Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 10-Sep-2023 | Report No: PIDA35985

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Serbia	P179703	Serbia Railways Sector Modernization Phase 2	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EUROPE AND CENTRAL ASIA	11-Sep-2023	31-Oct-2023	Transport
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Republic of Serbia	Serbia Voz, Serbia Railways Infrastructure, Ministry of Construction, Transport and Infrastructure, Railways Directorate, Serbia Cargo	

Proposed Development Objective(s)

Phase 2 Project Development Objective: to maintain the quality of infrastructure and safety of railway operations through enhanced maintenance of existing railway assets

Components

Component 3: Railway Modernization Enablers
Component 1: Infrastructure and Asset Management
Component 2: Institutional Strengthening and Project Management

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	130.00
Total Financing	130.00
of which IBRD/IDA	65.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	65.00
Non-World Bank Group Financing	
Other Sources	65.00
FRANCE: French Agency for Development	65.00

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

This Project Information Document (PID) covers Phase 2 of the Serbia Railways Sector Modernization Program, approved by the World Bank's Executive Directors on March 17, 2021 with the first phase (P170868).

B. Introduction and Context

Country Context

Serbia's recovery from the pandemic-induced recession has been strong and the ongoing domestic and European energy crisis has revealed new vulnerabilities. After two years of solid growth in 2018-19, the Serbian economy contracted in 2020 by 0.9 percent. The recession would have been even more severe if not for the timely and sizeable government fiscal support package. The economy rebounded in 2021, with growth reaching 7.5 percent. But the pandemic was one in a series of shocks that have affected Serbia recently, several of them climate related. Firstly, the European energy crisis coupled with domestic problems with generating capacity and the need to import electricity, coal and gas at exceptionally high prices has created large fiscal costs. Secondly, drought has reduced domestic agricultural output two years in a row at a time when international food prices were also rising sharply. The drought of the summer 2022 is the latest in a series of climate-related events with significant economic impacts, including severe drought and floods in 2012 and 2014 that caused recessions. Climate change projections indicate that Serbia faces a high probability of continuing temperature increases, along with more frequent and prolonged droughts and wildfires.

While Serbia saw a growth rebound after the pandemic, the country's structural rate of growth over the past ten years has been relatively low and inequality remains high. Growth averaged 1.9 percent between 2010 and 2019, well below the rate of growth needed to close the income gap with aspirational peers in the European Union (EU). There are many reasons for this relatively slow growth, including the large, unreformed State-Owned Enterprises (SOEs) sector, fiscal consolidation implemented over 2014-18, and the fact that investment and exports, although growing steadily, are still below levels seen in comparable countries. In addition, Serbia's growth is characterized by high energy intensity and inefficient use of resources. Finally, income inequality reflects persistent gaps in access to opportunities. The Gini coefficient felt from 38.3 in 2013 to 34.5 in 2021 but is among the highest when compared with aspirational peers in the EU.

Sectoral and Institutional Context

The role of railways in Serbia and in the region

1. **Serbia is strategically located at the crossroads of western Europe, eastern Europe, Türkiye and the Middle East**. Serbia is at the heart of the Alpine Western Balkan rail freight corridor. Set up in 2010, this 2,114 km corridor comprises 21 intermodal terminals and connects five countries: Austria, Slovenia, Croatia, Serbia and Bulgaria – and beyond, Türkiye and Western Europe on either end. This corridor shares common sections with the Pan-European Corridor X, connecting Serbia on the South, to North Macedonia and, beyond, to Greece, and, on the North, to Hungary. These corridors have been playing an increasing role for regional integration and international logistics. Modernized transport infrastructure, together with further structural reforms in the transport sector, is among the key elements to make Serbia more competitive, stimulating investment, and completing Serbia's transition to a market economy.

2. **Railways are a major asset for Serbia's connectivity at the regional level.** Largest economy in the Western Balkans, Serbia serves as a regional hub and springboard for companies to access the larger regional market and Serbia's main trading partners are the neighboring Western Balkans economies, EU member states (Germany and Italy in particular), Russia and China. Serbia's key exports (automobiles and auto components, electrical motors and wire, and agricultural products) as well as its main imports (pharmaceuticals, vehicle parts for assembly, and crude and refined petroleum) lend themselves to transport by rail as the mode of choice.

Institutional and governance aspects

3. **In this context, with the support by the World Bank and the European Union, Serbia reformed in 2015-16 its railways sector.** Significant institutional changes took place. Among the most important are unbundling of Serbian Railways into three operating companies – Infrastructure Zeleznice Srbije (IZS), Serbia Voz (SV) and Serbia Cargo (SC); canceling subsidies and introducing contractual arrangements among companies and with government, rightsizing the workforce and publishing the Railway Network Statement, which is the document that describes the rail network, the rail capacity allocation process, the services supplied and the principles of determining the infrastructure charges. These companies, all three State-Owned Enterprises (SOEs) operate as independent legal businesses within a contractual framework that chiefly includes: (i) a Multiannual Infrastructure Investment Contract that defines the infrastructure manager (IZS) investment program and related subsidies for the public authority; (ii) a Passenger Services Obligation Contract (PSO) whereby the Public Authority defines passenger services obligations and related subsidies if they generate operating losses; and (iii) Track Access Charges tariffs that railway undertakings (including Serbia Voz, Serbia Cargo and private operators) must pay to IZS to use the railway network. The comprehensive sector restructuring work was followed with two waves of workforce rightsizing, in 2018 and 2019, increased commercial focus of IZS evidenced by termination of operations on 313 km of network. The final goal of the railway sector is to become financially sustainable within EU directives.

Infrastructure, investment and maintenance aspects

4. **Serbia's operated railway network is about 3,330 km, comprised of about 290 km of double track lines and 3,040 km of single-track lines**. About 57 percent of tracks are electrified. Historically, the size of IZS maintenance and investment programs was not driven by the real need but by the combination of the public budget "affordability" and IZS's relatively limited ability to successfully and efficiently execute the investment (i.e. low "absorption rate"). As a result of the historic underinvestment, IZS has extended the

asset life well beyond the economic and technical limits, across many asset groups and its infrastructure usage cost has significantly increased. As a result, maximum speeds over 100 km/h are only allowed on about 5 percent of the network and on 9 percent of main lines. On 55 percent of the network, the maximum allowed speed is 60 km/h. Further, only 56 percent of the network allow the maximum axle load of 22.5 tons, which is the European Union standard. Finally, in 2022, 144 km (4 percent of the total) of tracks were closed due to poor conditions; an additional 70 km were closed for maintenance and renewal purposes, which is a positive sign looking ahead.

5. **Yet, Serbia has embraced an ambitious investment program aimed at significantly improving railway infrastructure quality, totaling about US$ 5 billion over 2017–27**. The investments are financed by: (i) US$ 2.7 billion from multilateral sources (US$1,9 billion European Investment Bank, US$400 million World Bank / French Development Agency, US$109 million European Bank for Reconstruction and Development and US$70 million from the European Union; (ii) about US$ 2.3 billion from non-EU bilateral sources (People's Republic of China, Russian Federation); and (iii) US$ 175 million from domestic fiscal and infrastructure manager resources. Most investment focus on: (i) Alpine Western Balkan rail freight corridor (Dimitrovgrad, at the border with Bulgaria – Nis – Belgrade), (ii) upgrade of the existing line between Belgrade – Novi Sad – state border with Hungary, (iii) construction of a new high-Speed Rail line between Belgrade and the border with Hungary, (iv) rehabilitation and upgrade of suburban railway lines in the Belgrade metropolitan area, financed by the World Bank / AFD Program, and (v) other regional lines rehabilitation and upgrade, including the planned upgrade of Belgrade – Vrsac, at the State border with Romania, expected to be financed within the World Bank / AFD Program. In total, the Government of Serbia aims for about 1,400 km (40 percent) of Serbia's railway network to be modernized by 2030.

6. **Still, the maintenance capacity of the railway infrastructure manager (IZS) needs to be rebuilt and developed; this is what this second phase of the *Serbia Railway Sector Modernization Program* aims at doing.** In 2022, IZS had a maintenance budget of about US$27 million equivalent to cover its whole network; almost three-quarters of this maintenance budget was allocated to main lines. Maintenance focused mostly on track (59 percent of expenses), as well as power supply and systems (24 percent). In 2022, it is estimated that about 300 km of tracks (about 8 percent of the total track length) received some form of routine maintenance. IZS aims at securing regular maintenance for 564 km of building/renewed lines in 2024. IZS's equipment for routine maintenance is worn out: the average age of its equipment for civil works is 45 years-old; following the chronic shortage of funds for maintenance, the equipment is generally in a poor condition.

Labor force aspects

7. **The number of employees in the railway sector has been significantly reduced since 2015, but it has aging workforce and lacks skills needed for modernized operation.** Today, the railway sector directly employs about 9,100 staff, which is significant reduction from 2015 levels of 16.700. IZS has about 5,700 employees while Serbia Cargo and Serbia Voz have respectively 1,100 and 2,300 employees. Across all three companies, the age structure is challenging, with over 80 percent of the employees between 41- and 60-year-old (average age around 48-year-old). Only between 10 and 20 percent of employees have a university degree, half the workforce has a high-school degree, and not qualified staff represents between 5 and 20 percent of the workforce.

Climate aspects

8. **The transport sector needs to be decarbonized and its resilience boosted to address climate change and**

the vulnerabilities of the network. Besides energy, the transport sector is the main contributor to GHG emissions and a significant cause of air and noise pollution in urban areas.[1] The motorization rate in Serbia has increased by 22 percent in the past 5 years and raising demand for road mobility is being met with old, highly polluting vehicle fleets. During 2015-2018, Serbia was among the top 5 importers worldwide of secondhand light-duty vehicles from the EU. The carbon intensity of the road sector must be addressed, while pursuing a modal shift to greener modes. The resilience of transport infrastructure to climate change must be improved to reduce network vulnerabilities. Floods, flash floods and landslides are causing significant damage to transport infrastructure. Severe flooding events in Serbia, particularly in 2014, directly jeopardized railway lines and electrical installations in more than 50 locations across the country. In Serbia, 12,000 km of road infrastructure and 900 km of railways are directly exposed to potential flood risk.

Program performance and Phase 1 results

9. **Co-financed by the World Bank and AFD, the *Serbia Railway Sector Modernization Program* was approved in March 2021** and overall aims at consolidating the sustainability of the railway sector, both through investment and institutional development. Phase 1 of the Program, under implementation, focuses more particularly on setting the basis for enhanced sector sustainability.

10. **As the Program has been under implementation for two years out of a planned 10-year period, its Program Development Objective achievement is on track**. The passenger rail market share has slightly increased from the 2020 baseline to 2022: trains now transport about 5 percent of all passengers in Serbia. Likewise, fatality rates on the railway network show a positive downwards trend. Yet, the freight traffic market share has decreased because of the on-going massive railway investments: rail-track works have temporarily impacted the level of service of freight transport and part of the rail traffic has shifted to trucks. This traffic is expected to revert to trains as ongoing works are completed.

11. **Phase 1 is rated Satisfactory both for PDO achievement and Implementation Progress with** Fifty-seven percent of loan proceeds expected to be committed by the December 2023. The design of Phase 1 and delivery its outputs drive the achievement of its PDO targets. As originally planned, and further impacted by the Covid-19 pandemic, no Phase 1 PDO indicator is achieved yet, after only 2 years of implementation. Yet, Phase 1 is on track to achieve its targets.

12. **While Phase 1 is still in early phase, tangible results have been achieved**. Phase 1 disbursement lag is about 15 months, resulting and from the Covid-19 pandemic that triggered delays in staffing-up the Project Implementation Unit (PIU), but also the preparation of the technical documentation (engineering designs) for Phase 1 activities delayed declaration of effectiveness. Despite this adverse context, progress has been steady and progress has been achieved on both the investment and institutional strengthening sides.

C. Proposed Development Objective(s)

Development Objective(s)

Phase 2 Project Development Objective: to maintain the quality of infrastructure and safety of railway operations through enhanced maintenance of existing railway assets.

[1] Serbia's CO2 emissions per unit of GDP are about twice those of the EU average.

Key Results

Key Phase 2 results aim at tracking that Serbia's railways lines sections that have be constructed / rehabilitated / upgraded, i. e. considered in a "state of good repair", are appropriately maintained and, consequently, that infrastructure restriction and failures do not materialize.

D. Project Description

Phase 2 is structured along the same three components as in the Program first phase: (i) Infrastructure and Asset Management, (ii) Institutional Strengthening and Project Management; and (iii) Railway Modernization Enablers.

Component 1 - Infrastructure and Asset Management
This component supports: (i) the acquisition of heavy-duty machinery; (ii) the reparation and refurbishment of out-of-order heavy-duty machinery already belonging to IZS; (iii) the modernization of existing IZS's maintenance facilities; (iv) the outsourcing of routine maintenance in a subset of the Serbian railway network; (v) downstream activities to the implementation of the Railway Infrastructure Management Systems financed from the first phase of the Program; and (vi) the preparation of the technical documentation required for the rehabilitation and upgrade of the selected existing railway lines in Serbia.

Component 2 - Institutional Strengthening and Project Management
This component supports: (i) sector governance and commercial approach to developing Information Technology strategies and solutions for IZS, Serbia Voz and Serbia Cargo; (ii) the continuation of Phase 1 activity to progress human capital in the railway sector in Serbia, including procedures, capacity building, and developing academic curricula with specific actions to support further female participation to the railway sector; and (iii) Project management and citizen engagement activities.

Component 3 - Railway Modernization Enablers.
This component supports: (i) for freight transport: analytical work to develop an intermodal strategy, promoting rail/road and rail/waterways services as well as last mile connectivity opportunities; (ii) for passenger transport: execution of Integrated Territorial Development pilot projects, as a follow-up activity of Phase 1, as well as a business plan for railway stations in Serbia.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

The Environmental and Social (E&S) risk for the Program Phase 2 is set as moderate, for both environmental and social project aspects. The environmental and social risks are linked to (i) physical interventions related to railway

infrastructure maintenance on the existing railway network, modernization of maintenance workshops, ITD pilot projects and refurbishment of maintenance machinery, as well as (ii) Technical Assistance (TA) activities including preparatory studies for Phase 3 investments, analytical and economic/financial assessment work related to intermodal strategy and to 'last mile' connectivity investments (for industrial cargo transport), and acquisition of heavy machinery (e.g. tamping machines, ballast cleaners) for in-house routine maintenance. While Phase 1 risk was rated substantial due to planned extensive rehabilitation works on lines and other railway infrastructure (tunnels, bridges, etc.), under Phase 2 regular maintenance (such as cleaning and regulating ballast, stabilizing tracks, slopes stabilization, maintenance of the electrical network, etc.) will be carried out on the existing lines, while some small-scale civil works (pilot projects and modernization of workshops) are also planned. No construction of new lines or reconstruction/renewal works will be eligible for financing, and neither are expected as a result (in subsequent phases) of TA financed under the Phase 2.

The potential risks and impacts under this Project can be characterized as predictable, temporary and predominantly reversible; low to moderate in magnitude; site-specific and (if well addressed) have low probability of serious adverse effects to human health and/or the environment, easily mitigated and managed. Construction of new lines or any other substantial or high-risk activity/sub-project will not be eligible for financing under the Phase 2, including TA screened as such. The works may cause environmental and social impacts typical for small to moderate scale civil works and railway infrastructure maintenance including, but not limited to generation of dust and noise, pollution of water bodies, traffic disruptions and management of larger quantities of construction waste, OHS as well as generation of small quantities of hazardous waste, but also oil/varnish/dye/chemicals contaminated fabric, equipment, and containers. Generation of significant amount of waste rails, sleepers, and stone aggregate is not expected under the Phase 2. In addition, impacts from operations that include workshops (modernization as well as refurbishment of maintenance machinery) can also include generation of (up to moderate amounts of) wastewaters and hazardous waste with possible adverse impacts of chemicals to environment and human health of employees. No negative impacts on vulnerable groups are expected as a result of the activities of the second phase. The railway maintenance investment does not involve land acquisition or resettlement. However, there is a slight possibility of other downstream risks, to arise including on land acess, depending on the scope and aoutcome of planned Technical Assistance (TA) feasibility studies in Phase 2. The screening mechanism from Phase 1 will be upgraded and incorporated into the ESMF to prevent funding activities with significant environmental and social impacts in Phase 2.

E&S management and overall responsibility for ESF compliance of the Phase 2 implementation will be assumed by the existing PIU (implementing the Phase 1), established within the MCTI. Therefore, it is assessed that the Borrower has sufficient capacity to address potential risks associated with Phase 2 activities. The existing PIU currently includes an experienced Environmental Expert and a Social Expert, both engaged on a full-time basis, but also an Occupational Health and Safety (OHS) expert that is engaged on a part-time basis. The PIU's full-time Social and citizen engagement specialists will continue to implement social-related activities such as risk assessment and management, stakeholder engagement, grievance monitoring and reporting, and citizen engagement. The Project and worker grievance mechanisms will be upgraded to reflect Phase 2. All aforementioned experts as well as other relevant PIU staff (e.g. M&E) have been ESF-trained. Implementation of Phase 1 recorded no significant incompliances and is currently rated Satisfactory.

E. Implementation

Institutional and Implementation Arrangements

Phase 2 institutional and implementation arrangements are similar as the ones of the first phase of the Program. These arrangements have proved working satisfactorily in Phase 1.

Phase 2 of the MPA will be also managed by Serbia's Ministry of Construction Transport and Infrastructure (MCTI) through a Project Implementation Unit (PIU), supplemented by Project Implementation Teams (PITs) in the Railway Directorate, IZS, Serbia Voz, and Serbia Cargo. The PIU will have primary responsibility for project execution, ensuring that the development objectives are met and that financial resources are budgeted, disbursed, expended, accounted and audited. The PIU set-up for Phase 1 will be maintained to implement Phase 2. MCTI, through the PIU, will be directly responsible for implementation of all components. The Project Implementation Teams will act as subordinate implementing agencies to provide technical support.

The Central Fiduciary Unit (CFU), within the Ministry of Finance, will carry out the coordination, administration, and oversight of Phase 2 procurement and finance. The CFU has gained considerable experience in World Bank-related procurement and financial management since its creation in 2017 to serve as the fiduciary arm for Bank-financed projects in Serbia. MCTI, the PIU, and the PITs will provide technical support to the CFU, especially for the development of procurement documents and evaluation of bids. If necessary, the CFU will be strengthened with additional procurement staff as per norms established by the Bank. The adequacy of this arrangement for the MPA has been assessed and found suitable.

CONTACT POINT

World Bank

Gregoire Francois Gauthier
Senior Transport Specialist

Svetlana Vukanovic
Senior Transport Specialist

Borrower/Client/Recipient

Republic of Serbia

Implementing Agencies

Ministry of Construction, Transport and Infrastructure
Anita Dimoski
Acting assistant minister for railway & intermodal transport
anita.dimoski@mgsi.gov.rs

Railways Directorate
Lazar Mosurović
Acting General Manager
lazar.mosurovic@raildir.gov.rs

Serbia Cargo
Dušan Garibović
General Manager
dusan.garibovic@srbcargo.rs

Serbia Railways Infrastructure
Nebojsa Surlan
General Manager
nebojsa.surlan@srbrail.rs

Serbia Voz
. Ivan Bulajić . Ivan Bulajić
General Manager
kabinet.srbijavoz@srbvoz.rs

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Gregoire Francois Gauthier Svetlana Vukanovic

Approved By

Practice Manager/Manager:		
Country Director:	Xiaoqing Yu	12-Sep-2023