republic of Serbia proclaims principles of gender equality. Although the Constitution fails to mention gender pay equality, articles of The Labor Law treats rights of men and women equally, including right of equal pay. Additionally, according to provisions of this Law, a working woman has the right of absence from work due to pregnancy and childbirth, maternity leave, and absence from work for childcare, for a total of 365 days. This length of maternity leave is usually used in full, making it one of the lengthiest in the world. The right of employment is also proclaimed equal, but because of maternity leave provisions young women in certain cases will be discriminated in employment possibility, although it is illegal to ask questions about maternity plans during job interviews. This particularly applies to employment in small and moderate private enterprises.

In 2021, Serbia enacted the **Law on Gender Equality,** which stipulates the obligations of public authorities and employers on gender equality and guarantees equal opportunity in employment. It explicitly prohibits gender discrimination at all stages of employment, gender-based harassment and sexual harassment at work and in connection with work, and the payment of unequal wages for work of equal value. The law includes several measures to encourage employers to take a proactive approach to fostering gender equality, including requiring employers with more than 50 employees to develop annual gender equality plans and report on their implementation.

Despite principles however, many women in Serbia face challenges combining paid work and childcare responsibilities. This could be an additional cause for Serbia's low fertility rate, which is one of the lowest in European countries, and average in the region at 1.48 percent in 2020. The employment rate of women in Serbia in 2022 (43.2%), which has grown in the past few years, is still lower than the EU-27 average (58.5%). Of all the employed in the transport sector in Serbia, 20 percent are female and 80 percent are male. The statistics are similar in individual railway companies for which data was obtained. For example, Serbia Voz employs about 74 percent (1659) of males and 26 percent (577) females in its workforce.

Measured by the European Institute for Gender Equality (EIGE) Gender Equality Index, according to 2021 data, the value of Index for Serbia is 58, which is still significantly behind the EU-28 average of 68. The most prominent inequalities are in the domains of money, time and power, indicating lower economic standard of women, carrying out disproportionately unpaid household work and care for family, and insufficient participation in decision making in positions of political, economic and social power.

The labor market participation is much lower for women than for men, as indicated by activity, employment, unemployment and inactivity rates. There is also prominent gender segregation on the labor market, with women concentrating more in the sectors related to social services and men in the sectors of manufacturing, construction, and ICT. Transport sector is one of the sectors with strong gender segregation.[7]

Serbia is characterized by high number of trips made by women and men, on weekdays and weekends as well. Serbia, the average number of trips is 3.8 per day, with 3.6 trips for men and 3.9 trips for women (in the context of this statistic trips are defined as one non-stop travel within one transportation mean). Both, men and women, make much more trips during the week than on weekends. Although the difference is not high, Serbian women still make more trips on weekdays and on weekends than men. Women are more prone to intermodal mobility behavior that is, combining two or more transport modalities in one trip. More than fifth of women and men in the sample (23% of women and 22% of men) combine different transport means during single trip every day, and 20% of women and 14% of men do that 4-5 times a week. Combining different transport means in a single trip could pose stress[8].

As in countries across the region, women and men also have different specializations in university, which contributes to the segregation seen in the labor market and the differences in labor market outcomes. Women constitute 89 percent of graduates in education, 75 percent in health, and 74 percent in humanities and the arts. On the other hand, they make up only 40 percent of graduates in engineering, manufacturing,

[7] Source: Statistical Office of Serbia, Labor Force Survey 2022
[8] Reviewed version submitted by SeConS Development Initiative Group and Dornier Consulting International GmbH 2019

and construction, although this percentage has been increasing in recent years, along with the percentage of women graduating in the IT sector, which is now also close to 35%.

3.1.11.5. Economy and livelihood

The trends in the transport sector are reflected in the employment size within the sector. The number of employees in the railway transport has decreased from 17,078 in 2014 to 10,207 in 2018. Higher labor income was the biggest contributor to poverty reduction in Serbia in 2013-17, and efforts to maximize job opportunities remain the most important and sustained way to reduce poverty in the long term. Half of total household gross income is derived from regular employment and 32% is derived from pensions. Social welfare accounts for 2,5% of the total household gross income. Households in the bottom 40 percent of the income distribution, with less education attainment, have worse employment outcomes. Poor workers are more likely to have low-skilled jobs: 63.3 percent are employed in elementary occupations, craft, or primary sector occupations. Households in the bottom 40 percent also depend less on income from salaried employment (34 percent of total income) and more on self-employment (15 percent of total income) than households in the top 60 percent of the income distribution (47 and 6 percent, respectively).

3.1.11.6. Labor and informal employment

The incidence of informal employment is the highest among the youngest age group (15-24 years), of whom 20% are employed informally. Incidence of informal employment tends to decrease with age. This can be accounted to the low level of professional experience of the youngest age group. Informal employment rates tend to rise again for older workers, with 21 % of employees over 55 being informally employed. Broken down by age group, young men and older women are over-represented in informal employment.

The labor market has recovered from post-crisis job losses. From 2014 to 2018, Serbia created around 240,000 net new jobs. The unemployment rate declined from close to 20 percent in 2014 to 9,4 percent in 2022, and the employment rate now surpasses pre-crisis levels. Many of the new jobs have been full-time wage jobs in the formal private sector. Recent labor market improvements have also benefited women, older workers, and the youth. Job creation was the strongest in services and industry. Earnings have continually been increasing since 2015 and the most recent average net earnings in March 2023, in Serbia, is approx. 730 EUR. Gross and net earnings in the period January-March 2023, compared to the same period last year, are nominally higher by 15.5%, however, in real terms they are lower by 0.4%. Median net earnings for March 2023 amounted to approx. 500 EUR, which means that 50% of employees earned earnings up to the specified amount.

Despite labor market improvements, a considerable number of people in Serbia are not working or searching for a job. Among people aged 15-64 outside of the labor force, Serbia's activity rate (71,4 percent) and employment rate (64,5 percent) remain far below those of neighboring EU countries. Inactivity and unemployment are even worse among poor households: only 22.4 percent of the working-age poor are employed, compared to 53.0 percent of working-age non-poor. Many job seekers are long-term unemployed: 45 percent of unemployed workers wait more than one year to find a job. Serbia is underutilizing its full potential workforce while firms demand more workers with the right skills. With a declining working-age population due to aging and outmigration, it is important that Serbia uses its available workforce effectively.

When broken down by region, the largest number of informally employed workers is located in Central and Western Serbia, and the smallest number in Belgrade. The highest share of informally employed workers of the total number of workers is in West Serbia and Šumadija (36,3%), followed by South and East Serbia and equally Vojvodina (24 % each), and Belgrade (17,2%). These differences can, to large extent, be explained by the higher share of agricultural workers outside of Belgrade, and their higher propensity to work in the informal sectors, as well as generally less exposure to labor inspections in rural areas.

Of those informally employed the vast majority can be found in the agricultural sector (56,85% of all informally employed), followed by services (23,6%) and construction (13,9%). In other sectors, the share of informal work is less than 5%.

The poverty rate, measured as income per capita below the standardized upper-middle-income country poverty line of US$5.5/day in 2011 purchasing power parity (PPP), fell from 26.7 percent in 2013 to 18.9 percent in 2019. An increase of 1 percent in GDP was associated with about a 4 percent reduction in the poverty headcount rate, higher than the elasticities in neighboring Western Balkan countries. Consistent with

the labor market recovery, increased labor income contributed the most to the observed reduction in poverty, followed by pensions. Household income increased and the poverty rate fell because of overall economic growth and its strong impact on households in the bottom of the income distribution.

3.1.11.7. Population in rural areas

In 2021, 135.194 persons internally migrated within the Republic of Serbia. The average age of persons who changed residence was 34.7 years (35 for men and 34.5 for women). The capital (Belgrade) region and northern Vojvodina region had a positive migration balance in 2021. In 2021 most of the persons moved from one municipality/city to another within the same area (36.3%), and at least from one to another settlement within the same municipality/city (28.1%). The largest number of migration movements was recorded in the territory of the Belgrade area, 51 206 (37.9%) immigrants and 47 293 (35.0%) emigrants. The migration balance is positive in 49 Serbian municipalities, in one it equals zero and in the remaining 119 municipalities, the migration balance is negative. This confirms that despite rural development measures the rural areas still struggle with depopulation.

Economic growth has disproportionately benefited rural and low-income households. In Serbia, the income of the poorest 40 percent grew by an annualized average of 3.9 percent between 2013 and 2017, higher than the income growth of 1.5 percent for the whole population. Previously rural areas had been particularly hurt following the global financial crisis. Between 2013 and 2017, with economic growth and jobs recovery, the poverty headcount ratio decreased by 9.6 percentage points in thinly populated areas, 6.0 and 2.9 percentage points in intermediate and densely populated areas, respectively. However, thinly populated areas continue to house more than half of the country's poor.

4. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

4.1. Overview

Republic of Serbia, having acquired the EU candidate country for membership status, is taking a huge effort to reach environmental standards in line with the EU acquis[9]. A set of environmental legal framework adopted during the last decade contributed to Serbia coming closer to desired environmental standards. However, a negotiating Chapter 27, Environment and Climate change[10], still remains technically, financially and administratively the most complex and challenging one, with more than 750 different legal acts needed to be produced and adopted and over 10 billion euros of investments needed to be undertaken.

The standards of good environmental practice are applied throughout the country, and progress is particularly visible within the energy and transport sector.

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

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

4.2. Reaching environmental standards in Serbia

The Republic of Serbia is taking a huge effort to reach good environmental standards. A set of environmental laws adopted during the last two decades contributed to Serbia coming closer to desired environmental standards. The standards of good environmental practice are applied throughout the country, and progress is particularly visible within the energy and transport sector, also due to the fact that several large projects

[9] The Acquis Communautaire is the accumulated body of European Union (EU) law and obligations from 1958 to the present day. It comprises all the EU's treaties and laws (directives, regulations, decisions), declarations and resolutions, international agreements and the judgments of the Court of Justice.

[10] http://eukonvent.org/wp-content/uploads/2018/07/Izve%C5%A1taj-o-napretku-Srbije-2018_engleski.pdf

were financed by different International Financing Institutions (IFI), which implemented a strict environmental system.

4.3. **Relevant Government Policies, Acts, Rules, Strategies and Guidelines**

Environmental protection in Republic of Serbia is regulated by a set of laws and secondary laws, the most important of which are provided in Annex 06. Full List of regulations in the field of environmental protection in the Republic of Serbia is accessible at following website: https://www.ekologija.gov.rs/wp-content/uploads/inspekcija/List_of_regulations.pdf

In 2015 a Post-screening Document for the transposition and implementation of Chapter 27 - Environment and Climate Change has been adopted, containing preliminary plans and deadlines, as well as the assessment of the necessary financial resources needed for achieving full implementation of the pertinent EU legislation.

4.3.1. The Constitution of Serbia

Passed in 2006 the Constitution of RS proclaims the rule of law and social justice, principles of civil democracy, human and minority rights and freedoms, equality and commitment to European principles and values and the right to a healthy natural environment.

This legal act is **relevant** as it provides the right to healthy environment and the right to receiving timely and comprehensive information about the state of environment and any changes thereto.

4.3.2. The Law on Public property

Enacted in 2011 and amended in 2018, governs the fundamental principles on public ownership and other proprietary rights of the State, autonomous provinces and local self-government units.

This Law is **relevant** for the project as it governs the public ownership regime. The main positive aspects of the Law on Public Property are in that it (i). decentralizes the ownership entitlements, (ii). provides specific rules for use and disposal of public property and (iii). sets the framework for potential public-private partnerships.

4.3.3. The Law on foundations of property law relations[11]

Relevant for the implementation of the RPF and identification of eligibility. Enacted in 1990 and amended in 2005 ("Official Gazette of the SFRY", No. 6/80, 36/90,"Official Gazette of the FRY", No. 29/96 and "Official Gazette of the RS", No.115/2005) governs fundamental provisions of property relations, including ownership rights substance, subjects of ownership rights, co-ownership and joint ownership rights, acquiring the right of ownership, right on yields emanating from owned thing, possession rights, ownership acquired by adverse possession, ownership relations deriving in situations when structures was built on someone else's land, protection of ownership rights, protection of possession, cessation of ownership rights, etc. Most important provisions of this Law that are of considerable influence on the resettlement process and application of WB standards are the provisions regarding ownership rights acquired by construction (for informally constructed structures), provisions on the legal institute of joint spouse property on property acquired during marriage etc.

4.3.4. The National Strategy for Sustainable Development

Relevant for the Project as it sets standards for public health and environmental risk factors, including climate change, waste, chemicals, accidents, radiation, noise and natural disasters, such as floods, landslides, fires and earthquakes.

4.3.5. Law on Water

Relevant for the Project. The Law on Water ("Official Gazette of RS" No. 30/10, 93/12, 101/2016, 95/2018 and 95/2018 – other law), which incorporates the EU Water Framework Directive, covers water regimes, water management areas, responsibilities for water management (including sub-law water management legislation), water management activities, limitation of owners' and beneficiaries' rights, water cooperatives,

[11] **https://www.paragraf.rs/propisi/zakon_o_osnovama_svojinskopravnih_odnosa.html,**

financing of water management activities, and administrative inspection to enforce the Law. The legislation provides for various water management sub-laws on water resource conditions, water resource compliance and water resource permits.

4.3.6. Law on Environmental Protection

Relevant for the Project. Law on Environmental Protection (LEP) ("Official Gazette of RS" No 135/2004, 36/2009, 36/2009 – other law, 72/2009 – other law, 43/2011 – CC ruling, 14/2016, 76/2018, 95/2018 – other law and 95/2018 – other law. The LEP is currently the main legislation relating to environment protection in Serbia and is harmonized with the Council Directive 2003/105/EC, which amends Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances (Seveso II Directive).

The main objectives of LEP are:

- Conservation and improvement of the environment; and
- Control and mitigation of pollution of the environment.
- The main focuses of LEP are:
- Declaration of ecologically critical areas and restriction on the operations and processes, which can or cannot be carried out/ initiated in the ecologically critical areas;
- Environmental Approval;
- Promulgation of standards for quality of air, water, noise and soil for different areas for different purposes;
- Promulgation of a standard limit for discharging and emitting waste; and
- Formulation and declaration of environmental guidelines.

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

4.3.7. Law on Environmental Impact Assessment

Relevant for the Project. This Law governs the impact assessment procedure for projects that may have significant effects on the environment, the contents of the Environmental Impact Assessment (EIA) Study, the participation of authorities and organizations concerned, the public participation, transboundary exchange of information for projects that may have significant impact on the environment of another state, supervision and other issues of relevance to impact assessment.

The Law on EIA (LOEIA) ("Official Gazette of RS" No. 135/2004 and 36/2009) provides categorization of industries and projects and identifies types of environmental assessment required against respective categories of industries or projects.

The Law covers, among others:

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

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

4.3.8. The Law on Waste Management [12]

Relevant for the Project. The Law on Waste Management ("Official Gazette of RS" No. 36/2009, 88/2010, 14/2016, 95/2018 and 36/2023) is harmonized with all relevant EU directives. The Law regulate: types and classification of waste; waste management planning; waste management entities; responsibilities and obligations in waste management; organization of waste management; managing special waste streams; conditions and procedure for permit issuance; transboundary movement of waste; reporting on waste and database; financing of waste management; supervision, and other issues relevant for waste management.

The Law on Waste Management has transposed the European Waste Framework Directive (2008/98/EC as last amended by 851/2018/EC), the European Directive on Landfills (1999/31/EC, as amended) through transposition in the Serbian Law on Waste Management and/or Regulation on waste landfilling in combination with the Regulation on Categories, Testing and Classification of Waste, the European Directive on Packaging and Packaging Waste (1994/62/EC, as amended transposition in the Serbian Law on Packaging and Packaging Waste. The European Directive on Waste Electric and Electronical Equipment (WEEE) (2012/19/EU, as amended) has experienced transposition though the Serbian Law on Packaging and Packaging Waste in combination with the Rulebook on the List of Electric and Electronic Products, Measures of Prohibition and Restriction of Use of Electric and Electronic Equipment Containing Hazardous Substances, Methods and Procedures of Managing Waste from Electric and Electronic Products.

According to the Waste Management Act, waste management consists of a set of activities of joint interest which comprise implementation of prescribed action plans to be carried out within waste collection, transport, storing, treatment and disposal, including supervision of these activities and responsibility for waste management facilities and aftercare. The provisions of this Law shall not apply to: 1) Gaseous effluents emitted into the atmosphere; 2) Land (in situ) including unexcavated contaminated soil and buildings permanently connected with land; 3) Uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that material will be used for construction purposes, in its natural state on the construction site from which it was excavated; 4) Radioactive waste; 5) Decommissioned explosives; 6) Fecal matter, if not covered by paragraph 2 point 2) of this Article; 7) Straw and other natural non-hazardous agricultural or forestry material used in farming, forestry, or for the production of energy from such biomass through processes or methods which do not harm the environment or endanger human health; 8) Sewage sludge and the content of septic tanks, other than the sludge from waste water treatment plants. The Waste Management Act provides for transitional periods for achieving compliance with its provisions. The basic principles of waste management as provided in the Law are principle of "waste management hierarchy" "responsibility principle", "polluter pays principle" etc. The responsibility principle means, that producers, importers, distributors and sellers of products that affect the increase of the waste quantity shall be responsible for the waste generated by their activities. The polluter pays principle means, that the polluter shall bear the full costs of consequences of their activities. Responsibilities of Product Manufacturer assigns the product manufacturer with a number of general obligations regarding the production process and regarding the product. Secondly the manufacturer or importer whose product becomes hazardous waste upon its use shall take such waste over after the use of product, free of charge. In order to comply the manufacturer may authorize third parties to take the products over upon its use, in the name and on behalf of the manufacturer.

Waste shall be classified according to a waste catalogue. A waste catalogue is a comprehensive list of non-hazardous and hazardous waste classified by its origin and composition. Hazardous waste shall be classified, when necessary, according to the limit values of the hazardous material concentration. The owner and/or other holder of waste, i.e. operator, shall be obliged to classify waste in a prescribed manner, in compliance with this Law. In order to determine the composition and hazardous characteristics of waste, the entity referred to in paragraph 4 of this Article shall be obliged to test hazardous waste, as well as waste which, according to its origin, composition and characteristics, may be hazardous waste.

A set of secondary laws of importance for hazardous waste management in Serbia:

[12] http://www.pregovarackagrupa27.gov.rs/?wpfb_dl=109

- Rulebook on categories, testing and classification of waste ("Official Gazette of RS" of the RS, No. 56/2010) [13];
- Rulebook on Persistent Organic Pollutants (POPs) waste ("Official Gazette of RS" of the RS, No. 65/2011). This regulation prescribes: list of POPs substances, method and procedure for management of POPs waste I limit values of concentrations of POPs substances related to the disposal of waste that contains or I contaminated with POPs substances.
- Law on chemicals ("Official Gazette of the RS. 36/2009, 88/2010, 92/2011, 93/2012 i 25/2015),which transposed Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and bRestriction of Chemicals (REACH) in Serbian regulation;
- Governmental order on conditions, methods and management procedures of waste oils (Official Gazette of RS of the RS, No. 71/2010);
- Rulebook on management of medical waste ("Official Gazette of RS" No. 78/2010);
- Rulebook on handling asbestos-containing waste ("Official Gazette of RS" No. 78/2010);
- Rulebook on the list of electric and electronic products, measures of prohibition and restriction of use of electric and electronic equipment containing hazardous substances, methods and procedures of managing waste from electric and electronic products ("Official Gazette of RS" No. 99/2010, adopted on 10/01/2011),
- Governmental order on products which after use become separate waste flows, form of daily record on quantity and type of produced and imported products and annual report, method and deadlines for delivering the annual report, entities required to pay a fee, criteria for billing, amount and method of billing and payment of fee (Official Gazette of RS of the RS, No. 548/2010).
- Draft of Ministerial Order on management of PCB-containing equipment and waste
- Draft of Ministerial Order on reporting on waste management "Improvement of hazardous waste management in the Republic of Serbia - IWHMS "
- Orders regulating transboundary shipment of waste are:
  - Governmental order on the lists of waste for transboundary shipment of waste and the content and form of the document, which accompanies the transboundary shipment of waste and its filling-in
  - Governmental order on determination of specific sorts of hazardous waste which can be imported as secondary raw material
  - Ministerial order on the content of the documentation for transboundary shipment of waste
- Orders regulating waste treatment and waste disposal are:
  - Governmental order on authorize conditions, method and procedure of thermal waste treatment ("Official Gazette of RS of RS" No 102/2010)
  - Governmental order on disposal of waste in landfills ("Official Gazette of RS" No, 92/26010, adopted in 2010).

Other important regulations for the planning of hazardous waste management are:

- Law on Integrated Prevention and Control of Pollution the Law on IPPC (Official Gazette of RS of the RS, no. 135/04) transposes in Serbian legislation the IPPC Directive (2008/1/EC) and defines the conditions and procedure for issuance of integrated permits for installations which may have a negative impact on human health, environment or tangible assets, the type of installations, supervision and other relevant aspects of environmental pollution prevention or control.
- Law on Strategic Environmental Impact Assessment (Official Gazette of RS of the RS, no. 135/04) transposes into Serbian legislation the SEIA Directive (2001/42/EC) and is the instrument ensuring the integration of the environmental considerations into the sectorial policy. Furthermore, it regulates conditions, method and procedures of conducting the strategic assessment of environmental impact during facility planning. Finally, it determines the public participation in the SEIA procedure.

Serbia has ratified the:

- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and pesticides in International Trade (Official Gazette of RS, International Agreements, No. 38/09) the

[13] http://www.subotica.rs/documents/zivotna_sredina/Propisi/Pokate.pdf

- Stockholm Convention on Persistent Organic Pollutants (Official Gazette of RS–International Agreements, No. 42/09) the
- Basel Convention on Transboundary Movement of Hazardous Wastes and their Disposal Official Journal of FRY, International Treaties, No. 2/99, the
- Aarhus Convention (" Official Gazette of RS- International Treaties", No. 38/09) the
- Protocol on Pollutant Release and Transfer Register to the Aarhus Convention" (" Official Gazette of RS - International Treaties", No. 8/1)

4,3,9 The Law on climate change

Relevant for the project. The Law on climate change ("Official Gazette of RS" No. 26/2021), This law regulates the system for the limitation of greenhouse gas emissions (hereinafter: GHG) and for adaptation to changed climate conditions, monitoring and reporting on the strategy of low-carbon development and its improvement, the program of adaptation to changed climate conditions, adoption of the strategy of low-carbon development and the program of adaptation to changed climate conditions, issuing permits for GHG emissions to the plant operator, issuing approval to the aircraft operator's monitoring plan, monitoring, reporting, verification and accreditation of verifiers, administrative fees, supervision and other issues of importance for the limitation of GHG emissions and adaptation to changed climatic conditions.

4.3.9. The Law on Chemicals

Relevant for the Project. The Law on Chemicals ("Official Gazette of RS" No. 36/2009,88/2010, 92/2011, 93/2012 and 25/2015) regulates the integrated management of chemicals, their classification, packaging and labeling, register of chemicals and trade of chemicals ' Principles of a strategic approach to chemicals management - Joint Body for Integrated Management of Chemicals. It transposed EU legislation in the field of chemicals related to POPs Regulation 1907/2006/EC on registration, evaluation and authorization on chemicals (REACH) – partially harmonized, Regulation 757/2010 amending Regulation 850/2004, Directive 2004/42/EC on limitation of emissions of volatile organic compounds (VOC) from the use of organic solvents in certain paints, varnishes and vehicle refinishing products, Regulation 689/2008/EC export and import of dangerous chemicals on banned and severely restricted chemicals as well as Directive 67/548/EEC on classification, labeling and packaging of substances , Directive 1999/45/EC on classification, labeling and packaging of preparations Regulation 1272/2008/EC on classification, labeling and packaging of substances and mixtures in accordance with GHS and Regulation 440/2008/EC on test methods pursuant to REACH.

Help desk: Serbian Chemicals Agency established national help-desk, with aim to provide relevant information and guidelines to industry and relevant stakeholders, to answer to their questions and help them in fulfilling obligations from national legislation.

4.3.10. The Law on mining and geological explorations

Relevant for the Project. The Law on mining and geological explorations (" Official Gazette of RS" nr. 101/2015 and 95/2018 – other law). regulate measures and activities of the mineral policy and the manner of implementation thereof, conditions and manner of execution of geological explorations of mineral and other geological resources, researching of geological environment, as well as geological explorations for the purpose of spatial and urban planning, designing, construction of buildings and remediation of site, manner of classification of resources and reserves of mineral raw materials and ground waters, exploitations of reserves of mineral raw materials and geothermal resources, construction, use and maintenance of mining facilities, plants, machines and equipment, execution of mining works, mining waste management, remediation and recultivation of abandoned mining facilities, as well as inspection over the implementation of the present Law.

The Geological Institute of Serbia is established by the same Law as an individual organization with the capacity of a legal entity that carries out the basic geological explorations and other geological explorations as well as the works of applied geological explorations of importance for the Republic of Serbia, in accordance with this Law.

4.3.11. The Law on Cultural property

Relevant for the Project. The Law on Cultural property ("Official Gazette of RS" No. 71/94, 52/11 – other law, 92/11 – other law) regulates the system of the protection and use of cultural property and define conditions for the implementation of activities relating to the protection of cultural property.

Depending on its physical, artistic, cultural and historical features, cultural property in Serbia include: cultural monuments, spatial cultural-historical units, archaeological sites and landmarks – immovable cultural property; works of art and history, archival material, film material and old and rare books – movable cultural property.

Depending on its importance, cultural property in Serbia is also classified into: cultural property, cultural property of great importance and cultural property of exceptional importance.

This Law defines the chance find procedure. According to Article 28 of subject law, a person who digs out of earth or takes from water property under prior protection outside of organized research shall immediately, within 24 hours at the latest, inform thereof a competent cultural property protection institution and the Ministry of Interior.

4.3.12. The Law on Protection against Environmental Noise

Relevant for the Project. The Law on Protection against Environmental Noise, ("Official Gazette of RS" No 36/2009 and 88/2010), transposes EU Directive 2002/49/EC relating to the assessment and management of environmental noise. The Law has the following main goals: establishment, maintenance and improvement of the system of noise protection on Serbian territory; and determination and realization of measures in the field of noise protection that avoid, prevent or decrease the harmful effects of noise on human health and the environment. The limit levels of noise are covered by the Regulation on permitted level of noise in the environment.

4.3.13. The Law on Occupational Health and Safety

Relevant for the Project. The Law on Occupational Safety and Health organized ("Official Gazette of RS" No. 101/2005, 91/2015 and 113/2017 -other law) governs the occupational safety and health system in Serbia. By harmonizing this law with the ratified International Labor Organization conventions and EU Framework Directive 89/391/EEC, as well as special directives derived from the Framework Directive, all guidelines originating from them have been accepted in a form adjusted to national conditions. Apart from this Law, the regulatory framework of the occupational safety and health system is integrated by several sub-acts. The Rulebook on preventive measures for occupational health and safety and prevention and containment of contagious diseases epidemic ("Official Gazette RS" No 94/2020) governs preventive measures employers need to introduce at workplaces and applies to all persons at workplaces in cases an epidemic has been declared.

The provisions of this are further elaborated in numerous by-laws[14], for regulating the specific implementation procedures. A total of 8 legal acts and 55 rulebooks related to the area of occupational health and safety are ensuring implementation of the Law, and providing targeted OHS procedures for e.g.

- working on temporary and movable construction sites,
- deep drilling and exploitation of raw minerals,
- exposure to asbestos,
- working in an environment at risk from explosive atmosphere,
- mitigation measures from hazardous risk of electricity,
- Working in quarries, clay, sand and pebble extraction sites,
- Rail traffic,
- Noise, vibration emissions exposure etc. Preventive measures during manual cargo movement.

4.3.14. Regulation on Labor, Working Conditions and Gender Equality

Relevant for the Project. The legal framework of Serbia guiding Labor and Working Conditions is, with a few minor shortcomings, strongly compliant with the ESS2 as Serbia is signatory to the International Labor

[14] There are 8 legal acts and 55 rulebooks related to the area of occupational health and safety.

Organization (ILO) and United Nations (UN) Conventions informing the ESS2.[15])

The Labor Law (LL) ("Official Gazette of RS" No. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017- CC ruling,113/2017 and 95/2018 – authentic interpretation), is the main legislation that guides labor practices in Serbia. It provides for the minimum rights of employees such as the right to corresponding salary/wage, safety and health at work, health-care protection, personal integrity protection, personal dignity, and other rights in the event of illness, reduction or loss of work ability and old age, including unemployment financial benefits during temporary unemployment, as well as the right to other forms of protection, in conformity with the law and bylaw, i.e. the employment contract. An employed woman is entitled to special protection during f pregnancy and childbirth. Special protection is also guaranteed to employees under 18 years of age and an employed person with a disability.

The terms and conditions provided by this Law also includes ban to direct or indirect discrimination regarding employment conditions and choice of candidates for performing a specific job, conditions of labor and all the rights deriving from the employment relationship, education, vocational training and specialization, job promotion and termination of employment contracts on the grounds of differences by virtue of sex, birth, language, race, color of the skin, age, pregnancy, health condition, and/or disablement, ethnic origin, religion, marital status, family obligations, sexual orientation, political or other belief, social background, financial status, membership in political organizations, trade unions, or any other personal characteristic. The LL guarantees the employee's right to corresponding earnings, compensations and refund of expanses, entitlement to training and professional development, provision of safety and health at work, health-care protection, personal integrity protection, personal dignity, and other rights in the event of illness, reduction or loss of work ability and old age, including financial benefits of temporary unemployment, as well as the right to other forms of protection.

The provisions of the Labor Law apply to all employees who work in the territory of the Republic of Serbia for a national or foreign legal or natural person (i.e. employer), as well as to employees assigned to work abroad by an employer, unless otherwise specified by the law.

The LL is also applicable to the employees in the field of transport, employed foreign nationals and stateless persons working for an employer in the territory of the Republic of Serbia (Labor Law - Article 2)

The below represent other core laws relevant to Labor, working conditions and equality in general and to Project workers.

Law on Civil Servants	(2005 last amended in 2022)
The Law on Peaceful Settlement of Labor Disputes	(2004 last amended in 2018)
Law on Employment and Unemployment Insurance	(2009 last amended in 2017)
Law on Employment of Foreign Citizens	(2014 last amended in 2019)
Law on Retirement and Disability Insurance	(2003 last amended in 2022)
Law on Health Insurance	(2019)
Law on the Prohibition of Discrimination	(2009 last amended in 2021)
Law on the Prevention of Harassment at the Workplace	(2010)
Rulebook on Conduct of Employers and Employees in Relation to Prevention and Protection from Harassment at Work	(2010)
Law on Protection of Whistle Blowers	(2014)
Law on Gender Equality	(2021)

The Law on Gender Equality (2021) stipulates the obligations of public authorities, employers and other natural and legal persons in relation to gender equality. The law prescribes the measures, the planning and reporting instruments and the institutional framework for achieving gender equality, as well as how the implementation of the law is monitored. The Law defines specific measures for achieving and maintaining

[15] These include: • ILO Convention 87 on Freedom of Association and Protection of the Right to Organize • ILO Convention 98 on the Right to Organize and Collective Bargaining • ILO Convention 29 on Forced Labor • ILO Convention 105 on the Abolition of Forced Labor 2 Guidance Note – ESS2: Labor and Working Conditions • ILO Convention 138 on Minimum Age (of Employment) • ILO Convention 182 on the Worst Forms of Child Labor • ILO Convention 100 on Equal Remuneration • ILO Convention 111 on Discrimination (Employment and Occupation

gender equality which must be defined and implemented by public authorities and employers and which must, among other things, promote equal opportunities in the area of human resources management and on the labor market, as well as include the collection of gender disaggregated data and its submission to authorities. Employers who have more than 50 employees are required to include gender equality action plans within their annual workplans, either publicly disclose them or submit them to the responsible Ministry along with annual reports on their implementation. The law defines what is not to be considered discrimination in the area of labor, employment and self-employment and this includes initiatives to support female employment and entrepreneurship. In the field of labor and employment, the Law guarantees equal opportunities as well as the application of measures to enable both women and men to exercise their right to work, in terms of availability of executive jobs and positions; conditions to access employment or occupation, including selection criteria and recruitment conditions, regardless of the branch of activity and at all levels of professional hierarchy, including career advancement, all forms of paid work; deployments and promotions; working hours; flexible working hours due to alignment of family and work obligations of men and women, absence from work; payments; working conditions; professional training and additional education, including practical work experience, daily, weekly and annual leave; termination of employment; collective bargaining; provision of information; social security; pregnancy leave, maternity leave, duration of maternity leave and benefits during maternity leave; childcare leave and special care for a child with a disability; protection of the right to work and in connection with work. Penalties for non-compliance with the provisions of the law target, among others, employers and labor unions.

The Republic of Serbia is a signatory of a number of important and binding international documents, which guarantee the equality of women and men and prohibit gender-based discrimination. Among these documents, the most important are documents of the United Nations (Universal Declaration of Human Rights, the Convention on the Elimination of All Forms of Discrimination against Women — CEDAW), the Council of Europe (European Conventions for the Protection of Human Rights and Fundamental Freedoms, the European Social Charter and the Council of Europe Convention on preventing and combating violence against women and domestic violence) and the European Union (EU Charter of Fundamental Rights).

NOTE> Full List of regulations in the field of environmental protection in the Republic of Serbia is placed on following website: https://www.ekologija.gov.rs/wp-content/uploads/inspekcija/List_of_regulations.pdf

4.3.15. Planning and construction law[16]

Relevant for the Project. The planning and construction law was published in "Official Gazette of the RS", No. 72/09 of September 3, 2009, corrected "Official Gazette No. 81/09 (Corrigendum), changed by Constitution Court of RS ruling 64/10 (CC), 24/11, 121/12, 42/13 (CC), 50/13 (CC), 98/13 (CC), 132/14 145/14, 83/2018, 31/2019, 37/2019 (other law), 9/2020 and 52/2021 and it governs the following issues: the conditions and modalities of spatial planning and development, the development of general and detailed regulation plans, the development and use of construction land and the construction of facilities, predominant use of land when the land has multiple uses, public use of land and other issues of significance in the development of space, landscaping and use of construction land and the construction of facilities. It prescribe procedure for: issuance of site conditions; issuance of building permit; notice of works; issuance of occupancy permit; attainment of conditions for design, i.e. connection of a facility to the infrastructure network; obtaining legal instruments and other documents issued by the holders of public authorities required for the construction of facilities, i.e. for the issuance of site location conditions, building permit and occupancy permit within their competence, as well as for the provision of conditions for connection to the infrastructure network and for the registration of title to the built facility and for designating a house number (unified procedure).

4.3.16. Building legalization law[17]

Relevant for the Project. Building legalization law, published in "Official Gazette of the RS ", No. 96/15, 83/18, 81/20 – CC ruling and 1/23 – CC ruling) regulates the conditions, procedure and manner for legalizing buildings, parts of buildings, auxiliary buildings and other buildings constructed without a building or construction permit. The custom of constructing buildings (houses, shops, even apartment buildings), or adding auxiliary buildings to existing, legal building (garage, additional floors on houses or rooms) without a

[16] https://www.paragraf.rs/propisi/zakon_o_planiranju_i_izgradnji.html, ibid
[17] https://www.paragraf.rs/propisi/zakon_o_ozakonjenju_objekata.html

construction permit became quite usual during the past 30 years. The governments over the years always maintained the intention to legalize all illegally constructed buildings, if constructed on own land and/or with consent of the owner, but most of the buildings have not yet been legalized. It is without any doubt that if the Project will have any resettlement impact, some of the assets will be buildings without building permits so provisions of this law can be important, but in those cases, the RPF, in terms of eligibility, shall prevail if more stringent. This law now imposes restrictions to title transfer for structures constructed without building permits. In line with Article 28, all structures subject to the formal process of legalization shall within 6 months be registered as such by the relevant cadastral authority together with the note that any commercial transaction in terms of transfer of title is forbidden.

4.3.17. The Law on Extra-Judicial Proceedings[18]

Relevant for the Project. The Law on Extra-Judicial Proceedings ("Official Gazette of SRS", No. 25/82 and 48/88, amended "Official Gazette of the RS" No 46/95, 18/2005, 85/2012, 45/2013, 55/2014, 6/2015 and 106/2015-other law and 14/2022) defines the rules by which courts decide on personal, family, property-related and other rights and legal interests, which are resolved in extra-judicial proceedings, pursuant to the Law. In accordance with this Law, the court in extra-judicial proceedings determines compensation for an expropriated property after it establishes the important facts and approves a decision which defines the type and amount of compensation. According to this Law, participants may conclude an Agreement about type and amount of compensation, and the court will then base its decision on their agreement, if the court finds that the agreement is not contrary to mandatory regulations.

4.3.18. The Law on Administrative procedures[19]

Relevant for the Project. The law in effect was adopted in 2016 ("Official Gazette of RS No18/16, authentic interpretation of the law - 95/2018, 2/2023) defines the rules and procedures to be applied by government authorities when deciding on rights, obligations or legal interests of individuals, legal persons or other parties, within the framework of administrative procedures. Decisions by administration bodies are approved in form of a decree, after completing the procedure as prescribed by this Law. The party has the right to appeal against the decision approved in first instance. This Law administratively governs the expropriation process.

4.3.19. The Law on State Survey and Cadaster[20]

Relevant for the Project. The Law on State Survey and Cadaster ("Official Gazette of the RS" No 72/2009, amended on 18/2010, 65/2013, 15/2015, 47/17, 113/17, 27/18, 41/18- other law and 9/20 – other law) regulates the professional activities and affairs of the state administration related to land, buildings and other structures survey, real estate cadaster, records and registration of property, registration of possession, registration of illegal buildings and buildings legalized according to provision of the latest Building Legalization Law of RS, utilities cadaster, basic geodetic works, address register, topographic and cartographic activities, valuation of real estate, geodetic and cadastral information system.

4.3.20. The Law on Expropriation[21]

Passed in 1995 and enacted on January 1, 1996 ("Official Gazette of RS" No 53/95, …20/2009, 55/2013-CC ruling and 106/2016 – authentic interpretation) enables government institutions to acquire property for projects that are deemed to be of public interest, while protecting the interests of all persons with legal title, whose assets are to be expropriated. The Law on expropriation does not use the term "involuntary resettlement", but instead uses the term "expropriation" and is based on the Governments eminent domain power. The Law in conjunction with the project RPF will guide potential land acquisition and resettlement needed for the Project.

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[19] https://www.paragraf.rs/propisi/zakon-o-opstem-upravnom-postupku.html, ibid
[20] https://www.paragraf.rs/propisi/zakon_o_drzavnom_premeru_i_katastru.html, last accessed October 9, 2019

[21] https://www.paragraf.rs/propisi/zakon_o_eksproprijaciji.html, ibid

4.3.21. Law on Special Procedures for the Implementation of the Project of Construction and Reconstruction of Linear Infrastructure Structures of Particular Importance to The Republic of Serbia[22]

This Law is published in the "Official Gazette of RS" No. 9/20. The law provides inter alia particular conditions to the Law on expropriation governing land acquisition for construction of line infrastructure objects in the road, rail, water, and air sector with the potential to beneficially impact the overall development of the Republic of Serbia. The law is infused with the intention of efficiency cutting across the permitting and land acquisition procedure. This Law shall apply to projects of construction and reconstruction of line infrastructure structures of particular importance to the Republic of Serbia. Construction and reconstruction of public line transport infrastructure (road, rail, water, and air) are deemed as Projects of particular importance to The Republic of Serbia. The decision on recognition i.e. implementation of each such Project as a Project of particular importance to the Republic of Serbia is passed by the Government.

The Law identifies projects of construction and reconstruction of the line infrastructure structures of particular importance to the Republic of Serbia, and governs the process of determining the public interest for complete and incomplete expropriation and temporary occupation of immovable property required for development purposes. The Law sets the range of potential Beneficiaries of Expropriation (BoE), defines the specific expropriation procedure, permitting and approval procedures to create an enabling environment for efficient implementation of Projects to particular importance to the Republic of Serbia.

In terms of this Law, Projects of particular importance to the Republic of Serbia are projects of construction and reconstruction of line infrastructure structures that have an impact on an overall development of the Republic of Serbia, balanced regional and local economic development, international, regional and interior territorial connection, improvement of connectivity, prevention of the degradation of the parts of the territory of the Republic of Serbia, ensuring and improving population's subsistence, social development, and environmental protection thereby enhancing an overall living standard of the citizens of the Republic of Serbia.

Procedures of rehabilitation, maintenance, renovation, modernization and other works on line infrastructure structure shall be subject to the provisions of the law governing that type of line infrastructure structure unless otherwise stipulated by this Law. The novelty of the Law is for cases during construction in which the scope of work needs to be conducted outside the area of the already acquired land, such land shall be acquired through a negotiated settlement between the owner and the beneficiary of expropriation.

Unless differently regulated by this law the Law on Expropriation shall govern the Land acquisition process.

4.3.22. Law on safe transport of hazardous materials

Relevant for the Project. Law on transport of hazardous materials (104/2016, 83/2018, 95/2018 and 10/2019) regulates conditions for performing domestic and international transport of dangerous goods in road, rail and inland waterway transport on the territory of the Republic of Serbia. Furthermore, it sets requirements in relation to packaging, mobile pressure equipment (e.g. tanks), means of transport intended for transport of dangerous goods, conditions for body designation which examine and control packaging, mobile pressure equipment, and vehicles for transport of dangerous goods. This Law also defines competencies of state bodies and organizations in transport of dangerous goods, conditions and obligations to fulfill the participants in the transport of dangerous goods, supervision, as well as other issues related to the transport of dangerous goods.

The Center for the Investigation of Traffic Accidents carries out professional work related to the investigation of accidents and serious accidents in air traffic, serious accidents, other accidents and accidents in railway traffic, very serious maritime accidents, serious maritime accidents, maritime accidents, maritime accidents, serious navigational accidents and navigational accidents in water traffic.

4.3.24 Law on free access to Information of public importance

[22] English version of the Law available at the website of the Ministry of Construction, Transport and Infrastructure, https://www.mgsi.gov.rs/sites/default/files/LAW%20on%20Special%20Procedures%20for%20the%20Implementation%20of%20the%20Project%20of%20Construction%20and%20Reconstruction%20of%20Line%20Infrastructure%20Structures%20of%20Particular%20Importance%20to%20the%20Republic%20of%20Serbia_0.pdf

Relevant for the Project. The Law on Free Access to Information of Public Importance (Official Gazette or the RS 120/04, 54/07, 104/09 and 36/10) requires representatives of the public sector to provide information and respond to any queries in relation to their activities, including planning documents, permits, audits, etc.

In order to implement the right to access information of public importance, held by public authority bodies, a Commissioner for Information of Public Importance is established by this Law, as an autonomous state body, independent in fulfilling its authority.

4.3.25. Law on investigation of accidents in air, railway and waterborne traffic ("Official Gazette of RS", No. 66/2015 i 83/2018)

Relevant for the Project. This law regulates the investigation of accidents and serious accidents in air traffic, serious accidents, other accidents and accidents in railway traffic, very serious maritime accidents, serious maritime accidents, maritime accidents, maritime accidents, serious navigation accidents and navigation accidents in water traffic, jurisdiction and powers of authorities for conducting investigations and research procedures, as well as exercising supervision over the implementation of this law.

4.3.25. Law on Safety in railway traffic ("Official Gazette of RS", No. 41/2018)

Relevant for the project. This law regulates the conditions for the safe and smooth running of railway traffic in the Republic of Serbia. Railway safety, in the sense of this law, includes conditions fulfilled by the railway system and railway workers, as well as other conditions of importance for achieving safe and smooth running of railway traffic.

4.4. **Relevant Institutions**

The following is a general description of competences of the various institutions involved in and relevant for the environmental sector. Only main competences are included.

The environmental policy and climate change sector a large number of institutions are active at national, provincial and local level.

The main actors are the following:

- The Ministry of Environmental Protection (MoEP),
- Provincial Secretariat for Environmental Protection – PrSEP,
- The local self-government authority responsible for environmental protection matters,
- Serbian Environmental Protection Agency,
- The Ministry of Construction, Transport and Infrastructure,
- The Ministry of Health,
- The Ministry of Mining and Energy,
- The Provincial Secretariat for Urban Planning and Environmental Protection,
- Ministry of Labor, Employment, Veterans and Social Affairs,
- Labor Inspectorate
- OHS Inspectorate
- Ministry of Interior
- The local self-government units, and
- Public Utility Companies

4.4.1. The Ministry of Environmental Protection (MoEP)

MoEP is in charge for the development, review and monitoring of the implementation of the National Program for the Adoption of the Acquis for chapter 27, for the follow-up of European Union environmental regulations, and preparation of proposals for the planning of communication activities for Chapter 27. MoEP is responsible for the development of the policy and regulatory framework which is largely driven by the EU accession

process. The Ministry of Environmental Protection is the key institution in the waste sector, responsible for policy making, legislation and control (permits) and assisted by the Serbian Environmental Protection Agency (SEPA). The autonomous province of Vojvodina has the responsibility to administer and control its own territory. Practical implementation of waste collection and management is vested with the Local Self Government units (provided by the Public Utility Companies (PUCs). The Ministry of Health and the health care facilities are competent authorities for health care waste management. The Ministry in charge of energy and mining also participates in work of the waste management sub-sector and is responsible for harmonization with Directive 2006/21/ EC on the management of waste from extractive industries.

Authorities and entities responsible for waste management are the following:

- Government of the Republic of Serbia;
- Government of the Autonomous Province;
- Local self-government units (municipalities);
- Environment Protection Agency;
- Officially approved professional organizations for waste testing;
- Non-governmental organizations, including consumers' organizations;
- Other authorities, organizations and private waste owners, in compliance with law in articles 18 – 22 of the Serbian Waste Management Act the competences for waste management of the Ministry of Environmental Protection (MoEP), of the Autonomous Province (AP), of the Local self-government units (LSG) and of the Serbian Environmental Protection Agency (SEPA).

The Environmental inspection- Department for Waste Management - performs inspections of waste treatment installations for hazardous wastes and specific other waste streams (i. a. packaging wastes) and general inspections to determine the compliance with environmental requirements.

MoEP is responsible[23] for the following areas relevant for the EU Acquis in environment:

- Horizontal environmental issues (EIA, SEA, public participation, etc.),
- air quality,
- chemicals management,
- climate change (excluding technical demands to vehicles and fuel quality),
- ozone layer protection,
- waste management excluding radioactive waste,
- protection from major chemical accidents and participation in response on chemical accidents,
- industrial pollution,
- nature and biodiversity,
- water quality (water pollution protection to prevent quality deterioration of surface and underground water),
- waste and wastewater infrastructure,
- protection from environmental noise.

4.4.2. The Environmental Protection Agency – SEPA [24]

It is an administrative body within the MoEP. It is responsible for:

- management of the national Environmental Protection Information System and Register of Polluters,
- state monitoring of water and air quality and management of the national laboratory,
- implementation of established and compliance programs for the quality control of air, surface and groundwater from first aquifer and precipitations,

[23] MEP is responsible for: EIA, SEA, Public Participation, Access to Information, Environmental Liability, Waste Framework, Packaging, Landfill, WEEE, Batteries, PCB/PCT, POPs, ELVs, RoHS (recast), Shipments of Waste, AAQ, 4th daughter, VOCs petrol, Stage II VOCs petrol, NEC, Standards on good environmental status, Groundwater, Habitats, Wild Birds, CITES, NAGOYA PROTOCOL, Zoo, Trade in seal products, Importation of skins of certain seal pups, Leg-hold Traps, IED, CHAPTER II – IPPC, LCP, Waste Incineration, VOC solvents, SEVESO III, VOCs paints, Eco-label, EMAS, Titanium – Dioxide, MCP, REACH, CLP, Mercury, Asbestos, Biocidal products, PIC REGULATION, MMR, Consumer Information, ODS, F – GASES, Environmental Noise.

[24] SEPA is in charge for Quality Assurance/Quality Control

- monitoring, analysis and forecasts of quality of air and water
- collection and integration of environmental data, and processing of data in order to prepare annual reports on the state of the environment and implementation of environmental policy in Serbia,
- as focal point, for co-operation with the EEA and EIONET.

4.4.3. The Ministry of Construction, Transport and Infrastructure (MCTI)

MCTI is generally responsible for road transport, roads and traffic safety, railways and intermodal transport, air traffic and transport of dangerous goods, waterways transport and navigation safety, construction affairs, implementation of consolidated procedures and legislation, spatial and urban planning, international cooperation and European integration, inspection supervision and housing and architectural policy, communal activities and energy efficiency.

4.4.4. Republic Geodetic Authority[25]

It is a special organization that carries out professional affairs and affairs of the state administration related to:

- Geodetic Affairs
- Real Estate and Utility Cadaster
- Geospatial Data Management
- Mass Valuation,
- Information and Communication Technology related to Geodetic and Cadaster Information system,
- Administrative Support, Strategic Development, Legal Affairs and Supervision and Control.

4.4.5. Ministry of Health[26]

The Ministry of Health is responsible for:

- the implementation of sanitary regulations pertaining to environmental protection and biosafety,
- sanitary inspection,
- water supply for public consumption,
- control and the monitoring of sanitary conditions in and on objects and at the border and other places.

4.4.6. The network of the institutes of public health

These institutes cover:

- monitoring of ambient air quality in local urban networks,
- monitoring of the quality of surface bathing waters and surface water as sources for water supply,
- monitoring of drinking water safety and quality,
- monitoring of wastewater quality.

4.4.7. The network of institutes responsible for Labor, working conditions and OHS

The authorities relevant to the labor and OHS sector in terms of supervising implementation of the Labor and OHS regulations are the Ministry of Labor, Employment, Veteran and social issues, Occupational Safety and Health Directorate of the Ministry for Labor, Employment, Veterans, and Social Policy. The Labor Inspectorate of the Ministry for Labor, Employment, Veterans, and Social Policy.

4.4.8. The Ministry of Health - Sanitary Inspection

Within the Ministry of Health, the Sanitary Inspection is responsible for inspection and supervision:

- water quality of public water supply service
- health control of objects of general use in production, trade and import, including general use of

[25] RGA is the responsible for transposition and coordinating the implementation and monitoring of the INSPIRE directive
[26] MoH is in charge for Bathing Water Directive and Drinking Water Directive.

chemicals and products on the market,
- the application of restrictions and prohibition of production, placing on the market and use of chemicals and products intended for general use.
- other tasks in sanitary control.

4.4.9. Ministry of Finance - Customs and Tax Administration

The Customs Administration in the Ministry of Finance is responsible for the border controls of imports and exports. In the environmental sector it includes the border controls of international trade in protected wild species and whether trade is in line with protection requirements, rules and regulations. Relevant for implementation of the Project as it will conduct the Custom and Tax exemption procedures under the Project as relevant.

4.4.10. The Institute for Nature Conservation in Serbia[27]

The Institute is a professional institution that generally carries out activities on protection and improvement of the natural heritage of Serbia. At national level the Institute:

- contributes to the implementation of EU nature protection Directives with corporation of Ministry of Environmental Protection,
- the scientific authority with regard to Implementation CITES in cooperation with the CITES unit in the MoEP.

4.4.11. Relevant Institutions on Provincial level

The Governments of the Autonomous provinces have the responsibility for administration and control on its own territory. The responsibilities of AP of Vojvodina, relevant for some of the activities, according to the Law on Establishment of Responsibilities of AP Vojvodina, (O.G. 99/2009, 67/2012) include following sectors, relevant to the EU environmental and climate change acquis:

- urban planning, construction and land use,
- veterinary,
- agriculture,
- water management,
- forestry,
- environmental protection (art 16, 25, 28) including nature resources management;
- environmental program in line with national programs.
- inspections and enforcement,
- collection of charges for the protection and improvement of the environment.

4.4.12. Local self-government units – municipalities and cities

Serbia has three levels of government consisting of the State, provincial and municipal (at the local self-government) level.

The functions, powers, structures, and procedures of local self-government is set out in the Law on Local Self-Government, Municipalities have their own elected assemblies and the power to tax. Responsibilities of municipal level cover following sectors: horizontal legislation, waste, water, air quality, noise, civil protection.

Their responsibilities relating to environmental protection include:

- Development of plans and programs;
- Land use planning and (certain) construction permitting;
- Communal services including water purification and distribution, wastewater collection and treatment, district heating, solid waste management, landfills, spatial planning, parks, nature and other;
- Environmental protection, environmental planning, in accordance with (higher level) strategic documents;
- Charges for environmental protection and improvement;

[27] INC deals with, Habitats Directives: Directive 92/43 / EEC as amended by Directive 97/62 / EC, 2006/105 / EC and Regulation (EC) 1882/2003.

- Inspections and enforcement;
- Supervise and control waste management measures in compliance with the Law;
- Regulation, support and supervision of the operation and development of municipal services (treatment and distribution of drinking water, disposal and treatment of waste and wastewater);
- Regulation and definition of procedures for the use and management of springs, public water wells and public taps, including water quality standards;
- Permitting and authorization of water abstraction and use; and
- Organization of protection against natural and other major disasters, e.g. floods, erosion.

4.5. **EIA procedure in the Republic of Serbia**

The Environmental Impact Assessment procedure in the Republic of Serbia as governed by the Law on Environmental Impact Assessment, is harmonized with European EIA Directive (85/337/EEC, 97/11/EC, 2003/35/EC and COM 2009/378 as codified by the Directive 2011/92/EU).

The EIA Law defines procedures of impact assessment for activities that may have significant effects on the environment, the contents of the Environmental Impact Assessment (EIA) Study, the required engagement of authorities and organizations concerned, citizen engagement, transboundary exchange of information for projects that may have transboundary impacts, supervision and other issues of relevance to impact assessment.

Impact assessment is carried out for future and projects under implementation, changes in technology, reconstruction, capacity enhancement, closure and decommissioning activities and for removal of projects that may have significant impact on the environment. The EIA is applicable to the industry, mining, energy production, transport, tourism, agriculture, forestry, water management, waste management and utility services sectors, as well as for all the projects that are planned in areas of protected natural resources of special value and within the protected zones of immobile cultural resources.

The Government of the Republic of Serbia (GoS) has adopted lists sensitized by risks[28] :

LIST I	LIST II
Projects for which an impact assessment is mandatory (Annex 04). Those are the projects with significant environmental and social impacts. Relevant to the Project, an EIA is mandatory for **construction of main railway lines (e.g. Prokop Station)**	Projects for which an impact assessment may be required (Annex 05). For these the PIU or PITs as relevant will be required to submit a Request for Decision about the Need for Environmental Impact Assessment to the relevant institution. Based on the outcome of the process a Decision whether an **E(S)IA is required or not will be issued. This is applicable to all activities** not listed within the LIST I in context of the Project.
	Finally, for any project activity adjacent to or within the nature/cultural protected area an EIA **might be** required based on the conditions and opinions obtained from the relevant institutions. Depending on the geographical location these are the Institute for Nature Protection (INP), Provincial Institute for the

[28] https://www.paragraf.rs/propisi/uredba_o_utvrdjivanju_liste_projekata_za_koje_je_obavezna_procena_uticaja_i_liste_projekata_za_koje_se_moze_zahtevati_procena_uticaja_na_zivotnu_sredinu.html

	Nature Protection (PINP), Institute for Protection of Cultural Monuments (IPCM)

Diagram/flow chart for the national EIA procedure is shown in figure 7 below:

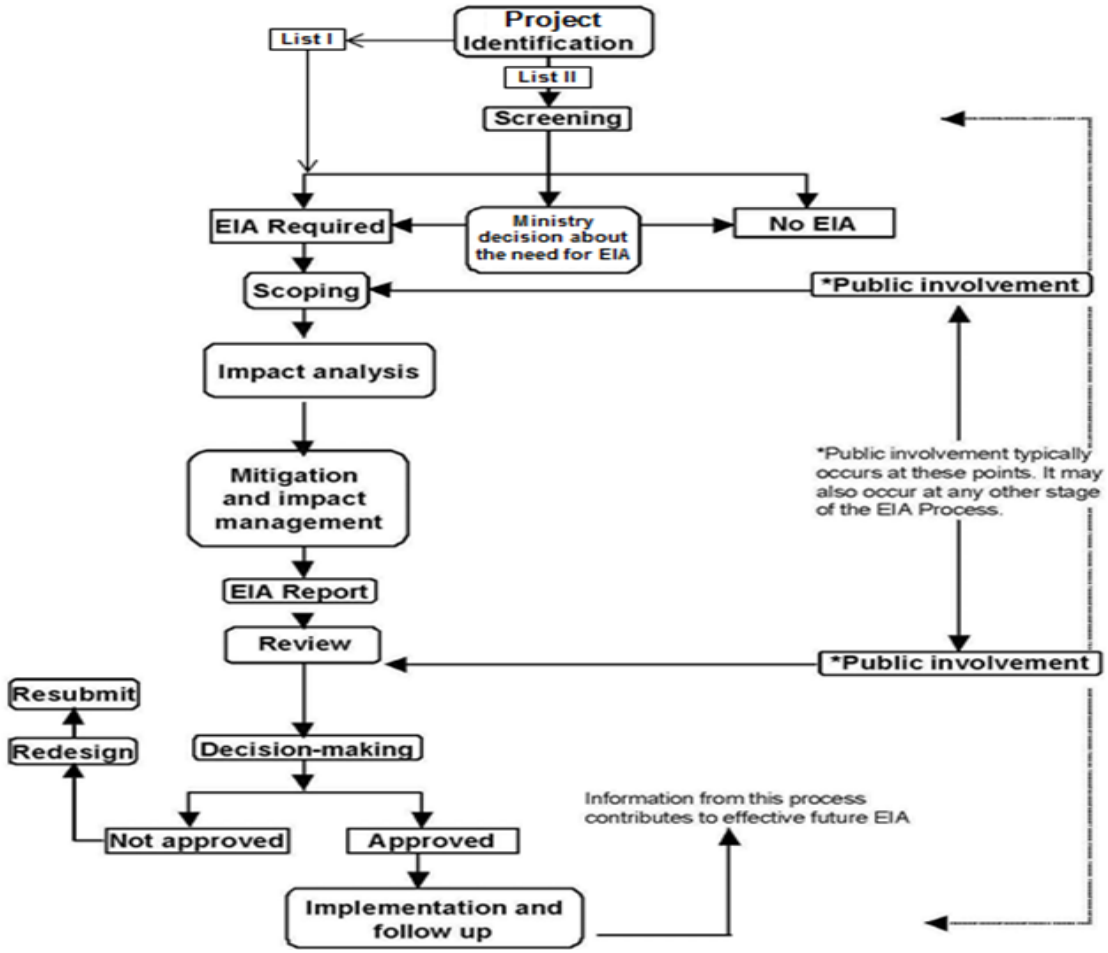

Figure 7: EIA flowchart under country law

Within the component 1.5 – preparation of the technical documentation – engineering designs, environmental/social impact assessment, economic assessment – of the rehabilitation and upgrade of the railway line Lapovo - Kraljevo (77 km) preparation of EIA/ESIA will be necessary.

5. WB ENVIRONMENTAL AND SOCIAL STANDARDS

5.1. Environmental and Social Framework

This Section describes key requirements of the World Bank relevant for the Project. Applicability of these requirements to specific subproject should be assessed after detailed information on such subprojects are made available.

The World Bank (Bank) adopted Environmental and Social Framework (2016; ESF) which became effective in October 2018. The ESF specifies the Bank's commitment to sustainable development through Bank's policies and number of Environmental and Social Standards (ESS) designed to support the Borrower's[29] projects, aimed to alleviate extreme poverty and promote shared prosperity. The Bank's Environmental and Social Framework consists of three parts:

- A Vision for Sustainable Development
- The Environmental and Social Standards (ESS 1-10)
- The WB Environmental and Social Policy for Investment Project Financing

The World Bank's Environmental and Social Framework (ESF) includes the Environmental and Social Policy for Investment Project Financing, which describes the requirements the Bank must follow for projects it supports through Investment Project Financing, and 10 Environmental and Social Standards (ESSs), which establish requirements for Borrowers to identify, assess, and control environmental and social risks and impacts of Bank-supported projects.

The standards will: (a) support Borrowers/Clients in achieving good international practice relating to environmental and social sustainability; (b) assist Borrowers/Clients in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability and governance; (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

5.2. **Overview of Environmental and Social Standards and their relevance for the Project**

The Bank is committed to support MCTI to design and implement environmentally and socially sustainable projects, as well as to strengthen its PIU capacity to assess and manage projects' environmental and social risks and impacts. Nevertheless, MCTI remains ultimately responsible for implementation of the Project fully compliant to WB ESF. The below applicable Environmental and Social Standards benchmark the standards the project will meet through the project life cycle:

	E & S Standards	**Relevance**
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS2	Labor and Working Conditions	Relevant
ESS3	Resource Efficiency and Pollution Prevention and Management	Relevant
ESS4	Community Health and Safety	Relevant
ESS5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Relevant
ESS8	Cultural Heritage	Relevant
ESS9	Financial Intermediaries	Not Relevant
ESS10	Stakeholder Engagement and Information Disclosure	Relevant
	Legal Operational Policies	

[29] Wherever used in this document (including the Annexes), unless stated otherwise or the context otherwise requires, the term Borrower and Borrower/Client shall mean the Ministry of Transport, Construction and Infrastructure i.e. the respective Project Implementation Unit and the Project Implementation Teams (PITs).

	E & S Standards	Relevance
OP 7.50	Projects on International Waterways	No
OP 7.60	Projects in Disputed Areas	No

These ESSs are accompanied by unbinding Guidelines, Best Practice Notes, Templates and Checklists. Standards applicable to this Project are described in more details below.

5.2.1. ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Assessment and management of environmental and social risks and impacts or ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social out-comes consistent with the Environmental and Social Standards (ESSs).

The Proponent will conduct environmental and social assessment of projects proposed for Bank financing to help ensure that projects are environmentally and socially sound and sustainable. The environmental and social assessment will be proportionate to the risks and impacts of the project. It will inform the design of the project and be used to identify mitigation measures and actions and to improve decision making.

The Bank classifies a proposed project into one of four categories (depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental and social risks and impacts):

- Projects with high risk
- Projects with substantial risk,
- Projects with moderate risk,
- Projects with low risks.

Depending on the project, a range of instruments can be used to satisfy the Bank's EA requirement: environmental impact assessment (ESIA), regional or sectorial EA, Environmental and Social Commitment Plan (ESCP) – material measures and actions required for the project to achieve compliance with the ESSs over a specified timeframe, strategic environmental and social assessment (SESA), environmental audit, hazard or risk assessment, environmental and social management plan (ESMP) and environmental and social management framework (ESMF). EA applies one or more of these instruments, or elements of them, as appropriate. When the project is likely to have sectorial or regional impacts, sectorial or regional EA is required.

The standard is relevant. The Project will finance physical interventions in rehabilitation and reconstruction of the existing railway network. A number of interventions have been identified for rehabilitation activities, along with selected sections of the network itself.

This Environmental and Social Management Framework (ESMF) is applicable to all project activities and will guide the process of E&S due diligence for each of the proposed subprojects to be defined in course of the Project. The screening process will include E&S questionnaires/activity checklists, exclusions and E&S assessment (also defined in the E&S review of the ESMF) defines guidance for site specific Environmental and Social Management Plans (ESMP), including ESMP Checklists and E&S audits for the existing facilities/commenced projects. ESMF responds to ESS1 requirements for oversight and implementation control through definition of public and stakeholder consultations, implementation arrangements, monitoring and reporting procedures and responsibilities for the ESAs (ESMP, ESMP Checklists, etc.) as well as for the ESFM.

The small-scale rehabilitation and maintenance works are likely to produce risk and environmental impacts such as emissions of dust and noise, potential pollution of water bodies and soil, traffic disruptions and management of larger quantities of construction, mixed and hazardous waste, including parts of the rails and crushed stone, and management of hazardous waste that has been polluted from the train traffic. Impacts to natural habitats are likely if works take place in sensitive natural areas. Project will be user of large quantities of non-renewable mineral resources such as sand, stone and gravel. On the other hand, significant use of

energy is not expected. Use of larger amounts water resources and production of wastewaters may occur if there would be cleaning of removed stone aggregate. The ESMP and ESMP Checklist will also include provisions on management of all wastes from the works, including management of hazardous wastes that may occur at a site beyond the working sites. These provisions will be in line with ESS3.

On the social side a Labor Management Plan addressing potential gaps between Serbia legislation managing labor condition and OHS issues has been prepared.

The Standard of Assessment and Management of Environmental and Social Risks and Impacts applies to all projects supported by the Bank through Investment Project Financing. The objective is to identify, evaluate and manage environmental and social risks and impacts associated with each stage of project, in order to achieve environmental and social outcomes consistent with Bank requirements. ESS 1 also applies to all Associated Facilities/ Activities which must meet ESSs requirements to the extent that the MCTI has control or influence over such Associated Facilities/ Activities. Within ESS 1, the MCTI shall:

- Conduct environmental and social assessment (ESAs) of the proposed project, including stakeholder engagement in the form of ESMP, ESMP Checklist;
- Where ESAs already exist or are under development, where planned activities are already at some stage of preparation or implementation, they will be reviewed and revised accordingly (if needed) to meet the requirements of the ESF, World Bank Group General EHS guidelines, and Railway EHS guidelines and national regulation.
- Undertake Environmental and Social Audits for activities implemented in earlier phases (for completion of which WB financing is sought) and for works that commenced. The E&S Audit may include necessary structural measures for adaptation of climate and geophysical hazards considering safety risks to the communities, as it will for the Prokop station, Such Audits shall be carried out by and independent consultant;
- Undertake stakeholder engagement and disclose appropriate information in accordance with ESS10,
- Develop an Environmental and Social Commitment Plan (ESCP) and implement all measures and actions set out in the legal agreement including the ESCP,
- Conduct monitoring and reporting on the environmental and social performance of the project against the ESSs. The ESMP/ESMP Checklist management and monitoring plan as provided in Annexes 09A, 09B and 12 will serve as a basis for reporting. However, a Sample Environmental & Social Report enclosed as Annex 14 of this ESMF document will be used by the Contractors to report on E&S performance to be later verified by the Supervising Engineer through the monitoring templates as mentioned above.
- As per requirements of ESF, conduct due diligence for associated facilities defined in Sub-Chapter 9.2.

The environmental and social assessment will be proportionate to the risks (as defined by the WB E&S Policies and Directives) and impacts of the project activity and will assess in an integrated way all relevant direct, indirect and cumulative environmental and social risks and impacts throughout project life cycle, including those specifically identified in the ESS2-10. Environmental and social assessment process shall apply mitigation hierarchy according to which: (a) risks and adverse impacts needs to be anticipated and to the extent possible avoided, while positive impacts and benefits for the community and physical environment need to be maximized, (b) where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) residual adverse impacts and risks need to be removed or mitigated to the acceptable level; (d) where significant residual impacts remain, compensate where technically and financially feasible.

5.2.2. ESS10 Stakeholder Engagement and Information Disclosure

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.

This ESS must be read in conjunction with ESS1. Requirements regarding engagement with workers are found in ESS2. Special provisions on emergency preparedness and response are covered in ESS2 and ESS4. In the case of projects involving involuntary resettlement, Indigenous Peoples or cultural heritage, the Proponent will also apply the special disclosure and consultation requirements set out in ESS5 and ESS8.

Objectives of the ESS10 are: to establish a systematic approach to stakeholder engagement that will help Proponents identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties; to assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance, etc.

This ESS recognizes the importance of open and transparent engagement between the Project and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a substantial contribution to successful project design and implementation.

In consultation with the Bank a Project Level Stakeholder Engagement Plan (PLSEP) proportionate to the nature and scale of the project and its potential risks and impacts has been developed and Sub-project level Stakeholder Engagement Plans (SPSEP) for each Sub-Project, as relevant, will be developed. These plans are collectively referred to as: SEPs. The PLSEP provides guidance for SPSEPs to be prepared for a group of sub-projects similar in nature, geographically adjacent etc. For each category of stakeholders appropriate method of engagement has been developed. The SEPs will be used to improve outreach and dialogue between enterprises and the service users. It will also ensure that communities around the construction sites are adequately informed and protected in line with the mitigation measures.

A project related grievance mechanism has been integrated in the Project Level SEP. Admission points and detailed information will be part of the awareness razing campaign and outlined in the Sub-Project-specific SEPs.

The Phase 2 project Level SEP and updates, as well as the SPSEPs acceptable to the Bank will be disclosed with meaningful public consultations as appropriate, and will target the various levels of stakeholders at all levels. All site-specific environmental and social management instruments acceptable to the Bank, shall be disclosed and consulted on prior to start of any works.

5.2.3. ESS2 Labor and Working Conditions

Labor and working conditions or ESS2 recognize the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. The Proponent can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

ESS2 applies to project workers including: full-time, part-time, temporary, seasonal and migrant workers. The main objectives of ESS2 are following: to promote safety and health at work; to promote the fair treatment, nondiscrimination and equal opportunity of project workers; to protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate, etc.

The standard is relevant for this Project. ESS2 regulates labor and working conditions of project workers. ESS2 applies to project workers including fulltime, part-time, temporary, seasonal and migrant workers.

The term "project worker" is related to:

- people employed or engaged directly by the Borrower (including the project proponent and the project implementing agencies) to work specifically in relation to the project (direct workers);
- people employed or engaged through third parties to perform work related to core functions of the project, regardless of location (contracted workers);
- people employed or engaged by the Borrower's primary suppliers (primary supply workers); and
- people employed or engaged in providing community labor (community workers).

Given the risk attributable to labor and working conditions a self-standing Labor Management Procedures (LMP) document was developed to manage labor and working conditions risks under the Project. The LMP will be subjected to public consultations and disclosure prior to appraisal and will be integrated into tendering documents together with relevant statements on compliance (presented in the project LMP) contractually binding any contractor to adhere to these procedures. GRM mechanism for the employees will have to be established for the works related to the project. All the contractors will adopt the Code of Conduct for Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH). OHS risk mitigating measures for each activity will be addressed in the respective EAS, and in line with the national law, GIIP and WB EHSG, stricter ones prevailing. OHS plan is the indispensable part of Contractors' ESMP (including all sub-contractors), and measures will be coordinated with the PIU and relevant implementing agency.

5.2.4. ESS3 Resource Efficiency and Pollution Prevention and Management

This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with GIIP.

The main objectives of ESS3 are following: to promote the sustainable use of resources, including energy, water and raw materials; to avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities, etc.

This standard is relevant, as the maintenance works to be financed will include management of some amounts of waste, including parts of the old railroad track and railroad sleepers, and crushed railroad ballast rock. Portions of this waste can have hazardous characteristics and will need to be managed in a manner that is prescribed for such wastes, so as to minimize pollution and risks to human health.

ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.

The Project will produce some quantities of waste (mostly form the maintenance of tracks, including removed contaminated stone aggregate (from lubricants, oils and fuel) and waste wooden sleepers (creosote treated). The amount of such waste cannot be determined at this stage.

The project will also use considerable amounts of mineral non-renewable resources e.g. new stone aggregate and gravel from borrow pits and quarries, sand that is likely dredged, as well as use of a range of materials like asphalt, cement and others. Depending on the design of sub-projects, there may be a significant use of timber and chemicals (used for treatment of new wooden sleepers, etc.). The project will not use significant energy, outside of typical use in civil works (transportation of materials and people, rail machinery). Use of larger amounts water resources and production of wastewaters may occur in cleaning of removed stone aggregate.

Through the implementation of procedures and measures stated in ESMF, site-specific ESMPs and ESMP checklist, MCTI will avoid or minimize the release of pollutants and assure compliance with the Environmental, Health and Safety Guidelines and Good construction/railways practice.

Immanent and subsequent contamination, disturbance and inefficient use of non-renewables will be prevented through careful tailoring and implementation of procedures and measures aligned with requirements of the ESF, WB EHSG and national regulation. These measures will be integrated to mitigation plans of in ESMF, ESIAs, site-specific ESMPs and ESMP checklist. The existing ESIAs (finalized according to the national procedures) as well as EHS Performance Audit for commenced projects (such as construction of the Prokop station) will be weighed against these measures to ensure that what is currently in place is operating in accordance with Bank requirements. EAS Mitigation measures will also include waste classification parameters and procedures, appropriate handling, storage, disposal and treatment methods. Only licensed quarries and excavation sites will be considered for supply. ESMPs (stand alone or as part of the EIAS) and ESMP Checklists will be included to bidding and contracting documentation. No pesticides will be purchased or used under this project.

The ESMF includes sections on resource efficiency and pollution prevention and management. Assessment of risks and impacts and proposed mitigation measures related to relevant requirements of ESS3, including raw materials, water use, air pollution, hazardous materials, and hazardous waste are included within scope of the ESMF, and ESMPs as relevant.

5.2.5. ESS4 Community Health and Safety

The main objectives of ESS4 are following: to anticipate and avoid adverse impacts on the health and safety of project affected communities during the project life cycle from both routine and no routine circumstances; to promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams; to avoid or minimize community exposure to project-related traffic and road safety risks, dis-eases and hazardous materials, etc.

ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

It is not expected that a significant volume of traffic is generated by the project, however, there will be rail and traffic interruptions caused by works on railway lines. Safety procedures for works on (high voltage) electrified lines will be required. In case the works will be carried near inhabited areas, traffic management plans will be prepared and accordingly followed. Management of construction wastes and hazardous wastes needs to be conducted in a manner that would safeguard the environment and the communities where the disposal is planned. All waste management activities need to also include adequate mitigation and rehabilitation practices, as appropriate. Access to working sites will be made possible and allowed only to Contractor' employees, supervision engineers and otherwise authorized persons through the set of informing, warning and separation measures. OHS and community safety measures will be included in ESMF, ESIAs, site-specific ESMPs and ESMP checklist while the existing ESIAs for planned activities will be reviewed and revised accordingly (if needed) to meet the requirements of the ESF, WB EHSG and national regulation. The EHS Performance Audit for commenced projects will be assessed against these measures and closing identified gaps to ensure that what the existing infrastructure operates in accordance with Bank requirements.

Since the project is financing the development of sub-project designs and technical documentation under the subcomponent 1.5., universal access will be incorporated into the design for all relevant reconstruction/rehabilitation sub-projects. Furthermore, the E&S Audit for any relevant subprojects will include necessary structural measures for adaptation of climate and geophysical hazards considering safety risks to the communities. Capacity building on climate change and installation of preventive systems will be included in development of sub-project designs.

5.2.6. ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Objectives of the ESS5 are to avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives; to avoid forced eviction; to mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher; To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure; To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant; To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.

Where involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause, economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood). Physical displacement is not expected. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement. This ESS applies to permanent or temporary physical and economic displacement resulting from the following types of land acquisition or restrictions on land use undertaken or imposed in connection with project implementation: (a) Land rights or land use rights acquired or restricted through expropriation or other compulsory procedures in accordance with national law; (b) Land rights or land use rights acquired or restricted through negotiated settlements with property owners or those with legal rights to the land, if failure to reach settlement would have resulted in expropriation or other compulsory procedures; (c) Restrictions on land use and access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights. This may include situations where legally designated protected areas, forests, biodiversity areas or buffer zones are established in connection with the project; (d) Relocation of people without formal, traditional, or recognizable usage rights, who are occupying or utilizing land prior to a project specific cut-off date; (e) Displacement of people as a result of project impacts that render their land unusable or inaccessible; (f) Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting and gathering grounds and grazing and cropping areas;) Land rights or claims to land or resources relinquished by individuals or communities without full payment of compensation; and (h) Land acquisition or land use restrictions occurring prior to the project, but which were undertaken or initiated in anticipation of, or in preparation for, the project.

The project itself does not anticipate any land acquisition or relocation resulting from its direct activities. However, during Phase 2, Technical Assistance (TA) will be provided for Feasibility Studies and possibly sub-project designs and technical documentation. Depending on the specific scope of these feasibility studies and designs, there is some possibility that they may indirectly require land acquisition and cause physical and/or economic displacement in the future.

To address any potential downstream risks and impacts associated with the scope and outputs of the technical assistance activities, precautionary measures are being taken. This is why ESS5 is being triggered.

5.2.7. ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

The Phase 2 is not expected to support any significant construction activities that might have negative impacts on biodiversity or living natural resources. In addition, activities are going to be implemented in inhabited areas where biodiversity is anticipated to not be present. However, some areas that are inhabited by humans can also contain biodiversity that is of significant value in particular in peri-urban areas. As such, this ESMF will set forth detailed guidance on how to best assess the potential impacts to natural and sensitive areas, even if those are not under some sort of formal protection

5.2.8. ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The standard is not relevant for the project as Serbia has no social or cultural groups of specific characteristics defined in ESS7.

5.2.9. ESS8 Cultural Heritage

. The Phase 2 will entail rehabilitation, construction and reconstruction works along with excavations, demolition, and movement of the earth. The expected civil works, however, will be limited to rehabilitation of infrastructure within its existing footprint (with the possibility of minor expansion that can result in land acquisition). Due to civil works, Chance Find's procedures are included in this ESMF in line with national legal requirements and good international practice. The Standard is triggered also as CH status of workshops planned to be rehabilitated and modernized is unknown.

If any of the possibly proposed infrastructure works could have an impact on cultural heritage, adequate provisions of this ESS will be integrated into the ESMF and site-specific Cultural Heritage plans may be required as part of ESMPs. Otherwise, the ESMF will include provisions on ensuring no cultural heritage is impacted during works.

5.2.10. ESS9 Financial Intermediaries

The standard is not relevant for the project since Bank funding is not being provided to financial institutions for further on-lending.

5.2.11. OP 7.50 Projects on International Waterways

The Project will not support any works directly on international waterways or tributaries thereof. There will be no bridge construction or rehabilitation works. The ESMF and site-specific ESMPs will provide guidance for protecting riverbed from pollution and littering during works in the zone of waterways. As such, there are no possible impacts on the water quality or quantity to the riparian associated with these works**.**

5.3. **General Environmental, Health, and Safety (EHS) Guidelines**

These are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. These General EHS Guidelines are designed to be used together with the relevant Industry Sector EHS Guidelines which provide guidance to users on EHS issues in specific industry sectors. The WB EHSG will be applicable to all project activities.

5.4. **Environmental, Health, and Safety Guidelines for Railways**

The EHS Guidelines for Railways are applicable to activities typically conducted by rail infrastructure operators dedicated to passenger and freight transport. The document is organized into two main areas, namely rail operations, covering construction and maintenance of rail infrastructure as well as operation of rolling stock, such as locomotives and rail cars; and, locomotive maintenance activities, including engine services, and other mechanical repair and maintenance of locomotives and railcar. The Railways-relevant WB EHSG will be applicable to all project activities.

5.5. **Key ESF objectives compared to national requirements**

ESF Objectives	**National Laws and Requirements**	**Gaps**	**Recommended Actions**
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts			
Objectives of ESS 1 are: to identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs.	Law on EIA Decrees and lists	Public consultations on project design Social impact assessment is not required Small scale activities that may not require activities as per Serbian law but require an ESMP, ESMP Checklist or E&S audit as per Bank ESF Associated facilities are not covered	Stakeholder engagement and public consultations in accordance with the Project Level Stakeholder Engagement Plan (PSEP) and Sub-project specific SEPs Conduct Social Impact Assessment Prepare E&S management instruments in line with the WB ESF and this ESMF
ESS 2: Labor and Working Conditions			
The Objectives of ESS 2 are: To promote safety and health at work. To promote the fair treatment, non-discrimination and equal opportunity of project workers. To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.	Various laws, policies and code of practices are applicable. These laws and policies are aligned with the international standards, namely ILO Conventions and EU Directives, as the terms, conditions and instruments proposed in the international conventions and directives are incorporated into the Labor Law of Serbia	The gaps are limited to requirement for a Labor Grievance Mechanism to be made available and consultation with workers on OHS related issues.	Grievance mechanism for project workers shall be established Project activities will require engagement of direct and contracted workers. Both groups will be subject to the Project LMP and the World Bank Group Environment, Health and Safety Guidelines. Contractors will be required to develop Code of Conducts and SEA/SH Code of Conduct which

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
			must be read, understood and signed by all workers.
ESS 3: Resource Efficiency and Pollution Prevention and Management			
The Objectives of ESS 3 are in general implementing technically and financially feasible measures for improving efficient consumption of energy, water and raw materials, as well as other resources. Where benchmarking data are available, the Borrower will make a comparison to establish the relative level of efficiency. When the project is a potentially significant user of raw materials, in addition to applying the resource efficiency requirements of this ESS, the Project will adopt measures specified in the WB EHSGs and other GIIP to support efficient use of raw materials, (The Borrower will seek to reduce or eliminate the use of toxic or hazardous raw materials.) The Borrower will avoid the release of pollutants or, when avoidance is not feasible, minimize and control the concentration and mass flow of their release using the performance levels and measures specified in national law or the EHSGs, whichever is more stringent. The Borrower will avoid the generation of hazardous and nonhazardous waste. Where waste generation cannot be avoided, the Borrower will minimize the generation of waste, and reuse, recycle and recover waste in a manner that is safe for human health and the environment. Where waste cannot be reused, recycled or recovered (due to contamination or other reason), the Borrower will treat, destroy, or dispose of it in an environmentally sound and safe manner that	Law on Environmental Protection ("Official Gazette of RS 135/04, 95/18) Law on integrated environmental pollution prevention and control ("Official Gazette of RS 135/04 and 25/15) Law on waters ("Official Gazette of RS 30/, 95/18) Law on protection and sustainable use of fisheries ("Official Gazette of RS 28/14 and 95/18) Law on Plant Protection Products ("Official Gazette of RS 41/09). Law on Energy Efficiency (25/13) Law on Waste Management Basel Convention on Transboundary Movement of Hazardous Wastes and their Disposal Official Journal of FRY, International Treaties, No. 2/99, The Aarhus Convention (" Official Gazette of RS- International Treaties", No. 38/09) the Protocol on Pollutant Release and Transfer Register to the Aarhus Convention	Regular monitoring is not required. No request for GIIP adherence	In addition to national legislation adherence, adopt and implement the WB EHSG and GIIP and measures as prescribed in this ESMF to achieve the highest of the standards (stricter prevailing). Cary out regular monitoring of ESAs implementation and compliance.

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material.			
ESS 4: Community Health and Safety			
The Objectives of ESS 4 are to anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life-cycle from both routine and non-routine circumstances. To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams. To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials. To have in place effective measures to address emergency events. To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.	Law on planning and construction ("Official Gazette RS" Nos. 72/2009, 81/2009 - correction, 64/2010 - decision of the CC, 24/2011, 121/2012, 42/2013 – CC decision, 50/2013- CC decision, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019-other law, and 9/2020) Decree on health and /safety and OHS at construction sites Law on Roads ("Official Gazette RS" no 41/2018 and 95/2018) Law on Road Safety ("Official Gazette RS" no 41/2009) Rulebook on technical standards for universal access ("Official Gazette RS 22/2015) Fire protection act ("Official Gazette of RS", Nos. 111/2009, 20/2015, 87/2018 and 87/2018 - other law	In substance the gaps between the national requirements and the ESS are not substantial. However, mitigation and prevention measures shall be required in the form of site-specific Contractor management plans. In case double standards are detected within the ESF and national requirements the more stringent will prevail.	Although the Project aims to improve the lives of previously affected communities, it needs to be ensured that Project activities do not pose any unintended negative consequences on communities. The Contractors will prepare plans such as (but not limited to): Health and Safety Policy (HSP); Relevant procedures and references to Method, preparation of all pertaining parts of Construction H&S Management Plan (OHS, community safety plan, traffic management plan, hazardous materials safety plan, training program, emergency preparedness and response etc.) H&S training requirements and plan(s). H&S operational control;

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
			Security of the Construction worksites, Traffic Management Plans etc. to address the impacts on local communities of moving construction equipment; measures and actions developed to assess and manage specific risks and impacts outlined in the ESMF and subsequent ESMPs.
Noise prevention and mitigation measures should be applied where predicted or measured noise impacts from a project facility or operations exceed the applicable noise level guideline at the most sensitive point of reception.	Law on environmental Noise protection ("Official Gazette RS" NO. 36/209, 88/2010). A number of rulebooks, decrees to serve the implementation of the Law.	Serbia has a good level of alignment with EU rules on noise but implementation is at an early stage	The preferred method for controlling noise from stationary sources is to implement noise control measures at source. Noise reduction options considered in addition to the national requirements are those provided in the WB EHSG
ESS 5: Land Acquisition Restrictions on Land Use and Involuntary Resettlement			
The Objectives of ESS 5 are: To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives. To avoid forced eviction. To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement	The Law on Expropriation and the Law on Special Procedures for the Implementation of the Project of Construction and Reconstruction of line Infrastructure Structures of Particular Importance to The Republic of Serbia is the main law guiding the land acquisition by the use of Eminent Domain.	Gaps between the national legal provisions are in the domain of site-specific resettlement instruments, socio-economic surveys, compensation of informal owners and users, monitoring of social performance and requirements to prepare completion reports verifying implementation of the mitigation measures and	ESS5 shall prevail. RPF has been prepared in line with ESS5. Resettlement Audits shall be prepared for land acquisition, or restriction to land use that has taken place in anticipation of the project Phase 2 (subject to assessment under ESS5). RPs shall be prepared and implemented designed to cover

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
levels or to levels prevailing prior to the beginning of project implementation, whichever is higher. To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.		providing for corrective measures if needed.	any gap. Cut-off date announced. GM established. Adequate monitoring in place.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources			
•To protect and conserve biodiversity and habitats. •To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity. •To promote the sustainable management of living natural resources. •To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities	Conservation of biodiversity was identified as one of Serbia's priorities for environmental protection in the GoS. The Law on Nature protection ("Official Gazette of RS" 36/2009. 88/2010, 91/2010corr 14/206) governs protection and conservation of nature and biological, geological and landscape diversity as part of the environment.	There are gaps between ESS 6 and national laws with respect to No Net Loss/Net Gain requirements pertinent to Natural and Critical Habitats respectively	The environmental and social screening criteria will screen for the relevant risks and apply mitigation hierarchy. The environmental screening criteria will ensure that no activities with potential significant negative impact are eligible for funding in natural sensitive or critical habitats. Where the activities in modified habitats are considered, the project will incorporate consultations with protected area sponsors, national and local guardian institutions and relevant stakeholders, including local communities, and NGOs. Where necessary, a site-specific biodiversity management plans will be reviewed, updated and/or developed. Various actions will be taken during subprojects preparation and implementation in order to avoid any negative impacts.

ESF Objectives	National Laws and Requirements	Gaps	Recommended Actions
			Preconditions of relevant institutions will be obtained during preparation of site specific ESMP documents and mitigation measures will be prescribed. Project supervision will control implementation of subject requirements
ESS 8: Cultural Heritage			
The Objectives of ESS 8 are: To protect cultural heritage from the adverse impacts of project activities and support its preservation. To address cultural heritage as an integral aspect of sustainable development. To promote meaningful consultation with stakeholders regarding cultural heritage.	Cultural property law ("Official Gazette of RS 71/94, 52/11, 99/11, 6/20, 35/21 and 129/21). This Law regulate the system of the protection and use of cultural property and defines conditions for the implementation of activities relating to the protection of cultural property.	There are gaps between ESS 8 and national laws with respect to intangible cultural heritage.	No activities that can impact protected cultural heritage will take place. Chance findings clause will enter all ESAs for sub-projects.
ESS 10: Stakeholder Engagement and Information Disclosure			
/The Objectives of ESS 10 are: To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties. To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.	The Republic of Serbia citizen engagement commitments do not reside under a single self-standing law or regulation. However, the recognition of importance of citizen engagement is embedded in the legal system and clearly recognized by the mandatory procedures provided by individual laws	While all acts spell out a right to access to information held by public authorities, the ESS recognizes the importance of open and transparent engagement vis- à-vis project stakeholders by the project	SEP Prepared for the Phase 2 of the project. Sub-Project Specific SEPs compliant to the PSEP prepared prior to activities have taken place and adequately implemented.

6. TENTATIVE PROJECT SUPORTED ACTIVITIES

The phase 2 of the Project would prioritize procurement of new rail maintenance machinery, refurbishment of existing rail maintenance machinery and investments in the maintenance workshops, thus strengthening the railway sector on the field of maintenance. The overall focus of Phase 2 is on maintenance of recently rehabilitated or constructive infrastructure.

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7. POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS, IMPACTS AND MITIGATION MEASURES

7.1. Environmental Risk Rating

The Project has moderate environmental risks. All works to be done in the second phase of the MPA, and supported by this Project, will be prevalently carried out on the already existing railway network, acquisition of heavy-duty machinery, and (ii) the repair and refurbishment of out-of-order heavy-duty machinery already belonging to IZS. All this equipment will be operated by IZS, the Serbia railways infrastructure manager, to undertake in-house railway infrastructure maintenance, and modernization of the IZS's maintenance facilities, possibly in Lapovo and Batajnica. These two maintenance facilities is planned to serve as bases for the new/refurbished machinery, which will be serviced chiefly at these two maintenance facilities. This modernization focuses on existing buildings and includes: (i) roof repairs, fire safety and protection, solar panels power supply; (ii) heavy equipment for the workshops – cranes, lifting jacks, turntables.

These activities are expected to produce mostly temporary, typical, short term and limited adverse environmental impacts, however, as there are many uncertainties on project locations (e.g. sensitivity and value of habitats), on available supporting infrastructure (e.g. facilities for hazardous waste management), features of existing facilities that are part of the project, this Environmental and Social Management Framework (ESMF) has been prepared for the Project as a set of due diligence procedures ensuring compliance to WB Environmental and Social policy, WB EHSG, national legislation and good practices. Environmental and Social Management Plans (ESMP) and location-specific environmental impact mitigation plans (Checklist ESMP) for infrastructure improvements will be developed as part of project preparation and detailed design work. Pollution that can occur in various stages of construction, reconstruction, rehabilitation and/or repair is temporary in its scope and nature - and can be readily mitigated through the application of standard mitigation measures and good practices in engineering design, application of the code of good construction practice, and regular operation and maintenance.

In line with the WB Policy for Investment Project Financing, screening of the terms of reference, work plans or other documents defining Technical Assistance (TA) objectives, the scope and outputs of TA activities (advisory, analytics, designs as well as capacity building) will be carried out to ensure that TA processes and outputs reflect moderate E&S risk limitations, and that it provides the advice and other support consistent with the requirements under the Bank's Environmental and Social Framework (ESF).

Supported sub-project risks will range from low to moderate. There will be no substantial or/and high-risk subprojects supported under this Project.

The indirect environmental impact through enhanced railway transport is likely to be positive, as railways are more environmentally friendly transport mean than roads or aviation.

In addition to the relevant WB standards, the Serbian national legislation will be observed and taken into consideration in preparation of site-specific E&S management instruments. Where the national and WB requirements differ, the more stringent will apply.

Capacity for ESF implementation will be upgraded as deem needed and maintained throughout Project implementation: The PIU is to be staffed with a full-time Environmental specialist, a full-time Public communication, social and citizen engagement specialist), a part-time Occupational & Health (OHS) Specialist throughout project implementation and Resettlement specialist on a as need basis (with a ToR approved by the Bank). The specialist will be supported by training by the E&S World Bank Specialists. PIU will be engaged through the Project to perform E&S review of activities, including ES screening of proposed subprojects and to assign adequate Risk Category in line with classification given in a WB Environmental and Social Framework

(ESF). Moreover, the PIU within the MCTI will be responsible for obtaining preconditions of relevant institutions (Institute for Nature Protection of Serbia and Institute for Protection of Cultural Monuments) and obtaining of Decision issued by Ministry of Environmental Protection regarding the need of EIA for each particular subproject. Also, this document will be used by Environmental and Social Consultants during the subproject's screening procedures.

Environmental and Social Management Plans (ESMPs), Environmental and Social Impact Assessment Studies (ESIAs) and location-specific Checklist ESMPs for railway infrastructure improvements will be developed as part of project preparation and detailed design work Environmental Specialist engaged within the PIU will be responsible for checking and approval of site specific ESMP documents and Checklist ESMPs, consultations with PAPs and other project stakeholders. During project implementation Environmental Specialist will conduct site visits and control of fulfillment of Contractor's environmental obligations. Environmental specialist will be also responsible for timely preparation and delivery to the WB project progress reports – status of mitigation measures taken, monitoring results.

OHS risks will be managed through application of the guidelines in this ESMF, the national laws, policies and rules, the EHS Guidelines which will allow prevention and protection measures to be introduced following the order of priority: Eliminate the hazard, controlling the hazard and minimizing it. The major risks tied to Community health and Safety relates project activities taking place outside of the traditional project boundaries, but nonetheless also the project operation within the limits of the construction sites. One of the prominent risks is the traffic and road safety risks to workers, affected communities, road and rail interface users throughout the construction period. Adequate Traffic management plans shall be in place. Emergency Preparedness and Response Plan that is commensurate with the risks of the facility will be prepared for each project and unplanned event when a project operation loses control, or could lose control, of a situation that may result in risks to human health, property, or the environment, either within the facility or in the local community.

7.2. **Social Risk Rating**

The World Bank has assigned the project with moderate social risk rating. Phase 2 of the Project does not involve any new railway construction and focuses mainly on procurement of equipment, maintenance of railway facilities, tracks and machinery, and sectoral governance activities. The investments in equipment and in the maintenance of the facilities will minimize early equipment failure. Better condition and maintenance of infrastructure assets will ultimately lead to a reduction in the rate of possible accidents and ensure greater passenger safety. Phase 2 activities are not anticipated to have a significant adverse impact on vulnerable groups. Universal accessibility of the rehabilitated railways infrastructure will be considered from design stage. The railway maintenance investment will not involve land acquisition or resettlement. However, there is a slight possibility of other downstream risks, including on land access, depending on the scope and outcome of planned Technical Assistance (TA) feasibility studies in Phase 2. Precautionary measures will be taken to mitigate any potential risks and impacts that may arise from the scope and outputs of the technical assistance activities. ToR for the TA and relevant outputs work plans or other documents defining the scope and outputs of technical assistance activities will be drafted by the Client and reviewed by the WB so that the advice and other support provided are consistent with the ESSs. The RPF created for Phase 1 will be adapted to guide any potential direct and indirect ESS5-related risks specific to Phase 2. No major construction works are planned, although, maintenance of railway infrastructure involves repair works which may produce typical construction-related OHS and CHS risks. No temporary restriction on land use is anticipated during the small-scale rehabilitation works. The works will be carried out outside private land areas and limited to existing facilities and/or footprints. The screening mechanism for Phase 1 already considers the maintenance aspects relevant for Phase 2 but will be upgraded to ensure that Phase 2 does not fund activities that may involve significant social impacts. The PIU will include in the bidding documents specific OHS standard requirements that all contractors and sub-contractors will meet under this project phase. The standards will be consistent with local regulations, WBG EHS guidelines and GIIP.). It is not expected that a significant volume of traffic is generated by the project, but in case the works will be carried out near inhabited areas the traffic management plans will be prepared and accordingly followed. The

community health and safety impacts will be addressed in site-specific ESMPs, in line with the guidelines provided in the ESMF. The LMP for Phase 1 will be updated to guide project labor and working conditions in Phase 2. The existing SEP prepared for Phase 1 reflects maintenance activities. However, the SEP will be adapted to meet the specifics of Phase 2 in relation to information disclosure, stakeholder mapping and engagement in accordance with the ESS10. Project-level SEP for Phase 2 will outline requirements for site-specific engagement by implementing agencies such as contractors and sub-contractors as well as supervision consultant(s) All social-related activities will be implemented by full-time Social and CE Specialists who will continue to support the implementation of Phase 2 and will have an essential role in social risk assessment and management, stakeholder engagement, GM monitoring and reporting and CE. The project and worker GMs will be upgraded to reflect Phase 2. To summarize, potential social risks and impacts are mostly associated with ESS2 and ESS4, and following the type of activities envisaged under Phase 2 they are predictable, temporary and mostly reversible; small in size and location-specific. Based on the nature and extent of Phase 2, and the PIU's experience in handling Phase 1, the overall social risk is moderate.

The scale of labor use will be limited but complex in terms of management. This is a consequence of multiple small to medium scale individual construction/rehabilitation sites established to complete intended activities. Labor risks related to the construction activities and unfair labor and working conditions, shall be mitigated by adequate enforcement of the LMP adopted for the project.

7.3. **Environmental and Social Risks in the design phase**

7.3.1. Risks from Natural Hazards

Serbia is prone to natural hazards such as floods, landslides, droughts, earthquakes, and wildfires that can have a significant impact on people and infrastructure.

Measures
The design of project facilities should include necessary structural measures for adaptation of climate and geophysical hazards considering safety risks to the communities. In the case the sub-project has commenced or the intervention is planned on an existing facility, E&S Audit will test the compliance against measures for adaptation of climate and geophysical hazards considering safety risks to the communities. Designs shall be climate-sensitive, and shall envisage installation of preventive systems commensurate to the assessed baseline risks during design. Design will also include important accessibility considerations. Whenever technically and financially feasible, accessibility features for railway design will include level boarding platforms, accessible entrances with ramps or elevators, tactile paving for visually impaired passengers, clear signage with high contrast and Braille, audio announcements, assistive listening systems, accessible restrooms, priority seating, emergency communication systems, and staff training in disability awareness.

7.4. **Environmental and Social Impacts during Project implementation**

All works to be done in the implementation phase will be carried out on the already existing railway network, and may only include the preparation of technical documentation for the renewal of existing lines, which is unlikely to cause significant E&S impacts (depending on the location), while construction of new lines will not be eligible for financing.

Railway maintenance works will include, but be not limited to, environmental impacts such as dust and noise, potential pollution of water bodies, traffic disruptions and management of small quantities of construction waste, including parts of the rails and crushed stone, and management of hazardous waste that has been polluted from the train traffic.

Mitigation requirements may include, but are not limited to, using a water-based detergent for washing, dry cleaning and recycling of solvents, using lead-free water-based paints, and filtering the air coming out of the varnishing room before it is released into the atmosphere. Regarding reduction of hazardous waste production, parts and equipment that contain asbestos, PCB or CFC should be avoided. Wastewater must be

first treated in the oil and grease separator pit and then in the further treated in the wastewater treatment plant, before being released into the recipient, satisfying national legislation on discharge water quality and WB ESHG. All waste must be sorted and disposed of adequately, and only handed over for processing or final disposal to licensed companies. Accompanying papers must be updated and they must follow the waste flow. Toxic and hazardous materials and hazardous waste must be kept in specialized containers and in places that are equipped with double walls or bund walls and are protected from the elements.

The environmental impacts of the project are expected to be of manageable, easy to envisage, temporary and of local impact for both types of activities. Track maintenance works and repairs of railway infrastructure might produce typical construction related adverse impacts: dust and noise due to excavation, demolition and construction, management of demolition construction and large amounts of hazardous wastes and accidental spillage of machine oil, lubricants, fuel, anticorrosive agents, and other hazardous substances, potential encroachment to a private property, landslide risk, and traffic disturbance, OHS risks, community safety (fire hazards, railway safety) and other.

7.4.1. General overview of measures of protection during Phase 2

The provided overview of measures is informative only and if they differ from WB ESF and WB EHSG requirements, the stricter one will prevail. The final set of mandatory mitigation measures will be defined in the specific Environmental and Social Assessment (ESA) and ESA reports (ESMP, ESMP Checklists, E&S Audits) for a particular sub-project or activity.

No.	Direct impact	Prescribed measures
1.	Water and soil pollution by oil, fuel, lubricants during storage and transport	Waste oil is to be disposed of in closing barrels. If waste oil is not transported away immediately upon replacement, provide such space for temporary storage of barrels providing for avoidance of leakage to surrounding areas. Barrels/oil will be disposed/processed at approved and licensed disposal sites The procedure of oil replacement on machinery should be implemented on surfaces planned for this and by laying protective beds underneath points of potential leakage. Vehicle maintenance at the construction site is prohibited. Vehicles are to be maintained only in the designated workshops.
	Contamination from the leakage and contaminated waste waters generated in workshops	No discharge of wastewaters without prior treatment. Regular monitoring of treated water quality.
	The replacement of worn-out sleepers	New worn-out sleepers should be treted with creosat C
2.	Silting and pollution of waterways during construction works	The entry of vehicles into waterways during construction is prohibited. If it is necessary to cross waterways in machinery at certain construction points, the construction of temporary adequate crossings at such points are mandatory, in order to avoid direct contact of machinery with the waterway.
3.	Soil, surface and ground water pollution due to inadequate drainage of surface waters at official points	Adequately solve drainage in stations and at stops in order for water from atmospheric precipitation to collect rapidly and efficiently and prevent soil, surface and ground water pollution.
4.	Soil, ground and surface water pollution during disposal of construction waste to temporary dumpsites along the railway	Depending on the type of material, cover in concrete or foil, fence off and adequately level the dumpsite so that all potential polluted atmospheric waters are led through a drain or by eaves to the sedimenter and separator of oils and grease.

No.	Direct impact	Prescribed measures
5.	Air pollution by the operation of asphalting machinery.	Use and apply control equipment to prevent air pollution.
6.	Local creation of emissions of dust, noise and vibration that may present disturbances to the surrounding population and animal life	Periodic wetting of materials and terrain during railway construction. The contractor shall cover trucks during transport. Install protection on machinery and construction equipment. Limit working hours (e.g. until 6-7 PM) in settlements. Prohibit the operation of machinery in neutral shift. Application of mobile noise protection structures. Temporary construction sites and vehicle parking are to be set up as far as possible from settlements. Screen grievance log for dust, noise, and vibration related grievances
7.	Waste at official points and along the railroad on the open railway	Set containers at official points for communal, recyclable and hazardous (electronic) waste. Provide waste containers along the railway to be driven by the utility company to the communal waste dump.
8.	Poor sanitary protection and disposal of solid communal waste in camps and construction sites.	Provide adequate sanitary rooms and containers for communal waste and containers for recyclable waste.
9.	Small scale disposal of contaminated soil and gravel during maintenance	Determine the type of waste (hazardous, non-hazardous) Define a space for temporary disposal, as well as conditions for disposal in order to avoid soil pollution (laying down foil or soil remediation). Final disposal should only be in a licensed facility
10.	Excavation of Removal non-contaminated and disposing of excess earth at the contractor's discretion	The Final Design must define locations for earth borrow pits, as well as locations for disposing of excess soil. Non contaminated
11.	Potential transmission of communicable diseases to the local population	Secure regular medical check-ups for workers and their treatment.
12.	Movement of heavy machinery and vehicles with materials and equipment along existing roads	Bypass roads for vehicles used in construction to improve travel times along existing roadways. Secure priority roadways and transport lanes for bringing materials and equipment in and out.

In all of the cases when either of the three risk factors (contaminates, receptors, exposure pathways) are considered to be present (in spite of limited data) under current or foreseeable future conditions, the following steps should be followed in ESAs:

1) Risk screening (identification of location, sampling and testing, evaluation of analytical results, verification of receptors and exposure pathways);

2) Interim risk management (implemented at any phase of the project life cycle if the presence of land contamination poses an "imminent hazard," i.e., representing an immediate risk to human health and the environment if contamination were allowed to continue, even a short period of time);

3) Detailed quantitative risk assessment (Identifying relevant human and ecological receptors (e.g., children, adults, fish, wildlife), determining if contaminants are present at levels that pose potential human health and/or ecological concerns (e.g., levels above applicable regulatory criteria based on health or environmental risk considerations), determining how human or ecological receptors are exposed to the contaminants (e.g.,

ingestions of soil, dermal contact, inhalation of dust), the types of adverse effects, quantifying the magnitude of health risks to human and ecological receptors etc.); and

4) Permanent risk reduction measures (definition of mitigation strategies).

7.4.2. Environmental and social general mitigation measures

The environmental impacts identified at this stage are preliminary in nature and will need to be further elaborated specifically (subproject wise) and potential for occurrence has to be ascertained during further stages of subproject design and implementation. This section details out the overall mitigation measures which will broadly fit in the following categories. Other risks not specifically mentioned hereunder shall be mitigated by direct application of the WBG EHS Guidelines and Rail EHS guidelines, the GIIP and national legislation.

7.4.2.1. General mitigation measures prescribed by the Law

General environmental protection measures encompass information from this domain adapted to a global strategy, local spatial conditions and the characteristics of the planned railway subprojects:

- As part of the overall development policy, provide for consistent respect of regulations of broader significance regarding limits for certain impacts;
- Secure setups for the continuous maintenance of the railway.

Table below provides a tabular overview of the key legal requirements in the field of environmental and human environment protection for numerous elements of the environment – management of hazardous substances, release of waste waters, protection of natural and cultural heritage, noise, soil and water pollution, storage of hazardous substances and alike.

Legal requirements		
Environmental elements	Limitation, obligation or recommendation	Comment
Management of hazardous substances	Appoint persons responsible for management of hazardous substances	Appoint an employee to be responsible for hazardous substance management
	Identification or classification of hazardous substances used in the company and records of hazardous substance movements	Identify and sort hazardous substances in the company Keep records of the movement and hazardous substances in the company (entry, movement, use)
	Keeping records on chemical accidents	Keeping a central registry and book of minutes (type of substance, amount, consequence, remediation measure, etc.)
	Implementing response measures to chemical accidents in accordance with the programme of measures	The company undertakes response measures to the accident
	Elimination of consequences of chemical accidents and keeping records on the activities undertaken	In case of chemical accidents, the company undertakes measures to eliminate environmental consequences (remediation and recultivation).
	Reporting to competent bodies on the annual movement of hazardous substances.	Annual reporting to the competent ministry on the movement of hazardous substances.
	Planning protection measures from uncontrolled oil leakage	Design protective beds of adequate volume, separate oil sewage, oil separators. Maintenance should periodically refresh equipment and change seals, regardless of their state.
	Monitoring of oil leakage	Regular supervision over equipment with oil, particularly in locations without human crews.

Legal requirements		
Environmental elements	Limitation, obligation or recommendation	Comment
	Notification of competent services on all accidents that may lead to soil and water pollution	Notify competent services upon identifying an accident (police, fire department)
	Elimination of the consequences of pollution by hazardous substances	In case of accident, adequate measures to decontaminate the soil and waters shall be applied.
	Recording accidents with oil leakage	Record all oil leaks, particularly leakage of greater amounts that may lead to soil and water contamination.
	Regular training of employees and control of readiness to react in case of accidents	Implement an employee training programme and control of their training and readiness to act in case of accidents
Waste management	Selection at the collection of hazardous waste	Maximize the degree of waste separation and collection of liquid chemicals according to the relevant waste laws
	Categorization and characterization of collected waste.	Implement categorization and characterization in accordance with the law (in the case WB requirements differ, the stricter ones prevail such may be example of removed stone aggregate and used sleepers).
	Securing conditions for temporary storage of waste, particularly hazardous waste, preventing soil and water pollution	Use technical measures to eliminate risks of pollution of soil and water by waste (safety beds, reservoirs, etc.)
	Measuring and recording waste	Introduction of a system for measuring and recording the creation and movement of waste
	Implementing measures for the prevention of the creation and reduction of the amounts of created waste	Company obligations prescribed by law.
	Recycling of collected waste	Collection and regeneration of used oil. Oil is to be sent for recycling to the Belgrade Oil Refinery (RNB*).
	Handover of waste for treatment to licensed companies.	Hazardous waste is to be submitted for treatment to authorized companies (e.g. batteries and accumulators, waste sleepers, stone aggregate, etc.)
	Reporting to the Ministry and Environmental Protection Agency on waste flow	Report to competent bodies
	Close cooperation with competent bodies	Contacts with the competent ministry and Environmental Protection Agency.
Waste water release	Produce technical documentation in accordance with the water conditions	Harmonize practice with limitations defined by law.
	Waste water quality control	The water management permit will prescribe the subject and frequency of control for waste water quality.
	Implementing supplemental protection	In case of deviations of the quality of waste

Legal requirements		
Environmental elements	Limitation, obligation or recommendation	Comment
	measures in case of inadequate waste water quality.	water from the defined levels, competent bodies order the implementation of supplemental protection measures.
Noise	Planning of protection measures (sound barriers) during works	If an increased level of noise in the environment is indicated (Impact Assessment), the design is to envisage supplemental protection measures Choose equipment with the lowest noise emission (in accordance with EU standards). Implement noise protection measures during the construction phase, particularly in settlements: mobile sound barriers, choice of work hours, construction site organization, etc.
	Identifying critical points for noise above permitted levels	Analyze the disposition of equipment, immediate environment, identify the most critical points of emission of excess noise.
	Periodic noise control at critical points.	Measuring noise environmental noise levels by engaging an authorized organization.
	In case the noise is at the limit of permitted levels, implement supplemental noise protection measures	If increased noise levels are registered, the competent inspection shall order supplemental noise protection measures.

7.4.3. Soil and water pollution

Contamination of surrounding soil is possible from transportation vehicles exhaust and load /construction machines. Contamination caused by temporary construction sites e.g. spills of fuel, chemicals, temporary roads or from disposing of waste dust, and other activities. Contamination from discharging used/waste waters from the construction site into soil can also take place if mitigation measures are not adhered to. In the course of works, soil can also be contaminated from: opening of new borrow pits for materials to be used during works, certain construction materials including concrete, greases and motor oils, formwork stripping products and paints for various uses during expansion and modernization of railways, and leaking oil that is often observed in different kind of railway construction and rehabilitation activities. Even in cases when oil leaks within the construction areas are not significant, it is a risk; and can contribute to contamination of the sites. Depending on the substrate, these oil leaks could both wash off into the river environment, and/or be leaking through the substrate that could then impact groundwater and surface water.

Discharging diverse waste products from construction site process and construction site complex (liquids, particles and solid waste) on banks or directly into river beds leads to spread of pollution along the watercourse. The potential risks are associated with:

- Discharge of used waters from the construction site (technological and hygienic) into watercourses.
- Excavations in the field can cause the cutting – opening of aquifers, i.e. disruption of groundwater (water cycle).
- Fine fractions can be washed away during the execution of construction works under influence of material falls from temporary landfills. This will make surface courses turbid.
- Waste material, mechanical oil, fuel etc. can be disseminated by malfunctioning construction machines and vehicles or negligent personnel.
- Location of machines, temporary construction material depots near rivers or surface watercourses.
- Erosion during earthworks;
- creosote treated and contaminated materials;
- Accidental spills of chemicals, fuel, and similar;

- Contaminating of water from degreasing, paints and other chemicals used in workshops.

During the works on railway modernization, hazardous products such as hydrocarbons, lubricants and waste oils may be accidentally or deliberately discharged into the water.
In the operational phase, contamination of surface and groundwater is possible form treated wood, being a new track or stored sleepers.
The risk in the supply chain of illegal quarrying and dredging for mineral resources is not to be neglected.

7.4.3.1. Soil, ground and surface water protection measures

Contaminated lands may involve surficial soils or subsurface soils that, through leaching and transport, may affect groundwater, surface water, and adjacent sites. Where subsurface contaminant sources include volatile substances, soil vapor may also become a transport and exposure medium, and create potential for contaminant infiltration of indoor air spaces of buildings.

Contamination of land should be avoided by preventing or controlling the release of hazardous materials, hazardous wastes, or oil to the environment. When contamination of land is suspected or confirmed during any project phase, the cause of the uncontrolled release should be identified and corrected to avoid further releases and associated adverse impacts.

To determine whether risk management actions are warranted, the following assessment approach should be applied to establish whether the three risk factors of 'Contaminants', 'Receptors', and 'Exposure Pathways' co-exist, or are likely to co-exist, at the project site under current or possible future land use:

Contaminant(s): Presence of hazardous materials, waste, or oil in any environmental media at potentially hazardous concentrations,

Receptor(s): Actual or likely contact of humans, wildlife, plants, and other living organisms with the contaminants of concern

Exposure pathway(s): A combination of the route of migration of the contaminant from its point of release (e.g., leaching into potable groundwater) and exposure routes Applicability and Approach (e.g., ingestion, transdermal absorption), which would allow receptor(s) to come into actual contact with contaminants.

Where there is potential evidence of contamination at a site, the following steps are recommended:

- Identification of the location of suspected contamination,
- Sampling and testing of the contaminated media (soils or water),
- Evaluation of the analytical results against the local and national contaminated sites regulations
- Verification of the potential human and/or ecological receptors and exposure pathways relevant to the site in question.

Other soil protection measures include:

- Prevention of landslides and erosion by geotechnical inspections and measures (concrete injecting, gabions, fences, geomembranes, etc.);
- Prevention of illegal dumping and littering;
- Developing procedures for prevention and remediation of spills;
- Adequate management of materials.

To prevent indirect impacts to soil form conduct of suppliers, mineral materials will be obtained only form licensed quarries and sand/gravel produces with valid concessions.

- Soil Erosion. recommended soil erosion and water system management approaches include: Reducing or preventing erosion by: Scheduling works to avoid heavy rainfall periods to the extent practical, contouring and minimizing length and steepness of slopes, mulching to stabilize exposed areas, Re-vegetating areas promptly, Designing channels and ditches for post-construction flows o Lining steep channel and slopes (e.g. use jute matting), Reducing or preventing off-site sediment transport through use of settlement ponds, silt fences, and water treatment, and modifying or suspending activities during extreme rainfall and high winds to the extent practical. Segregating or diverting clean water runoff to

prevent it mixing with water containing a high solids content, to minimize the volume of water to be treated prior to release of water.

- Structural (slope) stability. Measures to prevent slope instability include: Geotechnical survey, providing effective short term measures for slope stabilization, sediment control and subsidence control until long term measures for the operational phase can be implemented, Providing adequate drainage systems to minimize and control infiltration, application of locally regulated or internationally recognized building codes to ensure structures are designed and constructed in accordance with sound architectural and engineering practice, including aspects of fire prevention and response.

7.4.4. Waste

The Project interventions will inevitably cause waste and wastewater generation. Several types of waste will be produced on the construction site which can be categorized as:

- Inert (construction) waste – mainly concrete, soil from earthworks, rubble (tile, brick, plaster, sand from the demolitions, etc.);
- non-hazardous waste (wood, plastics, paper and cardboard, ferrous and non-ferrous metals, glass, electrical wires and cables, PVC pipes, tires, etc.); and
- hazardous wastes (paint, mastic, varnish, sprays, solvents, oils, asbestos, PCB contaminated soils, etc.)

and large quantities of hazardous construction wastes – used aggregate and wooden sleepers, gravel etc. from the rehabilitation of tracks, including removed contaminated stone aggregate (from lubricants, oils and fuel) and waste wooden sleepers (creosote treated). The usual risks are that common waste is inappropriately classified, dumped, e.g. fuel drums, old containers and similar that are no longer useable, batteries, and other items. Another risk is long-term storage of contaminated waste exposed to all weather conditions. This waste can cause environmental, health and safety risks for railway users and the environment. Secondly, as with oil spills, the waste can result in the release of lubricants etc. that could both wash off into the river environment, and/or be leaking through the substrate that could then impact groundwater.

7.4.4.1. Waste management

Waste management shall be addressed through the implementation of provisions on management of all wastes, including management of hazardous wastes defined in the Environmental and Social Assessment (ESAs) documents. These provisions will be in line with the national legislation and WB Environmental, Health and Safety Guidelines (EHSG) for Railways and EHSG for Waste. Implementation of waste related mitigation measures and monitoring s is an obligation of each Contractor and Sub-Contractor. The ESAs will adopt a hierarchy of waste management in the project activities including prevention, reuse, recycling, refurbishment, and disposal. When planning the waste management on sub-project specific activities the contractors shall plan taking into account:

- Review of new waste sources during planning, siting, and design activities,
- The Contractor's should cover all aspects of waste management, including implementation of practice standards such as reduce, re-use and recycle. It should specify final disposal routes for all waste and demonstrate compliance to national legislation and best practice procedures on waste management. The WMP will, as a minimum, include details of temporary waste storage, waste transfer and pre-treatment prior to final disposal or recycling. Licensed/approved facilities for solid and liquid waste disposal must be used and a duty of care and chain of custody for all waste leaving the site will be followed. As part of the plan Contractors will be expected to produce waste handling forms for chain of custody, which will be used to control waste leaving site. Thus, the waste controller will keep a copy of the form and the driver will always carry a copy and will ensure that the load is signed for at the final disposal site. All records should be kept by the Contractor for audit purposes and to demonstrate that the project is complying with best practice and applicable legislation. Collection of data and information about the process and waste streams in existing facilities, including characterization of waste streams by type, quantities, and potential use/disposition,
- Establishment of priorities based on a risk analysis that takes into account the potential EHS risks during the waste cycle,

- Definition of procedures and operational controls for onsite storage · Definition of options / procedures / operational controls for treatment and final disposal,
- Hazardous wastes should always be segregated from nonhazardous wastes. If generation of hazardous waste cannot be prevented through the implementation of the above general waste management practices, its management should focus on the prevention of harm to health, safety, and the environment,
- Understanding potential impacts and risks associated with the management of any generated hazardous waste during its complete life cycle,
- Ensuring that contractor's classification, handling, treating, and/or disposing of hazardous waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the waste being handled, in line with the WB EHSG for waste and national regulation.
- Ensuring compliance with applicable national regulation and international treaties.
- Hazardous waste from maintenance of the railway will be separated and temporarily stored inside the adequate equipped space. Hazardous waste will be delivered to authorized companies for waste management in the manner and in accordance with legal regulations on the transport, treatment and disposal of waste, and will be accompanied by appropriate documentation. All wastes generated under the Project must be adequately disposed/processed by the end of the Project.
- Hazardous waste should be stored so as to prevent or control accidental releases to air, soil, and water resources in area location where:

- Waste is stored in a manner that prevents the commingling or contact between incompatible wastes, and allows for inspection between containers to monitor leaks or spills.
- Store in closed containers away from direct sunlight, wind and rain. Secondary containment systems should be constructed with materials appropriate for the wastes being contained and adequate to prevent loss to the environment.

Provide adequate ventilation where volatile wastes are stored.

Hazardous waste storage activities should also be subject to special management actions, conducted by employees who have received specific training in handling and storage of hazardous wastes:

- Provision of readily available information on chemical compatibility to employees, including labeling each container to identify its contents
- Limiting access to hazardous waste storage areas to employees who have received proper training · Clearly identifying (label) and demarcating the area, including documentation of its location on a facility map or site plan
- Conducting periodic inspections of waste storage areas and documenting the finding,
- Preparing and implementing spill response and emergency plans to address their accidental release (additional information on Emergency Plans in provided in Section 3 of this document) · Avoiding underground storage tanks and underground piping of hazardous waste.

On-site and off-site transportation of waste should be conducted so as to prevent or minimize spills, releases, and exposures to employees and the public.

In addition to the recommendations for treatment and disposal applicable to general wastes, the following consideration are to be taken specific to hazardous wastes:

- Asbestos containing waste shall be properly removed, packaged and sealed prior to transport to prevent dispersion of asbestos fiber and dust in to the environment respecting the WB EHSG and best practices;
- Inert construction waste can be reused, but only if proven harmless, while unusable and contaminated fractions will be disposed or treated at licensed facilities. No contaminated fractions may be reused or placed on the market.

The Waste management procedures will strictly follow the requirements of the Law on waste management and the applicable bylaws as well as WB Environmental, Health and Safety Guidelines (EHSG) for Railways and Waste.

The Environmental Assessment Reports (ESIAs, ESMPs, ESMP Checklists, E&S Audits, etc.) for sub-projects will also include provisions on management of all wastes, including management of hazardous wastes. These provisions will be in line with the national legislation and WB Environmental, Health and Safety Guidelines (EHSG) for Railways, and other applicable.

The producer of waste i.e. any Contractor shall:

1) Develop a site-specific Waste Management Plan and ensure its implementation;
2) Obtain a waste testing report and update it in case of technological modifications, changes in the origin of raw materials, other activities that could a change in the waste character, and keep such a report for at least five years;
3) Ensure the application of the principle of waste management hierarchy;
4) Collect waste separately and classify it in accordance with the national legislation;
5) Store waste in a manner that shall not affect human health or the environment, and create conditions to prevent the mixing of different types of waste, as well as mixing of waste with water;
6) Hand over waste to an entity authorized for waste management if they are not in a position to organize waste handling in compliance with the Law;
7) Keep records on produced, handed over or disposed waste;
8) Appoint a person responsible for waste management;
9) Enable the competent inspector to inspect sites, facilities, plants and documentation.
10) In the case of waste in the form of aggregates originating from areas of increased pollution (e.g. railway stations, etc.) stone aggregate analysis is carried out, selection and classification in accordance with the testing of waste for hazardous elements in line with the Law on waste, WB EHSG and internal IZS 'Instructions on handling of used stone aggregate waste resulting from works on railway tracks.
11) Reuse and dispose/ treat waste in line with the national legislation.

7.4.4.2. Treatment methods for the waste

The producer of waste i.e. any Contractor shall at minimum:

12) Set up containers during the execution of works for each of the specific types of waste. Locations are determined within the WMP;
13) Ensure waste collected from the construction site is, prior to transport to dumpsites, stored at predetermined and adequate locations;
14) Apply adequate testing for classification of waste and separate materials that may be recycled or reused from the remaining waste and adequately stored;
15) Waste containing poisonous or potentially hazardous substances will be disposed of in specially marked containers within temporary construction sites ensuring it cannot leak and contaminate soil and water;
16) Implement measures to prevent construction, waste, or other materials from the construction site to reach surrounding waterways or drainage channels;
17) Cover trucks for transporting construction materials and waste by tarps.

7.4.4.3. Management of waste form the ballast prism

The ballast prism is made of gravel, its surface becoming black after a certain period, because the space under the surface is often filled with liquids and sludge. Gravel pollution also occurs through the treatment of the railway belt with herbicides, fungicides and pesticides, by releasing fecal containing water onto the railway (from the sewer lines of railcars), leakage of lubricant oils and grease from trains and railcars, herbicides, by leakage of liquid and solid freight in transport, etc.

Such replaced surface material will be removed from the construction site, tested in order to be correctly classified and must be disposed or treated in licensed facilities

According to the Rulebook on categories of waste with, gravel can be sorted under non-hazardous or hazardous waste. In order to be sorted according to the catalogue of waste, it needs to be characterized, providing data on its potential content, i.e. concentration of substances making it hazardous waste. Depending on the degree of contamination, decisions are made on its disposal, and/or reuse. Exact locations for dumping earth and old gravel are to be defined by the Final Design, but to a licensed facility or treatment plant in accordance with the national legislation and WB EHSG.

Gravel is the possibly waste that will occur in the largest amounts during reconstruction and modernization. There are several options for the use of old gravel. Gravel can be used for purposes not related to railways (e.g. for filling old holes, or at dumpsites), only if proven safe. Finally, one modern method is the biological remediation of gravel, with environmentally acceptable chemicals. If treatment is applied, it must be carried out in environmentally safe manner.

7.4.4.4. Management of waste form the railway sleepers and stone aggregate

Railway sleepers are covered with creosote oils to prevent degradation and periodically treated with pesticides, fungicides and herbicides. During the replacement of worn-out sleepers, according to the Law on Waste Management, i.e. the Rulebook on categories of waste with lists, this type of waste must be adequately disposed of. The same applies to the stone aggregate that will be sampled, laboratory tested and reused, treated or disposed as hazardous waste depending on the laboratory results.

Since the majority of wood protection substances, organic or inorganic, are hazardous waste, it is possible that wood treated with these substances represents hazardous waste, therefore sample analysis is necesary prior to starting works to adequately determine the quantity of potential waste which will inform the Contractors Waste Management Plan (WMP).

If the reuse of used sleepers is possible, ensuring conditions on reuse under the laws and WB EHSG and EU REACH Regulation (EC 1907/2006) are met including the concentration of hazardous substances.

If sleepers are not suitable to be reused and the option is burning old sleepers, temperatures of over 1200 °C need to be secured in order to prevent the emission of harmful and poisonous gases (dioxins, furans, etc.). Waste sleepers (as well as all other waste generated under the Project) must be disposed or processed in a licensed facility before the project closing.

<u>Management of wood (vegetation) waste</u>

Wood waste may be produced during preparatory works, where a certain number of trees and bushes will be removed during the clearing of terrain within the right of way.
Wood waste can be sorted and cut up, and used to produce other wood products, or can be donated to the local population after collection to be used for heating, after ensuring it has not been contaminated by oil or dye.

<u>Management of other waste categories</u>

All other waste management procedures shall follow the national requirements and Wb EHSG (soil, rails, points, etc.). Portions of excavated inert materials can be immediately reused upon completed works on the lower layer for regulating inclines on embankments and carvings. The greatest amounts of earth waste will be created by excavation of materials from the protective and transitional layer of the rail bed, to be replaced with a new one.

In addition to waste that will be generated during the execution of works, various types of foil and nylon bags used to pack construction materials, various types of plastic and glass bottles, cans, barrels, etc. might be generated as waste. Containers must be amade available at the construction site provided for all these types of waste, until final handover to the companies tasked with the further treatment of the same is completed.

Plastic products are to be collected separately, but also processed through the recycling process, in a clean state. When collecting and disposing of plastic waste (bottles, barrels, etc.) particular attention needs to be given to plastic packaging for oil, lubricants, fuel, etc. The above packaging is not treated as plastic, but as hazardous material. All different fractions must be collected separately. Different types of wastes must not be mixed together.

Liquid hazardous waste (waste chemicals) will be managed, collected and temporally stored according to the relevant waste by laws and WB EHSG and ESF requirements, and will be given to the operators will adequate permits for that kind of waste.

Waste oil from replaced points may be recycled, under conditions acceptable to the national regulation and WB EHSG.

Metal waste will represent, for the most part, replaced elements of the upper layer (including rails, fastenings, etc.). This waste will be stored in working units of IZS already intended for this purpose. If degreasing is applied, it must be done in environmentally safe manner, and the waste adequately (i line with the regulaton and WB EHSG) stored and processed/disposed.

For temporary storage of hazardous waste, the Contractor will identify and adapt a covered space protected from outside influence (wind, rain, etc.). Waste with characteristics of hazardous waste needs to be secured and transported away for treatment in an environmentally acceptable way, in licensed facilities. To secure and further treat hazardous waste, a contract must be signed with a company licensed to managed/treat/dispose of such waste.

Locations are to be determined for the immediate securing of waste in places it occurs, and containers procured for various types of waste in order to be able to separate it and collect it separately. Since different types of waste are secured differently, instructions need to be prepared on the method of disposing of certain types of waste. The contractor shall adopt a decision appointing a waste management person during the execution of works. Containers for metal waste, for packaging waste, etc. will be marked separately. The final treatment of waste will be the task of the licensed companies with whom the Contractor signs contracts on final care and treatment of waste. Upon the completion of works, all locations with temporary dumpsites need to be returned to their previous state. All waste will be temporarily stored on land owned by SR. Temporary construction sites are to be equipped with communal waste containers, as well as recycling waste containers.

Oil wil be collected and handed over to licensed facilities. Oil contaminated materials will be either disposed as hazardous waste, recovered (e.g. energy) or cleaned to be disposed as non-hazardous wastes.

Burning of any type of waste a the site or anywhere else apart from licensed facilties is strictly prohibited.

7.4.4.5. Collection and disposal of inert non-hazardous waste

Collection of waste involves treatment, collection, transport by licensed operators to l facilities licensed for disposal of such waste. Construction waste involves all types of waste materials and by-products produced during the construction process. All waste must be collected in waterproof containers.

The contractor tasked with waste management shall request a written permit from the competent Municipality for disposing of waste soil. The transport of waste from the construction site to the dumpsites will be implemented using vehicles of the Contractor or whomsoever the Contractor selects for implementing such work, however with adequate licenses. Waste soil wil be reused whenever possible.

Non-hazardous waste shall be disposed into containers (mostly of larger volume) to be regularly transported and emptied by the utility company.

The municipal body competent for environment and spatial planning affairs designates a location and issues adequate permits for landfills s used to deposit surplus of soil and construction waste. In accordance with the above, the Contractor shall request a permit from the competent Municipality for the disposal of inert construction waste. During generation of construction waste relevant documentation must be produced to record the amounts and types of waste in line with national requirements.

The generation of waste during the period of utilization is expected as a consequence of the following activities:

1) Maintenance of railroad and equipment,
2) Installation and operation of lubricating equipment,

3) Maintenance of the surroundings of the railway, weed control,
4) Collection of waste dumped along the railroad, and more.

The following types of waste may be generated during utilization:

1) Waste from engine lubricants and the transmission mechanism,
2) Hydraulic oil waste, oil contaminated waste
3) Communal waste (similar to waste from residential, commercial, industrial and similar buildings), waste from the use and emptying of toilets,
4) Liquid fuel waste,
5) Waste from the regulation of green surfaces
6) Constructuon waste, and more.

7.4.5. Air pollution

Construction works might result with increased concentration of polluting substances, primarily dust and exhaust gases from vehicles (machines engaged in the works execution).

Suspended particles (dust) that will occur from transport roads when used for machinery transportation or trucks passing.

The installation and operation of the site, including the presence of workers, equipment and materials will result in gaseous emissions of which oxides of carbon (COx), nitrogen (NOx) and sulphur (SOx) as well as aerosols and noise. However, these impacts will be localized, given the number of construction vehicles involved and the duration of the work. Furthermore, in view of the current traffic level, very limited local navigation, these emissions are not likely to significantly degrade ambient air quality and noise parameters.

7.4.5.1. Air quality measures

Prevention and protection from dust comprises of set of measures typical for civil works such as: installation of dust screens, cleaning vehicles and transportation surfaces, covering loads, controlled loading and unloading of materials, materials management and temporary storage at site measures, watering surfaces, and similar.

Emissions form use of transport will be minimized by good housekeeping and organizational practices and include, but are not limited to: maintenance and attests of vehicles and machinery, using only legal sources of petrol, careful planning of routes and optimal loads, etc.

7.4.6. Noise pollution and vibrations

Human presence and execution of works at the location, and movement of vehicles and construction mechanization.

Noise mitigation measures will be prescribed within the ESMP and ESMP Checklists documents and implemented during the construction phase of the project.

7.4.6.1. Noise protection measures

Reducing the impact of noise can be achieved by various methods:

- Selecting equipment with lower sound power levels
- Installing suitable mufflers on engine exhausts and compressor components
- Installing acoustic barriers without gaps and with a continuous minimum surface density of 10 kg/m2 in order to minimize the transmission of sound through the barrier
- Barriers should be located as close to the source or to the receptor location to be effective
- Installing vibration isolation for mechanical equipment
- Limiting the hours of operation for specific pieces of equipment or operations, especially mobile sources operating through community areas
- Re-locating noise sources areas less sensitive, to take advantage of distance and shielding ·

- Siting permanent facilities away from community areas if possible ·
- Taking advantage of the natural topography as a noise buffer during facility design.
- Reducing project traffic routing through community areas wherever possible
- Management measures (e.g. working hours),
- Developing a mechanism to record and respond to complaints.

7.4.7. Risk from radiation

If the project envisages reconstruction of electric traction substations (EVP), pursuant to Article 4 of the Ordinance on the sources of non-ionizing radiation is of particular interest, the manner and period of their studies (OG104/09) reconstructed sources belong to the sources of non-ionizing radiation is of particular interest.

7.4.7.1. Radiation protection measures

In accordance with the Ordinance on the sources of non-ionizing radiation is of particular interest, and with Articles 6 and 7 specifically, the manner and period of their studies (OG104/09) it is necessary:

- obtaining conditions and environmental protection measures issued by the competent authority in accordance with regulations governing the protection of the environment;
- Assess the environmental impact in the proceedings conducted by the competent authority before issuing permits for their construction or installation and use in accordance with the regulations governing the assessment of the impact on the environment.

After the construction, installation or facility that contains a source of non-ionizing radiation, before issuing a permit to start work or use permit shall be the first test, and measure the level of electromagnetic fields in the vicinity of the source. For the purposes of the first tests the user can source electromagnetic fields put into trial operation in the period not longer than 30 days or for telecommunication facilities can perform measurements within the technical inspection. The body responsible for technical inspection, or for the issuance of permits to begin work or occupancy permit for the building that contains the source of non-ionizing radiation is of particular interest can be started if the source is determined by measuring the level of electromagnetic fields do not exceed the prescribed limit values and building blocks, or placed object will not endanger their work environment. Provision field measurements every 4 years.

7.4.8. Impacts on nature and biodiversity

With envisioned maintenance ad other actions on current infrastructure, facilities and equipment, noticeable loss of habitat, of habitat and thereby a significant negative impact on biodiversity is not envisioned. However, there may be temporary disturbance and limited as well as temporary biodiversity loss due to works including access on the existing lines in nature sensitive areas within the right of way. As most works on rehabilitation of railways can be done by railway machinery, the impact can be minimized through the design of works. Indirect impacts are possible in the case of illegal waste disposal or illegal quarrying, etc. The loss and/or fragmentation of habitat are not expected.

Increased noise levels might cause temporary disturbance of wildlife. Access roads, emissions from trucks and construction machines may have negative impacts on vegetation around the construction site, though it will be temporary and limited.

Activities with significant impact to biodiversity and valuable natural habitats will not be financed, including construction in nature sensitive areas.

7.4.8.1. Nature protection measures

Should a project within a protected area (or one that may affect critical habitats or protected species) be proposed, site-specific ESAs will include provisions to identify risks coming from e.g. right of way, noise and human presence and implement adequate measures including, but not limited to development of Biodiversity Management Plan, avoidance of breeding/nesting periods for sensitive/protected species, strict control of movement, expert oversight, use of rail track machinery for maintenance).

ESAs will reflect that it is strictly forbidden to:

- Open borrow pits and dispose of waste materials. Dispose waste to nature and watercourses;
- Burning waste on site;
- Illegal quarrying, excavation or dredging;
- Temporarily and permanently dispose of hazardous substances;
- Unauthorized disposal of any type of waste, including soil;
- Set up any kind of temporary building or materials required for railroad works;
- Park and repair machinery, pour fuel and lubricants, etc. In case of accidental leakage of hazardous substances;
- Set fires;
- Take up more than minimally required space;
- Collect timber, fruits, herbs or disturb animals.
- If the project foresees the removal of woody vegetation it is necessary to obtain a remittance of JP "Srbijasume";
- It is forbidden to plan changes the existing regime of surface and ground water, or perform any exploratory drilling and hydraulic works without having proper documentation and previously acquired relevant opinions, conditions or consent of the competent institutions. The aforementioned means that it is not allowed to plan backfilling, rearrangement and relocation of the river and other watercourses in the area concerned. Also, it is forbidden to plan the work, which can cause turbidity of waterways for more than five consecutive days;
- It is forbidden to carry out work that may cause engineering geological processes. In the event that during the execution of the planned works comes to soil erosion from the surrounding slopes, the project is to urgently take appropriate anti-erosion measures;
- During the execution of works it is necessary to separate top-soil material and later use it and mix with soil along the route of the railway;
- Space on the route of the railway infrastructure need to be fully equipped according to environmental standards, which prevent a negative impact on nature;
- Lighting fire in the area of protected natural asset is forbidden;
- During the execution of works it is necessary to take all measures to prevent spillage of fuel, lubricants and other harmful and hazardous substances in the soil, surface water and groundwater;
- If the area of the route line encountered geological and paleontological documents (fossils, minerals, crystals, etc.), Which could assume a protected natural value, in accordance with the provisions of the Law on protection of nature, the finder is obliged that within eight days since the invention of the findings to inform the ministry responsible for environmental protection and take measures to protect against destruction, damage or theft to the arrival of an authorized person.

7.4.9. Impacts to natural and mineral resources

It is not expected that the project be a significant user of energy, outside of typical use in civil works (transportation of materials and people, rail machinery).
On the other hand, use of mineral resources such as sand, gravel and stone will take place. The related risk from illegal and E&S unsound quarrying and dredging/excavation practices is moderate. It will be mitigated through adherence to national legislation and E&S standards of suppliers.

7.4.9.1. Resources and materials management

The measures to mitigate will include speed limits, transport and route planning, regular technical checks of vehicles and other regulated by respective national regulations and embedded in good sectoral practices.

Significant use of mineral resources such as sand, gravel and stone are highly likely therefore, the materials will be supplied only from companies/quarries with valid licenses and extraction concessions.

7.4.10. Impacts on settlements and population

Regarding the interest of certain social groups as users of certain areas and buildings contained therein, the modernization of the railways can have a twofold impact on the socio-economic and economic development of a given area. Modernization of railways improves travel conditions while reducing costs and increasing the safety of users in the first group. This can improve communication of underdeveloped settlements with economically better developed urban centers. The retention potential of settlements is increased, causing positive social and economic effects for the local population. However, on the other hand, the railway passing in the immediate vicinity of settlements can reduce the intensity of use for certain settlement spaces and activities (due to noise, vibration, increased number of transit travelers), thereby contributing to changes in the use of spaces, reducing their value and reducing profits for the owners.

Although part of the subject matter railway passes through settlements where the population is exclusively working in agriculture, data indicates a decrease of the agriculturally active population compared to the overall population. This analysis can show that the work capable population is increasingly aimed towards the nearest economic and urban centers. Therefore, the construction of this transport route will improve transport links, enabling the population greater access to the city core.

Comparing the effects of construction, positive and negative, in both cases leads to data showing that the benefits for the social environment, in case of the construction of the planned railway, are several times greater than the damage occurring as a consequence of construction.

Community health and safety impacts during the construction, rehabilitation, and maintenance of railway facilities are common and these impacts include, among others, dust, noise, and vibration from construction vehicle transit, and communicable diseases associated with the influx of temporary construction labor. No significant impact on local population quality of life is envisioned as no major construction is envisioned. Temporary impact during the small reconstruction works through increased noise, vibrations, dust could be experienced.

In the vicinity of the area various possibly sensitive receptors might be identified. The receptors are composed essentially of human population living in houses located throughout the area of site access roads, and next to the zone of railway rehabilitation works. Potential impacts from transport will include increased congestion, noise and vibration, reduced access and safety, increased pollutant emissions from construction traffic, exhausts, and inordinate road wear and tear (because of the large size and weight of the trucks), especially on minor roads that constitute the truck route haulage routes Poor driving habits by the truck drivers could result in considerable stress if not risk to pedestrians and other vehicles in communities through which the truck route will pass. Access by pedestrians and local vehicles may also be restricted due to the increased truck traffic. Dust, grit and mud may be spilled from the trucks or carried by truck tires and chassis.

Universal access will be incorporated into the designs for all relevant reconstruction/rehabilitation sub-projects.

7.4.11. Impacts on cultural and historic heritage

Locations of sub-projects, including worhshops for rehabilitation and pilote-projects are not defined at Appraisal thus impact to cultural heritage cannot be excluded, though is unliely. Also, if they are found by chance, the obligation is to stop the works immediately and (i) notify relevant national institutions responsible for protection of cultural and historic heritage as well as the bank within 24 hours (ii) and undertake measures to prevent damage of the findings. Not all subprojects and locations are known. In the case any of the locations include or can impact cultural heritage, Cultural Heritage Management Plan (CHMP) will be prepared to prevent and mitigate any potential negative impact. All projects will be carried out in accordance with ESS8 and national law and any project that would have adverse impacts on Cultural Heritage would be screened out.

- If during the execution of construction and other works finds archaeological sites or archaeological objects, Contractor shall immediately, without any delay, stop work and inform the competent authority (Institute for Protection of Monuments of Culture) and to take measures to report destroyed and damaged and to be kept in place in a position where it is detected. National procedures will be followed and works can recommence upon approval of the competent authority;
- Creating a complete professional and detailed technical documentation of all chance finds;

7.4.12. Impacts on climate

Subprojects implementation will have no negative impact on climate. Also, due to nature od railway modernization, some environmental benefits in terms of reduced GHG emissions are expected. France's AFD (Agence Française de Développement) and possibly other IFOs are planning to co-finance support of the climate goals of the DPO and the Railway Sector Modernization Project. Regardless the financing source or supported undertaking, all Project activities will be implemented in line with the ESF and WB EHSG and the participating organizations will adopt ESF for managing activities under this Project. **The proposed Program supports Serbia's GHG reduction goals and contributes to the CPF's cross cutting theme of supporting the mitigation of climate change effects.** Rail is a sustainable mode of transport, and shifting cargo and passengers from road to rail contributes to emission reductions. Improved management of maintenance cycles supports longer life spans of assets and more efficient use of resources. Particular attention to climate risks will be a major focus of the Program. Increasing temperatures in Serbia led to a maximum measured rail temperature of 60°C in 2017, and this is expected to increase further; hence, rail buckling is a serious risk for the future. Severe flooding events in Serbia, particularly in 2014, directly jeopardized railway lines and electrical installations in more than 50 locations across the country. The Program will address these key challenges through climate-sensitive design, capacity building, and installation of preventive systems.

The project is subject to the World Bank's climate screening requirements. The impact of climate change on the project's physical components is rated *High*, as extreme temperatures, precipitation, and flooding pose significant risks. Due to measures to be taken in the project, physical as well as non-physical, the adaptive capacity is adequate, and the climate risk to the outcome/service delivery of the project is rated as *Moderate*. The main physical component, track rehabilitation in Belgrade, is not in the primary risk zone, though in 2019 Belgrade experienced severe flooding. As the project will encompass actions across the country, the risk screening was done for the whole of Serbia. The most frequently reported disaster events in Serbia are floods accompanied by mudslides or landslides, as well as increasing temperatures leading to more extreme heat days. The mean annual temperature in Serbia rose significantly between 1989 and 2010. A 2007 heat wave measured record highs of 44.9°C. Forecasts show an increase in intensity and frequency of flooding, particularly in the winter. The northern, eastern and southern areas of the country are projected to see the upper end of the range regarding precipitation. Regarding the combined economic losses by type in Serbia, most losses are caused through drought (32.2%) followed by flooding (30.2%). Other hazards such as sea level rise, storm surge and strong winds pose only minor risks in Serbia. The risk of wildfires is moderate.

7.4.13. Land acquisition, Restriction on land use and involuntary resettlement

The railway maintenance investment in the Phase 2 will not involve land acquisition or resettlement. However, there is a slight possibility of land related downstream risks especially on land access, depending on the scope and outcome of planned Technical Assistance (TA) feasibility studies in Phase 2. Precautionary measures will be taken to mitigate any potential risks and impacts that may arise from the scope and outputs of the technical assistance activities. ToR for the TA and relevant outputs work plans or other documents defining the scope and outputs of technical assistance activities will be drafted by and reviewed by the WB so that the advice and other support provided are consistent with the ESSs. The RPF created for Phase 1 will be adapted to guide any potential direct and indirect ESS5-related risks specific to Phase 2

Project-related land acquisition through all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way and restrictions on land use (such as limitations or prohibitions on the use of agricultural, residential, commercial or other land that are directly introduced and put into effect as part of the project), if at all, may occur in relation to Phase 2 of the Project. The likelihood, size, number, scale, locations, the zone of impact of such components or activities; the scope and scale of land acquisition and impacts on structures and other fixed assets; restrictions on land use with potential to cause physical and/or economic displacement of all sub-components and activities is currently not known. The project intends to support activities country wide and Land acquisition impacts will be likely minor in range and limited to some activities under Phase 2 of the Project.

It is understood that the land requirements for the footprint of the project, if they do arise, can only be temporary and moderate in scale. Loss of assets attached to the land are not anticipated, but potential livelihood impacts due to restricted access to land because of temporary renovation works still need to be

identified. The early draft of the description of the project activities in relevant project documents and plans have informed these examples of potential impacts resulting from project-related to permanent and/or temporary land acquisition impacts an assessment of site-specific impacts has been conducted based on the available information. However, the information is limited to very few details for Phase 2 of the Project.

Specialized methods and tools for assessment of the impact of project activities on the restriction to land use, will be prepared if needed. The scope of requirements and level of detail of these assessments, tools will be commensurate to the magnitude and complexity of any potential land related concerns during renovation of railway infrastructure and will comply with the Resettlement Policy Framework (RPF) adopted for the Project. It is currently unknown if physical displacement will occur at all, and if the impacts will impose risks related to livelihood of the affected persons. Any of the assessment tool will be based on up-to-date and reliable information about (a) the proposed project and its potential impacts on the displaced persons and other adversely affected groups, (b) appropriate and feasible mitigation measures, (c) the legal and institutional arrangements required for effective implementation of resettlement measures, (d) adequate measures for restoration of livelihood and (e) a long term monitoring and evaluation arrangements as outlined in the RPF to capture implementation progress, design gap filling measures as need and ensure positive restoration outcome and shall identify of vulnerable household in context of resettlement and o include specific measures to ensure these groups are adequately supported,

The ESS 5 applies to permanent or temporary physical and economic displacement resulting from land acquisition or restrictions on land use undertaken or imposed in connection with project implementation prior to the project, but which were undertaken or initiated in anticipation of, or in preparation for, the project. If such cases are identified through the Social analysis of sub-projects, an audit will be undertaken by the PIU Citizen Engagement specialist or external consultants (to be hired on a need basis) to: (a) document and assess the adequacy of prior mitigation measures to address the environmental and social impacts of the past resettlement; (b) assess compliance with national legislation; (c) identify gaps in meeting the requirements of ESS5 including identification of vulnerable household in the context of resettlement and adequacy of support provided; (d) identify any complaints, grievances, or other outstanding issues; and (e) determine measures to close identified gaps and address complaints. This due diligence is undertaken within an agreed upon time frame that takes into account the context of the project and significance of the prior resettlement. It may not be possible to retroactively satisfy certain aspects of ESS5, such as consultation and disclosure. The due diligence may include review of relevant documents, field visits, interviews, and consultations held with affected persons and other key stakeholders. If activities resulting in displacement are ongoing at the time of project identification, they would continue guided by the principles of the RPF applicable to the Project.

7.4.13.1. Measures to manage Land acquisition and involuntary resettlement impacts

Appropriate methods and tools, including scoping, social analyses, investigations, audits, surveys and studies, will be used to identify and assess the potential social risks and impacts of the proposed sub-projects attributable to land acquisition requirements. These methods and tools will reflect the nature and scale of the sub-project land acquisition, restriction on land use and involuntary resettlement impacts. This process if referred to, in the Resettlement Policy Framework prepared for the Project, as Social analysis and is conducted in advance to determine the type and content of resettlement instruments.

The Social analysis process and its findings, as well as proposed mitigation measures will be documented as part of the project/subproject package. The following guidelines, codes of practice and requirements will be followed in the selection, design and implementation of any operations financed under the activities of the Project. Screening of activities will be carried out by the PIU's Public communication, social and citizen engagement specialist. The screening reports will be endorsed by the Head of the PIU and submitted to the World Bank.

The screening will rely on the following criteria and will aim to faithfully identify whether the proposed sub-projects will have adverse impacts on:

- loss of shelter, physical displacement;
- assets/resources or access to assets/resources;
- loss of income sources or means of livelihood;

- land, and require land acquisition;
- business and economic displacement;
- access to education and health of the community;
- vulnerable persons and households.

The Social analysis will identify persons with formal rights to land and assets (including customary and traditional rights recognized under the laws of the country). The analysis will also identify persons who do not have formal rights to land but have a claim to such land and assets. It will not only rely only on the use and analysis of secondary data that is readily available, but will also require a walk-over survey to validate that the secondary data provides a true, reliable and accurate accounting of the social environment. In cases where no conclusive decisions can be drawn from the walkover survey, further efforts will be made to acquire and verify information through key informant interviews, focus group discussions and other adequate methodology. If the analysis finds that such impacts as described above are present on sub-project affected land, a Resettlement Action Plan (RAP) and other resettlement instruments as applicable will be prepared based on the principles and guidance provided by the RPF.

When land has been acquired in anticipation of the Project an audit of appropriate scope will be conducted, in line with the RPF, to assess compliance of the resettlement and compensation process against the requirements of the ESS5.

7.4.14. Risks to vulnerable groups

Based on initial screening vulnerable groups, that could be affected by the Project include retired, elderly and people with disabilities and chronical disease; single parent headed households, male and female; people with low literacy and ICT knowledge; economically marginalized and disadvantaged groups; persons living below the poverty line; women. Since the Project is being implemented across the country the exact numbers of people within detected vulnerable groups are not known at this moment. However, the project outcome will have no negative impact on vulnerable or excluded groups. Moreover, poorer sections will benefit significantly as they are the biggest users of rail travel. Measures to protect vulnerable groups

Appropriate methods and tools, including scoping, social analyses, investigations, audits, surveys and studies, will be used to identify and assess the potential risks and impacts of the proposed sub-projects on vulnerable groups. The environmental and social screening questionnaire (annex 3) provides modus for vulnerability detection with regards to land acquisition. If vulnerability is detected, the Project will improve living conditions of those who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure. The Project RPF prescribes additional assistance to vulnerable PAPs including legal assistance and help. Additional support will be determined on case-to-case basis during socio-economic survey.

Moreover, the project will take special measures to ensure that disadvantaged and vulnerable groups have equal opportunity to access information, provide feedback, or submit grievances. The deployment of PIU's Public communication, social and citizen engagement specialist will help to ensure proactive outreach to all population groups. Focus groups dedicated specifically to vulnerable groups will be conducted to gauge their views and concerns.

The project will carry out targeted consultations with vulnerable groups to understand concerns/needs in terms of accessing information, facilities and services supported by the project and other challenges they face at home, at workplaces and in their communities.

In addition to the above, vulnerable PAPs will be given priority of employment on the project if possible. The universal accessibility of all infrastructure undergoing renovation will be ensured starting from the design stage

7.4.15. Gender risks

There is low risk associated with the Project and in the Country in relation to Sexual exploitation, Abuse (SEA) and Sexual Harassment yet promotion of avoidance of SEA relying on the WHO Code of Ethics and Professional Conduct for all workers and provision of gender sensitive infrastructure and segregate toilets shall be imposed to the Contractors through the tender specific mitigation instruments to be incorporated into the tender

documents. Although SEA/SH risk for this project is assessed as low (expected local employment and no labor influx), Contractors will be required to develop Code of Conducts and SEA/SH Code of Conduct which must be read, understood and signed and signed by all workers.

7.4.15.1. Measures against Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH)

Sexual Exploitation and Abuse and Sexual Harassment, or communicable diseases are not anticipated in relation to the project. Serbia has in place a set of national laws addressing the issues of gender-based violence and sexual harassment. The law on prevention of harassment in the workplace obliges employers to designate a focal point who can receive confidential complaints on harassment, including sexual harassment. Employers' internal rulebooks regulate disciplinary procedures in cases of sexual harassment. National laws also include provisions on the prohibition and penalization of various forms of sexual exploitation and abuse. The project is expected to engage some contractors and workers and will not include the type of works which would initiate a large labor influx. The project works will take place in areas which can be supervised. The SEP includes dedicated consultations with women's groups. A dedicated grievance mechanism will be equipped to receive confidential SEA/SH complaints. The project workers will receive training on the prevention of SEA/SH.

Under PIU supervision, the contractors will appoint senior focal points with responsibility for ensuring that commitments and policies to prevent SEA/SH are implemented. Increase women's representation, put in place monitoring systems commensurate to the risk for regular reporting on SEA/SH. Include requirements around SEA/SH in codes of conduct, policies and protocols for contractors, including training on policies and procedures once developed. SEA/SH CoCs must be read, understood and signed by all workers. Ensure codes of conduct are publicly disclosed in local languages and are widely accessible to all workers and all groups of people in project areas. SEA/SH risk assessments will be integral part of screening, assessments and tools and appropriate measures will be integrated into environmental and social management plans (ESMPs). The assessment of gender and safety risks will be included in bidding process for contractors. Contractors will be obliged to address SEA/SH through prevention and response, through inclusion of SEA/SH clauses in the contract. To address the issues of women safety concerns within rail stations the project architecture female passenger-friendly features such as breastfeeding rooms and sanitation facilities will be designed, appropriate safety and security design elements, e.g. lighting applied and staff will be trained on SEA/SH and bystander intervention.

7.4.16. The risk of informal work

Small rehabilitation activities tend to have shadow workforce. The risks of unpaid and underpaid work, work overload, poor terms and conditions of engagement, lack of occupational health and safety measures, and denied access to social security, pension or health insurance are associated with informal work. Through this ESMF a Labor Screening and Compliance checklist and Monitoring and Evaluation procedures have been developed to be included as mandatory in each call for proposal providing compliance of third parties i.e. beneficiaries of the Project to the ESS2 requirements. To safeguard workers' rights and labor conditions for project workers a Labor Management Plan (LMP) has been prepared in line with the national legislation and ESS2. The LMP shall be applicable and enforceable to both PIU employing or engaging worker directly and to any third party who has been contracted by the PIU to provide works, services or goods required for the core functions of the project. Community workers will not be involved. Third parties will be required through the provisions of the LMP to ensure their Suppliers and subcontractors comply with the national law and to ensure that Employees of any Suppliers or subcontractors are adequately trained on the requirements covered in the law. The PIU reserve the rights to verify compliance with the requirements set by a combination of mechanisms including but not limited to self-assessments, surveys, site-visits or audits. Relevant Records must therefore be maintained to demonstrate compliance and if necessary, allow access to their own and their Suppliers' and subcontractors' premises for authorized representatives of the PIU and/or the supervision consultant.

7.4.17. Occupational health and safety risks

Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity and may occur from:

- Rotating and moving equipment. protective measures include: Turning off, disconnecting, isolating, and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts, or in which energy can be stored (e.g. compressed air, electrical components) during servicing or maintenance, Designing and installing equipment, where feasible, to enable routine service, such as lubrication, without removal of the guarding devices or mechanisms.
- Noise. Noise limits for different working environment need to be observed and the use of hearing protection should be enforced actively and periodic medical hearing checks should be performed on workers exposed to high noise level.
- Vibration. Exposure levels should be checked on the basis of daily exposure time and data provided by equipment manufacturers.
- Electricity. Exposed or faulty electrical devices, such as circuit breakers, panels, cables, cords and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders, and by vehicles with metal booms. Vehicles or grounded metal objects brought into close proximity with overhead wires can result in arcing between the wires and the object, without actual contact. Recommended actions include: Marking all energized electrical devices and lines with warning signs , Locking out (de-charging and leaving open with a controlled locking device) and tagging-out (warning sign placed on the lock) devices during service or maintenance; Checking all electrical cords, cables, and hand power tools for frayed or exposed cords and following manufacturer recommendations for maximum permitted operating voltage of the portable hand tools ; Double insulating / grounding all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits ; Establishing “No Approach” zones around or under high voltage power lines; Rubber tired construction or other vehicles that come into direct contact with, or arcing between, high voltage wires may need to be taken out of service for periods of 48 hours and have the tires replaced to prevent catastrophic tire and wheel assembly failure, potentially causing serious injury or death; Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work.
- Working with Chemicals.
- Welding and hot work. Recommended measures include: Provision of proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations
- Industrial Vehicle Driving and Site Traffic. Safe driving practices are to be implemented and include Training and licensing industrial vehicle operators, medical surveillance of drivers, establishing site speed limits, vehicle inspections, operating rules and procedures (e.g. prohibited operation of trucks with elevated platform after unloading)
- Working at Heights. Fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters; into operating machinery; into water or other liquid; into hazardous substances; or through an opening in a work surface. Fall prevention may include: installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area, Proper use of ladders and scaffolds by trained employees, Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines, Appropriate training in use, serviceability, and integrity of the necessary PPE.
- Loading and unloading
- Materials management
- Site management
- Accidental situations
- Life and firesafety

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7.4.17.1. OHS measures

In accordance with the Law on Health and Safety at Work (“Official Gazette of RS”, no. 87/05), measures of protection at work need to be envisaged to prevent hazards that may occur during the construction of a building. The prevention of hazards during the execution of works requires engaging an organization to

implement the works registered for the type of activity subject to the technical documentation hereof. The organization must have a person at the construction site authorized to manage works, having passed the professional examination and in compliance with other conditions as per the Law on Planning and Construction. The authorized person and all other persons involved in the execution of works shall adhere to the regulations, standards and norms for the type of activity they engage in, as well as the Law on Health and Safety at Work (Off. Gazette of RS, no. 87/05).

The MCTI shall provide expert supervision over the execution of works. Prior to the commencement of works the precise position of all installations must be determined and all measures undertaken to avoid damages, as well as injury to workers and other persons located at the construction site. The contractor shall produce a Report on the Organization of the Construction Site, a site-specific operation and plan, produced as separate documentation based on the Construction or Design for Execution. The Report on the Organization of the Construction Site must be dully executed. Such report shall be provided by the contractor (manager of works) and certified by the representative of the MCTI or the supervision service, and thereafter the works may commence. The Report on the Organization of the Construction Site contains three sections:

- Schematic view of the construction site, i.e. situation plan;
- Description of works;
- Measures for health and safety at work (COntractor's OHS Plan).

When the works at the construction site are implemented by a single employer, or if the works are implemented by several employers in sequence, each of the employers shall produce a report on the organization of the construction site.

The employer, or employer's representative, has to ensure that, prior to commencement of work, a Plan of preventive health and safety measures is prepared.

The Plan of preventive health and safety measures and technical documentation required for construction in accordance with the regulations on planning and construction provide the basis for risk assessment regarding the likelihood of injuries and health hazards for specific jobs and working environment on the site.

The employer ensures that employees should work at workplace and in the working environment where health and safety measures have been implemented, while taking into account the instructions and guidelines provided by the design coordinator and coordinator for execution of works, guidelines under this ESMF and EHSG and cooperating with other employers and persons in implementation of health and safety measures.

All the employers on the construction sites have to be familiar with the Plan of preventive health and safety measures, and possible amendments to the Plan, and inform the Investor about it in writing

The contents of the report on the organization of the construction site should be available at the construction site, correspond to the factual situation, and encompass required and updated appendices, namely:

- List of workplaces with increased risk;
- List of employees appointed to workplaces with increased risk and medical examinations of employees appointed to such places;
- List of employees trained for healthy and safe work, including a signed list of employees introduced to the health and safety at work measures established in the relevant report.

Measures of protection at work, as per the Rulebook on the content of the report and organization of the construction site ("Official Gazette of RS" no. 121/2012), encompass:

- Measures to eliminate, mitigate or prevent risks regarding works implemented at the construction site;
- Method of organizing the provision of first aid at the site, rescue and evacuation in case of danger;
- Measures to eliminate, mitigate or prevent risk in the use of explosives (unloading, storage, loading, transport, disposal at the place of use and use of explosives), as well as undertaking measures, if the presence of hazardous objects is established (unexploded devices), and/or substances and measures for the professional removal;
- Measures to eliminate, mitigate or prevent risk during prefab construction, encompassing unloading, storage, setting into the lifting position, lifting of elements, setting into the designed position and

securing from falling over or falling in the raised position;

- Measures for the protection of employees from vehicles and measures for the unfettered operation of traffic, when a public road passes through the construction site area.

The contractor may only start work when the construction site is established and organized as per the provisions of the Rulebook on safety at work during the implementation of construction works (Official Gazette of RS no. 53/97). The report whereby the company, as per the regulations on workplace protection, reports to the competent Labor inspection on the commencement of works shall contain data defined by Article 237 of the Rulebook on protection at work during the implementation of construction works. The contractor likewise submits the Report on the Organization of the Construction Site to the Labor inspection along with the report on the commencement of works. OHS management plan will be developed by all contractors prior to starting work.

Provisions should be made to provide OHS orientation training to all new employees to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow employees. Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

If visitors to the site can gain access to areas where hazardous conditions or substances may be present, a visitor orientation and control program should be established to ensure visitors do not enter hazard areas unescorted.

Copies of the hazard coding system should be posted outside the facility at emergency entrance doors and fire emergency connection systems where they are likely to come to the attention of emergency services personnel. Representatives of local emergency and security services should be invited to participate in periodic (annual) orientation tours and site inspections to ensure familiarity with potential hazards present.

Contractor’s OHS plan must be compliant to ESF, WB EHSG and Good International Industry Practices (GIIP).

7.4.18. Community health and safety risks

The major risks tied to Community health and Safety relates to project activities taking place outside of the traditional project boundaries, but nonetheless also the project operation within the limits of the construction sites. One of the prominent risks is the traffic and road safety risks to workers, affected communities, road and rail interface users throughout the construction period. Adequate Traffic management plans shall be in place. Emergency Preparedness and Response Plan that is commensurate with the risks of the facility will be prepared for each project and unplanned event when a project operation loses control, or could lose control, of a situation that may result in risks to human health, property, or the environment, either within the facility or in the local community. These risks mainly stem from increased traffic on haulage routes from and to potential borrow and deposit areas to be used by the Contractors during construction works. Increased risk from hazardous waste and material, use of chemicals and their improper disposal. Health and safety risks posed by the influx of workers or people providing support services into an area are considered negligent. There should be full and proper consultation with all interested parties during the preparation of site-specific emergency plans, including those institutional stakeholders that have their own emergency plans prepared in accordance with pertinent laws.

7.4.18.1. Community health and safety measures

Community health and safety measure were partially covered under previous chapters (noise protection, vibration, etc.). Further risk management strategies are required to protect the community from physical, chemical, or other hazards associated with sites under construction. Risks may arise from inadvertent or intentional trespassing, including potential contact with hazardous materials, contaminated soils and other environmental media, buildings that are vacant or under construction, or excavations and structures which may pose falling and entrapment hazards.

Risk management strategies may include: Restricting access to the site, through a combination of institutional and administrative controls, with a focus on high-risk areas depending on site-specific situations, including fencing, signage, and communication of risks to the local community.

Where hazardous conditions on construction sites cannot be controlled effectively with site access restrictions, removal of risks through e.g. covering openings to small, confined spaces, ensuring means of escape for larger openings such as trenches or excavations, or locked storage of hazardous materials will be implemented.

Construction activities may result in a significant increase in movement of heavy vehicles for the transport of construction materials and equipment thus increasing the risk of traffic-related accidents and injuries to workers and local communities. While the exposure of workers to traffic, related risks are covered under appropriate OHS section community exposure should be minimized through a combination of safety measures, education and awareness-raising, and the adoption of procedures commensurate to the risks and sensitivity of receptors and areas.

Adoption of best transport safety practice with the following measures, inter alia, are required:

- Preparation of on and off construction site traffic management plans;
- Minimizing pedestrian interaction with construction vehicles;
- Collaboration with local communities and responsible authorities to improve signage, visibility and overall safety; of roads, particularly along stretches located near schools or other locations where children may be present;
- Collaborating with local communities on education about traffic and pedestrian safety (e.g. school education campaigns);
- Coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents;
- Using locally sourced materials, whenever possible, to minimize transport distances;
- Employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions;
- Speed limits;
- Continuous training of construction vehicle drivers;
- Using qualified experienced construction vehicles drivers;
- Monitoring of traffic behavior and monitoring of grievances related to traffic safety.

Continuous stakeholder engagement between the project and the local population (through municipal bodies and local councils and the GM) in line with the PSEP adopted for the project and subsequent sub-project specific SEPs, will be a supplemental mitigation measure alongside all others.

The concept of universal access will be considered during reconstruction or design of the facilities, taking into consideration the qualifying characteristics of the groups and individuals that has identified them as vulnerable though the PSEP, subsequent sub-project specific SEPs and any other SA.

7.4.18.2. Fire protection and accidental situation response measures

In accordance with the Law on Fire Protection (“Official Gazette of RS” no. 111/09 and 20/15) -installation must be checked at least twice a year by the authorized legal person (by the Ministry), in accordance with technical regulations and the manufacturer's instructions for periodic monitoring. About completed tests shall maintain records which shall contain information on performing verification and issue expert finding. Employees who carry out checks must have passed the certification exam. All employees at the site will be trained in procedures and use of fire protection equipment as well as fire prevention.

For all facilities required for the Public Access structures (e.g. stations, train) of the project, e.g. places serving for accessibility to trains, tracks, train stations, places where citizen engagement activities will be conducted, etc. Life and Fire Safety (LFS) measures will be implemented in an LFS Master Plan in accordance with specifications in the WBG EHS guidelines.

Emergency preparedness and response plan, and firesafety for both during the construction and operational stages, will be integrated to all ESAs.

Significant accidents and incidents will be reported to World Bank without delay. Procedure in the case of accidenst will be developed before bidding of works and in compliance with the ESCP set procedures and requirements.

7.4.19. Traffic related risks

The rail and traffic interruptions may be caused by works on railway lines and rail-road crossings. In case such works will be carried near inhabited or traffic intensive areas, traffic management plans will be prepared in site-specific ESAs with specific measures that ensure safety of all traffic participants in the construction as well as operational phase.

The **measures** can include:

- providing safe corridors and crossings for pedestrian movement,
- installation of safety systems at railway crossing (sound and visual warnings, gate arms),
- introducing resting areas,
- adjusting site working hours in accordance to needs of local population, etc.

Traffic management plans will be coordinated with the municipalities as well as competent authorities (traffic police).

Risks related to transport of dangerous goods will be addressed through development of specific guidelines for freight services taking account the national regulatory framework (e.g. Law on transport of dangerous goods, Law on chemicals, Law on OHS, etc.), international treaties, and best sectoral practices.

7.4.20. Cumulative impacts

As most of the works will take place on existing lines and facilities, and only limited sections construction will be supported through the project (outside of sensitive and valuable areas), significant cumulative impacts are not expected.

7.5. **Risks in the operational phase**

7.5.1. Noise

Exceeding limits for noise in urban areas and damage to infrastructure from vibrations in regular everyday railway traffic, as well as related disturbance, are important risks in the railway operations.

7.5.1.1. Measures

For permanent way, open line and in the stations, use the elastic fastenings, and on bridges, overpasses and through the urban city zone elastic rugs under the surface, which will contribute to mitigating the potential impacts of noise.

Noise monitoring is recommended during railway utilization, and not only in settlements, in order to adequately react in case of exceeding permitted values.

It is also important, as an additional protection measure, to ensure that in the future the construction of residential facilities is not permitted at distances from the track axis where permitted noise levels may be exceeded, which was not the case until now, monitor the state of noise with increasing traffic load.

For open lines and in the stations, use the elastic fastenings, while on bridges, overpasses and through the urban city zone elastic rugs under the surface, which will contribute to mitigating the potential impacts of vibration.

7.5.2. Risks from accidental situations

Transport of dangerous goods is a significant risk of railways in the operational phase, it can cause significant soil and ground water pollution through leakages, spills or accidents, consequent generation of large quantities of hazardous waste from site remediation and cleaning, and can pose a great threat to human health, even life.

7.5.2.1. Measures to be undertaken in case of accidents

In case of extraordinary events in transporting hazardous substances of greater amounts, a recovery procedure needs to be implemented in the presence of representatives of the mobile eco-toxicological unit and experts from the Emergency Situation Sector of the Ministry of Interior (MoI) of the Republic of Serbia. The recovery procedure is implemented by specialized companies holding permits to implement such interventions. The Contractor will prepare an Emergency Response Plan for each sub-project acceptable to the PIU.

7.5.2.2. Safety measures, including signaling-safety devices and telecommunication facilities

Cables are built so that their outside protection of PE is water insoluble, while mechanical and electrical protection made from Al and Fe, even in case of direct contact with ground water, does not produce harmful chemical compounds. The measures of setting up PA devices are envisaged by the design. Likewise, the design defines an area covered by the sound signal, and as needed this can be next to the station and public surface (station square). The level of sound signal is defined so that it cannot act harmfully on the listeners, nor disturb the environment.

Radio-devices are used in accordance with the conditions prescribed by the Regulatory Agency for Electronic Communication and Postal Services – RATEL, so that there are no disturbances for other users of radio-frequencies. Fire alarms are produced, transported and installed in accordance with the relevant regulations, therefore no harmful radiation can occur. The level of radiation is such that it cannot act harmfully on the environment during normal utilization regimes.

Implementation of rail operational safety procedures aimed at reducing the likelihood of train collisions such as a positive train control (PTC) system will be a part of Safety Management System applied at all WBs financed lines.

7.5.3. Contact Network risks

Large sections encompassed by the Project are electrified. These require careful planning to avoid injuries and fatal accidents during works as a result of contact with the high-voltage network.

7.5.3.1. Measures

Protection from accidental contact with segments under high-voltage is achieved by applying the prescribed distance from lines under voltage, isolation, protective barriers, warning plates and labels. Short circuit protection in the 25 kV network is achieved by distance protection of the CN and vacuum switches in the output fields of ETS. Protection from excessive contact and step voltages is achieved through grounding of the bearing structures of the CN and all other metal structures, 8m from the track axis of the grounded rail by the track for the return CN line in accordance with the regulations and reliable and rapid shutdowns of voltage in the CN in case of error. Protection from inexpert handling is provided by organizing a CN maintenance network and using the relevant instructions, rulebooks and manuals. Fire and explosion hazards have been eliminating by using standard equipment elements that are not flammable and do not support burning. The use of electric drives in spaces exposed to explosive mixtures is not permitted. Protection from electromagnetic impact on surrounding lines is achieved by using SS devices and TC devices and lines envisaging relevant protection measures during their design and construction, cables with small reduction factors. The strengths of the electric field and magnetic induction do not exceed the permitted values even in the most critical points that would be accessible to staff or passengers, therefore there are no harmful effect of their action.

During works execution, the risk related to this impact will be handled by using Checklist ESMP procedure, as described in Appendix 12 to this ESMF (section O of the Checklist ESMP- Rehabilitation of contact network).

7.5.4. Mitigation measures for accidental situations

Emergency preparedness and response plan for both during the construction and operational stages, will be integrated to all ESAs.

8. ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT

8.1. Risk classification according to the WB

As part of the environmental and social procedures a categorization system for subprojects with clearly defined risk categories in line with the ESF. The risk categorization will inform the scope and nature of the environmental and social due diligence and risk management of activities and subprojects. Sample risk categories and mitigation measures are outlined in Annex 3 (the scope and nature of the activity environmental and social due diligence and risk management of its subprojects.

The Bank classifies all projects in one of the four following groups, the:

- High Risk
- Substantial Risk
- Moderate Risk
- Low Risk.

General risk classification is available in the Annex 14

To determine appropriate risk classification, the following issues are and will be taken into account:

- Type, location, sensitivity and scope of the project,
- Nature and magnitude of potential environmental and social risks and impacts, as well as
- Borrower's (including any other agency responsible of project implementation) capacity and commitment to manage environmental and social risks and impacts in the manner consistent with ESSs.
- Other areas of risk that may be relevant to delivery of the ES mitigation measures and outcomes.

Other areas of risk can be also relevant for implementation of measures, as well as for results of environmental and social impacts mitigation measures, depending on specific project and context. These can include legal and institutional framework and its implementation and supervision strength, nature of mitigation and the proposed technology, managerial structures and legislation, as well as considerations related to stability, conflict or security.

The overall Environmental and Social Risk Classification of the Phase 2 of the Project is **Moderate**

Each activity to be funded under the Phase 2 of the Project identified and to be identified (tentative list provided in Annex 01) will be screened against the eligibility criteria and requirements of the ESF Policy by using the information of Environmental and Social Screening Questionnaire provided in Annex 03 in an order of precedence as provided in the decision-making algorithm provided in Sub-Project ESA Flowchart.

Based on the eligibility criteria agreed and vetted by the WB any activity and sub-projects classified as “High risk” will not be eligible for financing under the Project.

8.2. Associated facilities

The World Bank Environmental and Social Policy for Investment Project Financing also requires the application of the ESSs to Associated Facilities. Associated Facilities will meet the requirements of the ESSs, to the extent that the Borrower has control or influence over such Associated Facilities. The Bank will require the Borrower to demonstrate the extent to which it cannot exercise control or influence over the Associated Facilities by providing details of the relevant considerations, which may include legal, regulatory and institutional factors. The term “Associated Facilities” means facilities or activities that are not funded as part of the project and, in the judgment of the Bank, are: (a) directly and significantly related to the project; and (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria. Whether or not facilities not financed by the WB fall under this category will first be assessed, and if it may be the case, adequate E&S due diligence conducted and E&S instruments prepared/or applied to manage the risks in line with ESF.

8.3. **Assessment and Management of Environmental and Social Risks and Impacts**

Towards addressing the risks, following risk management instruments have been prepared: (i). This Environment and Social Management Framework (ESMF), (ii) Project Level Stakeholder Engagement Plan (PSEP); (iii) Labor Management Procedures (LMP) prepared as a self-standing document proportionate to the risk associated with Labor and (iv) Resettlement Policy Framework (RPF). The ESMF covers and integrates applicable ESF Standards and the World Bank Group's Environmental Health and Safety Guidelines and the Environmental, Health, and Safety Guidelines for Railway and GIIP.

The ESMF has provides a screening checklists helping to determine the activity risk level as well as when site specific Management Plans (ESMPs) or ESMP Checklists are required, developed in line with the ESSs, World Bank Group General EHS guidelines, and Railway EHS guidelines as well as national regulation. Where ESIAs and ESMPs already exist or are under development, where planned activities are already at some stage of preparation or implementation, they will be reviewed and revised accordingly (if needed) to meet the requirements of the ESF, World Bank Group General EHS guidelines, and Railway EHS guidelines and national regulation.

The template for ESMP Checklist for railway modernization is provided in Annex 12 of this document.

8.4. **Environmental and Social Review (Step-by-Step}**

For projects involving multiple subprojects the World Bank requirements involve mandatory review of adequacy of local environmental and social requirements relevant for the subprojects, as well as assessment of the Borrower's capacity to manage the environmental and social risks and impacts of such subprojects, particularly, Borrower's capacity to (a) perform subprojects screening; (b) ensure necessary specialists for conducting environmental and social assessment; (c) review findings of environmental and social assessment for individual subprojects; (d) implement mitigation measures; and (e) monitor environmental and social impact during project implementation. The WB requires appropriate environmental and social assessment of subprojects is carried out, and prepare and implement such subprojectsModerate Risk and Low Risk subprojects, in accordance with national law and any requirement of the ESSs that the Bank deems relevant to such subprojects by developing **and following procedures to secure ESF and regulation compliant implementation**. If necessary, the project may envisage measures to further strengthen Borrower's capacities. Substantial and high risk projects will be screened out and excluded from financing.

The PIU will ensure, that environmental management is an integral part of subproject planning, design, implementation, and operation and maintenance. The PIU will screen, monitor and report on the environmental and social performance, national legislation and ESF compliance under each subproject ensure efficient application of measures as defined in site-specific management instruments including ESMF.

Each subproject and its activities must undergo environmental and social assessment compliant to this ESMF, and consequently the ESF integrating stakeholder engagement activities including consultation and feedback, including Technical Assistance activities.

The Environmental and Social assessment will follow the 5 step Process to identify risks associated with specific sub-projects, screen out any high-risk activity, identify potential impacts and define measures aimed to prevent or minimize negative impacts and determine the type of management instrument required to meet the project standards.

STEP 1: Subproject screening and risk classification

The Environmental and Social Screening Questionnaire (ESSQ) provided in Annex 03 will be updated for specific projects if needed, and **shall be completed by the PITs** as they will likely have possession of or access to the most relevant information required for adequate screening, under the guidance of the PIUs Environmental and Public communication, social and citizen engagement specialist. However PIU is ultimately responsible for the screening process. Once the ESSQ has been satisfactorily completed (excluding substantial and high-risk activities and other non-eligible activities), **the PIU and the Environmental and social and citizen engagement specialist will submit the document and the E&S Screening report to the WB together with the**

proposed decision on the category of the subproject/activity. The final decision requires endorsement of the World Bank.

The Environmental and Social Screening questionnaires comprises four parts:

(1) **Administrative and institutional data:** includes a narrative part that characterizes the project, including administrative and institutional data, and a brief description of technical contents of the project, as well as the location of the subproject. This part can contain up to two pages of text. Annexes for all additional information can be supplemented if necessary.

(2) **Project eligibility criteria:** includes questions that should assist in determining whether the project in question is eligible for funding.

(3) **Basic information on proposed subproject, and**

(4) **Project information relevant for impacts and risks:** includes a series of questions on potential adverse environmental and social impacts covering all ESS 1-10, with two possible answers: "yes" or "no".

All subprojects likely to have significant, diverse, and/or long-term adverse impacts on human health and natural environment, the magnitude of which is significant or difficult to determine at the subproject identification stage are classified as “Substantial Risk” or “High Risk” sub-projects. The existing EIAs, prepared under national regulation, shall be subject to review both in scope and substance and will be revised if needed should the review shows incompliance to ESF and WB EHSG.

After reviewing the ESSQ, the screening will result in the project being classified in one of the following categories (this table is to be read in conjunction with Figure 10: Sub-Project ESA Flowchart) (detailed risk features as provided in the Annex 14):

Category	Risk Level	Decision
1	**Low Risk** project (with negligible environmental and social impacts for which an environmental impact assessment is not necessary)	Eligible for financing. No additional environmental and social assessment necessary
2	**Moderate Risk** project (project is expected to be of manageable, easy to envisage, temporary and of local impact)	Eligible for financing. It is necessary for PIU to develop **Checklist ESMP or ESMP**. Public Consultations are mandatory.
3	**Substantial Risk** project (with potential and very significant or irrevocable environmental and social impacts, whose size is difficult to determine in the project identification phase)	NOT eligible for financing.
4	**High Risk** project (likely to have highly significant, diverse, and/or long-term adverse impacts on human health and natural environment, the magnitude of which is difficult to determine at the subproject identification stage. These impacts may also affect an area broader than the subproject sites. Measures for mitigating such environmental risks may be complex and costly. Specific for this Project, but not limited to, the high-risk activities include: • Construction of substantial new railway lines (new routes); • Construction of small new lines such as bypasses, connections, and similar in sensitive and valuable natural areas, those causing fragmentation of habitats; • Other causing significant adverse impact to sensitive and valuable natural areas.	Not eligible for financing.

Category	Risk Level	Decision

Environmental and Social Screening Questionnaire is enclosed as Annex 03 to this ESMF document.
Before the assessment, PIU prepares a screening report, subject of the approval from WB Environmental and Public communication, social and citizen engagement specialist, who confirms the risk.

STEP 2: Sub-Project Preparation

The **PIU/PITs prepares necessary documentation for Sub-Project** implementation including, Technical documentation (this shall include climate-sensitive design solutions, capacity building, and installation of preventive systems). for the subproject to be financed including the technical description of the subproject, permits and approvals issued by competent bodies related to the implementation of the subproject as well as the time schedule of works.

STEP 3: Preparation and Disclosure of ESIA, ESMP and Checklist ESMP and public consultations

The, ESMP, or the Checklist ESMP (for "Moderate Risk" subprojects) are to be prepared for each individual subproject, prior to bidding procedures, by the PIUs Environmental and Public communication, social and citizen engagement specialist, and shall be subject to review and approval of the WB.

ESMP/ESMP Checklist and E&S Audit Reports shall be publicly disclosed and public consultations conducted. The documents shall be disclosed on PIU/MCTI websites and websites of local Municipalities. It is the responsibility of PIU/PITs to organize disclosure of subject documents, announce calls for public consultations in media and on local municipality level, prepare and perform presentation of the sub-projects and its environmental and social aspects in line with the Project Level SEP. Alongside the documents, an invitation for the public consultation will be published (e-format and printed media) and comments are invited to be submitted electronically and written submission thereof within a clearly defined time period (for a minimum of two weeks). Hard copies shall be made available at IZS premises, and other locations as deemed relevant. By the end of the disclosure period, the public consultation meetings for the ESAs shall be conducted, inviting stakeholders and the general public to proactively participate. The public consultation meeting for ESMP Checklists will be agreed at a later stage with the WB.

All comments and questions shall be processed and together with feedback incorporated in the final version of the Environmental Assessments (EAs, meaning ESMP, ESMP Checklist, E&S Audit) and captured in the minutes of the meeting. The disclosure and consultation shall be guided by the project PSEP and subsequent SEPs and consider potential limitations to traditional engagement.
The PIU will submit such final document with the confirmation of re-disclosure, and where documents can be accessed to the WB.

STEP 4: Integration of ESMP and Checklist ESMP in tender documents

The EAs (ESMP, ESMP Checklist) will be prepared prior to the bidding of works and the PIU will be responsible to integrate final version into tender documents for the selected subprojects and in the contracts for their execution to be signed with the selected works contractors. The Contract agreements shall impose the Contractor's obligation to comply with the requirements specified in the EAs. The Contractors will be required to demonstrate that all mitigation measures have been accounted for to ensure subproject implementation in environmentally and socially acceptable manner.

Standard Bidding Documents of the WB for Procurement of Works contain clauses for enhancement of environmental, social, health and safety performance. Additional sample clauses to be included in the Particular Conditions, including requirements for ESHS staff to ensure a successful implementation of ESMPs by the Contractors are enclosed within the Annex 17 of this ESMF document.

STEP 5: Implementation, project supervision, monitoring and reporting

Implementation of mitigation measures and environmental and social monitoring is an obligation of the Contractor compliant to ESMP and Checklist ESMP. The **Supervision Engineer** (compliant to the Standard conditions of contract (i.e. FIDIC Yellow book and FIDIC Red Book or MDBH Harmonized edition (Pink book) and (ii) the **PIU specialists**), alongside other routine activities, shall supervise the Contractor`s Environmental and Social performance and verify compliance with E&S Instruments. **The overall implementation and compliance responsibilities lie with the MCTI (PIU)**. The PIU (E&S Specialists) will report on ESA implementation and E&S (ESF, national regulation, and EHSG) compliance to WB in Progress Reports, while sub-project ESAs implementation reporting will be quarterly, unless differently agreed with the WB E&S specialists.
PIU E&S Specialists will regularly supervise works and review monthly reports, propose corrective measures when needed (when incompliance is recorded) and ensure their implementation. In the case Contractor fails to implement corrective measures and/or remove reported E&S incompliances, the PIU and WB can stop works or withhold payments until the E&S compliance is reestablished.

8.4.1. Associated Facilities

The World Bank Environmental and Social Policy for Investment Project Financing also requires the application of the ESSs to Associated Facilities. Associated Facilities will meet the requirements of the ESSs, to the extent that the Borrower has control or influence over such Associated Facilities. The Bank will require the Borrower to demonstrate the extent to which it cannot exercise control or influence over the Associated Facilities by providing details of the relevant considerations, which may include legal, regulatory and institutional factors. The term “Associated Facilities” means facilities or activities that are not funded as part of the project and, in the judgment of the Bank, are: (a) directly and significantly related to the project; and (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria. Whether or not facilities not financed by the WB fall under this category will first be assessed, and if it may be the case, adequate E&S due diligence conducted and E&S instruments prepared/or applied to manage the risks in line with ESF.

8.4.2. E&S review for Technical Assistance

Although TA activities generally carry a low E&S risk in the Project implementation phase, they can have notable E&S impacts further downstream, some that can be avoided or mitigated in the TA design. TA envisaged under this project, including design of rehabilitation interventions, and other infrastructure related activities, is a subject to environmental and social due diligence (compliant to ESF) under this Project. Specific steps to be taken include:

Step 1: PIU E&S Specialists screen ToR prepared for TA against ESF ESSs end determine its potential E&S risk for the implementation phase. If the risk is low, no further action needs to be taken. If the future risk is moderate, E&S Specialists notify the PIU (and the WB in a regular Progress Report) that a particular TA needs further E&S assessment. TA with potential downstream significant and high risk will not be supported under this Project.

Step 2: When TA documents are in high draft, they will be shared with PIU Environmental Specialist and PIU Social Specialist for E&S assessment against ESF ESSs. PIU E&S Specialists carry out assessment and make recommendations to mitigate identified E&S risks and make recommendations for further E&S performance of TA. Assessment results and recommendations are presented in the E&S Assessment Report.

Step 3: E&S Assessment Report is reviewed (also revised by PIU E&S Specialists if needed) and approved by the WB. Approved E&S Assessment Report is disclosed for 14 days at Ministries or Project web site with a call for comments. E&S Assessment Report is considered final when it addresses all relevant comments, feedback is provided to public, and consultation minutes are included (e.g. as an annex) acceptable to the Bank.

The diagram below depicts the ESA Process.

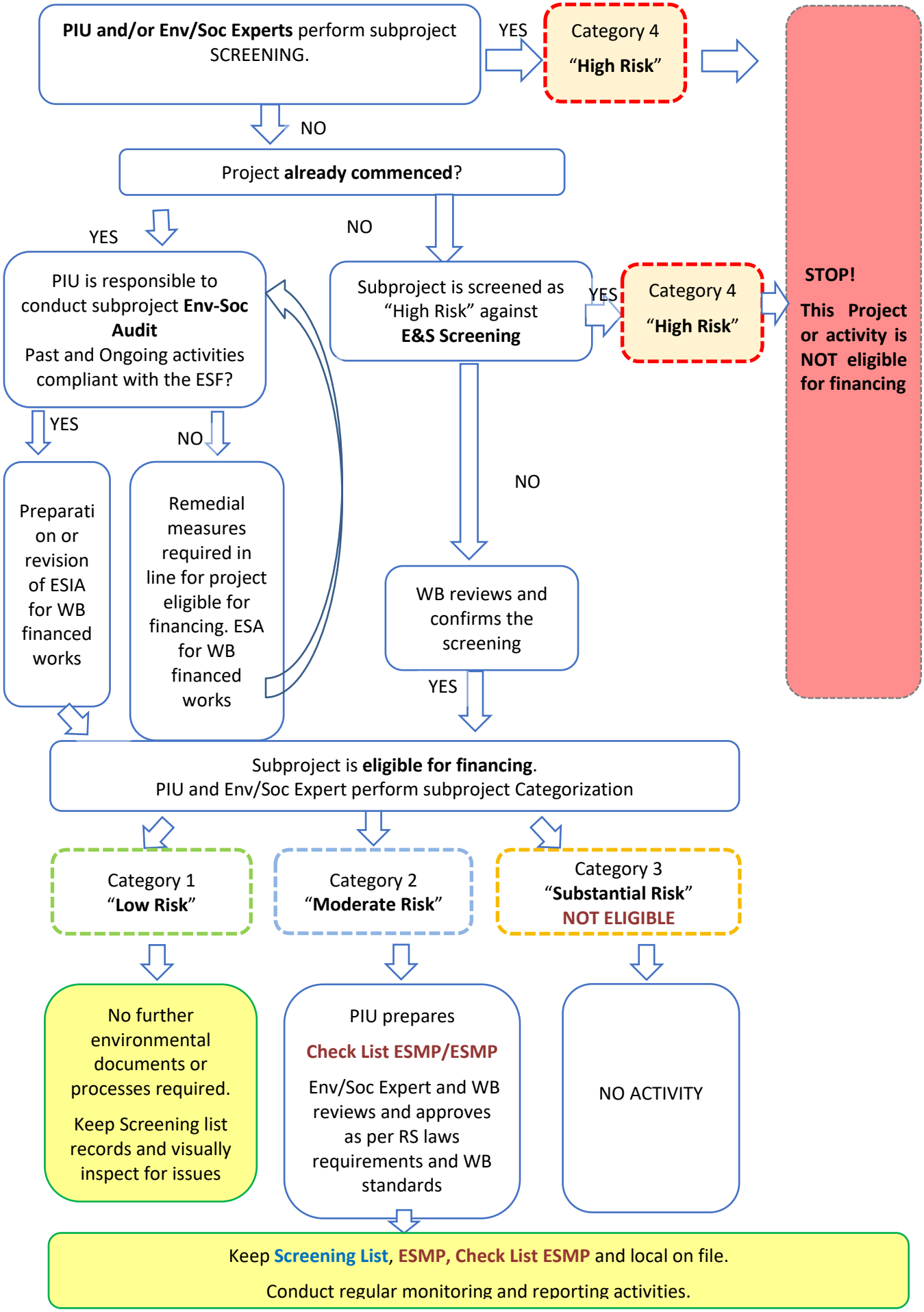

Figure 10: Sub-Project ESA Flowchart

8.5. **Standardized Environmental and Social Management Plans (ESMP)**

Within the Phase 2, the only subcomponent that includes construction works is the Subcomponent 1.2 – Modernization of railways maintenance facilities. The other components include procurement and maintenance of the railway infrastructure, and institutional strengthening. Therefore, depending on magnitude and type of construction works that will be undertaken, the national EIA may be needed for this subcomponent.

The Environmental and Social Management Plan (ESMP) for the subprojects classified as "Moderate Risk" projects, will identify the principles, approach, procedures and methods that will be used to control and minimize the environmental and social impacts of all construction activities and further, on the operation phase of the respective investments.

ESMP is an Action Plan that indicates which of the ESA report recommendations and alternatives will actually be adopted and implemented. It will ensure incorporation of the relevant environmental factors into the overall project design and will identify linkages to other safeguard policies relating to the project.

ESMP should define which documents should be developed for each subcomponent based on impacts identified during route survey, roles and responsibilities for their implementation as well as procedures and methods that will be used.

ESMP should outline the mitigation, monitoring and administrative measures to be taken during project implementation to avoid or eliminate negative environmental impacts, and may also be an effective way of summarizing the activities needed to achieve effective mitigation of negative environmental impacts.

ESMP identifies feasible and cost-effective measures that may reduce potentially significant adverse environmental impacts to acceptable levels.

The borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP will be executed effectively. Consequently, the Bank expects the plan to be specific in its description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and it must be integrated into the project's overall planning, design, budget, and implementation. Such integration is achieved by establishing the ESMP within the project so that the plan will receive funding and supervision along with the other components.

ESMP document will ensure that the environmental mitigation measures and their practical monitoring become a legal responsibility of PIU established within the MCTI.

Below is the recommended content of each ESMP:

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

8.5.1. Waste management as part of ESMP document

Respecting the expected nature of projects that will be proposed for financing under the Project, it can be concluded that, among other project specific impacts, a waste production will be unavoidable for majority of subprojects. Therefore, waste management will be mandatory elaborated within the ESMP documents and Waste Management Plans (WMP) should be developed by subproject Contractors as part of their own Site-Specific Implementation Plans.

WMP shall contain the following:

- Documentation on the waste generated by the company (origin, type of waste pursuant to waste classification list, composition, volume),
- Measures to be taken to limit waste generation, particularly in case of hazardous waste,
- Segregation of waste, particularly segregation of hazardous waste from other types of waste and from recyclables,
- Waste disposal practices,
- Waste treatment and/or disposal methods.

Serbian Rulebook on Waste Categories[30] defines a list of waste categories by activities in which it is generated and shall be read in conjunction with the relevant WB ESS and WB EHS guidelines (both general and sector specific).

8.5.2. OHS Management Plan

The Contractor will be required to prepare an OHS Plan to establish and maintain an effective health and safety management system. Through the Plan he will commit to implementing a structured approach to workplace health and safety in order to achieve a consistently high standard of safety performance.

This Plan will assist the Contractor in meeting his obligations in accordance with work health and safety legislation.

This Plan applies to all contracted workers and to other persons at risk from work carried out at workplaces.

8.5.3. Traffic Management Plan

The Contractor will be responsible to prepare a Traffic Management Plan Traffic involving requirements and measures for the safe movement of vehicles, powered mobile plant and pedestrians within, through and around sites.

8.5.4. Generic ESMP

Generic (sample filled out) ESMP has been prepared for the purpose of this ESMF and is provided in Annex 10 of this ESMF complemented by a Generic Monitoring Plan in Annex 11. The generic ESMP provides mitigation measures and monitoring value chain for construction works. In addition, national requirements on the need for environmental impact assessment of project encompassing works and/ shall be observed (relevant opinion on the need for undertaking the EIA shall be sought, where applicable and needed), as well as relevant permits obtained.

8.5.5. Integration of the ESMPs into tender documents

The ESMPs provisions will be integrated into the tender documents for respective Subprojects, and shall be appended to the contract and itemized in the specifications and bills of quantities.

Bidders will be required budget out the cost of ESMP requirements in their financial bids and required to comply with them while implementing the project activities. Specifications ensuring effective implementation of environmental, social, health and safety performance criteria by the selected bidder including include an obligation to inform the communities representatives and PIU of any incidents involving community members, all significant accidents and events involving contract and subcontract workers etc.

Template of an ESMP document - part I & II (Table Mitigation Plan and Table Monitoring Plan) is enclosed as Annex 09 to this ESMF document.

8.6. **General checklist ESMP**

For subprojects classified as “Moderate Risk”, the ESMP shall be prepared in line with guidance or ESMP checklists, as relevant, shall be prepared on the basis of the pre-existing templates provided hereunder.

[30] http://www.subotica.rs/documents/zivotna_sredina/Propisi/Pokate.pdf

- Part 1 constitutes a descriptive part ("site passport") that describes the project specifics in terms of physical location, the institutional and legislative aspects, the project description, inclusive of the need for a capacity building program and description of the public consultation process.
- Part 2 includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity type.
- Part 3 is a monitoring plan for activities during project implementation. It retains the same format required for standard World Bank EMPs. It is the intention of this checklist that Parts 2 and 3 be included as bidding documents for contractors.

The typical checklist format aims at covering all mitigating approaches of the joint contracts for rehabilitation / construction works related to localized impacts. The Checklist EMP presents the envisaged environmental impacts and offers the best operational practice for discharge control (i.e. dust, noise, and gas residues), management of hazardous and non-hazardous solid wastes originating from maintenance activities as well as other like discharge control (i.e. dust, noise, and gas residues) in the construction / rehabilitation site. It also offers instructions on avoidance of hazardous substances as toxic impregnation chemicals, solvents or cleaning solutions. The Checklist EMP also deals with the steps to be undertaken during the construction phase if objects of cultural / archeological significance are found (chance finds) during earthworks.

The steps to be followed in while preparing the ESMP checklist are given below:

General identification and scoping phase. At this point works needed are identified and environmental and social screening is implemented to the selected works hence main potential adverse impacts to the environment (nature and human) are identified. At this stage, Parts 1, 2 and 3 of the Checklist EMP are drafted. Part 2 of the Checklist EMP can be used to select typical activities from a "menu" and relate them to the typical environmental issues and mitigation measures.

Detailed design and tendering phase, including specifications and bills of quantities for individual activities by integrating the environmental provisions in tabular format. This phase also includes the tender and award of the works contracts. This phase finally defines the contractual obligations of the Contractor on environmental measures to be taken during the construction/rehabilitation process. The Checklist EMP should be disclosed publicly at the tendering stage.

Implementation phase. During the implementation phase environmental compliance and other qualitative criteria are checked on the respective site by the Supervising Engineer). The mitigation measures in Part 2 and monitoring plan in Part 3 are the basis to verify the Contractor's compliance with the required environmental provisions.

The ESMP checklist will be used only for rehabilitation works that will start during project implementation phase. In case of activities / works which already commenced, environmental auditing is conducted based on the criteria and requirements set in the Checklist ESMP.

8.6.1. Template Checklist ESMP for railway modernization works

Template checklist ESMP has been prepared for the purpose of this ESMF and is provided in the Annex 12 of this ESMF document. The Checklist ESMP provides mitigation measures and monitoring value chain for railway modernization works,

8.6.2. Integration of the checklist ESMPs into project documents

For each subproject screened as "Moderate Risk" category the Checklist ESMPs provisions will form part of the design documents for the project, and will be included in contracts for selected subprojects, both into specifications and bills of quantities.

Respectively the Contractors will be required to include the cost of Checklist ESMP requirements in their financial bids and required to comply with them while implementing the project activities.

8.7. **Monitoring and Reporting**

Environmental and Social **Monitoring**

Subprojects classified as “Substantial Risk” and “High Risk” will not be eligible for financing.

For subprojects classified as “Moderate Risk” the monitoring of the Contractor’s safeguards due diligence, the Supervising Engineer will work with Part 3 of the Checklist EMP, i.e. the monitoring plan (. Part 3 is developed site specifically and in necessary detail, defining clear mitigation measures and monitoring which can be included in the works contracts, which reflect the status of environmental practice on the working site and which can be observed/measured/ quantified/verified by the supervisor during the works. Part 3 would thus be updated and revised during the design process to practically reflect key monitoring criteria which can be checked during and after works for compliance assurance and ultimately the Contractor’s remuneration. **Supervision of sub-project implementation is not limited to the monitoring plan, but also to implementation of all measures defined in the ESA.**

Mitigation measures include the use of Personal Protective Equipment (PPE) by workers in site, dust generation and prevention, amount of water used and discharged in site, waste water treatment, presence of proper sanitary facilities for workers, waste collection of separate types (mineral waste, wood, metals, plastic, hazardous waste, e.g. asbestos, paint residues, spent engine oil), waste quantities, proper organization of disposal pathways and facilities, or reuse and recycling wherever possible. In addition to Part 3, the Supervising Engineer should check whether the contractor complies with the mitigation measures in Part 2.

Occupational health and safety performance should be evaluated against internationally published exposure guidelines. Monitoring should be designed and implemented by accredited professionals as part of an occupational health and safety monitoring program. Facilities should also maintain a record of occupational accidents and diseases and dangerous occurrences and accidents. Additional guidance on occupational health and safety monitoring.

Environmental monitoring activities should be based on direct or indirect indicators of emissions, effluents, and resource use applicable to the particular project. Monitoring frequency should be sufficient to provide representative data for the parameter being monitored. Monitoring should be conducted by trained individuals following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. Monitoring data should be analyzed and reviewed at regular intervals and compared with the operating standards so that any necessary corrective actions can be taken. Air, noise, water and soil quality should be monitored by considering the following:

- Monitoring parameters: The monitoring parameters selected should reflect the pollutants of concern associated with project processes.
- Baseline calculations: Before a project is developed, baseline air quality monitoring at and in the vicinity of the site should be undertaken to assess background levels of key pollutants, in order to differentiate between existing ambient conditions and project-related impacts.
- Monitoring type and frequency: Data on emissions and ambient air quality generated through the monitoring program should be representative of the emissions discharged by the project over time.

8.7.1. Reporting

An acceptable (monthly) monitoring report from the contractor, Supervising Engineer and TA consultants will be a condition for full payment of the contractually agreed remuneration, the same as technical quality criteria or quality surveys. To assure a degree of leverage on the Contractor’s environmental performance an appropriate clause will be introduced in the works contracts, specifying penalties in case of noncompliance with the contractual environmental and social provisions, e.g. in the form of withholding a certain proportion of the payments, its size depending on the severity of the breach of contract. For extreme cases a termination of the contract shall be contractually tied in.

PIU would report on regular basis to the World Bank on subprojects screening, approval and monitoring results. Reporting on ESAs implementation compliance will be quarterly, unless otherwise agreed between

the WB and the MCTI (PIU) as well as an integral part of progress reporting. In the case of significant accidental situations, the PIU will notify and report on the occurrence promptly.

9. LABOR MANAGEMENT PROCEDURES

The Serbian legal framework guiding Labor and Working Conditions, including OHS, is less a few minor gaps fully aligned with the standards set out in ESS2 as Serbia is signatory to the International Labor Organization (ILO) and United Nations (UN) Conventions informing the ESS2. Serbia has ratified more than 70 ILO Conventions including the 8 Core Conventions. Labor issues (including OHS, workplace SEA/SHA) under the Project will be managed through an autonomous LMP applicable to all project workers as defined by ESS2[31]. Salient features of the document and standard it enforces are provided below.

The focus of these LMPs is on workers engaged directly by the Ministry of Construction Transport and Infrastructure (MCTI), Serbian Railways Infrastructure (IZS), Directorate for Railways (DfR), the Project Implementation Unit (PIU) and Project Implementation Teams (PITs) in IZS, Serbia Cargo, Serbia Voz (SV) and DfR to specifically perform project related tasks. These workers are defined as **Direct workers**. Workers engaged or employed by third parties i.e. contractors, sub-contractors and service and good providers are defined as **Contracted workers** to which these procedures apply alike.

The Project is expected to engage between 16-25 **Direct workers,** over a period of 4 years**,** integrated into the Project Implementation Unit (PIU), housed by the Ministry of Construction, Transport and Infrastructure of Republic of Serbia (MCTI) and into the Project Implementation Teams (PITs) yet to be established in Infrastructure Zeleznice Srbije (IZS), Serbia Cargo (SC), Serbia Voz (SV) and DfR. These workers will be engaged through the standard form of Contracts for Consultancy services provided by The Bank. Where civil servants are working in connection with the project they remain subject to the national legislation regulating the status, rights and duties of employees in the public sector (unless a legal transfer of their employment occurs) and their employment relationship will remain subject to the terms and conditions of their existing public sector employment agreements or arrangements with the exception of requirements in the area of protecting the workforce and Occupational Health and Safety (OHS) and prohibition of child and forced labor shall apply to civil servants engaged in the project.

Contracted workers will be engaged or employed by third parties, i.e. contractors, sub-contractors[32] (to the extent that such sub-contracting is permitted under the parent contracts) and service providers/consultants to perform Project activities The number of contracted workers is not yet firm, but based on industry practice and recent experience, it is estimated that the total number of workers working on each construction site could range between 40-100 workers involved in civil engineering / construction works (depending on the subproject activities) and additional 10-40 persons involved in the supervision of works.

Primary supply workers: Given that the Project will be in need for continuous procurement of materials and goods essential for Project implementation (such as rail tracks), Primary suppliers are recognized as relevant and will be engaged in this Project. All primary suppliers must be formal businesses who procure and produce materials subject to high standards. As part of the procurement of such essential materials from primary suppliers, the contractor will assess if significant risk of child labor or forced labor, and of safety risks, exist, and if so, take appropriate steps to remedy them. Since the Serbia national framework is fully aligned with ESS2 and ILO standards the risk of child labor and forced labor in relation to primary suppliers is minimal. Hence, major risks that can occur are in respect with OHS issues in regard with the application of existing legislation. This can be mitigated through standard bidding documents which have provisions concerning the respective issue.

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[31] The term “project worker” refers to: (a) people employed or engaged directly by the Borrower (including the project proponent and the project implementing agencies) to work specifically in relation to the project (direct workers); people employed or engaged through third parties to perform work related to core functions of the project, regardless of location (contracted workers); (c) people employed or engaged by the Borrower’s primary suppliers (primary supply workers); and (d) people employed or engaged in providing community labor (community workers). ESS2 applies to project workers including fulltime, part-time, temporary, seasonal and migrant workers.

32 Sub-Consultant/Contractor means any person or entity to whom/which the Contractor or Consultant subcontracts any part of the Works or Services.

Since the Serbia national framework is fully aligned with ESS2 and ILO standards the risk of child labor and forced labor in relation to primary suppliers is minimal.

Given that the exact materials and goods that will be needed for the Project are not fully known safety issues regarding primary supply workers and the environment they work in cannot be fully assessed at this moment and will be described in sub-project level LMPs **Community workers:** Given the nature of the project and the country context, community workers, as defined in EES2, are highly unlikely to be engaged on the project.

Serbia has adopted ILO conventions on child labor. The minimum age of employment is 15 in Serbia. Notwithstanding, it no person under the age of 18 will be employed or engaged on the Project given the classification of labor and OHS risks. If any contractor employs or engages a person under the age of 18 years. Breach of this standard will be reported to the authorities (Labor Inspectorate) and measures taken against the contractor in accordance with the Contract for construction works. No child labor will be permitted under the project.

The risk of informal labor and associated lack of protection will be mitigated through: i). application screening/E&S screening checklist; ii). labor and working conditions commitments signed by any third party (annex 07); iii). labor and working conditions reporting requirements during contract implementation (annex 08), and iv). by providing access to the Project workers grievance mechanism.

The grievance mechanisms provided by the Serbian legislation are considered as minimum standard to be achieved in addressing labor dissatisfaction and perceived maltreatment. Any third party (Contractor) employing and engaging contracted workers are expected to design and implement grievance mechanisms that will be aligned or surpass this standard ensuring an easy access to protective measures and effective remedial actions in work situations that may give rise to grievances and disputes. Contractors will prepare detailed description of grievance mechanism (GM) before the start of their assignment. The GM must be well circulated and written in a language understood by all. The PIU will develop and implement a grievance mechanism for direct workers to address workplace concerns.

The PIU will use the Bank's 2017 Standard Procurement Documents for solicitations and contracts, and these include labor and occupational, health and safety requirements. Prior to contracting, the bidders will be required to submit a statement confirming their awareness of WB ESS2, their firm commitment to comply with the national labor and employment and occupational health and safety laws and labor management procedures in accordance with WB ESS2, and their willingness to refrain from any practice that can be interpreted or perceived as discriminatory or unfair to their employees. The form of the statement is presented in ANNEX 08 STATEMENT OF LEGAL AND REGULATORY **COMPLIANCE**. The failure to submit such statement will exclude a bidder from taking part in bidding. After the contract award, the contractors are required to provide their own Labor Management Procedures that have to be in line with these LMPs. Contractors should carry out due diligence to ensure that their subcontractors, suppliers and business partners involved in implementation of the Project are compliant with law and have no records on violating labor or OHS regulations. The contract to be made with the selected third party will incorporate terms and conditions of this LMP as the minimum standard provided for the project workers employed or engaged by the third party.

During the implementation of the contract, the third parties engaging/employing project workers will have to submit quarterly reports presenting their compliance with the LMP by using the reporting template provided in

ANNEX 07 LMP **COMPLIANCE REPORT**. The report should include the number and status of project workers, the number of hired and terminated employees in the given period, the number of hours worked, overtime, regularity of payment, OHS issues (injuries and fatalities, if any), safety measures, grievances raised and resolved, training provided/attended, incidents of non-compliance with the law or the LMP.

In case of any inconsistencies or departure from the required standards and practice, and depending on the gravity of a situation or malpractice, the MCTI may decide to inform the Labor Inspectorate on suspected transgressions or.

10. ESMF IMPLEMENTATION ARRANGEMENTS

10.1. **Institutional and Implementation Arrangements**

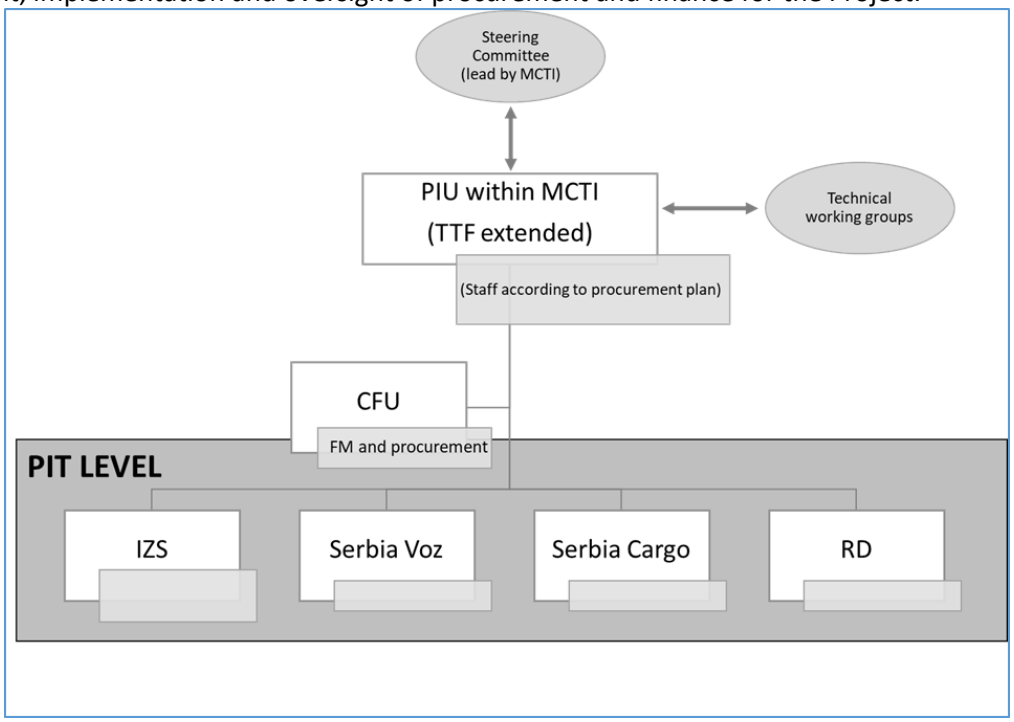
The Project will be managed by MCTI through a Project Implementation Unit (PIU), supplemented by Project Implementation Teams (PITs) in IZS, Serbia Cargo, Serbia Voz and DfR. The PIU will have primary responsibility for Project execution ensuring that the Project development objectives and technical, environmental, social standards are met and that financial resources are budgeted, disbursed, expended, accounted and audited. The PIU was already established before the Project to manage the Serbian part of the Western Balkans Trade and Transport Facilitation (TTF) Project approved in 2018, and new positions were then defined to cover the needs of Phase 1 of this Project. The PIU has been strengthened with appropriate managerial and technical capacity to enable it to (i). manage and monitor progress of the entire Project, (ii). carry out and be responsible of day-to-day implementation of Project activities, (iii). oversight of all other Project activities implemented by the companies; (iv). prepare technical documentation for activities that will be financed under the Project; (v). ensure strong environmental and social sustainability of the project, including ESF compliance during the Project implementation; and (vi). participate in tender preparation and evaluation. Therefore, the PIU now includes a full-time Environmental specialist, a full-time social and citizen engagement specialist), and a part-time Occupational & Health (OHS) Specialist throughout project implementation. While the PIU is implementing the components, PITs are acting as subordinate implementing agencies providing technical support for specific Project subcomponents or activities of the Project that pertain to their area of expertise. E&S Staff within the PIU is responsible for overall implementation of ESF Policies and ESMF as well as E&S management of the project, including, but not limited to: preparation and quality of ESAs, disclosure and organization of meaningful public consultations of ESAs, supervision of ESAs implementation and assessing compliance, prescribing corrective measures, reporting to WB, engaging other experts as needed and otherwise supporting and advising other PIU members in the area of E&S. MCTI is channeling Project funds to PITs to strengthen their structures. The WB has provided the necessary trainings to PIU, PIT and MCTI staff as part of its capacity building planning. The trainings were organized for PIU and Project Implementing Agencies E&S appointed staff, within a month from PIU E&S expert contracting and include ESF applicable standards and Bank's procedures, and ESMF guidelines, requirements and procedures such as screening, assessment, supervision and reporting. Cost of ESMF implementation has been integrated to the total Project cost.

The PIU has been staffed with experts specifically hired for the Project, while PITs will be staffed with mixes of agency staff and personnel hired for the Project. They will have capabilities in contract management, safeguards, and monitoring and evaluation. The PIU includes additional team members, being full or part time, including an environmental and social and citizen engagement specialist, a part-time Occupational & Health (OHS) Specialist, two railway experts, human development expert. The team will additionally be supported by a part time transport planner, and a transport economist. PIT will mainly consist of the employees within subject institutions that could be strengthened with specific expertise relevant for the effective Project implementation, like railway investment expert, rail asset management expert and specialist in railways management.

The PIU team of consultants for the Project ensures support to the planning, coordination, implementation and monitoring of the project performance. Work of the PIU is being monitored by the Project Coordinator, high-level representative from the MCTI. PIU has been supplemented by the Project Implementation Teams (PITs) in IZS, Serbia Cargo, Serbia Voz and DfR, and they are acting as subordinate implementing agencies to provide technical support for specific Project subcomponents or activities of the MPA that pertain to their

area of expertise. PITs have been staffed with mixes of agency staff and externally engaged personnel hired for the Project. The PIU and externally hired PITs staff are being financed from the Project (subcomponent 2.3).

Due to the existing arrangements for implementation of World Bank's projects in the Republic of Serbia, the PIU is being supported with the Central Fiduciary Unit (CFU), established within the Ministry of Finance (MoF). As the CFU was established to provide fiduciary support (procurement and financial management activities) to all World Bank-supported projects in Serbia since 2018, it carries out the overall coordination, management, implementation and oversight of procurement and finance for the Project.



The Central Fiduciary Unit (CFU), within the Ministry of Finance, is carrying out the overall coordination, management, implementation and oversight of procurement and finance. MCTI and PITs are providing technical support to CFU, specially to develop technical procurement documents and evaluation of proposals. If necessary, the CFU will be strengthened with additional procurement staff as per norms established by the Bank Procurement team. At present, the CFU provides financial management and procurement functions to seven other WB financed projects. The workload of CFU staff will continue to assessed and additional staff (Procurement and Financial Management Specialist) will be hired, as appropriate, to handle the increased workload Considering complexity and significant numbers of procurement activities envisaged for the Project, and on the other hand current workload of 2 procurement experts, members of CFU. The financial reporting is being done through Interim un-audited financial reports (IFRs), which include financial information relating to the whole Project, and are prepared periodically. The Project Operations Manual (POM) details implementation arrangements, including the division of responsibilities between the MCTI (PIU) and the CFU.

10.2. **Results Monitoring and Evaluation Arrangements**

Project monitoring and evaluation (M&E) is being undertaken by the MCTI through the PIU, which is ultimately responsible for all project data collection. A part time M&E Specialist has been hired to develop, in collaboration with MCTI, a detailed M&E framework and mechanism for each of the project components based on the Project Results Framework. The M&E system has been designed to ensure that the project is implemented in accordance with the objectives and expected results. The PIU is monitoring, assessing, and reporting the implementation progress and results based on the M&E framework, and the PITs in IZS, Serbia Cargo, Serbia Voz and DfR are providing the required data and information to the PIU, when needed. The project's progress is being assessed and documented in periodic progress reports, which are being prepared by the PIU. In addition, the PIU is preparing its own mid-term review and its own implementation completion and result report.

The World Bank will ensure continuous implementation support. The World Bank team has regular interaction

with the PIU and undertake frequent field visits. This will allow the World Bank to provide continuous monitoring and verification support in addition to the implementation support missions.

Process Cycle by Sectors, for the implementation of ESMF

	Activity	Primary	Secondary
1.	Capacity building of the PIU (within the MCTI) and implementing partners on the new ESF standards application	WB staff External E&S specialists	MCTI PIU
2.	Permits	PIU	PIU
3.	Incorporation of E&S requirements and guidelines	PIU	PIU
4.	Preparation, internal approval, Clearance and approval of the Project Operational Manual	PIU WB SRSM TTLs	PIU E&S Specialist
5.	Incorporation of the E&S requirements and guidelines into the Tender Packages	PIU	PIU, Procurement Specialists
6.	Stakeholder Engagement Plan Implementation	PIU	E&S Specialists
7.	Establishing GRM	PIU	Local Municipalities
8.	Environmental and Social Screening of Subprojects	PIU	PIU E&S Specialists
9.	Final screening of subprojects for eligibility, including E&S requirements	PIU	PIU E&S Specialists
10.	ESMP Checklist and Social Screening completion for Subprojects	PIU	PIU E&S Specialists
11.	Env. and Social Screening Report	MCTI PIU E&S Specialists	WB
12.	Development of EAS instruments (site specific ESMP, ESMP Checklist, RPs, Environmental and Social Audits, Resettlement Audits if needed)	PIU MCTI	PIU E&S Specialists
13.	Quality control and submission of ESS instruments to the WB	PIU	E&S Specialists
14.	Review and approval of ESS Instruments	WB E&S Specialists	Regional ESSA
15.	Implementation of ESMPs	Contractor	Subcontractors
16.	Monitoring and reporting on ESMP implementation	PIU	Supervising engineer E&S Specialists
17.	Supervision of ESMP/ RAP Implementation	PIU	Supervising engineer GM E&S Specialists

The Environmental and Social Management Plan (ESMP) will identify feasible and cost-effective measures that may reduce potentially significant adverse environmental and social impacts to acceptable levels. The ESMP divides the project cycle into three phases: construction, operation and decommissioning. For each phase, the PIU identifies any significant environmental and social impacts. For each impact, mitigation measures are to be identified and listed. Estimates are made of the cost of mitigation actions broken down by estimates for installation (investment cost) and operation (recurrent cost). The ESMP format (enclosed in Annex 09) also provides for the identification of institutional responsibilities for "installation" and operation

of mitigation devices and methods. To keep track of the requirements, responsibilities and costs for monitoring the implementation of ESMP, a Monitoring Plan will be applied.

11. PROJECT GRIEVANCE MANAGEMENT

11.1. Grievance Management for Phase 2 of the Project

A complete Project level Grievance Mechanism has already been defined in Phase1 of the Project and will be implemented for Phase 2. This is available as a separate document which contains all relevant details, including a description of how grievances can be raised and submitted, how they will be processed and responded to and all the details on recording of grievances and monitoring performance in grievance management. The entire Grievance mechanism is available in Serbian and English, on the website of the Ministry. If needed, it might be adapted for the phase 2 of the project.

https://www.mgsi.gov.rs/en/dokuments/grievance-mechanism-serbia-railway-sector-modernization-project-srsm

11.2. World Bank Grievance Redress System

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit

http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress- service.

For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

12. STAKEHOLDER ENGAGEMENT

Parties Potentially Affected by Phase 2 of the Project, who are therefore considered stakeholders, are likely to include the following: passengers, freight companies, persons residing in areas where sub-project specific works will be executed, persons affected by land acquisition and resettlement, businesses who may be affected by any land acquisition related activities or construction activities implemented as part of the subprojects, women benefitting from a new HR strategy for State Owned Enterprise (SOE) railway sector companies, vulnerable groups, The Ministry of Construction, Transport and Infrastructure (MCTI) , The Railways Directorate (RD) ,Serbian Railways Infrastructure (IZS) , Serbia Voz (SV), Serbia Cargo (SC), Serbian Railways AD, Private rail cargo operators. The vulnerable groups would include elderly women, minorities, Roma, refugees and people with disability, so issues of universal accessibility are addressed better.

In response to the commitment of the GOS to comply with the ESF, the Ministry of Construction, Transport and Infrastructure (MCTI) has developed a Project Level Stakeholder Engagement Plan (PSEP) adapted for Phase 2 to guide the project's stakeholder engagement in line with ESS 10 - Stakeholder Engagement and Information Disclosure, from the early stages and throughout the Project cycle focusing on gender gaps and tailored approaches. This PSEP has been adapted for Phase 2 of the Project.

The Republic of Serbia is in recognition of importance of citizen engagement is embedded in the legal system and clearly recognized by the mandatory procedures provided by individual laws.

Various stakeholder engagement activities are proposed to ensure awareness and meaningful consultations about Project activities. The outreach and stakeholder engagement will be gender appropriate, taking into consideration the after-hour chores of women. Targeted messaging will encourage the participation of

women, those living in areas with risks from flooding and highlight Project characteristics that are designed to respond to their needs and increase their access to Project benefits. Citizen engagement and feedback survey shall be part of the engagement agenda.

All ESF instruments shall be subject to adequate disclosure and public consultations in line with the SEP, and ESS1.

12.1. **Public Consultations on ESMF with project stakeholders**

As required by WB Environmental and Social Standard 10 (ESS10) – Stakeholder Engagement and Information disclosure, during preparation of the Draft ESMF, ESCP, RPF, SEP and LMP documents for Phase 2 of the Project, the PIU will carry out public consultations with relevant stakeholders, as soon as the draft documents are approved by the Ministry and the World Bank.

13. DOCUMENTS THAT HAVE INFORMED DEVELOPMENT OF THIS ESMF:

- The World Bank Environmental and Social Framework, 2017 International Bank for Reconstruction and Development/The World Bank
- WBG EHS Guidelines
- WBG Rail Guidelines
- Draft Project Appraisal Document (PAD) for the PHASE 2 of the Multi-phase Programmatic Approach Serbia Railway Sector Modernization (P170868), July 2023
- Concept Project Information Document (PID) - Serbia Railway Sector Modernization - P170868 (English)
- Concept Environmental and Social Review Summary (ESRS) - Serbia Railway Sector Modernization - P170868
- Labor Management Plan (LMP) for the Railway Sector Modernization Project in Republic of Serbia
- EU Delegation to the Republic of Serbia - Standard Summary Project Fiche – IPA centralized programmes Project Number 14: Modernization of Railways
- Environmental and Social Impact Assessment (ESIA) for construction of a single-track railway bypass around Nis, Infrastruktura Zeleznice Srbije a.d. Nemanjina 6, Beograd
- Basic statistic data of the Energy and Mineral Resources of the Republic of Serbia, Radoslav Vukas, National consultant, Graduated engineer of geology
- COMMISSION STAFF WORKING DOCUMENT Serbia 2019 Report Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 2019 Communication on EU Enlargement Policy {COM (2019) 260 final}

ANNEX 01: TENTATIVE LIST OF PROJECT ACTIVITIES

Component 1: Infrastructure and Asset Management (US$115.0 million)

Subcomponent 1.1 – Heavy duty machinery for railways infrastructure maintenance (US$76.5 million). The rationale for this subcomponent is to develop capacity within IZS for in-house maintenance. As outlined in the *Sectoral and Institutional Context* section, developing maintenance capacity is key to ensure passenger and good transport level of service and safety. This heavy-duty machinery is intended to be used for routine maintenance of recently rehabilitated / upgraded / constructed railways infrastructure, aiming at the sustainability of the capital investment undertaken.

The typology of new machinery to be acquired is the following:

(f) **Lot 1**: Heavy duty track maintenance machinery. This lot covers equipment for two track maintenance and intervention brigades, covering lining ang and tampering machinery, universal tamper and ballast regulators.
(g) **Lot 2**: Wagons. This lot cover wagons necessary for the transport of material and spare parts – wagons for continuous loading/unloading of materials and flatbed wagons, but also self-propelled wagons for the automatic assembly and disassembly of overhead contact line (OCL).
(h) **Lot 3**: Construction and repair machinery. This lot covers vehicles for small-scale track-related civil works intervention: backhoe loaders, bucket trucks, dump trucks. Vehicles will be rail and road capable.
(i) **Lot 4**: Monitoring equipment and motorcars. This lot covers inspection self-propelled equipment to monitor the infrastructure condition: track, OCL. The lot also includes heavy-duty rail-road motorcars with cranes and buckets.
(j) **Lot 5**: Intervention machinery for turnouts. This lot includes equipment for maintenance and replacement of track turnouts.

The typology of existing machinery to be refurbished is the following: (i) machinery and equipment for rail track condition monitoring: track geometry measuring and recording railcars; and (ii) machinery and equipment for rail track maintenance: tamping machines, ballast cleaners, dynamic track stabilizers, ballast regulator and profiler equipment.

This machinery will enable IZS to undertake the maintenance of existing railways infrastructure:

(e) **Routine maintenance** is the most common type of maintenance. For tracks, this includes inspections and condition recording, replacing worn-out parts, greasing points, cleaning, repacking ballast, and other general upkeep activities.
(f) **Preventive maintenance** addresses to railway maintenance in a proactive way, anticipating potential problems before they happen and taking steps to address them before they become major issues. Examples of preventive maintenance include inspecting running rails for wear or cracks, using special tools to detect weak spots in rail joints, regularly checking under bridges for damage, and performing routine tests on equipment such as turnouts, signals, crossings, etc.
(g) **Corrective maintenance** involves identifying issue at stakes and taking corrective action to fix it. For tracks, corrective maintenance may include repairing broken rails or ties, replacing damaged parts, realigning tracks, fixing drainage issues, removing vegetation from around tracks, repairing switches or other faulty components.
(h) **Emergency maintenance** is critical when an urgent need for repair due to an unforeseen event occurs, e.g.: natural disaster or accident, which could put passengers, operators, third parties and the environment at risk if not addressed rapidly. For tracks, emergency repairs may involve anything from replacing damaged rails or ties to clearing debris off the tracks after a storm event.

Infrastructure maintenance will focus on the following existing railways subsystems within IZS' network in Serbia: (i) track and turnouts, including ballast and subgrade; (ii) wayside signaling and telecommunication systems; (iii) power supply, from substations, and distribution systems (OCL). Maintenance will be undertaken within the Safety Management System developed by the first phase of the Program. Annex 2 provides further information on the nature of the maintenance machinery to be supplied, and on related maintenance activities.

Subcomponent 1.2 – Modernization of railways maintenance facilities (US$3.0 million). The rationale for this subcomponent is for IZS to have the adequate facilities to maintain and services the machinery to be acquired within Subcomponent 1. These facilities (among others across Serbia) will also be used to store spare parts and the equipment necessary for the routine maintenance and emergency interventions on the network.

Subcomponent 1.3 – Outsourcing railways routine maintenance (US$30.0 million). The rationale for this subcomponent is two-fold: (i) ensuring quality of service and safety standards of new/rehabilitated/upgraded railways infrastructure while the routine maintenance equipment in subcomponent 1.1 is not yet available; (ii) providing capacity building to IZS on railways routine maintenance, including the management of a performance-based maintenance contract.

Subcomponent 1.4 – Railways asset management and planning (US$2.0 million). Fully aligned with Phase 2's maintenance focus, the rationale for this subcomponent is also to give continuity to activities initiated in the first phase of the Program. The on-going Phase 1 is designing IZS' Railways Infrastructure Asset Management System (RIAMS) and will set-it up. This subcomponent builds on this.

Subcomponent 1.5 – Technical documentation (US$3.5 million). The rationale for this subcomponent is to prepare Phase 3 activities, which will focus on network rehabilitation and upgrade.

Component 2: Institutional Strengthening and Project Management (US$8.3 million)

Subcomponent 2.1 – Sector governance and commercial approach (US$5.3 million). The rationale for this subcomponent is to continue the digitalization work initiated in Phase 1, and follow-on implementation of the scoping and preparatory work completed in Phase 1. Information Technology (IT) strategies are being developed within Phase 1, while RD, IZS, Serbia Voz and Serbia Cargo have progressed in mainstreaming digital tools for their business processes. Digitalization is expected to drive a significant companies' efficiencies, both for their internal

Subcomponent 2.2 – Human capital development (US$1.5 million). Complementing the investment in fixed capital in Phase 2, this subcomponent finances a mix of technical assistance and capacity building activities to establish mechanisms and frameworks for long term development of human resources and knowledge sharing in the sector. This subcomponent also supports an internship program with majority of females within RD, IZS, Serbia Voz, and Serbia Cargo, aiming at increasing attractiveness of railways as employee and increasing the female workforce in traditionality male-dominated functions, with the view that part of these interns gets permanent positions in the industry.

Specifically on gender aspects, Subcomponent 2.2. finances: (i) setting up the Memorandum of Understanding (MoU) between the rail agencies and the university/ies and vocational schools, (ii) developing the internship program curriculum, (iii) providing onboarding training to the interns and the capacity building to the client staff who will mentor the interns, (iv) running the internship program successfully from onboarding to awarding the completion certificates to the program graduates. Sixty percent of internship candidates should be women.

Subcomponent 2.3 – Project management and citizen engagement (US$1.5 million). This subcomponent aims at strengthening Project management and ensuring transparency and accountability of the Project's interventions and results. It will complement similar financing under Phase 1, factoring in additional skillsets for PIU/PITs and the exceeding time of Phase 2 beyond Phase 1.

Component 3: Railway Modernization Enablers (US$6.5 million)

Subcomponent 3.1 – Growing cargo traffic (US$3.0 million). Complementing the overall focus on railways maintenance of Phase 2, this subcomponent includes activities aiming at increasing cargo rail traffic, thru the developing Strategy for logistic Centers of Serbia, but also at promoting Private Capital Mobilization (PCM) and private sector participation in intermodal interventions. This responds to the existing demand for improved "last-mile" railway connectivity in Serbia, whereby the private sector has already approached the MCTI with a variety of railway "last mile" connectivity propositions that would bring additional freight traffic to the IZS network. Initial data identified that connecting 20 facilities across Serbia could result in additional 2 million tons of freight traffic per year[33]. As rail cargo markets in Serbia are traditional, bulk and low value, developing further intermodality and containerization, targeting higher-value goods and increased revenues.

Subcomponent 3.2 – Growing passenger traffic (US$3.5 million). Also complementing the overall focus on railways maintenance of Phase 2 but also building on Phase 1 on-going activities, the rationale for this

[33] This equates to 22% of the freight volumes transported by Serbia Cargo as the operator with approximately 75% market share.

subcomponent is to enable the growth of passenger rail traffic. The Integrated Territorial Development (ITD) prolongs the Phase 1 and early pilots on this topic, while the focus on passenger stations extends Phase 1 interventions on the Prokop station in Belgrade, as well as expected outcomes from a technical cooperation on passenger stations that AFD and the French Railways are preparing with IZS.

ANNEX 02: EXCLUSION LIST OF PROJECT / ACTIVITIES

IFC does not finance the following projects:

Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES.

Production or trade in weapons and munitions.[34]

Production or trade in alcoholic beverages (excluding beer and wine).[1]

Production or trade in tobacco.[1]

Gambling, casinos and equivalent enterprises.[1]

Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded.

Production or trade in unbounded asbestos fibers. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

Drift net fishing in the marine environment using nets in excess of 2.5 km. in length.

A reasonableness test will be applied when the activities of the project company would have a significant development impact but circumstances of the country require adjustment to the Exclusion List.

All financial intermediaries (FIs), except those engaged in activities specified below*, must apply the following exclusions, in addition to IFC's Exclusion List:

Production or activities involving harmful or exploitative forms of forced labor[35]/harmful child labor.[363]

Commercial logging operations for use in primary tropical moist forest.

Production or trade in wood or other forestry products other than from sustainably managed forests.

* When investing in microfinance activities, FIs will apply the following items in addition to the IFC Exclusion List:

Production or activities involving harmful or exploitative forms of forced labor[2]/harmful child labor.[3]

Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals. Hazardous chemicals include gasoline, kerosene, and other petroleum products.

Production or activities that impinge on the lands owned, or claimed under adjudication, by Indigenous Peoples, without full documented consent of such peoples.

* Trade finance projects, given the nature of the transactions, FIs will apply the following items in addition to the IFC Exclusion List:

ANNEX 03: ESSQ - ENVIRONMENTAL AND SOCIAL SCREENING QUESTIONNAIRE – TEMPLATE

Title of the Project:		
Basic information on proposed project and activities (please describe main features)		
Project IF ID:		
Location of sub-project/activity:		
Contact e-mail address of the responsible person in the PIT providing relevant information		
PROJECT ELIGIBILITY CRITERIA		ANSWER YES or NO (and detailed arguments/ explanation)
Does the proposed activity require a FULL Environmental Impact Assessment as? per the Serbian Law on Environmental Impact Assessment (list of projects for which full EIA is mandatory/decided)? (EIA Requirement per se does not classify the activity as high risk)		
Are activities ongoing on the facility intended to be continued through WB financed activities? If yes have valid operating permit, licenses, approvals for the so far completed works been obtained? If not, please explain. *Permits to screen for include: construction permit, operational/use permit, urban permit, water management permit, etc.* If not, will the project financing be used to correct this condition?		
Does the existing enterprise need to follow specific Serbian environmental regulations regarding air emissions, water use or wastewater discharge and solid waste management?		
Does the existing enterprise take care about associated facilities (if applicable) relevant environmental and social performance? If possible, explain the answer		
Are serious adverse cumulative or transboundary impacts: H: Expected? S: Expected, but less severe and more readily avoided or mitigated? M: Not expected? Project impact is site-specific, unlikely to go beyond project footprint? L: Minimal or negligible?		
Is the area likely to be affected? H: Sensitive and valuable ecosystems and habitats? Legally protected and internationally recognized high biodiversity value areas? Lands or rights IP or other vulnerable minorities? Intensive or complex resettlement? Impacts on cultural heritage? Densely populated urban areas? History of unrest in Project areas or sector? Significant concerns regarding the activities of security forces? Recognized as a regional or national cultural		

heritage? S: Issues such as above are relevant but to a lower extent? M: Located away from environmentally or socially sensitive areas	
Reversibility of Project risk and impacts. Are the Project social and environmental risk and impacts: H: Long-term, permanent, and irreversible? S: Mostly temporary, predictable and/or reversible? M: Predictable and expected to be temporary and/or reversible? L: Minimal or negligible?	

CRITERIA	ANSWER YES or NO (unless otherwise stated)
Will the activity consume, use or store, produce hazardous materials that are outlawed or banned in EU?	
Has the local population or any NGOs expressed concern about the proposed activity's environmental aspects or expressed opposition?	
Is there any other aspect of the activity that would – through normal operations or under special conditions – cause a risk or have an impact on the environment, the population or could be considered as a nuisance?	

SOCIAL SCREENING FORM		
PROJECT ELIGIBILITY CRITERIA		
Screening indicators related to Land acquisition, assets and access to resources		
	Are geographical area or population adversely affected by the Project?: H: Large to very large? S: Medium to large? M: Low? Located away from environmentally or socially sensitive areas? L: Minimal or negligible?	
	Require that land (private) to be acquired (temporarily or permanently) for its development? If yes specify area.	
	Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forests If yes indicate	
	Specify the number of persons affected by economic displacement? (if not known at this stage please provide the best estimate and explain what is the estimation based on)	

	Physically displace individuals, families or businesses, Specify the number of persons affected by economic displacement? (if not known at this stage please provide the best estimate and explain what is the estimation based on)	
	Result in the temporary or permanent loss of crops, fruit trees or household infrastructure (if not known at this stage please provide the best estimate and explain what is the estimation based on)	
	Result in the involuntary restriction of access by people to legally designated parks and protected areas	
	Have negative impact to any vulnerable individuals or groups? (Please specify what the drivers of vulnerability are, how would these be adversely impacted or the vulnerability exacerbated? Specify or estimate the number of persons /groups and their qualifying characteristics.	
	Have negative impact to informal side road shops, traders or any nomadic/informal/road shop type of commercial activity.	
	Community Health and Safety. Are probability of effects to human health and/or the environment (due to accidents, toxic waste disposal, etc.): H: High? S: Medium to low? M: Low? L: Minimal or negligible?	
	Scale of risks and impacts. Are geographical area or population affected by the Project?: H: Large to very large S: Medium to large M: Low L: Minimal or negligible	

Form checked by (PIU Environmental and Social Specialist) Project category is: H_____, S_____, M____L	
Date	
Name	
Title	
Signature	

Form checked by (Head of PIU) Project category is: H_____, S_____, M____L	
Date	
Name	
Title	
Signature	

ELIGIBILITY CRITERIA

High-risk projects and substantial risk projects, as defined in the WB E&S Policies will not be eligible for financing, including:

- Construction of substantial new railway lines (new routes);
- Construction of small new lines such as bypasses, connections, and similar in sensitive and valuable natural areas, those causing fragmentation of habitats;
- Other causing significant adverse impact to sensitive and valuable natural areas.

Table 4: High-risk classification conditions

Project type, location, sensitivity, scale	**Nature & magnitude of ES risks & impacts, available mitigation**	**Context risk relevant to ES measures**
HIGH RISK or SUBSTANTIAL RISK		
• complex • large to very large scale • in sensitive location(s)	• wide range of significant adverse risks and impacts • long term, permanent and/or irreversible, impossible to avoid entirely • some cannot be mitigated or require complex, unproven mitigation, sophisticated social analysis • high in magnitude and/or in spatial extent (large to very large area or population); • significant adverse cumulative or transboundary impacts; • high probability of serious adverse effects to human health and/or the environment • high value and sensitivity (e.g. protected and internationally recognized areas) • high value, sensitive lands or rights of Indigenous Peoples and other vulnerable minorities • Intensive or complex involuntary resettlement or land acquisition • Impacts on cultural heritage or densely populated urban areas • may give rise to significant social conflict, harm or human security risks • a history of unrest in area or sector, concerns about use of security forces	• factors outside project control impacting ES performance and outcomes
• not as complex • large to medium scale • not such sensitive location	• some significant risks and impacts • mostly temporary, predictable and/or reversible • possibility of avoiding or reversing but with substantial investment and time • may give rise to limited degree of social conflict, harm, human security risk; • medium in magnitude and/or in spatial extent (medium to large area and population) • less severe, more readily avoided/mitigated cumulative and/or transboundary impacts • medium to low probability of serious adverse effects to human health and/or the environment (with	

	known and reliable mechanisms to prevent or minimize) • lower effects on areas of high value or sensitivity • more readily available and reliable mitigatory and/or compensatory measures	

ANNEX 04 LIST I – PROJECTS REQUIRING A MANDATORY ENVIRONMENTAL IMPACT ASSESSMENT

1. Plants for:
1) Refining oil, oil derivatives and natural gas;
2) Gasification and melting of coal or oil seal shale, heavy crude oil residues.
2. Plants:
1) For the production of electricity, water steam, hot water, technological steam or heated gases, by using all types of fuel, as well as plants for driving working machinery (thermal power plants, heating plants, gas turbines, internal combustion engine plants and other devices for combustion, including steam boilers) with 50 MW or more power;
2) Nuclear reactors, including the disassembly or removal from operation of such Reactors[1], other than scientific research plants for the production and conversion of fission and enriched materials with a total power not exceeding 1 kW of constant thermal load.
3. Plants:
1) For the treatment of spent nuclear fuel;
2) Envisaged:
- For the production or enrichment of nuclear fuel;
- For the treatment of spent nuclear fuel or highly radioactive nuclear waste;
- For the permanent disposal of spent nuclear fuel;
- For the permanent disposal of nuclear waste;
- For the treatment, storage and disposal of radioactive waste.
4. Plants:
1) For roasting or sintering metal ore (including sulphide ore);
2) For the production of raw iron or steel (primary or secondary melting) including continuous casting, with a capacity exceeding 2.5 t/h;
3) For processing in ferrous metallurgy:
- Hot rolling mills with a capacity of over 20 t/h of raw steel;
- Forges with automatic hammers with energy exceeding 50 kJ per single hammer, where the used heat power exceeds 20 MW;
- Plants for the application of metal protective layers to metallic surfaces using molten baths, with an input exceeding 2 t/h of raw material;
4) Foundry for ferrous metals with a production capacity of over 20 t per day;
5) Plants:
- For the production of non-ferrous raw metals from ore, concentrates or secondary raw materials through metallurgic and/or chemical processes, and/or electrolytic processes;
- For melting including the production of alloys from non-ferrous metals, as well as the production of by-products (refining, casting, etc.), with a melting capacity of over 4 t per day for lead and cadmium, or 20 t per day for all other metals;
6) For the surface processing of metals and plastic materials using electrolytic or chemical processes, where the volume of the treatment tubs exceeds 30 m3.

5. Plants for:
1) Extraction, production, refining and processing of asbestos and products containing asbestos;
2) Production of cement clinker, cement and lime in rotational or other furnaces with capacities over 500 t per day for the production of cement clinker or lime with a capacity of over 50 t per day in rotational furnaces.
6. Combined chemical plants, i.e. plants for the industrial production of substances where chemical change procedures are applied and where individual plants are located next to one another and are functionally connected, intended for the production of:
- Basic organic chemicals;
- Basic non-organic chemicals;
- Phosphorus, nitrogen or potassium-based artificial fertilizers (simple or complex fertilizers);
- Basic plant protection products, as well as biocides;
- Basic pharmaceutical products with the application of chemical or biological procedures;

- And/or refining and/or processing of explosives.
7. Construction of:
1) Main railway lines including ancillary facilities (bridges, tunnels and stations);
2) Main highways and roads with four or more lanes, or the reconstruction and/or expansion of an existing road with two lanes or fewer, with the aim of producing a road with four or more lanes, in case such a new road or a reconstructed and/or expanded section has a continuous length of over 10 km or more, including ancillary facilities, other than the supporting content of the main road;
3) Airports for engaging in public air transport[2] with a take-off runway longer than 2,100 m.
8. Interior waterways whereupon the international or interstate navigational regime is in force, as well as ports and docks located on an interior waterway whereupon the international or interstate navigational regime is in force, regulation works on interior waterways enabling the passage of vessels over 1350 t.
9. Plants for the treatment of hazardous waste by burning, thermal and/or physical, physical-chemical, chemical procedures, as well as central storage and/or landfills for depositing hazardous waste.[3]
10. Plants for the treatment of non-hazardous waste by burning or chemical procedures[4] with a capacity exceeding 70 t per day; communal waste landfills for over 200,000 population equivalents.
11. Exploitation of ground water or enrichment of ground water where the annual volume of exploited or enriched water is equal to the amount of 10 million m3 or more.
12. Facilities:
1) Hydro-technical facilities for transferring waters between river basins intended to prevent potential water shortages where the amount of transferred water exceeds 100 million cubic meters annually;
2) In all other cases, facilities intended for transferring waters between river basins where the multi-annual average of the flow in the basin where the water is captured exceeds 2,000 million m3 per year and where the amount of transferred water exceeds 5% of this flow, except in case of transfer of potable water by pipelines.
13. Plants for cleaning wastewater in settlements with populations over 100,000.
14. Extraction of oil and natural gas.
15. Dams and other facilities intended for holding and accumulating waters where the water arriving, or additionally retained, or accumulated exceeds the amount of 10 million m3.
16. Pipelines for the transport of gas, liquid gas, oil and oil derivatives or chemicals with a diameter exceeding 800 mm and a length exceeding 40 km.
17. Facilities for the intensive breeding of poultry or pigs with a capacity exceeding:
- 85,000 places for the production of broilers;
- 40,000 places for poultry in breeding and exploitation;
- 2,000 places for the production of pigs (over 30 kg of weight);
- 750 places for sows'
18. Industrial plants for the production of:
1) Cellulose from wood pulp, hay or similar fibrous materials;
2) Paper and cardboard with a production capacity exceeding 20 t/day.
19. Open pit mines for mineral resources with a surface exceeding 10 ha, or the extraction of peat when the surface area of the exploitation terrain exceeds 100 ha.
20. Construction of overhead power lines with voltages amounting to 200 kV or more and lengths exceeding 15 km.
21. Facilities intended for the storage of oil, petrochemical or chemical products, natural gas, flammable liquids and fuels with a capacity of 100,000 t or more.
22. Activities and plants that are issued integrated permits in accordance with the Regulation on the types of activities and plants that are issued an integrated permit (" Official Gazette of RS", no. 84/05).

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1 Nuclear reactor cease to be such plants once the entirety of the nuclear fuel and other radioactively polluted elements are permanently removed from the place where the plants have been built.
2 An "airport" involves airports corresponding to the definition envisaged by the Chicago Convention of 1944 whereby the International Civil Aviation Organization was founded (Annex 14).
3 Plants defined in Annex IIA with Directive 75/442/EEC, under heading D9, as well as landfills for disposing of hazardous waste where Directive 91/689/EEC applies.
4 Plants defined in Annex IIA with Directive 75/442/EEC under heading D9.

ANNEX 05 LIST II – PROJECTS FOR WHICH AN E&S IMPACT ASSESSMENT MAY BE REQUIRED UNDER THE NATIONAL LEGISLATION

Project	Criteria for deciding on the need for drafting the environmental impact assessment study
1. Agriculture, aquaculture and forestry	
1) Irrigation and drainage systems-meliorative systems	The surface area they encompass exceeds 20 ha
2) Clearing forests for transitioning to another type of land use	The surface area it encompasses exceeds 10 ha
2. Extractive industry	
1) Open pit mines for mineral resources	All projects not listed under List I
2) Peat extraction	Surface area of exploitation terrain from 20 ha to 100 ha
3) Underground exploitation of mineral resources	All projects
4) Exploitation of mineral resources through All projects the procedure of river or lake dredging	All projects
5) Drilling for exploration and exploitation of All projects oil and natural gas	All projects
3. Energy production	
1) Plants for the production of electricity, water steam, hot water, technological steam or heated gases (thermal power plants, heating plants, gas turbines, internal combustion engine plants, other devices for combustion), including steam boilers, in combustion plants using all types of fuel	With a power of 1to 50 MW
2) Plants for energy production from hydropotential	With a power of over 2 MW
3) Devices for using wind power to produce energy (wind farms)	With a total power of over 10 MW
4. Pipelines with ancillary facilities for the transport of gas, oil, chemicals, water steam, hot water or without ancillary facilities, as well as lines for the transmission of electricity by overhead power lines	
1) Pipelines for the transport of gas, other than internal factory pipelines	Length of over 10 km and diameter over 150 mm
2) Pipelines for the transport of chemicals, other than pipelines representing part of a plant for handling such chemicals	Length of over 2 km and diameter over 150 mm
3) Pipelines for the transport of steam or hot water from the plants listed under item 3.1 other than internal factory pipelines	Length of over 20 km.
4) Pipelines for wastewater transport	Length of over 10 km.
5) Pipelines for the transport of oil and oil derivatives	All projects not listed under List I

6) Overhead high voltage power lines	Nominal voltage of 110 kV or more
5. Storage of flammable liquids and gases, natural gas, fossil fuels, oil and oil derivatives and chemicals	
1) Storage of flammable gases or products containing flammable gases	Total capacity of over 50 m 3
2) Storage of flammable liquids	Total capacity of over 500 m 3
3) Storage of chlorine	All projects
4) Storage of sulphur-dioxide	All projects
5) Storage of ammonium nitrate or substances containing ammonium nitrate	All projects
6) Storage of ammonia	All projects
7) Storage of other chemicals	Capacity of over 10 t
8) Surface (above-ground) storage of natural gas	Capacity of over 50 m3
9) Storage of coal or lignite	Capacity of over 20,000 t
10) Storage of oil or oil derivatives	Capacity of over 5,000 m3
6. Production and processing of metals	
1) Plants for the production of raw iron or steel (primary	All projects not listed under List I
or secondary melting) including the continuous casting procedure	
2) Plants for processing in ferrous metallurgy:	All projects not listed under List I
- Hot rolling mills	
- Foundries with one or several hammers or mallets	
- For applying surface protective metal layers in melted condition	
3) Ferrous metallurgy foundries	All projects not listed under List I
4) Plants for melting including the production of alloys comprised of non-ferrous metals, as well as the production of useful by-products (refining, casting, etc.)	All projects not listed under List I
5) Plants for the surface processing of metals and plastic materials using electrolytic or chemical procedures	All projects not listed under List I
6) Plants for the manufacture or assembly of motor vehicles and production of engines for motor vehicles (cars, buses, freight vehicles, agricultural, construction and mining machinery, as well as other engine-driven vehicles)	AII projects
7) Plants for the manufacture of batteries and accumulators	AII projects
8) Shipyards (production and/or repair of ship hulls or engines or ship parts)	Ship lengths 20 m or more

9) Manufacture and repair of aircraft	All projects except regular aircraft maintenance works
10) Manufacture of rail vehicles	All projects
11) Plants for explosive deformation of metals	All projects
12) Plants for the preparation, enrichment, baking and sintering of metal ores, as well as utilization of tailings	All projects
7. Industrial processing of minerals	
1) Plants for the dry distillation of coal (gasworks, smouldering furnaces, etc.)	All projects
2) Plants for the production of cement clinker, cement and lime in rotational or other furnaces	All projects not listed under List I
3) Plants for the production of glass and glass fibers, including the production of glass obtained by processing old glass	Capacity of up to 20 t per day*
4) Plants for melting mineral matter, including the production of mineral fibers	Capacity of up to 20 t per day*
5) Plants for the production of ceramic products by baking (tiles, bathroom accessories, household items from ceramics and porcelain, etc.) as well as the production of construction materials by baking (roof tiles, bricks, etc.)	Capacity of 40 t to 75 t per day*
6) Plants for the production of asphalt mixtures, including mobile plants	Capacity of over 50 t per hour
8. Chemical industry	
1) Processing of intermediate products and production of chemicals	All projects not listed under List I
2) Independent plants for the production, processing, forming and packaging of basic organic and inorganic chemicals, phosphorous, nitrogen and potassium-based artificial fertilizers (simple and complex chemical fertilizers), plant protection products, as well as biocides, pharmaceutical and cosmetic products, plastic mass, explosives, paint and varnish, detergents and chemicals for maintaining hygiene and cleaning, etc.	All projects not listed under List I
3) Plants for the production of mineral oils and lubricants (by distillation, refining, or other methods)	All projects
9. Food industry	
1) Plants for the production, treatment or processing of products from:	
- Animal-based raw materials (except milk)	Capacity of 10 t to 75 t per day*
- Plant-based raw materials	Capacity of 30 t to 300 t per day*

2) Plants for the processing, packaging and canning of meat, vegetables and fruit	Capacity of over 10 t per day
3) Plants for the production of animal fodder, except for cattle fodder mixers for own use	Capacity of over 5 t per day
4) Plants for the processing, treatment and refining of milk	Capacity of 5,000 liters to 200,000 liters per day*
5) Plants for the capture and processing of ground water, filling and packaging	All projects
6) Plants for the production of beer	Capacity of over 3,000,000 liters per year
7) Plants for the production of malt and yeast	Capacity of over 200 t per year
8) Plants for the production of confectionery or syrup	Capacity of over 5,000 t per year
9) Plants for the production of:	Capacity:
- Alcoholic beverages	- Over 10,000 liters per day for alcoholic beverages;
- Non-alcoholic beverages	- Over 20,000 liters per day for non-alcoholic beverages;
- Vinegar	- Over 10,000 liters per day for vinegar.
10) Plants for animal slaughter	Capacity of 3 t to 50 t per day*
11) Plants for fish processing	Capacity of over 1t per day
12) Plants for the production of fish meal or fish oil	All projects
13) Plants for the production and processing of starch	Capacity of over 100 t per day
14) Plants for the production or refining of sugar using sugar beet or raw sugar	All projects
15) Mills and hot houses	Capacity of over 200 t per day
16) Refrigerators (without a raw material processing plant)	Capacity of over 10 t of cooling fluid in the system
17) Production of molasses	All projects
10. Textile, leather, wood and paper industry	
1) Plants for the production of paper and cardboard	All projects not listed under List I
2) Plants for the production of cellulose based products (chipboard, hardboard, MDF and plywood)	All projects
3) Plants for the refining, processing and cultivation of wood	All projects
4) Plants for the preliminary treatment of fibers, fabric and paper (washing, bleaching, mercerizing, printing, chemical treatment) or coloring fibers or fabric	Capacity of up to 10 t per day*
5) Plants for tanning and processing leather	Capacity of up to 12 t per day*
11. Rubber industry	
1) Plants for the production and processing of rubber and india rubber	All projects

2) Plants for the vulcanization of natural or synthetic india rubber using sulphur or sulphur compounds	All projects
12. Infrastructural projects	
1) Urban development projects:	
- Commercial, business and sales centers;	- Total usable surface area of over 60,000 m2
- Stadiums with ancillary facilities;	- Capacity of over 25,000 visitors
- Above-ground or underground parking.	- Capacity of 1,000 places or more
2) Railway lines including ancillary facilities and devices	All projects not listed under List I
3) Lifts and cable-cars, except for ski-lifts	All projects
4) Airports	All projects not listed under List I
5) Regional roads including ancillary facilities, except for supporting contents of the road	All projects
6) Interior waterways whereupon the international or interstate navigational regime is not in force, as well as ports and docks located on an interior waterway whereupon the international or interstate navigational regime is not in force, including ports, and/or docks intended for the loading and unloading of passengers or goods.	All projects
7) Channels, embankments and other flood - defense facilities	All projects
8) Dams and other facilities intended to retain or accumulate water	All projects
9) Public water supply facilities - sources of water supply at water capture points, transport of potable water, water processing plants	All projects
10) Hydro-technical facilities for transferring water between river basins (except for the transfer of potable water by pipelines)	All projects
11) Transformer stations and switchgears	Voltage of 220 kV or more
12) Telecommunications transmitter radio- relay systems	Effective radiated power of over 250 W
13) Mobile telephony telecommunications facilities (radio base stations)	Effective radiated power of over 250 W
13. Tourism and recreation	
1) Ski paths, ski lifts and cable cars with ancillary facilities	The surface area of scope extends across over 5 ha
2) Marinas with ancillary facilities	The surface area of enclosed water surface exceeds 1,000 m2 or has at least 100 berths
3) Tourist settlements and hotel complexes	Capacity of 1500 beds or more
4) Purpose-built parks (fun, sports, recreation, golf terrains, etc.) including zoos and safari parks, with ancillary facilities	Total surface area of over 20 ha

14. Other projects	
1) Car tracks for races or testing motor vehicles with ancillary facilities	The surface area it extends over exceeds 10 ha
2) Plants for waste management:	
- Disposal and storage of hazardous waste;	- Capacity of up to 10 t per day*
- Disposal and storage of non-hazardous waste;	- Capacity of up to 50 t per day*
- Treatment of non-hazardous waste;	- All projects not listed under List I
- Communal waste landfills;	- Capacity of up to 10 t per day or total capacity of up to 25,000 t*
- Waste treatment using mechanical and/or biological procedures	- All projects
- Mobile waste treatment plants	- All projects
3) Waste water processing plants:	
- Communal waste waters	- All projects not listed under List I
- Technological waste waters	- All projects
4) Plants and devices for testing	
- Internal combustion engines	- With a heat energy exceeding 10 MW
- Gas turbines or jet engines	- With a heat energy exceeding 100 MW
5) Plants for the production of artificial mineral fibers	All projects
6) Plants for the briquetting of coal	All projects
7) Plants for the production of concrete - concrete plants, including mobile plants	Capacity of over 30 t per hour
8) Plants for recycling, regeneration or destruction of explosive matter	All projects
9) Plants for disposal, processing or destruction of animal carcasses or animal- based waste	Capacity of 1 t to 10 t per day*
10) Plants for tobacco processing	Capacity of over 10,000 t per year
11) Plants for the production of biogas	All projects
12) Graveyards and crematoriums	For settlements with populations of 40,000 or more
13) Facilities for supplying motor vehicles with fuel (gas stations)	With a storage capacity of:
	- over 100m3 in settlements
	- over 500 m3 outside settled areas
15. Projects listed under List I and List II being implemented within a protected natural asset and the protected vicinity of an immovable cultural asset, as well as other special purpose areas.	All projects

* Note: Item no. 22 from List I shall apply to projects marked separately in List II, with capacities exceeding those given under column no. 2 (Criteria for deciding on the need for drafting the environmental impact assessment study).

ANNEX 06: RELEVANT NATIONAL LEGISLATION AS OF JULY 2020

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

The main legal documents are:

The Constitution of Serbia ("Official Gazette of RS" No. 98/06).
The National Strategy for Sustainable Development ("Official Gazette of RS" No. 72/09, 81/09)
The Law on Water ("Official Gazette of RS" No. 30/10, 93/12)
Law on Planning and Construction ("Official Gazette of RS" No. 72/09, 81/09)
Law on Strategic EIA ("Official Gazette of RS" No. 135/2004
Law on nature protection ("Official Gazette of RS", 36/09, 88/10, 91/10, 14/16)
Law on environmental protection ("Official Gazette of RS" No. 135/04, 36/09, 72/09, 43/11, 14/16)
Law on EIA ("Official Gazette of RS" No. 135/2004, 36/2009)
Law on waste management ("Official Gazette of RS", 36/09, 88/10, 14/16)
Law on noise protection ("Official Gazette of RS", 36/09, 88/10)
Law on water ("Official Gazette of RS", 30/10, 93/12, 101/16)
Law on forest ("Official Gazette of RS", 30/10, 93/12, 89/15)
Law on air protection ("Official Gazette of RS", 36/09, 10/13)
Law on Occupational Health and Safety ("Official Gazette of RS", 101/05, 91/15)
Animal Welfare Law, ("Official Gazette of RS" No. 41/09)
Regulation on welfare of animal intended for experimental purposes (''Official Journal of. RS'', No 39/10).

Laws and Rules regarding railway transport:

Law on Railways („Off. Gazette of RS, no. 45/13 and 91/15),
Law on Railway Safety and Interoperability ("Off. Gazette of RS", no. 104/13, 66/15 and 92/15)
Rules on technical conditions and maintenance of substructure of rail- ways ("Official Gazette of RS", no. 39/16)
Rules of chemical prevention of weed and shrubs on YR railways („Official Gazette of Yugoslav Railway Association", no. 8/90);
Regulation on railroad crossings („Off. Gazette of SRY, no. 72/99)
Regulation on the carriage of dangerous goods in road and railway transport („Off. Gazette of RS, no. 53/02)

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

Decree on defining the list of projects for which an environmental impact assessment is mandatory and the list of projects for which an EIA may be required ("Official Gazette of RS", No. 114/08)
Rulebook on the content of the request for determining the need for impact assessment and on the content of the request for defining the scope and content of the EIA study ("Official Gazette of RS", No. 69/05)
Rulebook on the content of the EIA study ("Official Gazette of RS", No. 69/05)
Rulebook on the procedure of public insight, presentation and public debate on the EIA study ("Official Gazette of RS", No. 69/05)
Rulebook on the work of the Technical Commission for the EIA study ("Official Gazette of RS", No. 69/05)
Decree on permissible noise level in the environment ("Official Gazette of RS", No. 72/10)
Decree on determining the category of water surfaces ("Official Gazette of RS", No. 5/68)
Decree on Dangerous Water Pollutants ("Official Gazette of RS", No. 31/82)

Law on confirmation of convention on information disclosure, public involvement in process of decision making and legal protection in the environmental area ("Official Gazette of RS", 38/09)

Decree on establishing the List of Projects for which the Impact Assessment is mandatory and the List of projects for which the EIA can be requested ("Official Gazette of RS" No. 114/08)

Rulebook on the contents of requests for the necessity of Impact Assessment and on the contents of requests for specification of scope and contents of the EIA Study ("Official Gazette of RS" No. 69/05)

Rulebook on the contents of the EIA Study (“Official Gazette of RS” No. 69/05)

Rulebook on the procedure of public inspection, presentation and public consultation about the EIA Study (“Official Gazette of RS” No. 69/05)

Rulebook on the work of the Technical Committee for the EIA Study (“Official Gazette of RS” No. 69/05)

Regulations on permitted noise level in the environment (“Official Gazette of RS” No. 72/10)

Decree on establishing class of water bodies (“Official Gazette of SRS” No. 5/68)

Regulations on dangers pollutants in waters (“Official Gazette of SRS” No. 31/82)

Law on confirmation of convention on information disclosure, public involvement in process of decision making and legal protection in the environmental area (“Official Gazette of RS”, 38/09)

European Environment and Health Committee. Serbia. Copenhagen, WHO Regional Office for Europe, 2006 (http://www.euro.who.int/eehc/implementation/20061010_9 accessed 29 December 2009).

National Assembly. Law on Protection against Environmental Noise. Official Gazette of the Republic of Serbia, No. 36/09, 88/10.

National Assembly. Law on Waste Management. Official Gazette of the Republic of Serbia, 2009, No. 36/09, 88/10, 14/16.

National Assembly. Constitution of the Republic of Serbia. Official Gazette of the Republic of Serbia, 2006, No. 98/06.

National Assembly. Law on Environmental Protection. Official Gazette of the Republic of Serbia, 2004, No. 135/04, 36/09, 72/09, 43/11, 14/16.

National Assembly. Law on Air Protection. Official Gazette of the Republic of Serbia, 2009, No. 36/09, 10/13.

National Assembly. Law on Chemicals. Official Gazette of the Republic of Serbia, 2009, No. 36/09. 88/10, 92/11, 93/12, 25/15

National Assembly. Law on Biocidal Products. Official Gazette of the Republic of Serbia, 2009, No. 36/09, 88/10, 92/11, 25/15

National Assembly. Law on Occupational Safety and Health. Official Gazette of the Republic of Serbia, 2005, No. 101/05, 91/15

National Assembly. Law on Environmental Impact Assessment. Official Gazette of the Republic of Serbia, 2004, No. 135/04, 36/09

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

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

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

ANNEX 07 LMP COMPLIANCE REPORT
for third parties engaging contracted workers

Assignment name:

Contract ref. No:

Contract period: Start date (M/D/Y) End date (M/D/Y)

Contractor/Service Supplier:

Reported period:

Date of report:

Signature of authorized person:

LABOR AND WORKING CONDITIONS COMPLIANCE REPORT

Company employees* statistics:

Total number of employee's gender disaggregated1: M_____F_____

Number of employees with an employment contract out of total number of employees

Number of employees without an employment contract out of total number of employees Number of employees with access to social security, pension and health insurance out of total number of employees Number of employees who receives wages/salaries at least once a month out of total number of employees

Number of employees who left the company in the reported period out of total number of employees

Number of employees hired in the reported period

Number of hours worked per employee (monthly average)

Total overtime (monthly average per employee)

Number of injuries at work (in reporting period and cumulative since contract start) out of total no. of employees
Number of fatalities at work (in reporting period and cumulative) out of total no. of employees
Number of reported violence out of total no. of employees
Number of reported harassment/ abuses out of total no. of employees
Availability of an accessible and functioning employee grievance mechanism (Y/N)

Number of grievances raised with the GM (in reporting period and cumulative since contract start)

Number of grievances resolved by GM (in reporting period and cumulative since contract start)

Number of suits filed with regard to labor, employment and OHS issues

Number of disputes brought to peaceful settlement/ voluntary arbitration procedure

Number of visits by labor/ OHS inspection

*The employee is any natural person employed or engaged to work or perform service for the employer

1 The number of employees refers to the actual number/headcount on the date of the report.

2 The numbers imply the total number of incidents in the reported period.

Project workers statistics:

Total number of project workers**:
Number of project workers with an employment contract:
Number of project workers without an employment contract:
Number of project workers with access to social security, pension and health insurance verified by confirmation from registry:

Working and Labor Conditions Screening checklist

	Terms and conditions	Yes / No	Notes
1	All project workers have an employment contract or engagement agreement in writing.	Yes ☐ No ☐	If "No" please specify and explain
2	All project workers are paid at least once a month	Yes ☐ No ☐	If "No" please specify and explain
3	All project workers worked 8 hours a day, 40 hours a week	Yes ☐ No ☐	If "No" please explain and specify the hours worked
4	All project workers had a regular daily and weekly rest	Yes ☐ No ☐	If "No" please specify and explain
5	Number of project workers were terminated from employment with termination in line with national labor law and ESS2	Yes ☐ No ☐	If "Yes" please specify number and explain conditions of termination
6	Number of project workers attended OHS related training programme	Yes ☐ No ☐	If "Yes" please specify number and explain
7	Project workers were granted leaves they are entitled to	Yes ☐ No ☐	If "Yes" Please specify the type and number of leaves
8	Project workers were involved in accidents at work resulting in injuries or fatalities	Yes ☐ No ☐	If "Yes" please specify and explain
9	Project workers reported on cases of discrimination, harassment, sexual harassment or non-compliance with law	Yes ☐ No ☐	If "Yes" please specify and explain
10	Project workers raised grievances or started voluntary arbitration / legal proceedings to settle a dispute	Yes ☐ No ☐	If "Yes" please specify and explain
11	In the reported period there were some incidents on noncompliance with the LMP	Yes ☐ No ☐	If "Yes" please specify and explain
12	All project workers have signed the Code of conduct including SEA/SH	Yes ☐ No ☐	If "No" please specify and explain

ANNEX 08 STATEMENT OF LEGAL AND REGULATORY COMPLIANCE

This STATEMENT is to be submitted as part of bidding documents by prospective Service/Works providers

Date and place of issuance: _____
Name and address of the issuer: _____

STATEMENT OF LEGAL AND REGULATORY COMPLIANCE

Hereby we declare that[37]

We are aware of, and comply with, the standards laid down in World Bank Environment and Social Framework;

We are aware of, and comply with, the standards laid down in the Labor Management Procedures;

We are aware of, and comply with, the standards laid down in World Bank Group Health and Safety Guidelines;
We conform to all national laws* and applicable regulations concerning employment, labor and employee relations, and labor and working conditions;
We are committed to providing a safe and healthy environment for our employees and to implementing all occupational health and safety requirements as stipulated by national legislation;
We do not tolerate any form of child, forced or slavery work.
We prohibit any form of harassment, abuse and violence at work and forbid direct or indirect discrimination against any employee or groups of employees on any ground and for whatever reason.
We confirm that a worker Grievance Mechanism is available
We confirm that no worker Grievance Mechanism is available but will be established by the time the contract is signed or will inform all contracted workers of the Grievance Mechanism available

We hereby state that should we be awarded with the contract; we shall adopt the Labor Management Procedures applicable to the project and incorporate them in our practice.
We understand that the failure to respect any of the above stated commitments could lead to termination of the contract and exclusion from the project.

Signature:
Name:
Position:

*National Laws refers both to the Laws of Republic of Serbia and the domicile Law of the country in case the Bidder is foreign

ANNEX 09 MITIGATION PLAN AND MONITORING PLAN FOR ESMP TEMPLATE ide

ESMP Table of Content

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. The Borrower will (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements.

Depending on the project, an ESMP may be prepared as a stand-alone document or the content may be incorporated directly into the ESCP. The content of the ESMP will include the following:

(a) Mitigation

• The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP: (i). identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement); (ii). describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; (iii). estimates any potential environmental and social impacts of these measures; and (iv). takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage).

(b) Monitoring

• The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

(c) Capacity Development and Training

• To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.

• Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).

• To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

(d) Implementation Schedule and Cost Estimates

• For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

(e) Integration of ESMP with Project

• The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall plan.

Content

INTRODUCTION

PROJECT DESCRIPTION

BASELINE DATA

- Population
- Health and Safety
- Geology and soil
- Climatic characteristics
- Seismology
- Air quality
- Waste
- Water resources
- Soil
- Flora and Fauna
- Noise
- Cultural heritage

SENSITIVE RECEPTORS

POTENTIAL IMPACT AND IMPACT ASSESSMENT

- Potential Impacts on the Air quality
- Potential Impacts on water (water protection and drainage) and soil
- Impact of generated waste streams
- Potential impacts on workers and community health and safety
- Potential socio-economic impacts
- Noise Impact
- Potential Impacts on the Flora and Fauna
- Potential Impacts on Cultural Heritage

CAPACITY BUILDING AND TRAININGS FOR USERS AND CONTRACTORS

PUBLIC CONSULTATION

ENVIRONMENTAL AND SOCIAL MITIGATION PLAN

ENVIRONMENTAL AND SOCIAL MONITORING PLAN

ANNEX 09A MITIGATION PLAN

Phase	Issue	Mitigating Measure	Cost of Mitigation (If Substantial)	Responsibility*	Supervision observation and comments (to be filled out during supervision)
Project Preparation					
Project Execution / operate					

* Items indicated to be the responsibility of the contractor shall be specified in the bid documents

ANNEX 09B MONITORING PLAN

Phase	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored/ type of monitoring equipment?	When is the parameter to be monitored- frequency of measurement or continuous?	Monitoring Cost What is the cost of equipment or contractor charges to perform monitoring?	Responsibility	Supervision observation and comments (to be filled out during supervision with reference to adequate measuring reports)
Project preparation							
Project Execution / Operate							

ANNEX 11: SAMPLE OF COMPLETED ESMP – MONITORING PLAN

EXAMPLE ONLY: RAILWAY TRACK REHABILITATION / RECONSTRUCTION OF EXISTING RAILWAY STATION

ANNEX 13: GRIEVANCE REGISTRATION FORM

Reference No. (*leave empty, will be filled in by the responsible person*)**:**

Section 1 Contact Information (optional):

Note: you can remain anonymous if you prefer. In case of anonymous submissions, a response will be posted on the Project website

❑ I wish to raise my grievance anonymously

Note: Your name and contact information will not be published or made publicly available. The data will be used exclusively for possible further communication with you regarding the submitted question, comment or grievance. Information on gender serves exclusively for statistical purposes, processing and analytical display; by declaring it, you are giving your consent for statistical data processing.

First name: _____

Last name: _____

Gender of complainant (optional): ❑ Male ❑ Female

Contact information:

Address: _____

E-mail: _____

Telephone: _____

Please mark how you wish to be contacted: ❑ By Post ❑ By Telephone ❑ By e-mail

❑ I will follow up on the response posted on the website as I want to remain anonymous

Preferred Language for communication: ❑ Serbian ❑ Other _____ (*indicate)*

Section 2 Question, Comment or Grievance (mandatory):

Note: In case your question, comment or grievance is connected to a specific event or incident, please briefly describe: What happened? Where did it happen? Who did it happen to? What is the result of the event / incident? When did the event or incident occur (date). Did it happen more than once (in what period)? Is it still happening?

What would you like to see happen to resolve the problem?

c) Template for Grievance redress log

#	Date when the grievance was received	Complainant's name	Bases of interest in the Project (resident, organization, etc.)	Submitted anonymously	Gender	Complainant's contact	Brief description of the problem	Category	Company responsible for processing the grievance	Name and function of the person in charge of handling the grievance	Planned activities	Result of activities undertaken to process the grievance

ANNEX 14: RISK CLASSIFICATION

Project type, location, sensitivity, scale	Nature & magnitude of ES risks & impacts, available mitigation	Borrower capacity and commitment	Context risk relevant to ES measures
HIGH RISK			
• Complex • large to very large scale • in sensitive location(s)	• wide range of significant adverse risks and impacts • long term, permanent and/or irreversible, impossible to avoid entirely • some cannot be mitigated or require complex, unproven mitigation, sophisticated social analysis • high in magnitude and/or in spatial extent (large to very large area or population); • significant adverse cumulative or transboundary impacts; • high probability of serious adverse effects to human health and/or the environment • high value and sensitivity (e.g. protected and internationally recognized areas) • high value, sensitive lands or rights of Indigenous Peoples and other vulnerable minorities • Intensive or complex involuntary resettlement or land acquisition • Impacts on cultural heritage or densely populated urban areas • may give rise to significant social conflict, harm or human security risks • a history of unrest in area or sector, concerns about use of security forces	• uncertain, conflicting agency jurisdiction • legislation, regulations not addressing risks and impacts • changes to applicable legislation are being made • enforcement is weak • limited past experience of implementing agencies • challenges and concerns about track record regarding ES issues • significant stakeholder engagement capacity, commitment, track record concerns	• factors outside project control impacting ES performance and outcomes
SUBSTANTIAL RISK			
• not as complex • Large to medium scale • not such sensitive location	• some significant risks and impacts • mostly temporary, predictable and/or reversible • possibility of avoiding or reversing but with substantial investment and time • may give rise to limited degree of social conflict, harm, human security risk; • medium in magnitude and/or in spatial extent (medium to large area and population)	• uncertain, conflicting agency jurisdiction • legislation, regulations not addressing risks and impacts • changes to applicable legislation are being made • enforcement is weak	

Project type, location, sensitivity, scale	Nature & magnitude of ES risks & impacts, available mitigation	Borrower capacity and commitment	Context risk relevant to ES measures
	• less severe, more readily avoided/mitigated cumulative and/or transboundary impacts • medium to low probability of serious adverse effects to human health and/or the environment (with known and reliable mechanisms to prevent or minimize) • lower effects on areas of high value or sensitivity • more readily available and reliable mitigatory and/or compensatory measures	• in some respects, limited experience of implementing agencies • some concerns about track record regarding ES issues readily addressed • some stakeholder engagement concerns readily addressed	
MODERATE RISK			
• no activities with high potential for harming people or environment • located away from sensitive areas	• risks and impacts not likely to be significant • not complex and/or large • predictable and expected to be temporary and/or reversible; • low in magnitude; • site-specific, without likelihood of impacts beyond the project footprint; • low probability of serious adverse effects to human health and/or the environment • Routine safety precautions are expected to be sufficient to prevent accidents • easily mitigated in a predictable manner		
LOW RISK			
	• Minimal or negligible risks to and impacts on human populations and/or the environment • few or no adverse risks and impacts and issues • No further assessment after screening		

ANNEX 15: COMPLIANCE REPORT

Contract:
Contractor/Service Supplier:
Reported period:
Date of report:

COMPLIANCE REPORT

Company employees* statistics:
Total number of employees[1]: _____

Number of employees with an employment contract	Number of employees outside the employment relationship	Number of employees with access to social security, pension and health insurance	Number of employees who receives wages/salaries at least once a month
Number of employees who left the company in the reported period	Number of employees hired in the reported period	Number of hours worked per employee (monthly average)	Total overtime (monthly average)
Number[2] of injuries at work	Number of fatalities at work	Number of reported violence	Number of reported harassment/ abuses
Number of reported discriminations	Number of grievances raised	Number of grievances resolved	
Number of suits filed with regard to labor, employment and OHS issues	Number of disputes brought to peaceful settlement/ voluntary arbitration procedure	Number of visits by labor/ OHS inspection	

*The employee is any natural person employed or engaged to work or perform service for the employer
[1] The number of employees refers to the actual number/headcount on the date of the report.
[2] The numbers imply the total number of incidents in the reported period.

Project workers statistics:

Total number of project workers**:	Number of project workers with an employment contract:	Number of project workers outside the employment relationship	Number of project workers with access to social security, pension and health insurance

Working and Labor Conditions Screening checklist

	Terms and conditions	Yes	No	Notes

1	All project workers have an employment contract or engagement agreement in writing			If “No” please specify and explain
2	Project workers are paid at least once a month			If “No” please specify and explain
3	Project workers worked 8 hours a day, 40 hours a week			If “No” please explain and specify the hours worked
4	Project workers had a regular daily and weekly rest			If “No” please specify and explain
5	Project workers were terminated from employment			If “Yes” please specify and explain
6	Project workers attended a training programme			If “Yes” please specify and explain
7	Project workers were granted leaves they are entitled to			If “Yes” Please specify the type and number of leaves
8	Project workers were involved in accidents at work resulting in injuries or fatalities			If “Yes” please specify and explain
9	Project workers reported on cases of discrimination, harassment, sexual harassment or non-compliance with law			If “Yes” please specify and explain
10	Project workers raised grievances or started voluntary arbitration / legal proceedings to settle a dispute			If “Yes” please specify and explain
11	In the reported period there were some incidents on noncompliance with the LMP			If “Yes” please specify and explain

** Project workers are natural persons assigned to the project by the contractor/ service provider.

This questionnaire should be part of a report on involvement/results achieved in the project

ANNEX 16: EXISTING WASTE MANAGEMENT SYSTEM OF THE “SERBIAN RAILWAYS INFRASTRUCTURE” a.d. COMPANY - SUMMARY FROM THE ROOLEBOOK OF RECORD KEEPING, STORAGE, MOVEMENT AND SELLING OF INACTIVE SUPPLIES AND WORK PRODUCT MATERIALS, April 2016

“Serbian Railways Infrastructure” adopted the Waste Management Plan in April 2016, containing documentation on the types, composition and amounts and measures for the reduction of waste, particularly hazardous waste. Procedures and methods for separating, storing and treating waste have also been listed. A cadaster of waste matter at the company level has been produced, and the formation of 4 centers has been envisaged for receiving hazardous waste in 4 railway hubs across the entire network of railways in Serbia.

During the working process, "Serbian Railways" ad generates a dangerous and non- hazardous waste:

- Hazardous waste is waste that by its origin, composition or concentration of hazardous substances may cause danger to the environment and human health and has at least one of the hazardous characteristics regulated by law, including the packaging in which hazardous waste was or is packed. Hazardous waste can be in the form solid and liquid state.

- Non-hazardous waste is waste that has no characteristics of hazardous waste.

Temporary storage of hazardous and non-hazardous waste is carried out in a total of 279 stocks at 283 locations (individual stocks / warehouses are located spatially in multiple locations), "Serbian Railways" JSC.

Secondary raw materials that are enlisted performing maintenance work on the railway infrastructure and railway vehicles (used crushed stone, old wooden sleepers, waste wood, waste sheets and steel, old rail for rail accessories and old crossover parts, waste oil, old batteries, used batteries, electronic and electrical waste ...) must be temporarily stored in specially designated locations and warehouses (facilities) designated and equipped for the storage of these wastes In line with relevant waste and chemicals regulation.

“Serbian Railways” ad does not perform the treatment nor permanent disposal, but only the sale / submission of the authorized operator. Sale of waste is carried out in accordance with applicable laws and the Company's current price list "Serbian Railways" ad public auctions and individual sales.

Sale / delivery of waste follows the document of movement of waste. Testing of the waste in order to launch the procedure for selling / delivering waste.

ANNEX 17: SAMPLE CLAUSES FOR TENDER DOCUMENTATION

During the works, the Contractor will work according to the Environmental and Social Management Plan (ESMP). The Contractor is obliged to confirm that:

- ESMP conditions have been included into the bid price;
- The Contractor has a qualified and experienced person in a team who will be responsible for the environmental compliance requirements of the ESMP. For this part of the work on the construction site, the presence of a responsible person is mandatory on a daily basis;
- The Contractor and its sub-contractors will comply with Republic of Serbia national laws, EU standards and Lender requirements.

The Contractor should identify potential risks before the commencement of works. Provisions for emergency responses are to be included in the Construction Site Safety Plan, which shall include nomination of a person who will be immediately contacted if an accident occur. In case of any accidents or environmental threats, there will be immediate reporting about these events. The Contractor shall inform the project manager and local authorities immediately after the accident. If the project manager is not available, the Contractor shall inform PERS about the accident. The Site Safety Plan shall be submitted to the Project Supervision Consultant for approval one week before the commencement of the works.

The Contractor will provide the results of “zero environmental monitoring” prior to commencement of works, during its own mobilization phase.

No compensation for the costs of the required environmental mitigation measures and monitoring activities in the form of the particular item in the Bill of Quantity (BoQ) shall be given to the Contractor, except for the water quality analysis and noise measurement. It shall be regarded as if the Contractor has included these costs in the other items of the BoQ. The actual costs of analyzing water quality and noise measurement within the defined contract will be reimbursed to the Contractor in the form of a specific item in the total price.

For non-compliance with the ESIA / ESMP requested measures for mitigating the environmental impact and monitoring activities, the Contractor will receive a specific penalty in the form of demerit points. Demerit points are provided as a measure that should stimulate the Contractor to carry out his obligations in an organized and timely way and to perform his duty in a quality manner.

The Contractor will be responsible for the implementation of environmental mitigation measures during construction and shall employ an environmental specialist who will supervise implementation of the Contractor’s environmental responsibilities. He will coordinate between the Contractor, IZS and the MCTI, and will address any complaints during project implementation in cooperation with IZS.

During project implementation, the IZS shall monitor the compliance of the Contractor with the ESMP provisions.

The Contractor will prepare, as quarterly progress reports, the reports for IZS, which would present all the mitigation measures and measures for environmental protection along with the anticipated activities for monitoring, which were performed during the reporting period. The Contractor will take care of the quality of the environment, in accordance with Mitigation Plan and Monitoring Plan, which form an integral part of the ESMP and will provide reports to IZS.

Sample Labor Clauses for tender documentation

'The appointed party shall be required to ensure the implementation and monitoring of lender requirements on labor standards. All workers employed on the site – whether direct employees of the Contractor or employees of subcontractors and labor-only contractors – shall be employed in accordance with national labor legislation and any additional requirements notified to the party by the lenders. The appointed party will be required to report regularly on its implementation and monitoring of the lenders' labor requirements.

The Contractor shall ensure that a safe and healthy working environment is provided and that best occupational health and safety practice is promoted. The Contractor shall take steps to prevent accidents, injury and disease arising in the course of work by identifying and controlling risks to workers, as far as is reasonably practicable. The Contractor shall ensure that all staff, laborers and persons entitled to be on site receive the necessary supervision, information, instruction and training to do their jobs safely. Where appropriate, the Contractor shall provide appropriate equipment to minimize health and safety risks and enforce its use. The Contractor shall put in place arrangements for emergency prevention, preparedness and response.

All tendering parties shall provide detailed labor costings for their bid and these labor costings shall be consistent with payment to all workers on the Works Site of the applicable minimum wage or collectively agreed wages, and statutory or agreed overtime premia. Wherever possible, non-wage labor costs – such as provision of OHS equipment and, where appropriate, worker housing – shall be incorporated in the Bill of Quantities.'

<u>Contractor labor clauses to be included in contracts for contractors:</u>

The Contractor shall comply with all the relevant labor Laws of the Republic of Serbia and Labor Management Procedures applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights. The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

<u>Prohibition of Forced Labor</u>

'The Contractor shall not employ forced or compulsory labor, including bonded or involuntary prison labor, in any form. Forced or compulsory labor consists of all work or service not voluntarily performed that is extracted from an individual under threat of force or penalty. Workers shall not be required to lodge deposits or their identity papers with their employers.'

<u>Prohibition of Child Labor</u>

'The Contractor shall ensure that you people are not employed below the appropriate national age for employment, namely 16. Young people who are employed between the ages of 16 and 18 shall be only employed in accordance with national law and not be employed on hazardous work and a risk assessment shall be carried out in respect of any work carried out by such employees.'

<u>Non-discrimination and equal treatment</u>

'The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. The Contractor shall ensure equal remuneration for men and women for work of equal value.'

Workers Organizations, Freedom of association and collective bargaining

'All workers shall have the right to form and join trade unions and to bargain collectively, as provided for under national law. The Contractor shall ensure that workers representatives shall not be discriminated against and shall have access to all workplaces necessary to enable them to carry out their representation functions.'

Record-keeping

'The Contractor shall keep complete and accurate records of the employment of labor. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to EBRD's representative. The number of grievances received by workers and the response shall also be collected and submitted on a quarterly basis.'

Wages

'The Contractor shall pay rates of wages and benefits that shall meet at least statutory or agreed industry minimum rates. Deductions from wages for disciplinary measures shall not be permitted nor shall any deductions from wages not provided for by national law be permitted without the expressed permission of the worker concerned. Deductions must never lead to an employee receiving less than the applicable minimum wage.'

'All workers shall be provided with clearly understandable verbal and written information about the conditions in respect of wages before they enter employment and of the particulars of their wages for the pay period concerned each time that they are paid. Wages shall be paid in legal tender in full, on time and directly to the workers concerned. The Contractor shall maintain records of all payments and deductions made.'

Hours of Work

'Hours of work shall comply with applicable laws, collective agreements, and industry standards. Overtime shall be voluntary wherever possible, shall not be demanded on a regular basis and shall always be compensated at a premium rate.'

"No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the Contract Data, unless:

(a) otherwise stated in the Contract,

(b) the Engineer gives consent, or

(c) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer."

Health and Safety

'The Contractor shall provide The Sponsor with a written Health and Safety Policy and a project-specific Health and Safety Plan before the commencement of work. This Plan should be made available to the lenders prior to the start of Construction.'

'The Contractor shall ensure that a safe and healthy working environment is provided and that best occupational health and safety practice is promoted. The Contractor shall provide regular information and training to all staff, workers and persons entitled to be on site regarding the potential hazards to health and safety, and on the measures in place to prevent accidents, injuries and ill health.'

'The Contractor will provide or make arrangements for medical treatment of workers, so as not to overload the resources of the local communities. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, and ambulance service are available at all times at the Site, and that any accommodation for Contractor's personnel and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.'

‘The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. The Contractor shall send to the Engineer/Employer, details of any accident as soon as practicable after its occurrence.’

‘The Contractor will develop a preventative approach to worker health concerns, including providing inoculations or other preventative treatments for disease that are either global in nature or endemic in the project area, condoms and information for raising awareness among employees of sexually transmitted disease and HIV/AIDS. The Contractor shall undertake appropriate measures to reduce the risk of transfer of STDs and HIV/AIDS among the Contractor’s Personnel and the local community.’

Social Security

‘The Contractor shall ensure that that obligations to staff and labor under labor or social security laws and regulations arising from the employment relationship shall be respected, and that such obligations shall not be avoided through the use of labor-only contracting arrangements.’

Grievance mechanisms

‘The Contractor shall ensure that a grievance mechanism is available to all workers to use without fear of intimidation or retaliation. The Contractor will ensure that employees are informed about the grievance mechanism and that this is part of the training for new employees and information is posted in relevant areas in the worksite and any construction camps.’

Code of Conduct

‘The Contractor shall develop and ensure that a code of conduct for employees is enforced, including policies on alcohol, smoking and non-smoking areas, and interaction with local communities. The code of conduct shall be part of the training programme for new employees and be posted in relevant areas in the construction camp.’

Reports

‘The Contractor shall record occupational accidents and occupational diseases, and shall provide information to workers and their representatives concerning the recording system. The Contractor shall notify the competent authorities of occupational accidents and occupational diseases, and provide appropriate information to workers and their representatives concerning the notified cases.’

‘The Contractor shall provide regular reports on its management and monitoring of working conditions of direct and indirect employees on the Works Site.