THE WORLD BANK
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Report No: PAD4531

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF EUR88.4 MILLION
(US$100 MILLION EQUIVALENT)

TO THE

REPUBLIC OF SERBIA

FOR A

# SERBIA LOCAL INFRASTRUCTURE AND INSTITUTIONAL DEVELOPMENT PROJECT

February 14, 2022

Transport Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2021)

| | |
|---|---|
| Currency Unit = | US$ |
| EUR1 = | US$1.13 |
| US$1 = | EUR0.88 |

FISCAL YEAR
January 1 - December 31

| | |
|---|---|
| Regional Vice President: | Anna Bjerde |
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ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| AFD | French Development Agency (*Agence Française de Développement*) |
| CEE | Central and Eastern European Countries |
| COVID-19 | Coronavirus Disease 2019 |
| CFU | Central Fiduciary Unit |
| CPF | Country Partnership Framework |
| EBRD | European Bank for Reconstruction and Development |
| EC | European Commission |
| ECA | Europe and Central Asia |
| EU | European Union |
| EIB | European Investment Bank |
| ESMF | Environmental and Social Management Framework |
| FA | Framework Agreement |
| FAO | Food and Agriculture Organization of the United Nations |
| FDI | Financial Development Institutions |
| GA | Grant Agreement |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gases |
| GI | Green Infrastructure |
| GIZ | German Development Agency (*Gesellschaft für Internationale Zusammenarbeit*) |
| GoS | Government of Serbia |
| IBRD | International Bank for Reconstruction and Development |
| ICT | Information and Communication Technology |
| IFC | International Finance Corporation |
| IPA | Instrument for Pre-Accession Assistance |
| IPF | Investment Project Financing |
| KfW | German Development and Investment Bank (*Kreditanstalt für Wiederaufbau*) |
| LIID | Local Infrastructure and Institutional Development Project |
| LSG | Local Self-Government |
| MCTI | Ministry of Construction, Transport, and Infrastructure |
| MFD | Maximizing Finance for Development |
| MoF | Ministry of Finance |
| M&E | Monitoring and Evaluation |
| MPA | Multiphase Programmatic Approach |
| NAPA | National Academy for Public Administration |
| OECD | Organization for Economic Co-operation and Development |
| PIU | Project Implementation Unit |
| PDO | Program Development Objective |
| PFM | Project Finance Management |
| PIM | Public Investment Management |
| POGM | Project Operations and Grant Manual |
| PPP | Public Private Partnership |
| PIMIS | Public Investment Management Information System |
| PUC | Public Utility Companies |
| RAMS | Road Asset Management Systems |
| RELOF | Local Finance Reform |
| SCTM | Standing Conference of Towns and Municipalities |

| | |
|---|---|
| SCD | Systematic Country Diagnostic |
| SOE | State Owned Enterprise |
| SUDS | Sustainable Urban Development Strategy |
| SUMP | Sustainable Urban Mobility Plan |
| TA | Technical Assistance |
| UN | United Nations |
| UNDP | United Nation Development Program |
| UNWTO | World Tourism Organization |
| USAID | United States Agency for International Development |
| VPD | Vehicles per Day |
| WB | World Bank |
| WB6 | Western Balkans Six |
| WHO | World Health Organization |

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DATASHEET

## BASIC INFORMATION

| Country(ies) | Project Name | |
|---|---|---|
| Serbia | Serbia Local Infrastructure and Institutional Development Project | |
| **Project ID** | **Financing Instrument** | **Environmental and Social Risk Classification** |
| P174251 | Investment Project Financing | Moderate |

### Financing & Implementation Modalities

| | |
|---|---|
| [ ] Multiphase Programmatic Approach (MPA) | [ ] Contingent Emergency Response Component (CERC) |
| [ ] Series of Projects (SOP) | [ ] Fragile State(s) |
| [ ] Performance-Based Conditions (PBCs) | [ ] Small State(s) |
| [ ] Financial Intermediaries (FI) | [ ] Fragile within a non-fragile Country |
| [ ] Project-Based Guarantee | [ ] Conflict |
| [ ] Deferred Drawdown | [ ] Responding to Natural or Man-made Disaster |
| [ ] Alternate Procurement Arrangements (APA) | [ ] Hands-on Enhanced Implementation Support (HEIS) |

| Expected Approval Date | Expected Closing Date |
|---|---|
| 9-Mar-2022 | 30-Nov-2028 |

Bank/IFC Collaboration

No

### Proposed Development Objective(s)

The Project Development Objective is to improve Local Self Governments ("LSGs") capacity to manage sustainable infrastructure and increase accessibility to economic and social opportunities in a climate aware manner.

### Components

| Component Name | Cost (US$, millions) |
|---|---|

| | |
|---|---|
| Component 1. Climate Smart Mobility | 282.00 |
| Component 2. Strengthening Capacity for Infrastructure Service Delivery | 11.50 |
| Component 3. Project Management and Awareness Raising | 6.50 |

### Organizations

| | |
|---|---|
| Borrower: | Republic of Serbia |
| Implementing Agency: | Ministry of Construction, Transport, and Infrastructure |

## PROJECT FINANCING DATA (US$, Millions)

### SUMMARY

| | |
|---|---|
| **Total Project Cost** | 300.00 |
| **Total Financing** | 300.00 |
| **of which IBRD/IDA** | 100.00 |
| **Financing Gap** | 0.00 |

### DETAILS

**World Bank Group Financing**

| | |
|---|---|
| International Bank for Reconstruction and Development (IBRD) | 100.00 |

**Non-World Bank Group Financing**

| | |
|---|---|
| Other Sources | 200.00 |
| FRANCE: French Agency for Development | 200.00 |

### Expected Disbursements (in US$, Millions)

| WB Fiscal Year | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|---|---|---|---|---|---|---|
| Annual | 1.50 | 5.50 | 10.00 | 15.00 | 23.00 | 27.00 | 18.00 |
| Cumulative | 1.50 | 7.00 | 17.00 | 32.00 | 55.00 | 82.00 | 100.00 |

## INSTITUTIONAL DATA

**Practice Area (Lead)**

Transport

**Contributing Practice Areas**

Governance, Macroeconomics, Trade and Investment, Urban, Resilience and Land

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks

## SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

| Risk Category | Rating |
|---|---|
| 1. Political and Governance | Moderate |
| 2. Macroeconomic | Moderate |
| 3. Sector Strategies and Policies | Moderate |
| 4. Technical Design of Project or Program | Substantial |
| 5. Institutional Capacity for Implementation and Sustainability | Substantial |
| 6. Fiduciary | Substantial |
| 7. Environment and Social | Moderate |
| 8. Stakeholders | Moderate |
| 9. Other | Moderate |
| 10. Overall | Substantial |

## COMPLIANCE

**Policy**

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

### Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

| E & S Standards | Relevance |
|---|---|
| Assessment and Management of Environmental and Social Risks and Impacts | Relevant |
| Stakeholder Engagement and Information Disclosure | Relevant |
| Labor and Working Conditions | Relevant |
| Resource Efficiency and Pollution Prevention and Management | Relevant |
| Community Health and Safety | Relevant |
| Land Acquisition, Restrictions on Land Use and Involuntary Resettlement | Relevant |
| Biodiversity Conservation and Sustainable Management of Living Natural Resources | Not Currently Relevant |
| Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities | Not Currently Relevant |
| Cultural Heritage | Not Currently Relevant |
| Financial Intermediaries | Not Currently Relevant |

**NOTE**: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

### Legal Covenants

Sections and Description
4.01
The Additional Condition of Effectiveness consists of the following, namely that the Co-financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Borrower to make withdrawals under it have been fulfilled

Sections and Description
Schedule 2.Section I.A.1
The Borrower shall, not later than six (6) months after the Effective Date, establish and thereafter maintain, throughout the Project implementation period, a steering committee ("Steering Committee") with composition, mandate and resources satisfactory to the Bank, to be chaired by the state secretary of the MCTI or any of its representatives and to be comprised of representatives of the Borrower's ministries, government agencies and, as

applicable, Participating LSGs that are key to the Project.

Sections and Description
Schedule 2.Section I.A.2.1(a)
The Borrower, through MCTI, shall:
Establish not later than four (4) months after the Effective Date and maintain throughout Project implementation, a Project implementation unit ("PIU") within the MCTI with composition, resources, terms of reference, and functions acceptable to the Bank, including, inter alia: (i) the overall coordination of all Project implementation activities; (ii) ensuring that the requirements, criteria, policies, procedures, and organizational arrangements set forth in the Project Operations and Grant Manual ("POGM") are applied in carrying out the Project; (iii) preparation of Project implementation documents, including Project progress reports; and (iv) monitoring and evaluation of the Project.

Sections and Description
Schedule 2.Section I.A.2.1(b)
The Borrower, through MCTI, shall:
Engage and hire, no later than four (4) months after the Effective Date, the following specialists for the PIU: (i) an environmental specialist; (ii) a social specialist; (iii) a part-time occupational health and safety specialist; (iv) a civil engineer, (v) a transport planner specialist; and (vi) an urban development specialist; all with qualifications, experience and terms of reference acceptable to the Bank.

Sections and Description
Schedule 2.Section I.A.2.1(c)
The Borrower, through MCTI, shall:
Engage and hire for the PIU, no later than one (1) month after the Effective Date, (i) a project manager; and (ii) a deputy manager; all with qualifications, experience and terms of reference acceptable to the Bank.

Sections and Description
Schedule 2.Section I.A.2.1(d)
The Borrower, through MCTI, shall:
Contract an external, independent private audit firm, acceptable to the Bank, with terms of reference acceptable to the Bank, no later than six (6) months after the Effective Date, which will be mandated to conduct an audit of the Project on an annual basis.

Sections and Description
Schedule 2.Section I.C.1
Subject to the eligibility criteria and procedures acceptable to the Bank and further elaborated in the POGM, the Borrower, through the MCTI, shall enter into a Framework Agreement with Participating LSGs, under terms and conditions acceptable to the Bank and set forth in the POGM.

Sections and Description
Schedule 2.Section I.C.2
Before commencing any civil works under each Sub-project, subject to the execution of the respective Framework Agreement, and subject to the Participating LSG meeting its obligations under the Framework Agreement, as

determined by the Bank, the Borrower, through MCTI, shall enter into an agreement ("Grant Agreement") with the relevant Participating LSG, under terms and conditions acceptable to the Bank.

Sections and Description

Schedule 2.Section I.C.4

Notwithstanding the formula reflected in the POGM to establish Grant amounts, the maximum amount of: (a) all Grants to a single Participating LSG shall not exceed the equivalent of twenty-two million Euro (€22,000,000); and (b) each Grant for a Subproject shall not be less than forty-five thousand Euro (€45,000) or more than eight million eight hundred thousand Euro (€8,800,000).

Sections and Description

Schedule 2.Section I.D.4

The maximum amount of accumulated payments per internship cycle to any intern in the Internship Program under the Project shall be the equivalent of two thousand six hundred and fifty Euro (€2,650).

**Conditions**

| Type | Financing source | Description |
|---|---|---|
| Disbursement | IBRD/IDA | The Borrower, through MCTI, shall develop and adopt a POGM, to the Bank's satisfaction, prior to requesting any withdrawal request. |

## I. STRATEGIC CONTEXT

### A. Country Context

1. **Serbia aspires to become a member of the European Union (EU) but still faces persistent challenges.** Major fiscal consolidation supported by structural reforms since 2014 has helped to restore macroeconomic stability and to create fiscal buffers needed for a decisive response to the COVID-19 pandemic. As a result, the economy contracted by only 0.9 percent in 2020 and is projected to grow by 6.5 percent in 2021. At the same time, the country needs a stronger focus on the key constraints to inclusion, sustainability, and resilience. Poverty and inequality levels in Serbia are still significantly higher than in comparator countries, with disadvantaged groups and subnational regions persistently lagging in key socio-economic indicators. Environmental sustainability concerns have become more prominent, with pressing issues such as air pollution and an extremely carbon-intensive economy. Improvements in government effectiveness and accountability have stagnated in recent years, despite some reform efforts, holding back stronger progress across other areas. The ongoing EU accession process offers opportunities to accelerate the reform agenda.

2. **The global COVID-19 pandemic had a significant impact on public finances.** COVID-19 and related containment measures took a heavy toll on the Serbian budget as the authorities provided a substantial stimulus package to the economy and households, totaling around 11.6 percent of GDP in 2020 and 4.4 percent of GDP in 2021. The budget deficit expanded to around 8 percent of GDP in 2020 and was partially reduced to 5 percent in 2021. Raising public debt was contained at nearly 60 percent of GDP in 2021. Despite these challenges, the medium-term macroeconomic outlook is positive with all key macro indicators projected to return to pre-pandemic trend. Economic growth is projected at 4 percent annually in the medium term, driven by consumption and investment.

3. **The European Green Deal provides a unique opportunity for Serbia to take steps toward a cleaner, low carbon economy.** The European Green Deal sets ambitious climate action goals, including reduction of greenhouse gas (GHG) emissions by 55 percent by 2030 and carbon neutrality by 2050. Serbia confirmed its commitment to the EU Green Deal and addressing climate change by signing the Sofia Declaration on the Green Agenda for the Western Balkans in November 2020 and adopting a 58-point action plan for the period until 2030 in October 2021. Serbia has also promoted several policies such as the Sustainable Urban Development Strategy (SUDS, 2019), the Law on Climate Change in 2021, and four new energy related laws in 2021.

4. **The burden to deliver on the green commitments of the Sofia Declaration will partially fall on Serbia's Local Self Governments (LSGs) and the transport sector.** LSGs suffer from environmental pollution. Serbia has Europe's worst per capita level of pollution-related deaths (175 per 100,000 inhabitants). The Yale University's Environmental Performance Index shows Serbia's environmental health and ecosystem vitality scoring below most Western Balkans Six (WB6) countries and comparator transition economies of Europe. Serbia's CO2 emissions per unit of GDP are about twice those of the EU average. Energy productivity is low, at one fourth of the EU28 average, and Serbia is highly dependent on fossil fuels. Transport is the second main contributor to GHG emissions, the fastest growing emissions source, and a significant cause of air and noise pollution in cities. At the same time, the country has some of the lowest resource productivity and recycling rates in Europe, with much of municipal solid waste being disposed in landfills that do not meet sanitary standards, and most wastewater discharged without treatment.

## B. Sectoral and Institutional Context

5. **Serbia is organized as a unitary state, with a strong central government and significant regional inequalities.** At the subnational government levels, LSGs consist of municipalities, the city of Belgrade and other cities. The 145 LSGs (117 municipalities, 27 cities and the capital City of Belgrade) have an average population of 48,000, being 37 percent higher than EU average. They are grouped in 25 districts, out of which 13 are classed as "lagging regions". Most responsibilities are shared between the central government and LSGs. Regions mostly play a coordinating role with limited functions, but there are efforts between the Government of Serbia (GoS) and LSGs to create intermunicipal cooperation bodies. The Standing Conferences of Towns and Municipalities (SCTM) represents LSG interests and provides a convening forum for integrated planning and policy development.

6. **The main function of LSGs include development planning, services delivery, management of assets, and implementation of local capital investments, often through local public service companies owned by LSGs.** LSGs support local economic development, maintain and manage local roads and other public infrastructure, and provide local services including water, waste disposal, public transportation, education, and health. In addition, the LSGs exercise public responsibilities, i.e., tasks delegated by the GoS to LSGs through special laws. In undertaking their functions, LSGs are guided by regulations on planning, project implementation, service delivery, finance, and infrastructure network management. While much of the policy and regulatory framework for these areas is in place, LSGs often lack the capacity and financing to effectively apply them. A key objective of this Project is to build capacity for more effective implementation of the mandated roles of LSGs.

7. **Decades of underinvestment and weak management have left LSGs' infrastructure in poor condition, which has contributed to environmental pollution.** These phenomena led to deteriorating living conditions in many cities and towns, increased vulnerability to climate change, and considerable inequities in living standards. Local roads, estimated at twice the length of the national road network, need renewal. Less than 25 percent of the population has access to safe water sanitation services. Collection rates of solid waste are low, and disposal practices are generally not in conformance with modern standards. The upgrading and greening of ageing local infrastructure and services, together with improving citizens' access to markets, jobs, and public services, are therefore crucial to increase the attractiveness of cities, towns and lagging regions and to drive economic growth.

8. **The local transport sector is one of lead polluters and suffers from poor infrastructure, low safety performance and deteriorating public services.** These factors hinder citizens' access to social, health and educational services and employment opportunities outside their immediate communities. With an average vehicle age of 17 years and poorly maintained diesel engines, transport is the second biggest contributor to GHG emissions and the third main contributor to overall air pollution levels. Emissions from the transport sector are increasing, with vehicle ownership levels forecast to increase by 30 percent, to 429 cars per 1,000 inhabitants, by 2033. According to the World Health Organization (2018), road crash fatalities in Serbia for 2016 were 7.4 per 100,000 population, which is 50 percent higher than the EU average. Vehicle accidents, the majority of which happens on local roads, cost Serbia an estimated 3.1 percent of GDP in 2016. The World Bank has supported Serbia with its Road Safety Strategy, which was adopted in 2016.

9. **Serbia is prone to natural hazards with significant potential impacts on people, infrastructure, and accessibility.** In May 2014, severe floods pushed 125,000 people into poverty, with damage estimated at 2.7 percent of then GDP. Much of the burden of addressing the consequences of disasters falls on LSGs. Serbia has already taken initial steps

in establishing a more effective institutional framework for disaster risk response, but there are limited incentives to mainstream disaster mitigation activities and climate change adaptation at the local level. The World Bank supported the development of a methodology for vulnerability risk assessment of the transport network at the central level, but there is no equivalent approach for the local network. With the support of the EU, GoS is developing design standards for local road networks and low volume roads, and on the use of recycled materials for road construction. Addressing disaster risk assessment and climate change adaptation will be a key component for this operation, both in terms of capital investments and technical assistance.

10. **To support local economic and urban development, GoS adopted in 2019 the Sustainable Urban Development Strategy (SUDS).**[1] SUDS presents an integrated package for planning the next stage of the development of Serbia's cities and municipalities. Its implementation will contribute to Serbia's EU accession process and harmonization of its urban development policy with the objectives of the EU Urban Agenda and the EU Green Deal. SUDS is also the first step in implementation of the UN Habitat III New Urban Agenda. The SUDS envisages that the Ministry of Construction, Transport and Infrastructure (MCTI) will be the lead agency and will establish a special unit for the implementation of the Strategy. SUDS will be complemented by various local sectoral plans including Sustainable Urban Mobility Plans (SUMPs), which are also an important focus of this operation. SUMPs are multisectoral strategic plans that seek to improve the movement of people and goods in a safe and sustainable way.

11. **Citizens' participation in local planning and development remains weak, despite a legal obligation for all LSGs to organize public debates in the process of budget preparation**. The potential of the e-Government portal[2] is still not fully utilized and opportunities for partnerships and bottom-up approaches for community engagement are rarely used. Citizens provide limited input to investment planning and selection processes. While most LSGs report practicing a typical top-down approach through (mandatory) public hearings, less than half have developed citizen engagement guides, and most rely on announcements on the municipal bulletin boards. While the regulatory environment for participatory infrastructure investment planning exists, there is a lack of knowledge, skills, and guidance about available instruments and models of participation in decision making. MCTI is working on establishing the e-Space platform where all planning documents will be accessible and published, to provide better visibility and information sharing. This Project will utilize a strong consultative approach and citizen engagement through participatory strategic planning and enhancement of e-Government portals to reinforce existing policy.

12. **Serbia's overall strategy development and policy coordination have seen some progress, but implementation gaps remain.** Numerous new strategic documents and action plans have been developed, based on the 2018 Law on the Planning System. These include a new Local Self-Government Strategy, as well as a wide range of environmental and climate-related and sectorial strategies. One of the most important LSG documents is the Local Development Plan (LDP), a long-term development planning document for a period of at least seven years that determines medium-term plans and resulting annual and medium cycle budgeting processes. Pre-Covid, the national plan for LSGs was to develop and adopt their LDPs by January 2021.[3] A significant challenge for LSGs will be to ensure horizontal and

[1] SUDS main objectives include sustainable economic development; improved urban settlements management; enhanced social well-being; higher environmental quality; and improved urban management.

[2] E-Government portal is the government portal with all electronic government services for citizens, businesses, and public entities at one place. www.Euprava.gov.rs

[3] The establishment of the new planning system in Serbia has just stared at all levels of government, so development planning documents at the national and provincial level - RS Development Plan, AP Development Plan and RS Investment Plan - are not going to be available in the initial phase of preparation of LSGs Development Plans.

vertical coordination of different planning documents and across sectoral boundaries as well as alignment of strategies, action plans, and linkages to budgeting processes and mobilizing financial resources.

13. **As part of the EU accession process, Serbia started improving the links between planning and budgeting, but further efforts are needed.** The legislative framework for the main planning documents is well developed in the GoS Decree on Capital Projects Management, but there is a gap in rules regarding smaller scale public investments. In addition to planning documents and multiannual budgets, LSGs are mandated to apply a newly defined and more rigorous framework to appraise, select, prioritize and implement capital investment projects with values above EUR5 million. GoS Decree on Capital Projects Management does not apply to investments under EUR5 million, but it requires LSGs to establish local databases of capital projects that must be compatible with the GoS' Integrated Capital Projects Database so as to allow interchange of data with the central Public Investment Management Information System (PIMIS). However, insufficient capacity at LSG level hinder these linkages. Therefore, it is essential to raise medium-term planning capacities and to strengthen planning and budgeting processes for infrastructure investments and maintenance.

14. **The regulatory framework for local government finances is relatively well developed, but its implementation is hampered by limited guidance and enforcement.** LSG financing, budgeting and public finance management are regulated by several laws (e.g., Law on the Budget System, Law on LSG Financing, and Public Debt Law). The Ministry of Finance (MoF) provides guidelines for preparation of budgets, but LSGs have autonomy in terms of the design, amount and structure of expenditures. In recent years, the level of LSG financing has remained below legally prescribed levels, particularly with respect to non-earmarked funds, and the criteria for allocation have not been specified. Generally, allocations have been frozen since 2013, leading to a drop in un-earmarked funds from 0.87 percent of GDP in 2013 to 0.65 percent of GDP in 2019. All LSGs use the Single Treasury Account, but reporting occurs at an aggregate level, limiting the MoF's ability to analyze in detail the efficiency of local government finances. Oversight and control of the local government public finance management (PFM), transparency and accountability are performed by the State Audit Institution, which audits several LSGs every year on a sample basis. The Project will propose a Monitoring and Evaluation (M&E) framework for public investments with special focus on green impact and other measures to strengthen PFM at the local level.

15. **LSG revenues in Serbia have increasingly been spent on goods and services rather than on capital investments.**[4] Total average revenues of LSGs in 2018 and 2019 amounted to EUR2.7 billion. The share of public funds assigned to LSGs (5.9 percent of GDP) is below the averages for the EU (9.9 percent of GDP) and the OECD (15.9 percent of GDP). In 2011, the share of the wage tax revenues assigned to LSGs was increased from 40 percent to 80 percent. Property tax revenues subsequently declined by 22 percent in real terms indicating that an increase in the wage tax revenue assignation created a disincentive for LSGs to collect their own-source revenues. Conversely, after the share of wage tax revenues assigned to LSGs was reduced in 2014 from 80 percent to 74 percent, the LSGs' own source revenues went up by 12 percent in real terms in 2019 compared to 2010. However, while total LSG expenditures increased by over 19 percent in the same period, driven by expenditures on goods and services, the share of LSG spending in total public capital investment declined from 40 percent in 2011 to less than 20 percent over the next decade. This indicates that the provision of additional revenues to LSGs without systemic incentives does not automatically promote local capital investment.

[4] LSGs have three sources of funding: (i) own-source revenues (property tax, local administrative and communal fees, etc.), (ii) assigned revenues (personal income tax, inheritance tax, gifts tax, property transfer taxes, etc.), and (iii) central government grants.

16. **Annual Infrastructure investment by LSGs is low by EU standards, at EUR450 million (a third of which goes to Belgrade and Novi Sad), with the majority spent on maintenance and rehabilitation of existing assets.** LSGs underinvest in infrastructure, both as a share of total spending and as a share of GDP. LSG capital investment expenditures, corresponding to 1 percent of GDP, are relatively low compared with the EU-27 and Central and Eastern European countries averages of 1.4 and 1.5 percent, respectively. Only 16 percent of LSG expenditure goes for investment, and within this, 26 percent goes for transport. In 2019, average investment spending per LSG was EUR2.76 million. Only 9 LSGs had total public investments above EUR5 million, while 60 LSGs spent less than EUR1 million. There is a need to reassess the current fiscal decentralization framework and identify policies that could support more effective spending, the potential to increase private sector participation in local infrastructure investments, and how green funds and a potential municipal infrastructure fund scheme could lead to more efficient and productive spending.

17. **LSGs face a number of constraints in providing sustainable local infrastructure to support economic development, notably in transport, waste management and environmental protection.** Based on the "Infrastructure Project Management at Local Level" survey[5], implemented by the MCTI and the World Bank, the main obstacles in delivering infrastructure services, as reported by LSGs, include insufficient finances, low capacity, poor infrastructure management practices and fragmented institutions. In terms of capacities, LSGs report a lack of engineers as the main obstacle to better infrastructure delivery. Efforts are also needed to continue to improve transparency, procurement, and supervision. According to the survey, the sectors that have the greatest need for support and reforms at the LSG level include transport, solid waste management, and environmental protection (including pollution, climate change mitigation and natural disasters).

18. **Only few LSGs can sustain a dedicated roads department, but a focus on simple asset management systems and high quality, citizen-informed designs can enhance the resilience and efficiency of local roads.** LSGs generally do not have formal asset management systems and instead rely on committees to prioritize road rehabilitation and maintenance expenditures. While management of small-scale road networks does not require complex asset management methods, simple systems could promote greater transparency and objectivity in decision making. Lack of resources for the preparation of high-quality designs and tender documentation also results in weak implementation, poor quality of works, and cost overruns. Designs need to better reflect citizen engagement and safety considerations and more systematically address complementary investments in public transport, pedestrian and bicycle friendly networks, street lighting, and other community facilities. Designs also need to address climate vulnerabilities and design for resilience through better drainage, slope and bank protection works, and resilient pavements. This Project will support the building of a pipeline of projects addressing these features.

19. **A fundamental rethink of transport service delivery at the local level is needed to address the mobility challenges of the future, to decarbonize the sector and reduce its impact on local air quality.** Current mobility is focused on cars and road infrastructure, while highly attractive environmentally friendly modes, especially for medium and small LSGs, are not systematically considered. LSGs lack active mobility infrastructure, and these possibilities are often neglected in transport planning, despite their positive impact on the environment and the overall well-being of citizens. Where provision has been made for sidewalks and bike lanes, they are often occupied by parked cars, there

[5] Online survey "Infrastructure Project Management at Local Level": https://forms.office.com/Pages/DesignPage.aspx?auth_pvr=OrgId&auth_upn=bdomine%40worldbank.org&lang=en-US&origin=OfficeDotCom&route=Start#FormId=wP6iMWsmZ0y1bieW2PWcNszn7ZlZ0nFMhj49Pp7LX1NUNzhMUjdHUURYUFNVWkw2RFhTSlk0SUpCOS4u

are no safe parking lots for bikes, street lighting is often missing, and driver behavior is risky. Road safety is being addressed by Local Road Safety Councils that have a steady funding stream earmarked for road safety interventions. In addition, the Local Road Safety Agency has strong capacity and is effective in mobilizing and coordinating stakeholders. A key area of concern is the safety of children, as about 1,000 children were seriously injured in traffic accidents over the past 5 years. LSGs also need to renew their infrastructure in a sustainable and green way through the utilization of modern information technology, along with special emphasis on the specific mobility needs of vulnerable groups. E-Mobility is in its early stages, and the World Bank is currently supporting the government by providing recommendations on its implementation.

20. **Local Public Utility Companies (PUCs) have an important role in the provision of infrastructure services, but their operations are not adjusted to changing citizen needs and technological advancements.** Currently, there are 477 local-level PUCs with close to 60 thousand employees. Their total annual business revenues amounted to almost EUR1.9 billion in 2019, with total assets of more than EUR5.2 billion. Local PUCs are often inefficient and are accumulating debts and liabilities. The total liabilities of local PUCs at the end of 2020 stood at approximately EUR 1.8 billion, out of which more than EUR330 million relate to arrears. Fixed assets of local PUCs amount to more than EUR4.3 billion, while annual depreciation costs are more than EUR170 million. This means that local-level PUCs need to invest more than EUR170 million every year just to preserve the capital base of their operations, while for further development and improvement of the quality of services, significantly larger investments are needed. The Project will also provide support to strengthening the PUCs' PFM practices and performance reporting.

21. **Many donors and international financial institutions are active in the provision of support to LSGs, through investments, capacity building, and technical assistance for legal, policy and institutional development.** Some of the most prominent projects are: the EU funded Municipal Infrastructure Support Program (focused on the institutional and regulatory framework for municipal infrastructure services and support for local public utilities reforms) and the EXCHANGE Program; Local Finance and Public Administration Reform Projects funded by the Swiss Government; a program on solid waste with EBRD and *Agence Française de Dévelopement* (AFD); and a multibillion Euro program on wastewater with Chinese bilateral partners. Several other development partners are also active, including IFC, UNDP, EIB, KfW/GIZ and USAID, in support of local economic development.

22. **GoS requested the World Bank and AFD for support to strengthen infrastructure service delivery at the local level with a focus on improving mobility in a sustainable manner to increase accessibility to economic and social opportunities.** This operation will support the scale-up of inclusive, green, and sustainable transport infrastructure service delivery as a means of ensuring green growth and more equitable development across the country. AFD is contributing US$200 million in co-financing to the Project. AFD has worked side by side with the Bank in critical aspects of the design of the operation.

### C. Relevance to Higher Level Objectives

23. **The World Bank's Systematic Country Diagnostic (SCD) Update, completed in April 2020, emphasized the continued need to improve governance, efficiency and accountability across all levels of government, including at the subnational level.** The SCD Update highlights the need to start addressing the 'next generation' of reforms related to environmental challenges to improve the quality of life, strengthen climate resilience, support a low-carbon transition, and focus on the needs of lagging regions. This will require improving urban economic performance, investing more in public services, upgrading urban infrastructure, making municipal administrators more

accountable, and promoting resilience. The Serbia SCD Update states that improving infrastructure connectivity and institutional and governance structures at the local level can accelerate local development, especially in terms of strengthened roles and responsibilities for infrastructure investment, ensuring more efficient use of available infrastructure, promoting a more effective allocation of resources, and increasing transparency at the subnational government level. Addressing these governance issues also impacts the country's ability to reduce inequality, address environmental challenges, and demonstrate progress on EU accession-related reforms. Improving accessibility is especially important for poor and disadvantaged groups and women, who rely more on public transport services. The proposed Project will support the LSGs in assessing and prioritizing mobility infrastructure needs and achieving effective project implementation, considering different needs and capacities between developed and lagging regions. The Project fits into the main areas identified by the Serbia SCD regarding where constraints should be addressed: (i) achieving higher and sustained economic growth; (ii) providing equal opportunities to ensure inclusion; (iii) ensuring environmental sustainability and managing climate-related risks; and (iv) improving institutions and governance.

24. **This Project is also fully aligned with the current FY16-20 Country Partnership Framework (CPF)[6] and the upcoming CPF for FY22-26**. The Project will support Objective 2d of the CPF FY16-20 on enhanced infrastructure networks. The upcoming FY22-26 CPF reflects Higher Level Outcomes (HLOs) and is aligned with SCD priorities, the Government of Serbia's program, the Green, Resilient, and Inclusive Development framework, and key SDGs. HLO-1 focuses on environmentally and fiscally sustainable growth, which will benefit future generations. HLO-2 focuses on improving the effectiveness of central and local governments and better access to health and education services. This Project is aligned specifically with the FY22-26 CPF's Objective 1.2, which supports green investments and transition to low-carbon economy and Objective 2.1, which supports strengthened public finance management at central and local levels, with strong emphasis on LSG delivery capacity. In addition, mobility is one of the five pillars for the Bank's Europe and Central Asia (ECA) Climate Change Action Plan (CCAP), considering that transport is the second largest contributor to GHG emissions in the region (and globally), which are growing rapidly.

25. **The proposed Project supports Serbia's GHG emission reduction goals and contributes to the CPF's and SCD's cross cutting theme of responding to climate change.** Serbia has committed to reduce its GHG emissions by 9.8 percent by 2030, compared to 1990 levels. Optimizing the use of infrastructure assets, improving maintenance cycles, establishing infrastructure investment eligibility criteria to support projects that contribute to climate adaptation and mitigation efforts in the country, and ensuring stable infrastructure financing will enable the LSGs to increase their resilience and reduce their environmental footprints.

26. **The proposed Project aligns with the Bank's maximizing finance for development (MFD) principles of leveraging private sector financing and optimizing the use of scarce public resources.** The investment needs of local governments are enormous, and there is a space for private investors to help to bridge the infrastructure gap. At the local level, the potential of mobilizing private capital and identification of the types of projects that would be of interest for private capital, in close cooperation with the IFC, are clear areas of opportunity.

## II. PROJECT DESCRIPTION

[6] CPF FY16-20 (Report No. 94687-YF) was discussed by the Board of Executive Directors on May 22, 2015.

## A. Project Development Objective

### PDO Statement

**To improve Local Self Governments ("LSGs") capacity to manage sustainable infrastructure and increase accessibility to economic and social opportunities in a climate aware manner.**

### PDO Level Indicators

- LSGs with developed annual and multi-annual budgets corresponding to development plans and asset management systems (Number)
- LSGs utilizing simple road asset management methods developed under the project (Percentage)
- Citizens reporting satisfaction with process of infrastructure service delivery, gender disaggregated (Percentage)
- Commercial and social services connected by improved, safe and resilient transport network (Number)
- Subprojects supporting climate adaptation and/or mitigation actions (Percentage)

## B. Project Components

27. **The objective of the project is to improve LSGs capacity to manage sustainable infrastructure and increase accessibility to economic and social opportunities in a climate aware manner.** The Project will finance a mixture of investment and technical assistance to improve green and inclusive infrastructure service delivery at the local level, including the implementation of the relevant chapters of SUDS. The Project will focus on strengthening capacities and technical approaches to implement existing regulatory, planning, and legal frameworks. Investments will prioritize improving integrated mobility infrastructure and overall resilience of LSGs.

28. **The Project will open a path for a long-term engagement in support of LSGs in Serbia.** It will inform the development of a policy and investment framework that can be strengthened over time and allow the Bank and other development partners to support Serbia's EU accession and improved absorption of pre-accession funds. The Project is designed in a manner that could absorb resources from other donors and also extend the sectoral coverage beyond local roads and mobility.

29. **The following principles are followed in the design of the operation:**
    i. Provide investments and technical support for sustainable improvement of local roads and mobility and overall resilience of LSGs. Infrastructure investment will be supported by improved transport asset management and concepts of building back better, safety and resilience, inclusion, natural based design, decarbonization of the economy, and creating a cleaner living environment. The Project will support LSGs in improving mobility, accessibility, resilience, safety, and lower emissions. Details of the subproject approval process and rules are defined in the Project Operations and Grant Manual (POGM), which was already approved by the Bank and adopted by the MCTI.

ii. Promote climate resilience, through non-motorized transport, linking road rehabilitation to climate adaptation including slope stabilization, river-bank protection, drainage works in the context of road rehabilitation and enhancing capacities for climate-aware infrastructure service delivery.
iii. Decentralize implementation to increase local capacities in a sustainable manner, induce spillover effects, and allow for high absorption of resources. All LSGs will receive financing from the Project, subject to a signed Framework Agreement (FA) setting out performance expectations and compliance with Bank's procedures.
iv. All civil works will be below the threshold for the use of national contracts. The average amount per LSG, excluding city of Belgrade, Nis and Novi Sad, over the project lifetime will be US$1.9 million. Size of the contracts and type of works will not be limited but will be such that construction (excluding project preparation, consultation, bidding) can be finished within one construction season to ensure timely disbursements. The amount envisaged per LSG will raise LSGs infrastructure investments by around 8 percent annually, which will not overwhelm LSGs in terms of absorption capacity. Capacity support will be provided to all LSGs with special focus on the weakest.
v. The maximum grant amounts are set in accordance with an agreed formula (based on population, area, development gap, and environmental index). The formula will ensure fair distribution of resources with priority on poorer and more vulnerable LSGs. Equally important, it sets the known amounts of available resources, allowing LSGs to properly plan and scope their proposed investments. Details of the formula and parameters are included in the POGM.
vi. The project aims at strengthening capacities and implementation of existing national policies by building technical, implementation, planning, and financial management expertise and raising awareness among stakeholders, including citizens. The project will follow existing government systems (procurement, FM, planning, and execution) where possible. Appropriate resources are assigned to cover capacity building, both top-down by delivering targeted trainings to experts and decision makers and bottom-up by raising awareness among citizens and civil servants. The continuous assessment of performance and consequent adjustment of capacity building activities will be embedded in their design.

30. **LSGs will receive grant transfers from the central level for infrastructure investments and will sign FA with MCTI, which will include commitments to improve PFM and transport infrastructure management.** The FA will define the general obligations of the LSG under the Project related to improvement of strategic planning, Citizen Engagement, PFM, transport infrastructure management, and selection and preparation of infrastructure investments including project planning, quality of design, and budgeting. Once the specific sub-project is approved by the PIU, the LSG will sign a sub-project Grant Agreement (GA). GA will define obligations and responsibilities of each party in implementation of specific investment and will be a condition for transfer of grant resources to the LSG. A model FA and GA are part of the POGM. The financing for infrastructure to be provided by the project will be additional, and not substitute for existing infrastructure spending by LSGs. To this end, the FA will include a provision that the average annual capital spending from own resources during the Project life will not be lower than the average of the past three years (except for 2020) adjusted for inflation.

**31. The PDO is supported by three components: (i) Climate Smart Mobility; (ii) Strengthening Capacity for Infrastructure Service Delivery; and (iii) Project Management and Awareness Raising.**

| Component 1<br>CLIMATE SMART MOBILITY<br>US$282 million | Component 2<br>STRENGHTENING CAPACITY FOR INFRASTRUCTTURE SERVICE DELVIERY<br>US$11.5 million | Component 3<br>PROJECT MANAGEMENT AND AWARENESS RAISING<br>US$6.5 million |
|---|---|---|
| • 1.1. **Investments in Climate Smart Mobility** (investments)<br>• 1.2 Sustainable **Mobility** (TA and tools) | • 2.1. Enhanced **Participatory Planning** and Preparation of **Pipeline Projects** (TA)<br>• 2.2. Strengthened **infrastructure Service Delivery Enablers** (TA) | |

**Project Costs and Financing**

**32. The total Project financing of US$300 million will be jointly co-financed by IBRD (US$100 million) and AFD (US$200 million).** Co-financing by the World Bank and the AFD is on a *pari-passu* basis and follows the modalities established under the World Bank–AFD Co-Financing Framework Agreement of 2018, requiring a separate Financing Agreement between AFD and GoS. The World Bank and the AFD will jointly finance the same contracts under the Project in accordance with agreed financing parameters. Supervision of the Project will be conducted by the World Bank under its rules. The disbursement percentages in the IBRD Loan Agreement will reflect the IBRD's share of the cost.

**Component 1. Climate Smart Mobility (US$282.0 million)**

**33. The objective here is to improve mobility within LSGs through strengthening systems for transport infrastructure service delivery and supporting transport infrastructure renewal.** These actions aim to increase resilience to natural disasters while reducing emissions of GHGs and local pollutants including PM2.5 and NoX. The component will finance targeted investments, analytics, technical assistance, and tools. Support for improved planning and management will ensure that these investments are inclusive, gender informed, and sustainable over the long term. Each LSG will be eligible for grants for infrastructure investments up to a value determined per a predefined formula, but the award of a grant will be subject to compliance with agreed eligibility and operational criteria. The component will be implemented through (i) Infrastructure renewal; and (ii) Sustainable mobility.

**Subcomponent 1.1. Investments in Climate Smart Mobility (US$272.0 million)**

**34. The objective here is to improve existing transport and associated infrastructure to support climate smart mobility and a move toward safe, green, and clean transportations systems.** The infrastructure financing will be provided through existing mechanisms for strictly targeted grant transfers from the central government to LSGs. The maximum total allocation to a single participating LSG during the course of the Project will not exceed the equivalent of US$25 million. Value of subproject grants will not be less than US$50,000 or more than US$10 million[7]. The investments will aim at accelerating the shift to sustainable and smart mobility and establishing green and clean transportations system. The investments will contribute to reducing the environmental footprint of transport services and improving LSGs' resilience to natural hazards. The majority of investments will be in transport

[7] Euro equivalent: The maximum total allocation to a single participating LSG over the course of the Project will not exceed the equivalent of EUR22 million. Value of subproject grants will not be less than EUR45,000 or more than EUR8.8 million.`

infrastructure reconstruction and rehabilitation, within existing infrastructure perimeters. Minor greenfield investments will be considered, for example, the construction of sidewalks, bicycle lanes and dedicated public transport infrastructure where required. The promotion of resilient and inclusive approaches and of active mobility will be central to the project design.

35. **The project will finance a range of investments to build climate resilience of the transport network including slope and bank protection and drainage facilities.** Some complementary activities will be considered where necessary to promote greener transport modes such as the greening of public spaces and addressing legacy pollution. Installation of digital infrastructure, where applicable, will be included, and the project will promote the utilization of modern technologies for the recycling of materials in civil works, as per the guidelines that will be defined under the ongoing EU IPA program. This subcomponent will also finance technical assistance required for the execution of the works including services for design, supervision, preparation of Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs) as necessary, technical audit, and road safety audit. Table 1 provides an indicative list of eligible investments.

*Table 1: Examples of types of investments that will be supported through the operation*

| | |
|---|---|
| ✓ Rehabilitation of roads, bridges, and streets.<br>✓ Traffic management schemes (traffic calming measures, parking management, pedestrian access, safety, congestion management, street lighting, etc.).<br>✓ Infrastructure for public transport (bus stops, bus lanes).<br>✓ E-Mobility (charging stations, e-bikes/scooters). | ✓ Dedicated non-motorized transport infrastructure (walking and bicycling) including public green spaces and lighting.<br>✓ Measures to improve climate adaptation including slope stabilization, river-bank protection, drainage works.<br>✓ Measures to improve environment including but not limited to provision of green space (forestation), legacy pollution cleanup. |

**Subcomponent 1.2 Sustainable Mobility (US$10.0 million)**

36. **The objective here is to strengthen LSGs systems to plan, manage, implement, and operate resilient transport networks that promote patterns of climate smart mobility in a sustainable manner.** This subcomponent will finance technical assistance, capacity building and demonstration pilots in three main areas:
    i. **Improve local road network management and resilience.** Outputs will include a framework for local roads management including guidance on institutional arrangements, policy, standards, maintenance contracting, asset management, resilience, and road safety with special focus on safety of children. An easy-to-use Road Asset Management System (RAMS) will be developed and introduced in participating LSGs.
    ii. **Mainstream sustainable and integrated mobility planning**. Outputs will include some 40 gender sensitive Sustainable Urban Mobility Plans (SUMPs) with transport management plans for medium and small size LSGs. The activity will streamline a gender sensitive approach in urban planning, design of mobility solutions and public space enhancement as well as in development of recommendations and identification of priority investments. Development of interactive guidelines and training of LSGs staff throughout the project life and knowledge exchange will be integral part under the SUMPs.
    iii. **Smart mobility research center and solutions through digital technologies**. Outputs will include concept and preliminary design for research and testing center for smart mobility, proposals for smart mobility contractual modalities, and up to 5 smart mobility pilots in areas such as optimizing public transport services, intelligent

transportation systems, real-time information, and infrastructure or service sharing schemes. The pilots will be implemented through calls for proposals that will prioritize solutions that could be scaled up across the country.

**Component 2. Strengthening Capacity for Infrastructure Service Delivery (US$11.5 million)**

37. **The objective here is to improve the effectiveness and sustainability of infrastructure service delivery through strengthening LSGs' capacity to implement improved local planning and PFM processes.** The component will finance a mixture of technical assistance and capacity building activities focused on: (i) enhancing strategic participatory planning and preparation of pipeline projects and (ii) strengthening institutions, PFM, and access to financing.

**Subcomponent 2.1. Enhanced Participatory Planning and Preparation of Pipeline Projects (US$6.5 million)**

38. **The objective here is to enhance the whole process of local development planning, including citizen participation, linkages between planning documents, sectoral strategies and budgets, and incorporation of climate and resilience criteria.** In addition, the subcomponent identifies and supports early preparation of urban development and municipal infrastructure projects that go beyond the roads and mobility sector. Specifically, the subcomponent will finance technical assistance and capacity building in two main areas:
    i. **Participatory Local Development Planning in Pilot LSGs.** The activities will support the development of critical planning documents and their links to corresponding capital investment and budget planning processes. The focus will be on reducing fragmentation of multiple plans and incorporating climate and resilience considerations into the planning documents. The specific planning documents to be supported will be based on an initial assessment of the planning status and capacity in selected pilot LSGs. The improved planning will strengthen linkages between broad development plans and asset management systems and annual and multiannual budgets and will also enhance the budgeting of individual infrastructure projects. Supporting the quality of infrastructure budgeting will strengthen programmatic budgeting practices. Specific emphasis will be given to ensuring improved citizen engagement, including from women and vulnerable groups to mainstream participatory approaches. The development of manuals and templates would also be supported so that lessons learned can be applied beyond the pilot LSGs. The activity will include extension of the E-Government portal with the feature of informing users of the planned infrastructure investments and planned consultations as well as to annually collect citizen opinion on main infrastructure priorities in their LSGs.
    ii. **Identification and Preparation of Pipeline Projects in Pilot LSGs.** The activities will focus on the identification and early project preparation activities for future urban development and municipal infrastructure investment projects that that go beyond the roads and mobility sector. The activities will be based on the improved participatory planning approaches piloted under activity 2.1(i). Specific technical assistance would be provided for preparation (pre-feasibility, feasibility etc.) to ensure readiness of investments.

**Subcomponent 2.2. Strengthened infrastructure Service Delivery Enablers (US$5.0 million)**

39. **The objective here is to promote sustainability and long-run improvements of infrastructure service delivery by improving technical capacities and tools and enhancing institutional arrangements and access to finance.** The support being provided under this subcomponent will be especially critical for smaller and poorer LSGs where funding and experience with managing public investments has been limited, while seeking to address capacity

constraints and institutional strengthening across LSGs. The subcomponent will be implemented through analytical work, technical assistance, and development of tools, in particular:

i. **Improving access to financing.** Outputs will include an assessment the current local infrastructure financing framework and recommendations to improve the LSGs' ability to raise private capital for infrastructure investments, potentials of green funds, and review of the municipal fund scheme.

ii. **Strengthening institutions and human capacities.** Outputs will include: (i) a review of the currently fragmented institutions and human capital; and (ii) recommendations on 'fit for purpose' digitization to enable existing staff to work efficiently and meet national and local requirements and to develop prioritized approaches to staff expansion and training. The introduction of a younger workforce to the sector will be supported through 40 paid internships in the Project Implementation Unit (PIU), MCTI and LSGs. Out of these at least 28 (70 percent) will be for women. In addition, PIMIS Database and Project Management tools will be delivered to each LSG to plan and manage infrastructure contracts.

iii. **Enhancing capacities for climate aware infrastructure service delivery**. The outputs will be capacity building and implementation support in several areas, with special focus on efficiency, transparency and green procurement; PFM/PIM for monitoring and reporting on green impacts; SOEs' performance, transparency, and inclusion of citizen feedback; contract management; and social and environmental management. It will also support intermunicipal cooperation and knowledge exchange on sustainable LSG development.

**Component 3: Project Management and Awareness Raising (US$6.5 million)**

40. **The objective here is to support an institutional structure that will enable successful implementation of the Project and raise awareness about the importance of a green transition and sustainable mobility.** The subcomponent will finance the establishment and maintenance of a strong PIU and strengthening and maintenance of the Central Fiduciary Unit (CFU). The PIU will be responsible for overall management of the Project and will provide day-to-day project management support to the LSGs to ensure transparency and accountability of the Project's interventions and results. Expenses that may be financed by this activity include PIU salaries and CFU salaries in accordance with the rotation model of financing, operating costs, office equipment, dedicated web page and supervision platform, awareness raising campaigns, communication strategy, and the PIU and the CFU training. To facilitate online supervision, a georeferenced platform will be introduced.

## C. Project Beneficiaries

41. **Renewal and greening of local roads and infrastructure will provide a better and healthier environment for a total population of about 6.7 million in the 145 participating LSGs.** Beneficiary communities include a mix of cities, urban settlements, rural settlements in urban areas, and areas with socioeconomically diverse populations. The Project's infrastructure improvements will benefit residents, businesses, and service providers. Improved environmental conditions will enhance the economic competitiveness of productive areas, supporting the livelihoods of beneficiary communities. Infrastructure renewal such as bus stops, sidewalks, bicycle facilities, improved drainage, safety features, and greener public spaces will improve the quality of life of residents. Enhancing climate resilience of LSGs' infrastructure networks will also benefit residents and businesses by increasing safety and reducing the likelihood and severity of natural hazards.

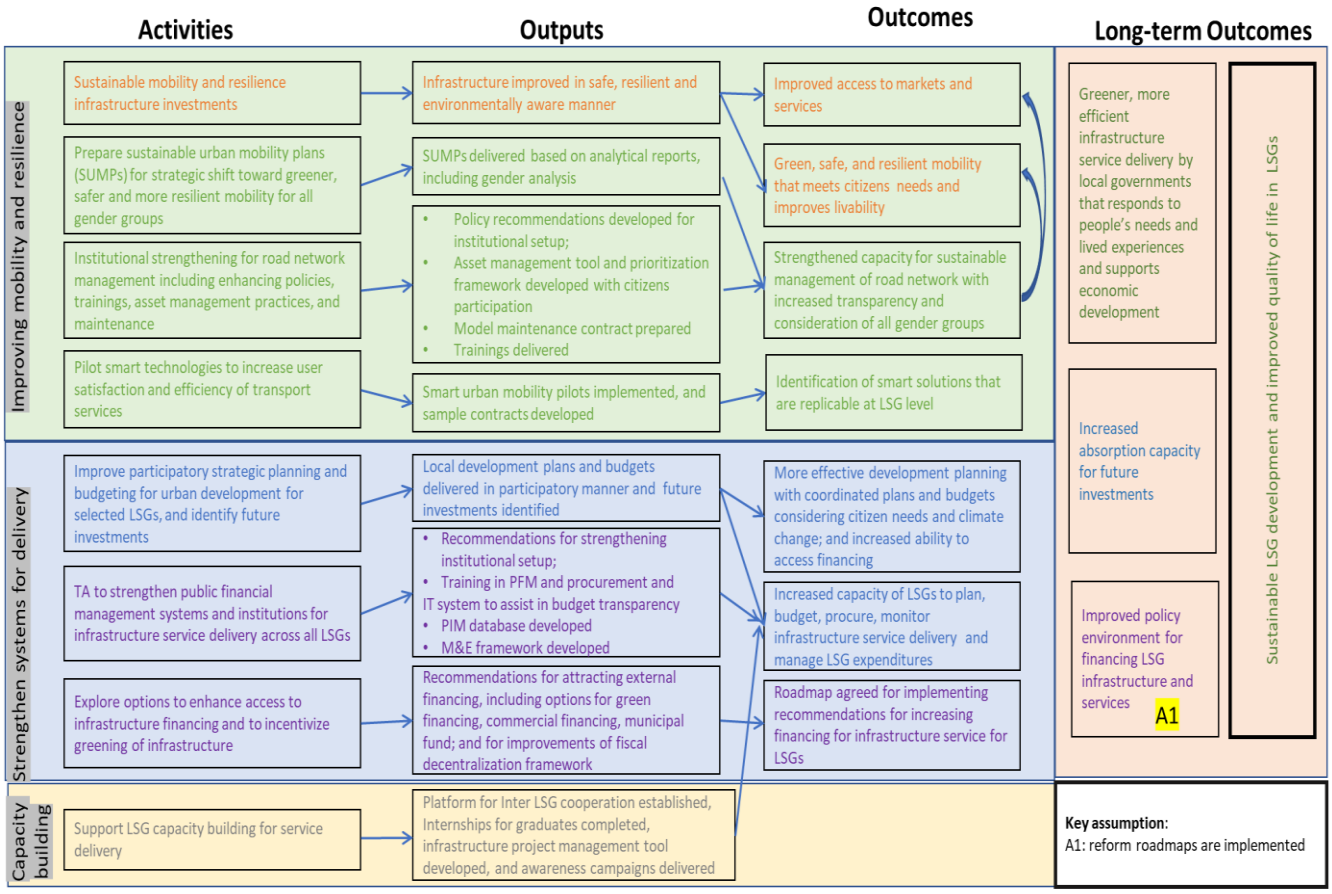
42. **Mainstreaming citizen engagement in infrastructure planning and prioritization will benefit vulnerable groups, including women and the disabled**. Improving public transit services, bus stops, and bicycle and pedestrian facilities will also benefit socioeconomic and demographic groups—especially the poor and women—who are less likely to

rely on private automobiles to meet their mobility needs because of low levels of car ownership. The interventions supported by this Project will also help expand the income-generating opportunities of these groups and contribute to better and more sustainable livelihoods.

43. **The Project's capacity building, technical assistance, and training will better enable MCTI and LSGs to fulfill their mandates**. By strengthening policy implementation and identifying areas for policy improvements, the Project will also benefit the MoF and the Ministry of Public Administration and Local Self Governments. LSGs will gain from technical assistance and training in the use of simple asset management techniques, improved procurement/contracting methods, and greater availability of road asset condition information, all of which will enable them to better use their limited budgets. Trainings in environmentally aware design, nature-based solutions, and resilience will benefit all LSGs and the MCTI and contribute to a greener future. MCTI will profit directly from policy and institutional development support to enable it to identify a clear central government role supporting local infrastructure management. Awareness raising campaigns should raise understanding among citizens on the importance of sustainable development and their role and rights in the process. Society at large will benefit from improved overall management of the local infrastructure networks.

## D. Results Chain

### Theory of Change (TOC)



44. **According to the Project's theory of change, investments in climate-smart local mobility coupled with capacity, tools, and policies for infrastructure delivery will improve the local infrastructure and provide better mobility to all citizens.** This will enhance access to services and boost local economic competitiveness, leading in the longer term to gains in productivity, welfare, and quality of life.

## E. Rationale for the Bank Involvement and the Role of Partners

45. **The World Bank is uniquely positioned to help LSGs transform the way in which they plan, execute, and manage infrastructure investments in line with Serbia's EU accession agenda.** The Bank's global expertise is especially relevant to helping Serbia to implement its SUDS and 2025 Investment Plan. The latter, based on EUR14 billion of investments, recognizes that investing in local infrastructure can improve growth and employment at the local level, enhance access to services and jobs, and advance environmental and climate related actions relevant to the European Green Deal and achieving climate neutrality. SUDS is designed to stimulate local development and planning through integrated strategies, institutional enhancements, and alignment of documents and procedures. It also responds to the emerging global interest in climate-friendly, greener, and smarter local development. Serbia has the opportunity now, through the SUDS strategy and the World Bank's support, to prepare local governments with capacity to execute regional funds once in the EU. When countries join the EU, much of the EU's support is executed by local governments in regional development projects.

46. **The proposed Project provides a vehicle for these transformative processes**. The implementation of modern asset management practices for local road network and of sustainable urban mobility plans will help ensure that subsequent infrastructure investments are sustainable. Inclusion of environmental and climate related consideration in the Project scoping and preparation will lead to gradual transition to the greener infrastructure investments. Strengthening the procurement and project preparation capacities will support more efficient use of available resources and better budgeting, while improved service delivery will lead to more efficient and citizen centric use of available resources. While many IFIs and donors are present in the sector, the activities are often not coordinated and focused on a few specific areas. The Project will be financed jointly with the AFD and will serve as the vehicle to build on and coordinate the heterogenous efforts.

## F. Lessons Learned and Reflected in the Project Design

47. **The Project will build on recent and ongoing World Bank analytical work, technical assistance, and infrastructure projects.** The World Bank's recent contributions to the improvement of infrastructure networks in Serbia include the Enhancing Infrastructure Efficiency and Sustainability Project, Corridor X Project, Road Rehabilitation and Safety Project, and the Serbia Railway Sector Modernization Multi-Phase Programmatic Approach (MPA) project.[8] In

[8] Recent analytical work includes: (i) a study of Transit-oriented Development done in collaboration with the City of Belgrade; (ii) Gender in Transport Study done for the national and the LSG levels; (iii) ongoing work on local road network climate resilience; (iv) the Western Balkans Urbanization Review complemented by a technical note on lagging regions in Serbia; (v) urban audits that are pointing out at gaps in service delivery and infrastructure in local communities; (vi) the recent World Bank PULSE survey on how Covid-19 has impacted selected LSGs, including their most pressing needs and gaps; and (vii) a series of activities under the World Bank-Austria Urban Partnership Program on enhancing the capacity of local governments in financial management, urban and participatory planning, citizen engagement, and social accountability.

addition, the recent World Bank-financed Strengthening Sustainable and Resilient Urban Development in Serbia project, implemented through a multi-donor trust fund funded by the Swiss Government, will complement this Project and provide an opportunity to ensure the continuity of activities through the medium term for greater impact. The engagement will provide complementary technical assistance and strengthen the capacity of selected LSGs to better plan, prepare, and carry out high-impact city-level investments and would inform the Project through analytical activities and capacity building in an ongoing manner.

48. **The Project has incorporated lessons from a survey[9] of all 145 LSGs and a "Deep Dive" analysis in 40 LSGs.** According to the findings, LSGs' institutional arrangements are fragmented and understaffed, with insufficient skill levels (notably engineering and planning skills) and low absorptive capacity. Recent mandates related to planning and strategic frameworks, while necessary, have put additional burdens to the LSGs for which they are not prepared. Most local infrastructure has not been refurbished or rehabilitated for more than 50 years, and it is extremely challenging for LSGs to undertake substantial investments instead of simple and inexpensive regular maintenance. Moreover, most local authorities are facing increasing challenges of rapid and chaotic urbanization and the impacts of more frequent natural disasters caused by climate change. Furthermore, negative birth rates, brain drain, and the global financial and economic crisis have further aggravated these challenges.

49. **The Project design was informed by lessons learned in other similar World Bank projects in the Western Balkans, especially several ongoing projects in North Macedonia.** The North Macedonia Local Roads Connectivity Project is providing financing for road infrastructure interventions to all 80 LSGs in North Macedonia. The amounts assigned to each LSG are defined per an agreed formula that considers poverty, population, and car ownership. Projects nominated and prepared by the LSGs are screened against simple and clear eligibility criteria. At the same time, decentralized implementation of procurement and infrastructure management was successfully implemented in the North Macedonia Municipal Services Improvement Project.

## III. IMPLEMENTATION ARRANGEMENTS

### A. Institutional and Implementation Arrangements

50. **The Project will be managed by a PIU housed at MCTI.** The new PIU (see Annex 1) will be responsible for the overall management of the Project. The PIU will be populated by PIU Manager, Deputy Manager and number of technical staff to facilitate Project implementation and capacity building support to LSGs. The prioritization, preparation, supervision, and implementation of sub-projects financed under the Project will be the responsibility of the LSGs, under the close guidance and supervision of the PIU. Each LSG will assign a dedicated person to be the Project manager and focal point to liaise with the PIU. Fiduciary aspects, including ensuring compliance with all financial management and procurement policies will be managed by the Central Fiduciary Unit (CFU) under the MoF. The CFU will be strengthened with a minimum of two additional specialists on procurement and financial management. The Project implementation arrangements are set out in the POGM including the division of labor between the PIU, CFU and the LSGs.

[9] Survey available at: https://forms.office.com/Pages/DesignPage.aspx?auth_pvr=OrgId&auth_upn=bdomine%40worldbank.org&lang=en-US&origin=OfficeDotCom&route=Start#FormId=wP6iMWsmZ0y1bieW2PWcNszn7ZIZ0nFMhj49Pp7LX1NUNzhMUjdHUURYUFNVWkw2RFhTSlk0SUpCOS4u

51. **At the beginning of the Project, each participating LSG will sign a FA, a model of which is a part of the POGM.** The FA will define the general obligations of the LSG under the Project related to improvement of strategic planning, CE, PFM, transport infrastructure management, and selection and preparation of infrastructure investments including project planning, quality of design, and budgeting. Once the specific sub-project is approved by the PIU, the LSG will sign sub-project GA. GA will define obligations and responsibilities of each party in implementation the specific investment and will be a condition for transfer of grant resources to LSG level.

52. **The PIU will be responsible for building the capacity of LSGs to enable them to carry out their activities and responsibilities effectively, with the fiduciary support of the CFU**. The PIU/CFU will provide template documents such as for procurement, reporting and safeguards, consistent with World Bank policies. LSGs will be expected to participate in technical assistance and capacity building activities and ensure that the tools introduced through the project are utilized at the local level. LSGs will regularly update information about the project on their relevant communication boards and websites.

53. **A Project Steering Committee will be established within MCTI to coordinate support for the improvement of local infrastructure service delivery and implementation of the SUDS not later than six (6) months after Project effectiveness.** The Steering Committee will be chaired by MCTI with members representing MoF, Ministry of Environment, Ministry of Public Administration, and, as applicable, representatives of participating LSGs that are key to the Project. International Financial Institutions and bilateral partners might be observers in the Steering Committee.

54. **AFD will follow the World Bank's guidelines for financial management and procurement and the Bank's Environmental and Social Framework.** The World Bank FM team will (i) review all annual audited project financial statements and quarterly un-audited interim financial reports provided by the Implementing agency; (ii) follow up with the implementing agency on these reviews, including monitoring and consultation on the implementation of recommendations in the auditors' reports; and (iii) serve as the focal point for AFD vis-a-vis the implementing agency in all matters related to FM under the Project. From the disbursement perspective, the World Bank would: (i) review each withdrawal application furnished by the implementing agency to verify that the amount requested is eligible for financing under the AFD's Financing Agreement; and (ii) notify AFD that the withdrawal application is in proper order and that the amount requested is eligible for financing by AFD.

### B. Results Monitoring and Evaluation Arrangements

55. **Monitoring and evaluation (M&E) of the Project's results will be carried out by the MCTI through the PIU, which will be ultimately responsible for all Project data collection, including those provided by the LSGs.** A part-time M&E Specialist will be hired to develop, in collaboration with the MCTI, a detailed M&E mechanism for each of the Project's components based on the Results Framework. The M&E system will ensure that the Project is implemented in accordance with its objectives and expected results, including provisions to mitigate the COVID-19 impact. The World Bank team will maintain regular interactions with the PIU and carry out frequent field visits. This will allow the World Bank to undertake continuous monitoring and verification over and above its periodic formal implementation support missions.

56. **The PIU will regularly monitor, assess, and report on the Project's implementation progress and results by delivering quarterly implementation reports and one comprehensive annual monitoring and evaluation report.**

Quarterly reports will summarize progress and issues related to procurement, FM, implementation of activities, social and environmental risk and impact management, and results monitoring. The focus of the quarterly reports is to supports problem identification and resolution. The format of the quarterly reports will be defined by the PIU and will include updates on project results indicators. The annual report will (i) outline and assess yearly implementation progress of the project; (ii) identify risks, lessons, and changes to improve implementation; (iii) summarize progress toward achievement of the PDOs and indicators; (iv) present a prospective view of the likelihood of achieving the outcomes and PDOs by the Project's closing date; and (v) outline steps to improve the Project's impact and sustainability.

57. **The Project mid-term review will assess LSGs performance in absorbing financing and provide an opportunity to reassess and adjust selection criteria and capacity support to ensure that funds are allocated to meet the Project's objectives.** By the mid-term review, all LSGs should have a clear list of pipeline projects and resources for preparing designs. If the review concludes that some LSGs will not be able to consume resources by the Project's closing date, the funds intended for those LSGs will be reassigned to be absorbed on first-come-first-served basis, with priority being given to poorer LSGs.

### C. Sustainability

58. **Under the FA with MCTI, each LSG will be mandated to utilize RAMS and to ensure that the investments are prioritized and that enough resources are earmarked in LSGs budgets for maintenance of the investments for the following 5 years.** Priorities for road rehabilitation and reconstruction will be derived from RAMS and, as such, will feed into the LSG development plans and into annual and multiannual budgets. In this way, the Project will ensure that investments generate the intended benefits beyond the loan closing date.

59. **Most of the policies needed for sustaining infrastructure service delivery are in place, but the Project will focus on boosting implementation.** Component 2 will focus on strengthening capacities at the central and local levels through top down and bottom-up approaches, for both institutions and citizens. The Project will make available training materials, facilitate continuous learning, support the development of IT tools to make the work of LSGs more efficient and transparent, and establish proper Public Investment Management Systems and Project Management Approaches to be mainstreamed and sustained across the country.

## IV. PROJECT APPRAISAL SUMMARY

### A. Technical, Economic and Financial Analysis

**Technical analysis**

60. **The civil works financed through the Project will mainly consist of rehabilitation and repairs following the existing alignments, while slight corrections and widening may occur where necessary to improve safety, resilience, and accessibility**. The Project may finance smaller greenfield investments, like for example bicycle lanes and sidewalks. The Project will also repair and upgrade drainage facilities, small bridges, and culverts as needed and relocate and repair aboveground and belowground utilities. The technical designs will include safety features such as guardrails, pavement markings, and speed reduction measures in urban and residential areas. In addition, designs will include

features to improve safety and accessibility for nonmotorized road users and transit users, such as sidewalks, new or improved bus stops, bicycle lanes, lighting, and other facilities to improve safety of access to schools, health centers, and other public amenities. The Project will install ducts and pipes for fiber optic cables, where appropriate.

61. **The MTCI and LSGs already prepared a sample list of potential projects for the first-year investment program, which currently comprises EUR 35 million in 40 LSGs.** The list was developed through a four-step process.[10] The scoped sample indicate that composition of the projects to be financed will consist of 49.5 percent roads/streets, 32.5 percent active mobility, 6 percent street lighting, and 12 percent disaster risk management. The road sections are in fair, bad or very bad condition, carrying on average 1,417 vehicles per day. The list includes roads with approximate lengths between 1km and 30km and average traffic volumes of 1,000–4,000 vehicles per day (VPD) or less in the case of rural roads. On average, the roads have an average roughness of 11.7 IRI, m/km, and the average vehicles speed of cars is 22.4 km per hour. Active mobility infrastructure mainly involves new bicycle paths and sidewalks with LED lighting and necessary furniture. The total length of the pedestrian and cycle infrastructure evaluated is 97.42 km, subdivided into 22 projects. Disaster risk management interventions are focused on strengthening riverbeds along streams prone to flash floods.

62. **The Project's activities will bring substantial climate change co-benefits through improved transport infrastructure resilience and maintenance, investments in active mobility infrastructure, development of sustainable urban mobility plans promoting modal shift and greening of transport, and utilization of modern technologies and recycled materials in civil works when appropriate.** Climate co-benefits will come from integration of environmental and climate resilience features in the transport infrastructure. Moreover, rehabilitating the roads to bring them to a maintainable condition also contributes to climate co-benefits because effective and timely maintenance is the most important measure to mitigate damage in the event of extreme weather. The preliminary analysis of potential road/streets interventions showed that total gross Carbon Dioxide (CO2) emissions over the 20-year evaluation period under the without-project scenario are estimated at 390,279 tons, and under the with-project scenario at 365,041 tons, resulting in a net CO2 emission of -25,238 tons, or -1,262 tons per year. The decrease in CO2 emissions is attributed to the increase in travel speeds with the project.[11] Component 2 will deliver tools and build capacity to improve the planning (development and strategic environmental related plans), budgeting, and implementation of municipal infrastructure services including rehabilitation and maintenance activities, which will enhance long-term sustainability of the LSGs.

**Economic analysis**

63. **The overall EIRR of the Project's infrastructure investments is 35 percent, and the NPV is EUR 115.84 million, at a 6 percent discount rate, corresponding to an NPV/Investment Cost ratio of 3.03.** Given the nature of this project, which develops a framework approach for improving infrastructure at the local level but does not identify individual projects to be financed at this stage, economic analysis was performed based on the scoped list of potential projects

[10] The four-step process is as follows: (a) the MTCI called for proposals from all 145 LSGs with clear guidance on prioritizing roads that link to a service – for example, schools and hospitals – or markets and on support to include also active mobility infrastructure; (b) 40 LSGs submitted their candidate roads with designs and justifications to the MTCI at an estimated cost of EUR 52 million; (c) the Standing Conference of Towns and Municipalities, engaged to support project preparation, performed a desk review of the technical designs and site visits to candidate roads (roads that did not have acceptable technical designs were excluded from the program); and (d) the MTCI concluded that sample eligible for financing would have estimated cost of EUR 23 million.

[11] It was estimated that travel speeds for cars will increase from around 22.4 km per hour without the project to 33.7 km per hour with the project, which will decrease fuel consumption and CO2 emissions.

that have ready technical documentation and reflect the types of investments that could be financed. Interventions can be roughly grouped as follows: roads/streets, active mobility infrastructure, lighting, and resilience. The quantified economic benefits for the roads/streets, active mobility, and resilience investments comprise savings in vehicle operating costs, travel times, road maintenance costs, and $CO_2$ emissions costs. The total financial cost for the proposed road works is EUR 17.5 million, corresponding on average to EUR 228,000 per km. The overall EIRR of the roads/streets is 33 percent, and the NPV is EUR 52.67 million, at 6 percent discount rate, corresponding to an NPV/Investment Cost ratio of 3.0, which is comparable to similar projects in the region. The total financial cost for the proposed active mobility infrastructure is EUR 13.725 million, corresponding on average to EUR 139,000 per km. Sensitivity analysis shows that the Project's capital investments are economically justified even if construction cost is 20 percent higher or if project benefits are 20 percent lower, or both. In case of both of the latter, the overall EIRR would drop to 24 percent. Details of the economic analysis are presented in Annex 3.

### B. Fiduciary

64. **The CFU, established within the MoF, will be in charge of financial management and procurement for the Project.** The CFU is responsible for fiduciary aspects of ten ongoing projects, it is appropriately staffed, and its performance has been satisfactory. The PIU within the MCTI will be the primary implementing entity, including being signatory of contracts and responsible for technical aspects of implementation. The LSGs will implement investments funded by the Project and report to the PIU, while PIU will communicate on the procurement and financial part of the implementation with the CFU. Internal controls and procedures to be used on the Project are described in the POGM, a draft of which is expected to be prepared by negotiations. Application of the controls and procedures in practice will be verified by the Bank's supervision.

**(i) Financial Management**

65. **A Designated Account (DA) for administering the World Bank funds will be opened in EUR at the National Bank of Serbia (NBS) and will be managed by the MCTI/PIU.** The control environment in the NBS is considered to be acceptable. The corresponding RSD account will be the MCTI account at the Treasury Administration, intended for local currency payments. All withdrawals of funds will be made to the DA. The Project expenditures for all activities contracted by the PIU will flow from the DA and RSD accounts, while the funds for LSG projects will flow from the DA to separate LSG accounts opened for that purpose. Allowed methods of disbursement will be advances to the designated account, direct payments, reimbursement, and special commitments. For the AFD loan, a separate Designated Account will be opened to and from which the AFD financing will flow as per the legal agreement between the AFD and the GoS.

66. **The funds for the strictly targeted grants to the LSGs for infrastructure investments under Component 1 will flow from the Designated Account to the separate accounts opened by the LSGs with the local Treasury, for the grant related purposes only.** The funds will be disbursed by the MCTI to selected LSGs in two tranches, 50 percent advance and 50 percent after verification by the CFU/PIU that the grant proceeds of the first tranche were used for the intended purposes and at least 80 percent of the initial amount was spent. The verification will be based on the review of the Project financial reports prepared by the LSGs and any additional checks as described in the POGM. The first transfer of resources will take place upon approval of the LSG's sub-project.

67. **The CFU will submit a full set of interim un-audited financial reports (IFRs), consolidated for all components and all sources of funds for each calendar quarter throughout the life of the Project.** Acceptable accounting software

will be used for Project accounting and reporting, including principal financial reports being quarterly IFRs and annual Project financial statements. The IFRs will cover the World Bank and the AFD financing.

68. **The LSGs will provide the Project financial reports in the agreed format to the PIU/CFU, covering one calendar quarter, or the report on total expenditures for the first tranche, if shorter than one quarter.** The POGM includes format of the financial reports, the list of documentation needed to accompany the reports, and the means by which the PIU/CFU will supervise the use of grant proceeds (quarterly financial reports on the use of grants, based on which the CFU prepares quarterly breakdown of grants report). If there is already an acceptable format used by the LSGs to report to the MoF, this will be assessed and used if possible. In addition, field controls may be made at any time by the MCTI/PIU to check whether the on-the-spot situation is congruent with the information provided in the LSGs' financial reports.

69. **The annual audited Project financial statements will be provided to the Bank within six months after the end of each fiscal year, and at the closing of the Project.** The audit will be conducted by a private audit firm acceptable to the Bank and in line with Term of Reference (ToR) agreed with the Bank. The audit ToR will include assessment of procedures with regard to grants and level of their alignment with the POGM. The annual financial statements will cover the World Bank and the AFD financing, following the same pattern as the quarterly IFRs.

70. **Based on the above arrangements and the Project design, the overall financial management risk for the project is assessed as Substantial.** Given that a number of entities is involved in implementation, it will be vital to: (i) prepare a POGM acceptable to the Bank which will define all procedures, including related to criteria and arrangements for grants to LSGs, (ii) have the LSGs sign FA with the central government which will define the activities and obligations under the grant, and (iii) establish effective communication channels and reporting lines between the MCTI, the CFU, and the LSGs.

71. **Co-financing.** In line with the terms of the co-financing agreement between the IBRD and the AFD, the Bank will review withdrawal applications received from the borrower and will confirm their adequacy, following which the AFD and the Bank will disburse their respective share of the financing.

**(ii) Procurement**

72. **Procurement will be carried out in accordance with the World Bank's "Procurement Regulations for IPF Borrowers: Procurement in Investment Project Financing for Goods, Works, Non-Consulting and Consulting Services", dated November 2020.** A Project Procurement Strategy for Development (PPSD) based on market analysis has been prepared with the help of the World Bank. A detailed Procurement Plan is prepared for the first 18 months of the project based on the PPSD's findings. PPSD was approved on January 18, 2022 and Procurement Plan on January 22, 2022. All procurement documentation will be standardized according to the new policies and regulations which cater to open competition and transparent selection of contractors and individuals. Project procurement communication and Procurement Plan implementation will be performed through the Systematic Tracking of Exchanges in Procurement (STEP) system.

73. **General Procurement Notice (GPN).** This will be prepared by the CFU and submitted to the Bank after negotiations. The World Bank will arrange for the GPN's publication in the United Nations Development Business online and on the World Bank's external website. The GPN will contain information concerning the Borrower, amount and purpose

of the financing, scope of procurement reflecting the procurement plan, the borrower's contact point if available, the address of a free-access website where the subsequent Specific Procurement Notices will be posted, and, if known, an indication of the scheduled dates for the specific procurement opportunities.

74. **Major procurement categories under the Project.** The Project's total value is US$ 300 million. Works will total US$277 million, followed by goods and non-consulting services in the amount of US$ 5 million and consultancy services in the amount of US$ 18 million.

75. **Client Capability and the PIU Assessment.** The procurement of works will be conducted by the LSGs with necessary fiduciary review and approval by the PIU, supported by the CFU, which will be responsible for all procurements under the Project. If LSGs decide to use grant proceeds for project design and/or supervision, these will have to follow Bank procurement rules. The PIU will conduct goods and consultancy procurement centrally. It is the first time that the LSGs will follow the World Bank's Procurement Regulations. Although the model bidding document for LSGs will be based on Serbian standard bidding documents with necessary customizations, LSGs' capacity needs to be enhanced to manage the procurement appropriately.

76. **Procurement Risk:** The Project will be highly decentralized, aiming at a sustainable increase of the LSGs' capacities in procurement. The procurement risk is assessed as Substantial.

77. **Procurement Risk Mitigation Measures:** To mitigate the procurement, the following measures are planned: (i) Use of Serbian electronic Government Procurement (e-GP) in a phased approach; (ii) Introduction of Key Procurement Performance Indicator (KPPIs) for decentralized procurement managed by the LSGs; (iii) assigning dedicated procurement and financial management persons dedicated to this project to the CFU; (iv) Conducting customized procurement training, including fraud and corruption, for LSG procurement staff; (v) Introducing remote supervision using electronic tools/devices; and (vi) Monthly reporting on contract monitoring following the format agreed with the PIU.

78. **Use of Serbian electronic Government Procurement (e-GP):** LSG may use the Serbian electronic Government Procurement (e-GP) with necessary customization to make it consistent with the Bank's Core Procurement Principles. Customization of the e-GP will take some time; hence, once the e-GP portal is ready to use for Bank-funded projects, then activities under this Project may use the e-GP system. Project funds could be used to enhance this module to use for other World Bank-funded project procurements.

79. **Procurement KPIs for LSG Procurement:** The following procurement KPIs will be monitored for the works procurement implemented by the LSGs.

| SL | Procurement Steps / Subjects | Indicators |
|---|---|---|
| 1 | Receipt, evaluation, and contract award | • Percentage of cases where the procurement process has been followed according to the approved procedures<br>• Average number of bids per bidding process<br>• Average number of days from advertisement to contract award |
| 2 | Delivery within the original schedule | • Percentage of works completed within the original deadline as stated in the agreement/work order |

| | | |
|---|---|---|
| 3 | Payments | • Average number of days taken to release payment |
| 4 | Green Procurement | • Percentage of cases green procurement aspect was considered in bidding document and contract agreement |
| 5 | Asset Tracking | • Percentage of cases where assets are purchased/developed as per requirement and are in appropriate place |

**80. Procurement thresholds and prior review thresholds**. The Procurement Plan sets forth those contracts which shall be subject to the World Bank's prior review. All other contracts shall be subject to post review.

### C. Legal Operational Policies

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

### D. Environmental and Social

**81. The environmental risks are considered Moderate.** Although the main long-term impacts of the Project are likely to be positive, given its green and sustainable footprint, several short-term risks need to be considered. The main environmental risks are related small to medium scale construction works and to: (i) impacts on ground and surface water, soil and air contamination (dust and noise); (ii) Occupational Health and Safety (OHS) issues and access to work sites; and (iii) improper waste management, related to infrastructure investments under Component 1. To identify and propose steps to mitigate these risks, the MCTI has prepared an Environmental and Social Management Framework (ESMF) that contains provisions of proper measures to be applied in order to identify and then mitigate community and environmental impacts, including OHS risks and waste management (storing, transporting and disposal) and will exclude activities in protected areas or cultural heritage sites.

**82. The ESMF first and foremost is aligned with the Project's defined criteria on what constitutes eligible projects.** The ESMF sets forth a screening mechanism to ensure that no substantial or high-risk activities are financed under the Project. The ESMF ensures that site-specific ESMPs will be prepared for activities of moderate (and low, if needed) risks and will include site-specific impacts and mitigation measures, with clearly defined procedures, roles and responsibilities for screening, preparation, review, and consultation. In addition to the ESMF, the MCTI and other relevant stakeholders will implement the activities listed in the Environmental and Social Commitment Plan (ESCP)[12], which will be revised, as needed, during implementation. The Project will provide central support in case development of ESMPs and RAPs are needed for local level investments. In order to understand LSGs' main environmental and climate related issues and challenges, an extensive online survey was implemented, and several introductory trainings were held for interested LSGs to present the Project's details and to provide, among other

[12] All the relevant documents, ESMF, RF, SEP, LMP, and ESCP were prepared and disclosed. The documents were publicly disclosed on the MCTI's website, starting from November 18, 2021, and the call for public consultations that were held virtually via Zoom on November 26, 2021 was announced in the daily newspaper with national coverage on the same date. The call for comments and inquiries was opened until December 3, 2021. https://www.mgsi.gov.rs/en/aktuelnosti/public-consultations-serbia-local-infrastructure-and-institutional-development-project

things, an overview of relevant environmental and climate change possibilities and constraints.

83. **The Project will primarily support limited, small to moderate scale civil works for rehabilitation and reconstruction of transport infrastructure, within existing physical perimeters.** Some greenfield investments are expected in case of construction of bicycle lanes and sidewalks. The Project will finance a range of investments to build climate resilience of the transport network including slope and bank protection and drainage facilities. Some complementary activities will be considered where necessary to promote greener transport modes such as the greening of public spaces and addressing legacy pollution. Installation of digital infrastructure where applicable will be included, and the Project will promote the utilization of modern technologies for the recycling of materials in civil works. The types and scope of the works and specific locations will be subject to formal eligibility and compliance screening as defined in the POGM. These will also be subject to the screening criteria set forth in the ESMF that are included in the POGM. Impacts from these activities (if managed and mitigated adequately) are expected to be typical for construction works, and as such, to be low in magnitude, reversible, predictable, and temporary. The ESMF has been prepared, reviewed by the Bank team, and disclosed and consulted upon ahead of Project appraisal.

84. **The investments under the Project consist of reconstruction or potential "greening" of already existing infrastructure, and improved resilience of existing infrastructure which will not change the nature of existing facilities.** There will be no new construction works on water bodies or any works that would create physical conditions that could change the flow patterns of water bodies. The proposed activities will not adversely affect the quantity or quality of water flow to the other riparians and will not be adversely affected by the other riparians' possible water use. As such, the ECA VP has approved Exception to the riparian notification requirement under OP 7.50 in November 2021.

85. **The Project's social risk is rated as Moderate.** Considering the nature of the Project, strong citizen and stakeholder engagement (CE/SE) for the proposed activities will be critical to the Project's success. On that account, CE activities started during early Project preparation. The LSGs, as main beneficiaries of the Project, have been extensively consulted through an online survey and field visits to understand their main challenges. Moreover, given the nationwide scope and multisectoral character of the Project, CE activities during implementation will be two dimensional: (i) presentation of the Project and sector and sub-project selection will include informing the public and (ii) sub project specific community engagement will present to the public the site-specific impacts, opportunities and challenges of each sub-project. In order to ensure timely and precise stakeholder identification, a Project level Stakeholder Engagement Plan (SEP), acceptable to the Bank, was developed, disclosed and consulted by the Borrower prior to the Project's appraisal. The Project level SEP presented the Project Grievance Redress Mechanism (GRM), identified Project Affected Parties (PAP), Other Interested Parties (OIP), and vulnerable groups, and ensured that planning, implementation, and monitoring of CE activities are adequately coordinated across key stakeholders. For each Project activity and subproject, under all three components, a sub-project level SEP will be developed consistent with the Project level SEP. The sub-project level SEP will identify all interested and affected parties specific to the sub-project and propose concrete action plans for engaging different stakeholders. Vulnerable groups are not likely to be negatively affected by the Project, and both dimensions of CE will mainstream engagement of vulnerable groups and ensure that they benefit from the project. The CE activities will continue throughout the Project's lifecycle and will be reflected in the Project level SEP, and subsequently the sub-project level SEPs where the budget for CE will be defined.

86. **The Bank's Environmental and Social Standard 2 (Labor and Working Conditions) will apply to: (i) direct workers hired to implement the Project (PIU); and to (ii) contracted workers engaged by the contractors and subcontractors (if engaged).** Given that the labor related laws in Serbia comply with ILO conventions, risks of labor management issues and OHS are low to moderate. Although the full scope of activities is not yet fully defined, based on the expected size of the subprojects it is safe to assume that there will be no major labor influx and that labor will be generated locally. To address the potential social risks on labor and working conditions, the Borrower prepared Labor Management Procedures (LMP) which identified, in detail, the main labor requirements and risks related to the Project and presented the Grievance Redress Mechanism for all employees for which the ESS2 applies. Subproject specific risks on labor and working conditions will be identified in the Environmental and Social Assessments (the ESMP or ESMP Checklist). Considering the above and the fact that the Serbia country Sexual Exploitation and Abuse/ Sexual Harassment (SEA/SH) risk assessment classifies the SEA/SH risk as low, the Project (SEA) risk is expected to be low. However, Sexual Harassment (SH) during construction and operation is possible. Mitigation measures to minimize the risk of SH will be introduced in sub-project specific ESMPs/ESMP Checklists, and all contractors will adopt the Code of Conduct for SEA/SH. Furthermore, the Project related GRM will be designed to accept and provide proper advice/address of the complaints related SEA/SH.

87. **Acknowledging the urban character of the expected subprojects under Component 1, risks under ESS4 (Community Health and Safety) are mainly in relation to the inability for full partitioning or fencing of construction sites.** Mitigation measures to control unauthorized access to working sites and excessive noise and dust levels will be ensured through the site-specific ESMPs for each sub-project. Traffic/Road Safety Management Plans with measures to ensure the safety and well-being of nearby communities and road users during construction and for the operation phase will be prepared together with Emergency Response Plans with procedures to respond to unforeseen crisis events. General guidelines for traffic management plans will be included in the ESMF and special guidelines will be given for sensitive sites. The principle of universal access will be incorporated into all relevant subprojects.

88. **Considering the nature of the Project, it can be presumed that the interventions will not cause large land take impacts.** Mostly, small scale impacts for spot widening in urban areas are expected. Furthermore, minor impacts on livelihood are possible (e.g., relocation of kiosks or formal or informal stands). Resettlement resulting from Project activities is not expected. The ESMF sets out guidance for a detailed Social Analysis and screening procedure to assess potential scale and scope of the loss of private assets and determine potential relevance of the ESS5 (Land Acquisition, Land Use and Involuntary Resettlement) for each selected sub-project. In order to address the aforementioned risks, the borrower prepared a Resettlement Policy Framework (RPF) to establish resettlement principles, organizational arrangements, and design criteria to be applied to subprojects, and to mitigate potential resettlement impacts. The RPF sets out guidance for preparation of sub-project specific RAPs which will set out detailed protocols for land acquisition on each respective sub-project. The RPF, satisfactory to the Bank, was disclosed and consulted prior to Project appraisal.

## E. Other Corporate Mandates

### Citizen Engagement

89. **The Project design has incorporated best practice approaches for stakeholder and citizen engagement throughout the Project.** During Project preparation, extensive stakeholder consultation took place. An online survey of 95 LSGs

was conducted to understand their needs and challenges in finance, infrastructure, governance, and related areas. Further interviews and field visits took place with some LSGs for a deeper analysis.

90. **During the Project implementation, citizen engagement will take place at several levels.**[13] The dedicated webpage will provide, besides information on the Project and procurements, an interface for citizens to register their grievances, input on infrastructure prioritization, and feedback related to the achieved infrastructure improvements. Community awareness campaigns will focus on civil society and citizens with the goal of empowering them to actively impact infrastructure development in their LSGs. The campaigns will focus on raising awareness on the importance of the green agenda, road safety, ways in which infrastructure could be greener, and similar issues. To ensure that the voices of vulnerable groups is heard and that their requirements are addressed, all relevant CE activities, including strategic participatory planning (subcomponent 2.1) and budgeting (subcomponent 2.2) will entail special feedback sessions and meetings tailored to the needs of such groups.

91. **All data collected through participatory planning and budgeting will be disaggregated in terms of living area (rural/urban), disabilities, gender, and age groups.** Participatory planning within subcomponent 1.2. and 2.1 will be done in human-centered, possibility-driven, and iterative manners. Problems will be redefined through discussions with stakeholders engaged in co-creation. A large number of possibilities and new ideas will be tested in an iterative process in which people share feedback. Different tools will be used in the process of participatory planning, including SWOT analysis, interviews, place-based processes that engage local communities in co-creation to create value in the design of planning documents. Citizen engagement will be an integral part of improvements of public financial management through subcomponent 2.2 by making information available to citizens on budget allocations, assets, planned investments and maintenance in their LSGs.

92. **To ensure that the feedback loop is closed, the borrower will provide feedback on respective CE activities to all involved stakeholders.** The report will include a list of all comments/inputs received and how they were addressed and incorporated into each Project activity. Feedback will be compiled in a report which will be delivered to relevant stakeholders by e-mail or post and will be published on the Project web page.

93. **To mainstream citizen engagement across the country, the Project will support piloting enhancement of the E-Government portal for consultation services on infrastructure regardless of the source of financing.** This will allow private users to (i) annually vote for infrastructure priorities in their LSGs and (ii) share information in a timely way on planed infrastructure works in their LSGs and scheduled public consultations.

**Gender**

94. **Gender considerations are an integral part of the Project design and will be formalized through a Gender Action Plan that will be prepared at the beginning of the Project.** The Project will introduce paid internships for typically male dominated occupations, with a target of at least 70 percent of interns being women. The maximum amount of accumulated payments per internship cycle to any intern in the Internship Program under the Project shall be the

[13] These include: (i) a participatory approach to develop SUMPs under subcomponent 1.2 and planning documents under subcomponent 2.1.; (ii) consultation on medium-term plans and budgets under subcomponent 2.2; (iii) development of a dedicated Project web page with CE interface and support to community awareness campaigns under component 3; (v) development of participatory planning manuals and enhancement of the E-Government portal with Infrastructure consultation service under component 2.1.

equivalent of US$3,000[14]. All technical assistance will take into consideration the needs of different gender groups, as well as intersectionality, while analytical work will ensure that the data are collected in a gender disaggregated manner. In particular, development of missing SUMPs across the country will be based on deep dives into different mobility patterns, needs, and challenges among gender groups. Recommendations and identification of future investments will take into consideration gender differences. Participatory strategic planning under subcomponent 2.1 and budgeting under 2.2 will consider the needs of different gender groups with special focus on women and vulnerable populations and will assure both women's and men's involvement in project identification and design. The Gender Action Plan will include a detailed checklist for each activity financed under the Project, with clear guidance on what gender aspects and support activities should be addressed through it.

95. **Proposed innovative interventions.** The Project will address reported gender gaps in the transport and construction sector through a *Bespoke paid internship program for females at the MCTI and LSGs.* The Project will offer three-month internships in the MCTI and/or LSGs to at least 28 women who are last-year university students or recent graduates (raising the number of interns from zero to 28), in roles that are traditionally male-dominated (e.g., engineers, geologists, hydrologists, etc.), by reaching out to the universities that prepare graduates in the related fields. Given the low share of women employed in the sector and the fact that the MCTI is implementing multiple construction projects in the country, the proposed activity promises to create a demonstration effect and challenge gender stereotypes about 'acceptable' jobs for women. It will also signal that the GoS is an equal opportunity employer and keen to support gender diversity in its workforce. At the same time, this intervention will facilitate establishing education-employment pathways between the MCTI and local universities. Specifically, the MCTI will establish a cooperation with at least one Serbia-based university with an existing engineering program, creating an opportunity for the MCTI to access a broader pool of qualified women candidates and for these candidates to gain hands-on experience that can improve their job prospects after graduation and better inform their future career decisions.

96. **The rationale for the internship program is based on the reality that, in Serbia, the employment rate of women is 41.9 percent compared to 56.6 percent for men**. The transport and construction sectors are disproportionately male dominated, as is the case worldwide. Only about 20 percent and 9 percent of all those employed in the transport and constructions sectors, respectively, are females. It is of note that more women than men complete tertiary education in the country: in 2019, 59 percent of all graduates from tertiary education were women. However, men dominate subject areas such as engineering, manufacturing, and construction (61 percent). The figures from tertiary education indicate that there are ample opportunities to tap into the existing female talent pool to improve women's employment in the infrastructure/civil engineering sector.

**Climate and Disaster Screening**

97. **According to the Climate and Disaster Risk Screening, the overall risk for climate and geophysical hazards in Serbia is Moderate**. Particularly high threats, observed in the past decades stem from flooding (including alluvial flooding in floodplains, pluvial in urban areas, and torrential flash floods on steep slopes) and droughts particularly affecting agriculture and potable water supply resources. The readiness of relevant institutions, the awareness of climate and geophysical hazards, and the ability to conduct risk and impact assessments and to plan and implement adaptation measures have been evaluated as moderate, mainly due to the existence of several key laws that address climate

[14] Equivalent to EUR2,650

and disaster risk management in the country.[15] The Project is providing measures and including resilience-building opportunities, physical as well as non-physical, to improve the adaptive capacity and mitigate the climate risk to the Project's outcomes and service delivery. The physical components of the Project will be implemented at different locations throughout the country on a framework basis; therefore, the climate and disaster screening was done at the national policy level. The most frequently reported disaster events in Serbia are floods, followed by increasing temperatures leading to more extreme heat days. The average annual temperature in Serbia increased by 0.15° per decade from 1960 to 2015, and an increase in the mean annual temperature of 1.5° to 2.2°C is expected by 2050. A 2007 heatwave 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. The highest economic losses are caused by drought (32.2 percent) followed by flooding (30.2 percent). Other hazards such as storm surge and strong winds pose only minor risks in Serbia. The risk of wildfires is moderate.

**Climate Co- Benefits**

98. **The Project will support investments that will improve the resilience of existing infrastructure and promote sustainable mobility and development at the local level.** Addressing climate change mitigation and adaptation are a key component for this operation, both in terms of the financing and technical assistance. Proposed climate mitigation and adaptation measures should improve overall resilience of LSG, prioritize climate aware infrastructure investments, guide sustainable LSG development, and lead to a modal shift toward non-motorized transport and, as such, contribute to decarbonization and reduction of greenhouse emissions (GHG). Through the establishment of eligibility criteria to access funding, every investment within the project will have to incorporate climate resilience considerations in the design, including active mobility and public transport infrastructure where possible, and consider natural based design approaches for transport infrastructure. Analytical work within the project will focus on increasing capacities and systems for sustainable infrastructure service delivery, in particular by developing climate vulnerability guidelines for local transport networks and incorporation of the analyses into road asset management systems; development of SUMPs across the country; completion of missing climate and environmental action plans at the local level; incorporation of climate adaptation and mitigation considerations in completion of urban development plans and budgeting process; and awareness raising campaigns. The Climate Co-Benefits assessment amounts to US$ 56.33 million (56.3 percent). The Project is exempt from undertaking GHG accounting analysis at the preparation stage, as specific transport investments are not identified ahead of the project's start.

**COVID-19 Response**

99. **The proposed Project will support Serbia's recovery from the COVID-19 pandemic in the short-term, while also supporting ongoing longer-term response and efforts to rebuild better, through the WBG's COVID-19 response pillars.** Targeted infrastructure investments and strengthening of policies, institutions and investments are the major focus of the Project. A participatory process will ensure that needs of vulnerable groups and the poor are embedded in interventions. The design of the interventions will contribute to pillars 3 and 4 of the Bank's COVID-19 approach, as follows:

[15] The Law on Disaster Risk Reduction and Emergency Management (2018), the Law on Reconstruction following Natural and other Hazards (2015), and the Law on Climate Change (2021). In 2014, Serbia also adopted the National Disaster Risk Management Program, with a systematic approach: risk assessment – risk reduction – early warning systems, preparedness and response – risk financing – reconstruction and recovery.

i. Pillar 3. Ensuring sustainable business growth and job creation. The Project will support pillar 3 by creating job opportunities in the construction of infrastructure at the local level. Infrastructure investments can be used to increase aggregate demand at a time of depressed economic activity, and investments in local infrastructure can mobilize the local workforce within a short period of time. Strengthening of capacities and policies will ensure that infrastructure investments on LSG level are sustainable and that expected multipliers are higher. These types of investments generate employment not only in the construction sector, but also in the service and manufacturing sectors. In addition to direct investment, this project will also open opportunities for business growth by improving the overall LSG infrastructure quality and service delivery.

ii. Pillar 4: Strengthening policies, institutions and investments for rebuilding better. One of the priorities of this Project is to continue to strengthen the capacity of LSGs to plan and manage local infrastructure investments. This operation will support the continuation of the reform process and service improvements in a sustainable manner. Financed infrastructure works will incorporate features to enhance climate resilience. The Project will also support rebuilding better by providing better connectivity, improved accessibility, and a transition to green infrastructure.

**100. The Project design incorporates mitigation of operational impacts of the ongoing COVID-19 pandemic.** If travel and other pandemic related restrictions continue, the Bank will rely on ICT tools for remote supervision (e.g., free of charge platforms like Mapiliary or the Geo-Enabling Initiative for Monitoring and Supervision) and virtual meeting tools. The M&E system will be developed and updated as necessary as the pandemic evolves, to meet any specific requirements. If public gatherings cannot be held, citizen engagement and stakeholder participation will be implemented using virtual meetings, electronic means such as e-mail, online surveys/questionnaires, phone conversations, and standard mail. A dedicated project webpage will be developed to facilitate online supervision, data exchange, and provide a platform for communication and feedback. These may be supplemented by socially distanced face-to-face consultations when conditions allow. Workshops and capacity building will be conducted physically or virtually, depending on prevailing conditions and risks. As has been shown in ongoing projects, construction works are not expected to encounter major constraints under the pandemic, as the nature of the work allows for social distancing and other preventative approaches. Procurement processes will be adapted in case of mobility restrictions or other effects of the ongoing COVID-19 pandemic, for example by facilitating the online submission of proposals. Nevertheless, specific plans and procedures will be developed to mitigate risks.

## V. GRIEVANCE REDRESS SERVICES

**101.** 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.

## VI. KEY RISKS

**102. The overall risk to achievement of the Project's development objective is rated as Substantial.** Key risk factors include: (i) technical design of the program; (ii) institutional capacity for implementation and sustainability; and (iii) integrated fiduciary. All other risk categories are deemed Moderate. The risks are summarized in the Standardized Operations Risks-rating Tool (SORT).

**103. The risks related to Technical Design of the Program are assessed as Substantial.** The proposed Project is a complex operation with multiple stakeholders, and it aims at equipping LSGs to manage their infrastructure independently. The project will strengthen implementation of the existing policies rather than introducing the new ones. Technical risks can be mitigated through establishment of steering committee to facilitate coordination of various stakeholders and through establishing a technically strong PIU and strengthening CFU teams and engagement of dedicated technical assistance to support LSGs in implementing a new paradigm. The template documents for work contracts procurement and project designs will be developed at an early stage of the project. Furthermore, the WBG and technical team will ensure close, frequent, and sustained engagement of the Bank's staff and introduce an online supervision platform.

**104. The program entails Substantial risks related to Institutional Capacity for Implementation and Sustainability.** Even in the presence of strong, high level political commitment to the LSG infrastructure agenda, the prolonged past underinvestment in the sector, slow implementation of ongoing projects, and the involvement of numerous stakeholders entail higher coordination and transaction costs which could delay the project's implementation. The physical investments under Component 1 are not technically complicated but may challenge limited local capacities. As a mitigating measure, the PIU in the MCTI will be strengthened with appropriate structures and levels of expertise and supported by dedicated technical assistance to support LSG in implementing a new paradigm. Clear and straightforward eligibility and compliance criteria and the content of the standard FA are part of the POGM. Strong capacity building with creation of curricula, continuous training, and establishment of a community of practices will also mitigate the risk. In addition, a steering committee composed of decision-makers will be established to facilitate the project's implementation and resolve bottlenecks. Finally, the World Bank's technical team will ensure close, frequent and sustained engagement, including an online supervision platform.

**105. The Integrated Fiduciary risk is deemed Substantial due to the Project's decentralized design, aiming at a sustainable increase of LSG capacities in procurement and financial management, including the use of technology.** As per the initial assessment, all procurement under LSGs will approach the local market, making it possible to use a model bidding document based on the Serbian standard bidding document for works, customized to make it consistent with the Bank's Core Procurement Principles, Anti-Corruption Guidelines and Sanctions Framework, and contractual remedies set out in the Legal Agreement. To support decentralized procurement in sustainable manner, the PIU will be staffed with skilled experts responsible for procurement capacity development of LSGs, review and approve of bidding, and bid evaluation prepared by LSGs. CFU will be further strengthened to support PIU in review and approval of bidding, and bid evaluation prepared by LSG. The Project will transparently publish all data about procurement and will finance capacity building and development of interactive procurement guidelines. Once upgraded to allow for IFI financed projects to be included, the e-procurement platform will be used.

## VII. RESULTS FRAMEWORK AND MONITORING

### Results Framework

COUNTRY: Serbia

Serbia Local Infrastructure and Institutional Development Project

#### Project Development Objectives(s)

The Project Development Objective is to improve Local Self Governments ("LSGs") capacity to manage sustainable infrastructure and increase accessibility to economic and social opportunities in a climate aware manner.

#### Project Development Objective Indicators

| Indicator Name | PBC | Baseline | End Target |
|---|---|---|---|
| **Capacity to manage sustainable infrastructure services** | | | |
| LSGs with developed annual and multi-annual budgets corresponding to development plans and asset management systems (Number) | | 0.00 | 15.00 |
| LSGs utilizing simple road asset management methods developed under the project (Percentage) | | 0.00 | 50.00 |
| Citizens reporting satisfaction with process of infrastructure service delivery, gender disaggregated (Percentage) | | 0.00 | 70.00 |
| **Access to economic opportunities and social services** | | | |
| Commercial and social services connected by improved, safe and resilient transport network (Number) | | 0.00 | 420.00 |
| **Climate aware investments** | | | |

| Indicator Name | PBC | Baseline | End Target |
|---|---|---|---|
| Subprojects supporting climate adaptation and/or mitigation actions (Percentage) | | 0.00 | 100.00 |

## Intermediate Results Indicators by Components

| Indicator Name | PBC | Baseline | End Target |
|---|---|---|---|
| **Component 1. Climate Smart Mobility** | | | |
| SUMPs and Action Plans adopted by LSGs (Number) | | 9.00 | 34.00 |
| Smart mobility pilots implemented (Number) | | 0.00 | 5.00 |
| LSGs with road safety interventions for children identified and budgeted (Number) | | 0.00 | 15.00 |
| Framework Agreements signed between LSGs and central government (Number) | | 0.00 | 145.00 |
| Share of investments dedicated to non motorized transport (Percentage) | | 0.00 | 20.00 |
| **Component 2: Strengthening capacity for infrastructure service delivery** | | | |
| LSGs piloted enhanced strategic participatory planning approaches (Number) | | 0.00 | 10.00 |
| Roadmap for improved access to financing developed (Yes/No) | | No | Yes |
| Database for public investments at the local level, compatible to central level PIMIS developed (Yes/No) | | No | Yes |
| Increase in number of works contracts finished within planned time (Percentage) | | 0.00 | 50.00 |
| Pipeline of urban development and municipal infrastructure | | 0.00 | 10.00 |

| Indicator Name | PBC | Baseline | End Target |
|---|---|---|---|
| projects prepared (Number) | | | |
| Number of internships completed, with women making at least 70 percent (Number) | | 0.00 | 40.00 |
| **Component 3: Project Management and Awareness Raising** | | | |
| Awareness campaigns on greening of infrastructure and sustainable mobility delivered (Number) | | 0.00 | 10.00 |

**Monitoring & Evaluation Plan: PDO Indicators**

| Indicator Name | Definition/Description | Frequency | Datasource | Methodology for Data Collection | Responsibility for Data Collection |
|---|---|---|---|---|---|
| LSGs with developed annual and multi-annual budgets corresponding to development plans and asset management systems | Number LSGs with annual and multi-annual budgets informed development plans and developed through the project. At later stage of the project, when road asset management is in place, the plans should be based on outputs from the asset management systems. | Annualy | PIU annual progress reports and consultant report on improvement of LSG strategic participatory planning | Consultant working on strategic participatory planning activity will deliver annual report with review of the status of the planning and budgeting document at LSG level. In addition, LSGs will deliver status of their documentation on annual basis. The PIU will consolidate received information | PIU and LSG |

| | | | | | |
|---|---|---|---|---|---|
| | | | | and include in the annual reports | |
| LSGs utilizing simple road asset management methods developed under the project | Percentage of municipalities that regularly use de road asset management methods that will be developed under the Project. | Annually | PIU annual progress reports | LSGs to provide information on the road asset management method which they are utilizing. PIU will consolidate received information and include in the annual reports. | PIU and LSGs |
| Citizens reporting satisfaction with process of infrastructure service delivery, gender disaggregated | Percentage of citizens that are satisfied with the infrastructure service delivered through the investments of this project. Data will be disaggregated by gender. | Annually | PIU annual progress reports and separate reports from a consultant | A consultant will be hired to perform annual citizen satisfaction surveys. Surveys can be implemented through various instruments like for example targeted questionnaires, interviews, project web site, workshops. Output of the consultant will be incorporated in PIUs annual report. | PIU |
| Commercial and social services connected by improved, safe and resilient transport network | Number of social and commercial services within 50m vicinity from the infrastructure investment. | Annualy | PIU annual progress reports | For each investment, LSG will report on number of social and commercial services in | LSGs |

| | | | | | |
|---|---|---|---|---|---|
| | Under social service the following is considered – schools, kindergartens, universities, hospitals, health centers, cultural centers, elderly homes, etc. Under commercial the following is considered - major business areas, markets, shopping areas, touristic areas, cultural areas, etc. | | | 50m vicinity of implemented investments. PIU will consolidate received information and include in the annual reports. | |
| Subprojects supporting climate adaptation and/or mitigation actions | Percentage of subprojects financed through subcomponent 1.1. that incorporated climate mitigation/adaptation measures in their design. | Annualy | PIU annual progress reports | PIU will use their records on approved investments and climate adaptation/mitigation features incorporated in the design together with the inputs from supervision and LSG coordinators if the projects have been implemented as per the design. | PIU |

| Monitoring & Evaluation Plan: Intermediate Results Indicators | | | | | |
|---|---|---|---|---|---|
| **Indicator Name** | **Definition/Description** | **Frequency** | **Datasource** | **Methodology for Data Collection** | **Responsibility for Data Collection** |
| SUMPs and Action Plans adopted by LSGs | Number of SUMPs with belonging Action Plans that are adopted by LSGs. | Annually | PIU annual progress report | PIU will monitor implementation of SUMPs within the project and if they are accompanied by adopted action plans. This data will be presented in the annual progress report. | PIU |
| Smart mobility pilots implemented | Smart mobility pilots implemented (Number). | Annually | PIU annual progress reports | The call for smart mobility pilots published and 5 pilots with highest potential of scale up selected, implemented, and tested. Results of test recorded and published. PIU will collect information from pilots and include them in annual progress reports. The same report will include information if report on contractual modalities | PIU |

| | | | | | |
|---|---|---|---|---|---|
| | | | | for smart mobility solutions is delivered and accepted. | |
| LSGs with road safety interventions for children identified and budgeted | Number of LSGs that included safety interventions identified in the project in their strategic sectoral plans and annual and mid-term budgets. | Annually | PIU Annual Progress reports and LSG reports on planned and budgeted road safety interventions | LSGs will deliver annually information on planned and budgeted road safety interventions, which PIU will summarize and include in annual progress reports. | LSG/PIU |
| Framework Agreements signed between LSGs and central government | Number of Framework Agreements between the LSGs and GoS signed. | Annually | PIU quarterly and annual progress reports | PIU will collect information on signed Framework Agreements from the MCTI and include this in the quarterly reports. | MCTI/PIU |
| Share of investments dedicated to non motorized transport | Percentage of value of investments that financed active mobility infrastructure. | Annually | PIU annual progress reports | For each subproject the PIU will calculate what percentage of overall investment was used to finance active mobility infrastructure/facilities. This data will be summarized and presented in the annual | PIU |

| | | | | | |
|---|---|---|---|---|---|
| | | | | report. | |
| LSGs piloted enhanced strategic participatory planning approaches | Enhanced participatory planning approaches applied in development of selected planning documents. | Annually | PIU annual progress reports and report from the consultant working on participatory planning | Consultants that will be working on participatory strategic planning activities and on participatory manuals will include in their reports number of advanced integrated and participatory approaches applied across LSGs . PIU will include this information in annual progress reports. | PIU |
| Roadmap for improved access to financing developed | Report on potentials for improved access to infrastructure financing for LSGs, addressing fiscal decentralization, commercial financing, green fund and municipal fund and including recommendations and roadmap delivered and accepted by the Ministry of Finance. | Annually | PIU annual progress report | PIU will collect the information and include it in the annual progress reports. | PIU |
| Database for public investments at the local level, compatible to central level | Database for local public investments, compatible to | Annually | PIU annual progress | PIU will confirm that the delivered database | PIU |

| | | | | | |
|---|---|---|---|---|---|
| PIMIS developed | central level PIMIS delivered and passed acceptance tests. | | reports | satisfies the ToR and that acceptance test confirmed requested performances. This information will be included in the annual progress reports. | |
| Increase in number of works contracts finished within planned time | Percentage of works contract implemented within the planned time compared to the current percentage (baseline). If any force major (e.g. floods) that impacted the implementation schedule, this will be calculated as acceptable extension and that the contract is still completed within the contracted time. | Annually | PIU annual Progress reports | The PIU will collect the data from the LSGs and the CFU will access the information through the Systematic Tracking of Exchanges in Procurement (STEP) system. PIU will include the information in annual progress reports. | CFU/PIU |
| Pipeline of urban development and municipal infrastructure projects prepared | Number of identified new urban development and municipal infrastructure projects with preliminary viability analysis. | Annually | PIU annual progress report | PIU will collect information from the LSGs and consultants working on preliminary analysis of potential pipeline projects and include this in the annual progress reports. | PIU/LSG |

| | | | | | |
|---|---|---|---|---|---|
| Number of internships completed, with women making at least 70 percent | Number of internships completed, with women making at least 70 percent. | Annually | PIU annual progress report | PIU will record the number of internships that have been financed through the project and successfully completed. The target is that 70 percent of all internships is given to women candidates. This will be recorded in the PIU annual progress reports. | PIU |
| Awareness campaigns on greening of infrastructure and sustainable mobility delivered | Number of delivered awareness raising campaigns on the topic of greening of infrastructure, citizen participation and importance of safe mobility systems coupled with targeted trainings to civil society sector. | Annually | PIU annual progress reports | PIU will engage a consultant that will deliver this awareness raising campaigns and trainings. Based on the consultant outputs the PIU will update the annual progress reports. | PIU |

## ANNEX 1: Implementation Arrangements and Support Plan

**COUNTRY: Serbia**
**Serbia Local Infrastructure and Institutional Development Project**

### (i) Institutional arrangements and responsibilities

1. **The Project will be managed by a PIU**[16] **housed at MCTI. The PIU will be responsible for the overall management of the Project and will support the LSGs in the selection, preparation, supervision, and management of investments.** The PIU will have appropriate managerial and technical capacity to enable it to carry out the implementation of the Project: PIU manager and deputy manager, environmental expert, social safeguard and citizen engagement expert, human development expert, up to 4 urban mobility experts, up to 5 civil engineers, road safety expert, up to 3 urban development expert, transport economist, disaster risk management expert, institutional development expert, investment financing expert, PFM expert, public communication and awareness raising expert, IT expert, and part time M&E expert and OHS expert. PIU Manager and Deputy Manager should be hired not later than one month after Project effectiveness, while environmental expert, social expert, OHS expert, urban planner, transport planner and civil engineer should be hired not later than four months after the Project effectiveness. Fiduciary issues will be managed by the CFU in the MoF. The CFU will be responsible for financial management, review and approval of procurement documents including bid evaluation reports, and providing assistance in capacity building support to the LSGs on fiduciary issues. The CFU will be strengthened with a minimum of two additional specialists (one procurement and one financial). The Project implementation arrangements are set out in the POGM including the division of responsibilities between the PIU, CFU and the LSGs. To be able to participate in the Project, each participating LSG will sign a FA defining the general obligations of the LSG under the Project related to improvement of strategic planning, CE, PFM, transport infrastructure management, and selection and preparation of infrastructure investments including project planning, quality of design, and budgeting. A standard FA is included in the POGM.

2. **Infrastructure investments will be implemented in a decentralized manner through the LSGs**. The objective is to build the capacity of LSGs in public investment and infrastructure management. To this end, the LSGs will be responsible for the implementation of subprojects including project prioritization, preparation, procurement, safeguards, supervision, monitoring and reporting, and on-going management of infrastructure. For each approved investment, a separate GA will be signed. GA will be a condition for transfer of grant resources to LSG level and will define obligations and responsibilities of each party in implementation the specific investment, like for example supervision, safeguard requirements, citizen engagement, etc. Each LSG will assign a dedicated person to be responsible for communication with the PIU and overall management of LSG participation in the project. The LSGs will be responsible for sub-project design and supervision as per the national law, while relevant safeguard documents will be prepared through the PIU. During implementation, the LSGs will transfer the worksite to the contractors subject to necessary safeguards documents, regularly monitor the progress of works, and alert the PIU about any omissions to the initial designs and

[16] The PIU in MCTI is currently managing implementation of World Bank projects including the Western Balkan Trade and Transport Facilitation Project and Railway Modernization Project MPA.

safeguard frameworks. Any expropriation will be done as per the Project's Resettlement Policy Framework and corresponding Resettlement Action Plans (RAP). The LSGs will be able to use project proceeds to cover the costs of subproject preparation and supervision.

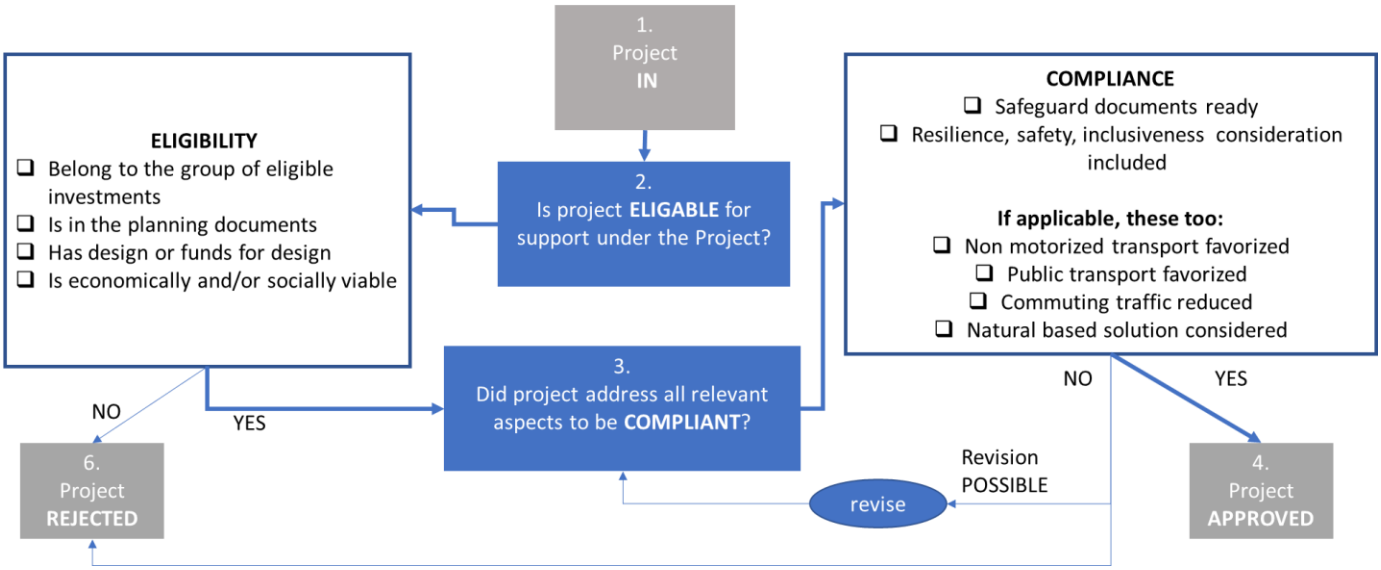
3. **The PIU will be responsible for building the capacity of LSGs to enable them to undertake these activities effectively with the fiduciary support of the CFU**. The PIU/CFU will provide template documents such as for procurement, reporting, and safeguards as per the Bank policies. The LSGs will be expected to participate in technical assistance and capacity building activities and ensure that the tools introduced through the Project are utilized at the local level. The LSGs will regularly update information about the Project on their relevant communication boards and websites.

4. **A Project Steering Committee will be established within MCTI to coordinate support for the improvement of local infrastructure service delivery and implementation of SUDS not later than six (6) months after Project effectiveness.** The Steering Committee will be chaired by the MCTI with members including the MoF, Ministry of Environment, Ministry of Public Administration, and, as applicable, representatives of participating Local Self Governments that are key to the Project.

5. **Total available grant funds for each LSG will be defined per a formula agreed with the GoS.** Each participating LSG will know in advance the maximum amount of grants for which they are eligible, which will contribute to the stability of financing and improve their ability to plan. The formula uses similar parameters as those used in other instances for subnational transfers. It includes parameters related to the population and area of the LSG as well as its development gap and climate vulnerability. More weight is given to the development gap to ensure that a large share of the available resources benefits less developed LSGs. LSGs that would need additional support are identified by comparing the amounts for which LSG would be eligible and amounts they spend annually for infrastructure investments. These are LSGs that have very low spending on infrastructure investment in the past 3 years. Technical assistance within the Project will be, in particular, focused on empowering those LSGs to identify and prepare infrastructure projects. Details of the formula are given in the POGM.

6. **The infrastructure financing will be provided through existing mechanisms for strictly targeted grant transfers from the central government to LSGs.** The LSGs will have an option to contribute with additional amounts or project implementation. Among the obligations of LSGs are to perform investment selection according to planning documents and best practices; ensure Bank safeguard policies are enforced; deliver data and reports needed for Project implementation; implement improved planning and budgeting approaches and documents; implement easy-to-use road asset management systems and project management tool; ensure transparency in procurement; adopt resilience, safety, and active mobility considerations in subprojects; implement streamlined supervision of works; use open data platforms where applicable; utilize improved planning documents, etc.

7. The CoPs will meet quarterly on a video online call and at least once a year in person, should the pandemic situation allow. The Project will also have a dedicated webpage, with all relevant documents, templates, and other information needed for smooth implementation of Project activities, as well as information available to public. It will also serve to collect and distribute information, collect citizen feedback, enable online supervision, and help monitor progress. The curricula on the topics of PFM, procurement, SUMPs, engineering, and contract management will be delivered on regular basis through the web page.




8. **Approval of the nominated investment projects will follow a robust and straightforward eligibility and compliance approval process.** Detailed guidance on the selection process and criteria for subprojects is included in the POMG. The main elements are as follows: Proposal(s) by each of the LSGs will be submitted to the PIU for an eligibility and compliance check. The eligibility check will confirm if the proposed project (i) belongs to the group of investments to be financed under the Project; (ii) is included in the planning documents as defined in the Law on Planning and Construction; (iii) is economically and socially justifiable; and (iv) has designs ready or secured funds for design completion. At a later stage of the Project, once the road asset management methodology is developed, the eligibility check will also confirm that the road asset management methodology supports the proposed project. Once the proposal is approved, the LSG should finalize project design and accompanying documents. Once the final documents for the proposal are delivered, the PIU will confirm if the proposed design is compliant with the requirements under the Project, in particular if: (i) compliant safeguard documents as per the Bank policies are delivered; (ii) the design properly addresses resilience, safety and, where applicable, natural based design; (iii) where relevant, if the design includes infrastructure for active mobility and favors public transport. The PIU will support LSGs in project preparation and will review the quality of the submitted projects against best practices and eligibility criteria. Upon those approvals, the procurement will be conducted by the LSGs under close support and guidance by the PIU supported with the CFU. The CFU will review and approve procurement plans, bidding documents, bid evaluation reports and amendments to the contracts prepared by the LSGs. The approval of each of those documents by the PIU will be the condition for the next phase in the public procurement process implemented by the LSG. The LSGs will also be responsible for the supervision of safeguards related aspects and grievance mechanisms, with close support and oversight by dedicated safeguard and communication specialists in the PIU. Simplified schematic representation of investment eligibility and compliance approval process is shown in the figure

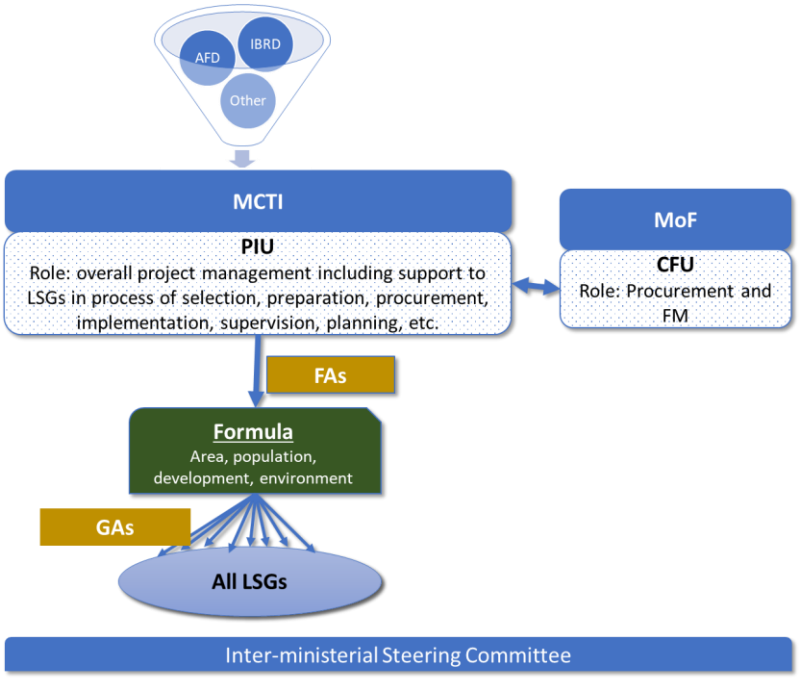
below.

9. **An overview of the institutional set up and high-level concept is given in figure below, while the main roles and responsibilities of the stakeholders are summarized as follows:**

   i. **The LSGs:** Selection, preparation, procurement, supervision and management of infrastructure investments with strong day-to-day support, guidance and approval of procurement by the PIU and the CFU. The LSGs will be obliged to report on sub project implementation and completion and to introduce asset and project management tools, improve strategic and medium-term planning and budgeting, and perform supervision and implementation of safeguard framework documents. Each LSG will assign a focal point that will be responsible for implementation of infrastructure investments under the project.

   ii. **The CFU:** Guiding FM and procurement in the LSGs. The CFU will support the PIU in approving the LSG procurements, bidding documents, bid evaluation reports, and any amendments to the contracts submitted by the LSGs. The CFU will also provide support in organized trainings to the LSGs on how to ensure stronger competition and increase transparency in procurement.

   iii. **The PIU:** In charge of overall management of the Project and implementation of all activities. The PIU will provide full technical support and guidance to the LSGs in selecting, preparing, reviewing, supervising, and managing investments. The PIU will check submitted projects for eligibility and compliance and will approve project designs for financing. It will also randomly check the progress of works on site. The PIU will be responsible for preparing and guiding TAs and capacity building activities under the Project, monitoring effects, and communicating with citizens. It will facilitate organization of CoPs, trainings, knowledge exchange, completion of planning documents, and delivery of tools for project management and PIMS. The PIU also will be in charge of final approval of procurement documents, upon obtaining the guidance from the CFU.



### (ii) Relation to the AFD

10. **The AFD would follow the World Bank's Financial Management and Procurement Operational Guidelines and the Bank's Environmental and Social Framework in the same manner it is done under the Railway MPA Project.** The collaboration between the World Bank FM team and the AFD would be as follows: the World Bank FM team would (a) review all periodic audited project financial statements and un-audited interim financial reports provided by the Implementing agency; (b) follow up with the implementing agency on these reviews, including monitoring and consultation on the implementation of recommendations in the auditors' reports; and (c) serve as the focal point for the AFD vis-a-vis the implementing agency in all matters related to FM under the Project. From the disbursement perspective, the World Bank would: (a) review each withdrawal application furnished by the implementing agency to verify that the amount requested is eligible for financing under the AFD's Financing Agreement and (b) notify the AFD that the withdrawal application is in proper order and that the amount requested is eligible under the AFD Financing.

### (iii) Financial Management

11. **Central Fiduciary Unit (CFU), established within the MoF, will be in charge of fiduciary responsibilities for the project.** The CFU is responsible for fiduciary aspects of ten ongoing projects, it is appropriately staffed, and its performance has been satisfactory. The PIU within the MCTI will be the primary implementing entity and responsible for technical aspects of implementation. The MCTI will be the signatory of contracts. The LSGs will implement projects funded by the Project and report to the PIU, while the PIU will report to the CFU on the use of funds by the LSGs. Financial management arrangements are described below. In order to be able to access Project financing, the following will need to be in place: (i) POGM acceptable to the Bank which will define all procedures, including related to criteria and arrangements for grants to LSGs; (ii) the LSG's signed FA with the central government, which will define the activities and obligations under the Project; and (iii) effective communication channels and reporting lines between the MCTI, the CFU, and the LSGs are established.

12. **Planning and Budgeting**. The Project's budget will be prepared by the PIU with inputs from the LSGs and overall support from the CFU. There is sufficient capacity for planning and budgeting within the CFU in order to manage project funds in terms of optimal allocation, liquidity, and overall performance. Variances of actual versus budgeted figures will be monitored on a regular basis, appropriately analyzed, and corrective actions taken. The PIU, with the support by the CFU, will prepare in-year financial plans and cash forecasts based on the Project's budget, thus ensuring adequate liquidity management and withdrawal of funds.

13. **Accounting System.** Acceptable accounting software, which is in place and administered by the CFU, will be used for project accounting and reporting, including quarterly IFRs and annual project financial statements. Accounting records should include appropriate analytics of expenditures per contracts and each specific payment. The Project will follow cash basis of accounting (cash based IPSAS), recording transactions when actual payment is done, rather than when they are incurred. Transactions should be accounted for within eight (8) days after being incurred. The CFU will maintain appropriate back up of accounting records on external drives, as well as appropriate security regulations with regard to access and editing rights of the financial information.

14. **Internal controls.** Internal controls and procedures are detailed in the POGM. The POGM also details procedures and processes regarding planning and budgeting, accounting, financial reporting, flow of funds, and external audit for the Project. It also describes roles and responsibilities, communication channels, flows of funds, and

documentation between the MCTI/PIU, the LSGs and the CFU. This will minimize the risks of errors, safeguard the Project's assets, and ensure the use of funds for intended purposes. Application of the controls and procedures will be verified by the Bank's supervision.

15. **Contract management**. (i) ***LSG grants***. Technical staff of the LSGs will evaluate and select contractors, act as signatory for the contracts and letters of acceptance of goods and services, and monitor and evaluate contract implementation and quality of deliverables. The PIU, with the support of the CFU, will conduct oversight over LSGs' projects and will conduct necessary field supervision and review of financial reports. (ii) ***Funds contracted by the PIU***. The MCTI/PIU will be signatory to the contracts and will manage contracts implementation and payments. For their part, the FM staff of the CFU will perform checks and controls of contract commitments and payments due under each contract and review invoices and the accompanying documentation for correctness and completeness. Upon technical staff's acceptance and approval of the goods received and services rendered, the CFU verify and approve payments to contractors. The payments will be executed by the MCTI and Bank statements will be sent to the CFU to account the transactions.

16. **Financial Reporting**. The CFU will submit a full set of interim un-audited financial reports (IFRs) consolidated for all implementing entities and project components and sources of funding (including AFD funding) for each calendar quarter throughout the life of the project. The IFRs will be due 45 days after the end of each quarter. The format of the IFRs will be agreed between the GOS and the Bank and attached to the POGM. The following financial reports will be submitted to the Bank:
    a. Cash Receipts and Payments,
    b. Statement of Expenditure by Activity
    c. Designated Accounts Statements
    d. Notes to the Statements

17. **External audit.** The annual audit of the Project's financial statements will be conducted by a private audit firm acceptable to the Bank in line with Terms of Reference (ToR) agreed between the GoS and the Bank and attached to the minutes of negotiations and the POGM. The audit of project financial statements will be funded by the Project. The audit report will be submitted to the Bank no later than six months after the end of the audited period. The audited Project financial statements will be posted on the MCTI/PIU website within two (2) weeks of the audit report being accepted by the Bank. The annual financial statements will cover the Bank and the AFD financing, following the same pattern as the quarterly IFRs.

18. **Financial management covenants.** The financial management covenants for the project will be as follows:

- The CFU to maintain an adequate financial management system.
- The CFU to prepare interim un-audited financial reports (IFRs) consolidated for all implementing entities and project components for each calendar quarter and deliver to the Bank no later than 45 days after the end of the reporting quarter.
- Annual project financial statements shall be audited by a private audit firm acceptable to the Bank and such audit shall be delivered to the Bank not later than six months after the end of the audited period.

**(iv) Funds Flow and Disbursement Arrangements**

19. **A Designated Account (DA) for administering the Bank funds will be opened in EUR at the National Bank of Serbia (NBS) and will be managed by the MCTI/PIU.** The corresponding RSD account will be MCTI account at the Treasury Administration, intended for local currency payments. All withdrawals of funds will be made to the

DA, except direct payments to contractors. The project expenditures for all activities contracted by the PIU will flow from the DA and RSD account, while the funds for LSG projects will flow from the DA to separate LSG accounts opened for that purpose. The MCTI/PIU, with the assistance of the CFU, will prepare and sign withdrawal applications for the replenishment of the DA. Allowed methods of disbursement will be advances to the designated account, direct payment, and reimbursement. There are reliable procedures instituted within the implementing entities and adequate capacity for managing the flow of funds and preparing withdrawal applications. For the AFD loan, a separate DA will be opened to and from which the AFD financing will flow as per the legal agreement between the AFD and the Government of Serbia.

20. **Component 1 will finance infrastructure investments through strictly targeted grants for the LSGs.** Each LSG will be eligible for grants for infrastructure investments up to a value determined per a predefined formula, and the award of a grant will be subject to compliance with agreed eligibility criteria and signing of the FA. The funds for the grants will flow from the DA and the corresponding RSD account to the separate LSG RSD accounts opened by the LSGs with the local Treasury, for the grant related purposes only. The funds will be disbursed by the MCTI to the selected LSGs in two tranches, 50 percent advance and 50 percent, after verification by the PIU/CFU that the proceeds of the first tranche were used for the intended purposes and at least 80 percent of the initial amount was spent. The verification will be based on the review of the Project financial reports prepared by the LSGs, and any additional checks as described in the POGM. The first transfer of resources will take place upon approval of the Project.

21. **Co-financing.** In line with the terms of the co-financing agreement between the IBRD and the AFD, the Bank will review withdrawal applications received from the borrower and will confirm their adequacy, following which the AFD and the Bank will disburse their respective share of the financing.

### (v) Procurement Arrangements

22. **Procurement Arrangement:** The PIU, with the support of the CFU, is responsible for overall procurement quality assurance and is considered as the implementing agency. The PIU, with the support of the CFU, will conduct consultancy services and procurement of goods for the Project. Works and consultancy services (supervision and design) for LSGs' projects procurement will be conducted by the respective LSGs with necessary review and clearance by the PIU/CFU. The LSGs will be responsible for preparing their procurement plans, bidding documents, bid evaluation reports, contract awards, and contract implementation. The PIU, with the support of the CFU, will approve bidding documents, bid evaluation reports, and any amendments to the contracts submitted by each of the participating LSGs. After necessary approval from the PIU on a specific procurement document, respective LSGs may proceed to the next procurement step or sign the amendment to the contract. The detailed procurement implementation arrangements are outlined in the POGM. The CFU will be strengthened with minimum 2 full-time specialists (procurement and financial).

23. **Bidding documents:** The main procurement under this project will be moderate value works (below US$ 5 million) which will follow national procedures. The LSGs will be responsible for this procurement and will follow the model bidding document approved by the Bank, which will be prepared based on the Serbian standard works bidding document with necessary customization to make it consistent with the Bank's Core Procurement Principles and the Bank's Anti-Corruption Guidelines and Sanctions Framework. The Model Bidding Document for works has been shared with the client ahead of Project Appraisal. For goods and consultancies (except design and supervision of works) for activities that are not to be procured by the LSGs, the PIU/CFU will be responsible for procurement and will use the Bank's model bidding documents. LSGs may use project funds for design and

supervision of works. In such a scenario, LSGs will follow the Bank Procurement Regulations for consulting services. The PIU will provide technical support to the LSGs to develop such procurement documents.

24. **Procurement of goods, works, and non-consulting services.** Goods may be procured using procedures and methods (Request for Proposals, Request for Bids, Request for Quotations and Direct Selection) in accordance with the Bank's Procurement Rules, Section VI. Approved Selection Methods: Goods, Works and Non-Consulting Services. The PIU and the LSGs will provide technical support to the CFU to develop procurement documents and to evaluate proposals.

25. **Procurement of consulting services will use the World Bank standard procurement documents.** Selection methods are: Quality-and Cost-Based Selection, Least Cost Selection, Fixed Budget Selection, or Quality Based Selection following the provisions of the Bank's Regulations for Borrowers, Section VII. Approved Selection Methods: Consulting Services. Individual consultants are selected from those that expressed interest in response to a REOI or through limited competitive selection. For direct selection of individual consultants, due justifications under the circumstances, as specified in para. 7.39 of Section VII of the Regulations, apply.

### (vi) Strategy and approach for implementation support

26. **In addition to ensuring compliance with Bank Policies and the Project's loan agreement, the Bank team will focus special attention on ensuring close coordination between the MCTI, the PIU, and the LSGs.** The involvement of numerous stakeholders entails high coordination and transaction costs which could delay project implementation. The Bank will work with the MCTI to ensure that all entities have the relevant skills and receive necessary training. The PIU will also receive specific coordination support from the Bank in the fiduciary, procurement, and project management dimensions. To facilitate government level coordination and efforts, the Steering Committee will be established not later than six months after Project effectiveness.

27. **Through supervision missions, the Bank team will carry out field visits to selected construction sites and hold meetings with key stakeholders.** The team supporting the TTL will be a mix of personnel based at the WB HQ and Country Offices in the region. Additional support will be provided by the World Bank's procurement, financial management, and ESS specialists. The Implementation Support Plan will be reviewed at least once a year to ensure that it continues to meet the implementation support needs of the Project and PDO.

    a) *Strategic:* Supervision missions will meet with the PIU and the LSGs to: (a) review progress on the Project's activities; (b) re-confirm strategic alignment of Project activities to the PDO; (c) promptly address any shortcomings in project implementation; (d) ensure the necessary coordination among respective stakeholders; and (e) evaluate progress on cross-cutting issues such as monitoring and evaluation, training, communication and dissemination of Project results and experiences. Supervision missions will be done according to the COVID-19 situation and will follow the recommendations of the GoS as well as the Bank. Virtual missions will be carried out when the COVID-19 does not allow in-site ones. The online supervision platform, utilizing free of charge the Mapiliary application or similar, will be established too.

    b) *Technical:* The Bank Project team will consist of technical specialists who will review and supervise the execution of Project activities, ensure that they remain in line with the PDO, and advise on adjustments to the designs and procurement plan when necessary. The support will also focus on ensuring the technical quality of bidding documents and evaluation reports, contract management, and the quality of all works, goods, and services delivered.

c) *Safeguards:* Bank environmental and social specialists will support the MCTI to apply the World Bank's operational policies, procedures and good practices. These specialists will provide expert knowledge to appropriate staff and contractors, will conduct regular supervision of implementation of the safeguard instruments, and provide capacity building of counterpart staff through hands-on support and training on the ESF.

d) *Procurement:* Procurement reviews and supervision will be conducted by the Bank's Accredited Procurement Specialist (APS) assigned to the Project. In addition, one supervision visit is expected to take place per year when ex post reviews will be conducted. Procurement documents will be kept readily available for the Bank's post review during supervision missions or at any other point in time. A post review report will be prepared annually and shared with the CFU.

e) *Financial Management* During Project implementation: The Bank will supervise the Project's financial management arrangements in two main ways: (i) review the Project's interim un-audited financial reports consolidated for all implementing entities and Project components and subcomponents for each calendar quarter, as well as the Project's annual audited financial statements and auditor's management letter; and (ii) perform periodic on-site supervision to review the Project's financial management and disbursement arrangements and ensure compliance with the Bank's requirements. The on-site supervision will include monitoring of agreed actions, review of randomly selected transactions, review of internal controls, and other specific supervision activities. Supervision will be performed by the Bank accredited Financial Management Specialist.

## ANNEX 2: Detailed Project Description

28. **The objective of the Project is to improve LSGs capacity to manage sustainable infrastructure and increase accessibility to economic and social opportunities in a climate aware manner.** The Project will finance a mixture of investments and technical assistance to boost green and inclusive infrastructure service delivery at the local level, including the implementation of the relevant chapters of SUDS. The Project will focus on strengthening capacities and technical approaches to implement existing regulatory, planning, and legal frameworks. Physical investments will focus on improving integrated mobility infrastructure and overall resilience of LSGs.

29. **The following principles are followed in the design of the operation:**
    - **a.** The Project will open a path for a long-term engagement in support of LSGs in Serbia. It will inform the development of a policy and investment framework that can be strengthened over time and allow the Bank and other development partners to support Serbia's EU accession and improved absorption of pre-accession funds. The Project is designed in a manner that could absorb resources from other donors and also extend the sectoral coverage beyond local roads and mobility.
    - **b.** The Project will finance investments and technical support for sustainable improvement of local roads and mobility of LSGs. Infrastructure investment will be supported by improved transport asset management and concepts of building back better, safety, resilience to natural hazards, inclusion, natural based design, decarbonization of the economy, and creating a cleaner living environment. Detailed descriptions of the subproject approval process and rules are defined in the POGM.
    - **c.** Decentralize implementation to increase local capacities in a sustainable manner, induce spillover effects, and allow for high absorption of resources. All LSGs will receive financing from the Project, subject to a signed FA setting out performance expectations and compliance with Bank's procedures.
    - **d.** All civil works will be below the threshold for the use of national contracts. The average amount per LSG over the project lifetime will be US$ 1.9 million. Size of the contracts and type of works will not be limited but will be such that construction (excluding project preparation, consultation, bidding) can be finished within one construction season to ensure timely disbursements. The amount envisaged per LSG will raise LSGs infrastructure investments by around 8 percent annually, which will not overwhelm LSGs in terms of absorption capacity. Capacity support will be provided to all LSGs with special focus on the weakest.
    - **e.** Maximum total grant amount per LSG are set in accordance with an agreed formula (based on population, area, development gap, and environmental index). The formula ensures fair distribution of resources with priority on poorer and more vulnerable LSGs. Equally important, it sets the known amounts of available resources, allowing LSGs to properly plan and scope proposed investments. A detailed description of the formula and parameters is included in the POGM.
    - **f.** The Project aims at strengthened implementation of existing country policies by building implementation, planning, and financial management capacity and implementing subprojects at a decentralized level. The Project will follow existing government systems (procurement, FM, planning and execution) where possible.

30. **To incentivize change, the LSGs will receive grant transfers from the central level for infrastructure investments, and will sign FA with the GoS, which will include a set of commitments to improve PFM and transport infrastructure management at the local level.** The financing for infrastructure to be provided by the Project will be additional and not substitute for existing infrastructure spending by LSGs. To this end, the FA will include a provision that average annual capital spending from own resources during the Project life will not be lower than the average of the past three years (except for 2020) plus inflation.

31. **The PDO is supported by three components: (i) Climate Smart Mobility; (ii) Strengthening Capacity for Infrastructure Service Delivery; and (iii) Project Management and Awareness Raising.**

## Project Costs and Financing

32. **The total Project financing of US$300 million will be jointly co-financed by the IBRD (US$100 million) and the AFD (US$200 million).** Co-financing by the World Bank and the AFD is on a pari-passu basis and follows the modalities established under the World Bank–AFD Co-Financing Framework Agreement of 2018[17], requiring a separate Financing Agreement between the AFD and GoS. The World Bank and the AFD will jointly finance the same contracts under the Project in accordance with agreed financing parameters. Supervision of the Project will be conducted by the World Bank under its rules. The disbursement percentages in the IBRD Loan Agreement will reflect the IBRD's share of the cost.

| Component 1<br>CLIMATE SMART MOBILITY<br>US$ 282 million | Component 2<br>STRENGHTENING CAPACITY FOR INFRASTRUCTTURE SERVICE DELVIERY<br>US$ 11.5 million | Component 3<br>PROJECT MANAGEMENT AND AWARENESS RASING<br>US$ 6.5 million |
|---|---|---|
| • 1.1. **Investments in Climate Smart Mobility** (investments)<br>• 1.2 Sustainable **Mobility** (TA and tools) | • 2.1. Enhanced **Participatory Planning** and Preparation of **Pipeline Projects**(TA)<br>• 2.2. Strenghtened **Infrastructure Service Delivery Enablers** (TA) | |

## Component 1. Climate Smart Mobility (US$282.0 million)

33. **The objective here is to improve mobility within the LSGs through strengthening systems for transport infrastructure service delivery and supporting transport infrastructure renewal that will increase resilience to natural hazards while reducing emissions of GHGs and local pollutants including PM2.5 and NoX.** The component will finance targeted investments, analytics, technical assistance, and tools. Support for improved planning and management will ensure that these investments are inclusive, gender informed, and managed in a sustainable way over the long term. Each LSG will be eligible for grants for infrastructure investments up to a value determined per a predefined formula, but the award of a grant will be subject to compliance with agreed eligibility criteria. The component will be implemented through (i) Investments in Climate Smart Mobility and (ii) Sustainable Mobility.

### Subcomponent 1.1. Investments in Climate Smart Mobility (US$272.0 million)

34. **The objective here is to improve existing transport and associated infrastructure to support climate smart mobility and a move toward safe, green, and clean transportation systems.** It will support infrastructure investments and targeted technical assistance, ensuring that the subprojects are selected, prepared, and delivered in accordance with best practices and Bank policies. The maximum amount of all grants to a single participating LSG will not exceed the equivalent of US$ 25 million. Each grant for a subproject will not be less than US$50,000 or more than US$10 million. The infrastructure financing will be provided through existing mechanisms for strictly targeted grant transfers from the central government to LSGs. The PIU will screen all subprojects for eligibility and compliance, including that (i) they belong to the type of interventions supported by the operation; (ii) they are reflected in relevant planning documents and, at a later stage, asset management system; (iii) designs are of good quality, incorporating all relevant aspects of climate adaptation and mitigation; and (iv) basic social and economic analysis is supportive. All subprojects will need to be accompanied by environmental and social safeguard documents as per the Bank's policies. In the later

[17] Co-financing Framework Agreement between Agence Francaise de Developpement and International Bank for Reconstruction and Development and the International Development Association, June 13, 2018.

stages of project implementation, they will also have to be reflected in medium-term plans and asset management systems. The detailed description of the eligibility and compliance screening process and criteria is given in the POGM.

35. **In all investments, features to promote resilience, safety and, where applicable, nature-based solutions will be incorporated.** The investments will contribute to reducing the environmental footprint of transport services and improving LSGs' resilience to natural hazards. The majority of investments will be in transport infrastructure reconstruction and rehabilitation, within the existing perimeters. Minor greenfield investments will be considered, such as sidewalks, bicycle lanes and dedicated public transport infrastructure where relevant. The promotion of active mobility and priority for public transport will be central to the Project design.

36. **The project will finance a range of investments to build climate resilience of the transport network including slope and bank protection and drainage.** Some complementary activities will be considered where necessary such as the greening of public spaces and addressing legacy pollution. The Project also will include installation of digital infrastructure where applicable and the utilization of modern technologies for the recycling of materials in civil works, as per the guidelines that will be defined under the ongoing EU IPA program. Table 2 provides an indicative list of eligible investments.

*Table 2: Examples of types of investments that will be supported through the operation*

| | |
|---|---|
| ✓ Rehabilitation of roads, bridges and streets | ✓ Dedicated non-motorized transport infrastructure (walking and bicycling) including public green spaces and lighting |
| ✓ Traffic management schemes (traffic calming measures, parking management, pedestrian access, safety, congestion management, street lighting, etc.) | ✓ Measures to improve climate adaptation including slope stabilization, river-bank protection, drainage works |
| ✓ Infrastructure for public transport (bus stops, bus lanes) | ✓ Measures to improve environment including provision of green space (forestation), legacy pollution cleanup |
| ✓ E-Mobility (charging stations, e-bikes/scooters) | |

37. **Technical assistance and the PIU itself will support the LSGs in the process of project prioritization, preparation, procurement, supervision, and contract management.** This subcomponent will also finance technical assistance required for the execution of the works including services for (i) preparation of environmental and social safeguard documents, (ii) independent technical audit, and (iii) road safety audit of selected interventions. The independent technical audit will assess a random sample of projects to ensure that the quality of planning, design, and construction processes is in accordance with agreed procedures. The technical Audit will also assess if all relevant Bank procedures and policies were adequately followed. Safeguards technical assistance will support the PIU and the LSGs in preparation of more complex environmental and social safeguard documents as per the Bank policies, while checklists will be prepared by the PIU. The LSGs will have an option to contribute with additional financing for the project implementation.

38. **A mid-term review of the Project will assess the LSGs' performance in absorbing financing and will provide an opportunity to reassess and adjust selection criteria and capacity support as needed to ensure that funds are allocated to meet the Project's objectives.** By the mid-term review all LSGs should have a clear list of pipeline projects and resources for design. If the review concludes that some LSGs are lagging behind and will not be able to consume resources by the Project closing date, the resources intended for those LSGs will be reassigned on a first-come-first-served basis, with the priority being given to poorer LSGs.

**Subcomponent 1.2 Sustainable Mobility (US$10.0 million)**

39. **The objective here is to strengthen LSGs' systems to plan, manage, implement, and operate resilient transport networks that promote climate smart mobility in sustainable manner.** Specific activities financed under this subcomponent include technical assistance, capacity building, demonstration pilots, and development of a simple transport asset management tool. The support will be mainstreamed by establishing working groups based on each LSG's willingness to implement the institutional reforms suggested in this project. In all activities, the project will incorporate redressing citizens' grievances and promoting transparency in decision making. The specific areas of support include:

    **(i)** Improve **local road network management and resilience**
    **(ii)** Mainstream **sustainable and integrated mobility planning**
    **(iii)** **Smart mobility research center and solutions through digital technologies**

40. **Improvement of local road network management will be done through the development of a framework for enhanced institutional arrangements, financing, maintenance, monitoring, prioritization, planning, and capacity development in climate conscious ways.** Focus areas will include (i) local roads management framework including developing a range of simple road maintenance contracts; (ii) resilience mapping and air pollution monitoring; (iii) improvement of road safety with special focus on safety of children; and (iv) a simple RAMS. The subcomponent will assess the strengths and weaknesses of the current system for the management of local roads and mobility and propose a program for enhancing institutional arrangements, policies, standards, financing, monitoring, prioritization, planning, and capacities. The subcomponent will also enhance local road network maintenance by developing a range of simple road maintenance contracts that could be adapted to LSGs' diverse needs and encourage adoption of these contracts to improve productivity of their maintenance expenditures. Assessing capacities and constrains of the service sector, i.e. design sector, will be part of the analysis. RAMS will include asset inventory, assessment of status and usage of available assets, and prioritization of maintenance and rehabilitation works. Support to some of its inventory set up and data collection needs will be provided. An easy-to-use RAMS will enable the LSGs to develop a diagnostic of existing transport infrastructure, assess the needs for maintenance and rehabilitation, and include them in planning and budgeting process, prioritize among these while taking into consideration climate vulnerability and inclusion of citizen feedback in the final project selection process. The methodology for assessing resilience of the national road network developed through the Bank's support will be adapted in a way that it can feed into the RAMS. In addition, a proposal for assessing and monitoring transport-related air pollution measures for all LSGs will be developed. Monitoring and data collection will incorporate a gender disaggregated approach.

41. **The Project will promote integrated mobility and citizen-oriented planning through the development of gender aware Sustainable Urban Mobility Plans (SUMPs) for up to 40 medium and small size LSGs.** SUMPs will be developed as per EU best practice and will address the transport system in integrated manner, emphasize sharing spaces between transport modes, and, where applicable, promote active mobility. The SUMPs will assess the quality and safety of mobility service provision, including but not limited to public transport, and recommend priority investments. They will streamline a gender sensitive approach in urban planning, design of mobility solutions, and public space enhancement through elaboration of a methodological guide. Development of interactive guidelines and training of LSGs staff will also be integral elements of the SUMPs.

42. **Smart mobility research center and solutions pilots will be used to assess the potential for scaling up transport management approaches through utilization of modern technologies.** The subcomponent will support

development of the concept and preliminary design for research and testing center for smart mobility. In addition, it will finance up to 5 smart mobility pilots such as optimizing public transport services, intelligent transportation systems, dynamic infrastructure management systems, real-time information, infrastructure or service sharing schemes, etc. The pilots will be implemented through call for proposals. Advantage would be given to the proposals that are scalable and that will promote non-motorized transport and/or will result in reduction of emissions from transport. All pilots will commit to publish gathered data in the GoS's open data portal. The smart mobility pilots also will explore proposals for different contractual modalities.

**Component 2. Strengthening Capacity for Infrastructure Service Delivery (US$11.5 million)**

43. **The objective here is to improve the effectiveness and sustainability of infrastructure service delivery at the local level through strengthening LSGs' capacity to implement current planning and PFM policies.** The component will finance a mixture of technical assistance and capacity building activities focused on: (i) enhanced participatory planning and preparation of pipeline projects and (ii) strengthened institutions, PFM, and access to financing.

**Subcomponent 2.1. Enhanced Participatory Planning and Preparation of Pipeline Projects (US$6.5 million)**

44. **The objective here is to enhance the whole process of local development planning, including citizen participation, linkage between planning documents, sectoral strategies and and budgets, and incorporation of climate and resilience criteria.** In addition, the subcomponent identifies and supports early preparation of urban development and municipal infrastructure projects that go beyond the roads and mobility sector. Specifically, the subcomponent will finance technical assistance and capacity building in two main areas:
    - **(i) Participatory Local Development Planning in Pilot LSGs.** The activities will support the development of critical planning documents and their links to corresponding capital investment and budget planning processes. The focus will be on reducing fragmentation of multiple plans and incorporating climate and resilience considerations into the planning documents. The specific planning documents to be supported will be based on an initial assessment of the planning status and capacity in selected pilot LSGs. Specific emphasis will be given to ensuring improved citizen engagement, including from women and vulnerable groups to mainstream participatory approaches. The development of manuals and templates will also be supported so that lessons learned can be applied beyond the pilot LSGs. The activity will include extension of the E-Government portal to permit informing the users on the planned infrastructure investments and planned consultations as well as to annually collect citizen opinion on main infrastructure priorities in the LSG.
    - **(ii) Identification and Preparation of Pipeline Projects in Pilot LSGs.** The activities will focus on identification and early project preparation of future urban development and municipal infrastructure investment projects that that go beyond the roads and mobility sector. The activities will be based on the improved participatory planning approaches piloted under activity 2.1(i). Specific technical assistance would be provided for preparation (pre-feasibility, feasibility etc.) to ensure readiness of investments.

45. **The Strategic Participatory Planning in Pilot LSGs will develop/complete/improve critical planning and environmental and climate related strategic documents and corresponding multi-annual and annual budgets.** Special focus will be given to reducing fragmentation of plans and better integrating them into the capital investment and budget planning process. The specific planning documents to be supported will be based on an initial assessment of the planning status and capacity in a selected pilot LSGs. The activity will (i) review current planning and strategic framework and provide recommendations for reducing fragmentation and (ii) support completion of critical planning and strategic documents, with a focus on better integration into the capital

investment and budget planning process in up to 15 selected LSGs. Support to pilot LSGs will be provided for improvement of the existing or development of missing planning documents, including, but not limited to, Local Development Plan (LDP), General (Master) Urban plan, Detailed Regulatory Plan, local SUDS, and others. It will ensure that the relevant climate and environmental related strategic documents are completed and well-integrated in the planning process. Finally, it will support proper "translation" of mid-term plans into multi-annual and annual budgets with improved overall budget estimates and length of execution.

46. **The improved planning will strengthen linkages between broad development plans and asset management systems and annual and multiannual budgets.** It will also enhance the current practices and capacities for budgeting of individual infrastructure projects that feeds into overall budget plans and integrate outputs from the asset management framework, where available, into medium term plans and budgets for infrastructure. Supporting the quality of infrastructure budgeting will strengthen programmatic budgeting practices. Currently, planning and budgeting for two outer years remains rather provisional and is not duly considered during the next budget cycle, and changes are not appropriately justified. In addition, the improvements will include remediation of current weaknesses of infrastructure cost estimates, where multiyear expenditures tend to be provisionally estimated and there are substantial deviations from the final executed costs. As needed, the project will engage with local investment commissions to provide advice, guidance, and peer learning among the LSGs about good practices.

47. **All activities under this subcomponent will place significant emphasis on strengthening participatory planning through dialogue-oriented planning techniques with special attention to the poor, disabled, elderly and women.** The main objective is to strengthen the LSGs' capacity in these areas, introduce innovative approaches to planning, and design and carry out a participatory process that addresses local issues and builds on local opportunities within different sets of planning documents. Several different tools will be used, including SWOT analysis, interviews, and place-based processes that engage local communities in co-creation of planning documents. A manual with templates and budgets for participatory planning will be developed. To increase transparency and inclusion of citizen feedback on priorities, the E-Government portal will be enhanced with the features of informing the users on the planned infrastructure investments and planned consultations and annually collecting citizen opinion on main infrastructure priorities in their LSGs.

**Subcomponent 2.2. Strengthened Infrastructure Service Delivery Enablers (US$5.0 million)**

48. **The objective here is to promote sustainability and long-run improvements of infrastructure service delivery by improving technical capacities and tools, and enhancing institutional arrangements and access to finance.** It will equip the LSGs with capacities and tools to perform their infrastructure related functions in a sustainable and climate aware manner. The support being provided under this subcomponent will be especially critical for smaller and poorer LSGs where funding and experience with managing public investments has been lower. The subcomponent will be implemented through analytical work, technical assistance, and development of tools, in particular:
    - **(i) Improving access to financing.** Outputs will include an assessment the current local infrastructure financing framework and recommendations to improve the LSGs' ability to raise private capital for infrastructure investments, potentials of green funds, and improvement of the municipal funding scheme.
    - **(ii) Strengthening institutions and human capacities.** Outputs will include: (i) a review of the currently fragmented institutions and human capital; and (ii) recommendations on 'fit for purpose' digitization to enable existing staff to work efficiently and meet national and local requirements and to develop prioritized approaches to staff expansion and training. The introduction of a younger workforce to the sector will be supported through 40 paid internships in the PIU, MCTI and LSGs. Out of these at least 28 (70 percent) will be for women. In addition, PIMIS Database and Project Management tools will be delivered to each LSG to plan and manage infrastructure contracts.

(iii) **Enhancing capacities for climate aware infrastructure service delivery**. The output will be capacity building and implementation support in a number of areas, with special focus on efficiency, transparency and green procurement; PFM/PIM with emphasis on monitoring and reporting on green impacts and SOEs performance and transparency and inclusion of citizen feedback; contract management; and social and environmental management. It will also support inter municipal cooperation and knowledge exchange on sustainable LSG development.

49. **The Project will finance technical assistance and facilitate discussions among the key stakeholders about the necessary regulatory changes, financing instruments and administrative strengthening that would improve LSGs' ability to raise capital for infrastructure investments in a climate aware manner.** Technical assistance will assess the current local infrastructure financing and fiscal decentralization framework with a special focus on mechanisms to improve LSGs' ability to raise private capital for infrastructure investments, potentials of green funds, and review of the municipal fund scheme. The current fiscal decentralization framework has a strong legal basis but there are a number of areas where improvements are possible, including: (i) finding an appropriate balance between recurrent spending and capital investments; (ii) reducing existing inequalities among the LSGs, with richer LSGs often benefiting from higher per capita revenues; (iii) increasing certainty about budgetary allocations to enable the LSGs' to make multi-annual commitments for infrastructure financing; and (iv) promoting coordination and collaboration between the LSGs. This subcomponent will also make recommendations for the development of a Climate Finance Framework for LSGs as a funding mechanism to support the integration of climate change adaptation measures into the key economic sectors as per the requirements, policies and laws that regulate the field of adaptation to climate change. Potentials for the establishment of municipal funds and functioning scheme will be explored also. For the successful attraction of commercial financing, the technical assistance will look at the regulatory framework for LSGs and improvements for attracting commercial financing for infrastructure, potentials of different financing instruments (infrastructure fund, IFIs, PPPs) that could be available for infrastructure investments at the LSG level, and institutional arrangements and capacities of LSGs to raise commercial financing. The activity will provide a concrete set of recommendations to address identified constraints. The IFC would be expected to play a key role in these analytics given its expertise in this area. It is expected that findings from this activity will inform any follow up operation to this project.

50. **The subcomponent will seek to strengthen the institutional framework at the LSG level by reviewing currently fragmented institutions, their mandates and available resources, and will propose consolidated approach and process simplification and automation to enable existing staff to work efficiently and to meet national requirements**.[18] Recommendations will also consider 'fit for purpose' digitization - to enable existing staff to work efficiently and meet national and local requirements, and will develop prioritized approaches to staff expansion and training where essential. The activity will incorporate a strong diagnosis on gender issues in the LSG policies and management. Introduction of young workforce to the sector will be supported through 40 paid three to six months internships placed at the PIU, the MCTI and the LSGs. Eligible will be graduates or recently finished graduates from the field of engineering, hydrology, geology, planning, ecology, and other area of expertise relevant for the project. Out of these at least 28 (70 percent) will be women.

51. **The subcomponent will finance capacity building activities and implementation support in a number of areas to enhance implementation of key country systems for climate aware infrastructure service delivery.** Capacity building and implementation support will be provided in areas like procurement, local treasury management and budget execution, PIM, transparency and inclusion of citizen feedback, contract management, and social and environmental management. It will also support inter municipal cooperation and knowledge exchange on

[18] Requirement based in the 2019 public investment decree. It appears that few if any LSGs have so far created such databases

sustainable LSG development.

52. **Improvement of PFM and PIM performance will be supported through strengthening of PIM framework, local treasury management and budget execution, and procurement capacities.** Procurement capacities will be enhanced through development of online guidelines and trainings on topics like conducting effective market analysis and bidders' awareness, preparing bidding document with appropriate qualification requirements, effective bid evaluation including identification of fraud and corruption, contract management, monitoring of key performance indicators, and, if feasible, use of electronic procurement. Strengthening local treasury management and budget execution – including accounting, monitoring and reporting - for local public investments will have a special focus on green impacts and SOEs' performance.[19] Local fiscal transparency and participatory budget planning options will be piloted to find those most adequate for the PFM cycle, enabling accountability, participation and promoting inclusiveness. The PIM enhancement will focus on introducing an easy to use database for local capital projects in ways that meet national requirements and through development of guidelines for identifying, preparing, budgeting, prioritizing, monitoring, selecting, implementing, adjusting and evaluating investments. The Project will encourage LSGs to adopt a standard database to ease information sharing between the LSGs and with the national level.[20] Finally, a tool for infrastructure project management, designed for the country context, will be developed so that each LSG will be able to manage infrastructure contracts. All LSGs will report on their PFM and procurement performance as per Project indicators and commitments defined in the FA.

**Component 3: Project Management and Awareness Raising (US$6.5 million)**

53. **The objective here is to establish an institutional arrangement that will enable successful implementation of the Project and raise awareness about the importance of green transition and sustainable mobility.** The subcomponent will support the establishment and maintenance of a strong PIU and strengthening of CFU. The PIU will be responsible for overall management of the Project and will provide day-to-day project management support to the LSGs to ensure transparency and accountability of the Project's interventions and results. Expenses that may be financed by this activity include the PIU salaries and the CFU salaries in accordance with the rotation model of financing, operating costs, office equipment, dedicated web page and supervision platform, awareness raising campaigns, communication strategy, and PIU and the CFU training. To facilitate online supervision, a georeferenced platform will be introduced.

[19] Building on 2020 guidelines for reporting on the implementation of medium-term plans.
[20] The PFM project will support information analysis at the national level.

## ANNEX 3: Economic Analysis

54. **The economic evaluation is based on the local infrastructure subprojects scoped during project preparation.** The LSGs submitted their lists of ready subprojects that do not have secured financing and that would be eligible as per the project design. From more than 120 proposed subprojects submitted by 40 LSGs, 74 were identified as suitable for the Project scope. The subprojects selected for economic analysis are considered to be representative since they come from almost one third of all LSGs in Serbia which are spread across the country, with varying geography, demography, and poverty rates.

55. **All local infrastructure subprojects identified are divided into four groups, depending on the scope and approach to the economic analysis: roads/streets, active mobility / clean mobility, street lighting and disaster risk management.** The total value of the scoped subprojects is EUR 35 million, of which 49.5 percent refers to roads/streets, 32.5 percent to active/clean mobility, 6 percent to street lighting, and 12 percent to disaster risk management. The Roads Economic Decision Model (RED)[21] has been used for the economic analysis. This took into account climate resilience based on EU best practices, relevant manuals, research, and other literature and assumptions frequently used for these types of infrastructure projects. The main results for each type of subproject are given in the table below.

**Table 1: Economic evaluation result of the identified infrastructure projects**

| Group | NPV (M Euro) | EIRR (%) |
|---|---|---|
| Roads | 51.00 | 33% |
| Active mobility / clean mobility | 52.42 | 35% |
| Street lighting | 2.72 | 30% |
| Disaster Risk Management | 9.7 | 44% |

56. **The overall EIRR of the project is 35 percent, and the NPV is EUR 115.84 million, at a 6 percent discount rate, corresponding to an NPV/Investment Cost ratio of 3.03.** Sensitivity analysis shows that the project is economically justified even if construction costs are 20 percent higher or if the benefits are 20 percent lower, or both. If both conditions applied, the overall EIRR would drop to 24 percent.

### B. Economic Evaluation Assumptions

57. **To ensure that the Project generates sufficient economic benefits to warrant the investments, an economic analysis was conducted for the projects nominated by the LSGs by dividing them into groups as per similar scope of foreseen works:**
    1. *Roads/streets:* Resurfacing, rehabilitation and reconstruction of local and municipal roads and streets,
    2. *Active mobility infrastructure*: construction and reconstruction of cycling and pedestrian infrastructure,
    3. *Street lighting*: installation or replacement of existing street lighting systems
    4. *Disaster risk management*: Projects related to the improvement of climate resilience

***Roads/streets***

58. **The analysis using the RED computes annual road agency and users' costs for each project alternative over the**

[21] RED is a widely used software tool for the analysis and appraisal of road maintenance, improvements, and investment decisions on low volume roads.

**evaluation period, comparing the proposed project investment program with the conditions without such investment.** The quantities of resources consumed and vehicle speeds are calculated first and then multiplied by unit costs to obtain total vehicle operating costs, travel time costs, and CO2 emissions. The resources consumed, and vehicle speeds are related to traffic volume and composition, road surface type, geometric characteristics, and roughness. Traffic benefits assume a normal traffic growth.

59. **The quantified net benefits computed by RED for the project roads comprise vehicle operating costs, travel time costs, road maintenance costs due to the road improvements, and $CO_2$ emissions costs.** For the RED calculations, the following assumptions were applied:
    - A discount rate of 6 percent and an evaluation period of 20 years. All costs are stated in constant 2021 Euros. Economic costs are 85 percent of financial costs.
    - The adopted average daily traffic annual increase rate for all vehicles is 5.0 percent per year from 2022 to 2031,[22] and 4.0 percent per year thereafter.
    - The social cost of carbon is US$42 per ton equivalent in 2022 increasing to US$64 per ton equivalent in 2041, based on the low scenario derived from the 2017 World Bank guidance note on shadow price of carbon in economic analysis.[23]

60. **The table below presents the vehicle fleet economic unit, basic characteristics, and the average traffic composition on the project roads.** The economic costs reflect the costs net of duties and tax.

**Table 1: Vehicle Fleet Economic Unit Costs, and Characteristics.**

| | Motor cycle | Car | Pickup | Light Truck | Medium Truck | Heavy Truck | Articulated Truck | Small Bus | Medium Bus |
|---|---|---|---|---|---|---|---|---|---|
| New Vehicle Cost (Euro) | 2,500 | 7,000 | 14,000 | 16,000 | 30,000 | 50,000 | 90,000 | 50,000 | 100,000 |
| New Tire Cost (Euro) | 20 | 55 | 75 | 150 | 250 | 250 | 425 | 220 | 425 |
| Fuel Cost (Euro/liter) | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Lubricant Cost (Euro/liter) | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| Maintenance Cost (Euro/hour) | 2.00 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 |
| Crew Cost (Euro/hour) | 1.50 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 7.20 |
| Overhead Cost (Euro/year) | 0 | 0 | 0 | 1,000 | 3,000 | 3,000 | 4,000 | 3,000 | 5,000 |
| Interest Rate (%) | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Pass. Work Time (Euro/hour) | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Pass. Non-Work Time (Euro/hour) | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Cargo Time (Euro/hour) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual Utilization (km) | 15,000 | 10,000 | 35,000 | 40,000 | 50,000 | 50,000 | 80,000 | 80,000 | 70,000 |
| Annual Utilization (hours) | 400 | 500 | 1,100 | 1,500 | 1,500 | 1,600 | 2,000 | 2,000 | 2,500 |
| Service Life (years) | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Private Use (%) | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number Passengers (#) | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 10 | 35 |
| Work Passenger Trips (%) | 75 | 75 | 75 | 0 | 0 | 0 | 0 | 75 | 75 |
| Operating Weight (tons) | 0.20 | 1.40 | 2.00 | 4.10 | 8.45 | 19.15 | 33.81 | 3.00 | 14.50 |
| Typical Traffic Distribution (%) | 12% | 56% | 9% | 9% | 8% | 2% | 1% | 2% | 1% |

61. **The Project will finance the resurfacing, rehabilitation and reconstruction of roads located in selected LSGs.** The economic evaluation focused on a sample of the potential pipeline of roads to be resurfaced, reconstructed, or rehabilitated under the LIID preliminary first year program. The total length of the roads evaluated is 76.6 km, subdivided into 33 roads, which are paved or unpaved on flat or hilly terrain. The table below presents the basic

[22] The IMF predicts that the GDP per capita will increase on average by 4.6 percent per year from 2022 to 2026.
[23] The guidance note presents low and high scenarios of the social cost of carbon over time, from which the high scenario was used due to positive net CO2 emission of the project.

current roads sections characteristics.

**Table 2: Roads Characteristics**

| Road No | Local Self Government | Road Name | Length (km) | Lanes (#) | Road Width (m) | Terrain Type | Surface Type |
|---|---|---|---|---|---|---|---|
| 1 | Leskovac | OP15 Leskovac - Donje Stopanje | 2.90 | 2 | 5.5 | Flat | Paved |
| 2 | Leskovac | OP44 Vucje -Brza | 2.40 | 2 | 5.5 | Hilly | Paved |
| 3 | Leskovac | OP34 Velika kopasnica - Slatina | 2.30 | 2 | 5.5 | Hilly | Paved |
| 4 | Leskovac | OP9 Razgojna-Grdanica | 2.00 | 2 | 5.5 | Hilly | Paved |
| 5 | Kula | Djure Strugara street | 0.23 | 2 | 5.0 | Flat | Paved |
| 6 | Kula | Moravska street in Sivac | 0.60 | 1 | 2.0 | Flat | Paved |
| 7 | Kursumlija | OP.II.17 Tijovac - Šatra- K.Banja | 2.10 | 2 | 5.5 | Hilly | Paved |
| 8 | Novi Becej | Ivo Lola Ribara | 1.22 | 2 | 6.2 | Flat | Paved |
| 9 | Irig | Vrdnik - Fruškogorska i Pavla Živančevića -Dudaša streets | 0.73 | 1 | 3.5 | Hilly | Paved |
| 10 | Irig | Sanacija propusta u ulici Mirka Laćarca u Vrdniku | 0.40 | 2 | 5.0 | Hilly | Paved |
| 11 | Subotica | Economic Zone `` Mali Bajmok` | 0.30 | 2 | 7.0 | Flat | Paved |
| 12 | Blace | OP23 Blace-Vrbovac and junction | 0.10 | 2 | 4.0 | Hilly | Paved |
| 13 | Cacak | RP 92021 Radiše Poštić street | 0.20 | 2 | 5.5 | Hilly | Paved |
| 14 | Cacak | S 92021 Solunska street | 0.50 | 2 | 5.5 | Hilly | Paved |
| 15 | Cacak | UM 92021 Ucitelja Marinovica street | 0.17 | 2 | 5.5 | Hilly | Paved |
| 16 | Mali Idjos | Most street | 0.39 | 1 | 3.0 | Flat | Unpaved |
| 17 | Mali Idjos | Munkači Mihajla | 0.30 | 1 | 3.0 | Flat | Unpaved |
| 18 | Mali Idjos | Gajska | 0.52 | 1 | 3.0 | Flat | Unpaved |
| 19 | Doljevac | Klisura - Čečina | 3.20 | 2 | 5.5 | Hilly | Unpaved |
| 20 | Srbobran | Miloša Crnjanskog street | 0.68 | 2 | 5.0 | Flat | Paved |
| 21 | Bosilegrad | Bistar - Jarešnik - Nazarica - Doganica | 17.50 | 2 | 4.5 | Hilly | Paved |
| 22 | Bosilegrad | Gornja Lisina - Donja Ržana - Gornja Ržana | 10.08 | 2 | 4.5 | Hilly | Paved |
| 23 | Bosilegrad | Bosilegrad - Planina Crnook | 19.09 | 2 | 4.5 | Hilly | Paved |
| 24 | Prokuplje | Junction Veljka Vlahovića, Kopaoničke, Kajmakčalanske | 0.23 | 2 | 5.5 | Flat | Paved |
| 25 | Golubac | L1009 Kudreš - Klenje | 5.10 | 2 | 5.5 | Hilly | Unpaved |
| 26 | Ljubovija | Radnička, Nemanjina, Desanke Maksimović i Branka Ćopića | 0.91 | 2 | 5.5 | Flat | Paved |
| 27 | Ljubovija | Prvomajska i Pionirska | 0.82 | 2 | 5.5 | Flat | Paved |
| 28 | Veliko Gradiste | Dunavska | 0.20 | 2 | 3.0 | Flat | Unpaved |
| 29 | Veliko Gradiste | Žike Popovića | 0.52 | 2 | 5.0 | Flat | Unpaved |
| 30 | Veliko Gradiste | Sarajevska | 0.06 | 2 | 5.0 | Flat | Unpaved |
| 31 | Veliko Gradiste | Žička | 0.01 | 2 | 5.0 | Hilly | Unpaved |
| 32 | Veliko Gradiste | Braće Buđoni | 0.52 | 2 | 5.0 | Flat | Unpaved |
| 33 | Veliko Gradiste | Pinkum i Cara Hadrijana | 0.31 | 2 | 4.0 | Flat | Unpaved |
| Total | | | 76.58 | | | | |

**62. The project roads are roads in fair, bad or very bad condition, carrying on average 1,229 vehicles per day.** The table below presents the current estimated roughness of each road, the travel time and speeds for a passenger car, and the total annual average daily traffic. The roads have an average roughness of 11.7 IRI, m/km, and the average vehicles speed of cars is 22.4 km per hour.

**Table 3: Roads Current Condition and Traffic**

| Road No | Condition Type | Roughness (IRI) | Car Travel Time (minutes) | Car Speed (km/hr) | Total Traffic (veh/day |
|---|---|---|---|---|---|
| 1 | bad | 7.0 | 5.0 | 34.6 | 1,445 |
| 2 | bad | 8.0 | 3.8 | 37.7 | 1,105 |
| 3 | bad | 12.0 | 3.2 | 43.3 | 752 |

**Table 4: Road Works Type and Financial Costs**

| Road No | Road Work Type | Unit Cost (M Euro/km) | Total Cost (M Euro) |
|---|---|---|---|
| 1 | rehabilitation | 0.044 | 0.128 |
| 2 | rehabilitation | 0.053 | 0.128 |
| 3 | rehabilitation | 0.315 | 0.723 |

| | | | | | |
|---|---|---|---|---|---|
| 4 | bad | 8.0 | 3.4 | 35.6 | 647 |
| 5 | very bad | 9.6 | 1.0 | 13.7 | 3,570 |
| 6 | very bad | 12.6 | 2.1 | 16.8 | 1,344 |
| 7 | bad | 13.0 | 8.0 | 15.8 | 1,300 |
| 8 | fair | 5.0 | 2.0 | 36.5 | 3,800 |
| 9 | good | 3.5 | 1.5 | 29.0 | 604 |
| 10 | bad | 10.7 | 0.6 | 40.0 | 149 |
| 11 | fair | 3.7 | 3.0 | 6.0 | 4,500 |
| 12 | very bad | 8.0 | 1.0 | 6.0 | 1,800 |
| 13 | bad | 9.0 | 0.4 | 29.6 | 3,020 |
| 14 | bad | 9.0 | 1.0 | 30.0 | 3,020 |
| 15 | bad | 9.3 | 0.3 | 34.0 | 3,020 |
| 16 | very bad | 18.0 | 2.4 | 9.8 | 144 |
| 17 | very bad | 18.0 | 1.6 | 11.5 | 91 |
| 18 | bad | 18.0 | 2.2 | 14.5 | 158 |
| 19 | very bad | 7.7 | 12.6 | 15.3 | 58 |
| 20 | very bad | 7.7 | 1.2 | 35.2 | 2,600 |
| 21 | bad | 18.0 | 60.0 | 17.5 | 400 |
| 22 | bad | 18.0 | 40.0 | 15.1 | 400 |
| 23 | bad | 15.0 | 60.0 | 19.1 | 400 |
| 24 | bad | 7.2 | 1.3 | 10.8 | 500 |
| 25 | very bad | 8.2 | 11.9 | 25.8 | 1,400 |
| 26 | bad | 12.0 | 1.2 | 46.3 | 1,400 |
| 27 | very bad | 14.0 | 1.2 | 42.2 | 1,400 |
| 28 | bad | 16.0 | 1.0 | 12.2 | 201 |
| 29 | bad | 16.1 | 2.0 | 15.6 | 310 |
| 30 | bad | 16.0 | 1.0 | 3.6 | 250 |
| 31 | bad | 16.0 | 1.0 | 0.9 | 195 |
| 32 | bad | 15.6 | 2.0 | 15.6 | 295 |
| 33 | bad | 16.0 | 1.0 | 18.4 | 275 |
| Average | | 11.7 | 7.3 | 22.4 | 1,229 |

| | | | |
|---|---|---|---|
| 4 | rehabilitation | 0.055 | 0.111 |
| 5 | reconstruction | 0.210 | 0.050 |
| 6 | reconstruction /partial widening | 0.150 | 0.080 |
| 7 | reconstruction | 0.137 | 0.287 |
| 8 | reconstruction / partial widening | 0.603 | 0.723 |
| 9 | reconstruction / partial widening | 0.300 | 0.250 |
| 10 | rehabilitation | 0.213 | 0.085 |
| 11 | reconstruction | 0.660 | 0.200 |
| 12 | reconstruction | 0.212 | 0.021 |
| 13 | reconstruction | 1.106 | 0.218 |
| 14 | reconstruction | 0.436 | 0.218 |
| 15 | reconstruction | 1.132 | 0.192 |
| 16 | resurfacing | 0.232 | 0.091 |
| 17 | resurfacing | 0.214 | 0.064 |
| 18 | resurfacing | 0.211 | 0.110 |
| 19 | reconstruction | 0.133 | 0.426 |
| 20 | reconstruction/partial widening | 1.294 | 0.880 |
| 21 | rehabilitation | 0.198 | 3.461 |
| 22 | rehabilitation | 0.227 | 2.289 |
| 23 | rehabilitation | 0.217 | 4.140 |
| 24 | reconstruction | 0.483 | 0.111 |
| 25 | reconstruction | 0.120 | 0.612 |
| 26 | reconstruction | 0.697 | 0.635 |
| 27 | reconstruction | 0.670 | 0.550 |
| 28 | reconstruction | 0.327 | 0.067 |
| 29 | reconstruction | 0.415 | 0.216 |
| 30 | reconstruction | 0.473 | 0.029 |
| 31 | reconstruction | 6.158 | 0.088 |
| 32 | reconstruction | 0.424 | 0.220 |
| 33 | reconstruction | 0.310 | 0.095 |
| Total | | 0.228 | 17.498 |

**63. The total financial capital cost for the proposed works was estimated for each road.** Table 4 presents the road works needed per road and the corresponding estimated total and per km financial cost. The total financial cost for the proposed road works is EUR 17.50 million, which corresponds on average to EUR 228,000 per km.

**64. Table 5 presents the estimated condition of the roads after the execution of the proposed road works in terms of roughness and car travel times, while Table 6 presents the resulting economic indicators.** On average, the roughness of the roads will decrease to 3.3 IRI, m/km, and the average vehicles speeds of cars will increase to 33.9 km per hour.

**Table 5: Road Characteristics After Road Works**

| Road No | Lanes (#) | Road Width (m) | Surface Type | Roughness (IRI) | Car Travel Time (minutes) | Car Speed (km/hr) |
|---|---|---|---|---|---|---|
| 1 | 2 | 6.0 | paved | 3.0 | 4.5 | 38.7 |
| 2 | 2 | 6.0 | paved | 4.0 | 3.4 | 42.4 |
| 3 | 2 | 6.0 | paved | 4.0 | 3.0 | 46.0 |
| 4 | 2 | 6.0 | paved | 4.0 | 2.8 | 42.9 |
| 5 | 2 | 5.0 | paved | 3.0 | 0.8 | 17.2 |
| 6 | 1 | 2.0 | paved | 3.0 | 1.2 | 29.0 |

**Table 6: Economic Evaluation Results**

| Road No | NPV at 6% (M Euro) | EIRR (%) |
|---|---|---|
| 1 | 1.13 | 77% |
| 2 | 0.76 | 55% |
| 3 | 0.16 | 9% |
| 4 | 0.39 | 38% |
| 5 | 0.78 | >100% |
| 6 | 1.27 | >100% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7 | 2 | 5.0 | paved | 3.0 | 7.0 | 18.0 | 7 | 2.20 | 67% |
| 8 | 2 | 8.2 | paved | 3.0 | 1.8 | 40.5 | 8 | 0.44 | 13% |
| 9 | 2 | 6.0 | paved | 3.0 | 1.2 | 36.3 | 9 | 0.03 | 8% |
| 10 | 2 | 5.0 | paved | 3.0 | 0.3 | 80.0 | 10 | 0.02 | 8% |
| 11 | 2 | 7.0 | paved | 3.0 | 1.0 | 18.0 | 11 | 9.50 | >100% |
| 12 | 2 | 4.0 | paved | 4.0 | 1.0 | 6.0 | 12 | 0.01 | 10% |
| 13 | 2 | 5.5 | paved | 3.0 | 0.3 | 39.4 | 13 | 0.39 | 23% |
| 14 | 2 | 5.5 | paved | 3.0 | 0.8 | 37.5 | 14 | 1.01 | 45% |
| 15 | 2 | 5.5 | paved | 3.0 | 0.2 | 51.0 | 15 | 0.40 | 26% |
| 16 | 1 | 3.0 | paved | 3.0 | 1.0 | 23.4 | 16 | 0.10 | 17% |
| 17 | 1 | 3.0 | paved | 3.0 | 0.9 | 20.0 | 17 | 0.01 | 8% |
| 18 | 1 | 3.0 | paved | 3.0 | 0.9 | 34.7 | 18 | 0.13 | 18% |
| 19 | 2 | 5.5 | paved | 3.5 | 5.0 | 38.4 | 19 | 0.10 | 9% |
| 20 | 2 | 5.5 | paved | 3.0 | 0.8 | 49.2 | 20 | 0.15 | 8% |
| 21 | 2 | 4.5 | paved | 4.0 | 30.0 | 35.0 | 21 | 10.55 | 33% |
| 22 | 2 | 4.5 | paved | 4.0 | 20.0 | 30.2 | 22 | 6.76 | 33% |
| 23 | 2 | 4.5 | paved | 4.0 | 35.0 | 32.7 | 23 | 7.67 | 24% |
| 24 | 2 | 5.5 | paved | 4.0 | 0.8 | 17.3 | 24 | 0.18 | 22% |
| 25 | 2 | 5.5 | paved | 4.0 | 8.0 | 38.3 | 25 | 7.11 | 97% |
| 26 | 2 | 5.5 | paved | 3.5 | 1.0 | 54.7 | 26 | 0.16 | 9% |
| 27 | 2 | 5.5 | paved | 3.5 | 1.0 | 49.4 | 27 | 0.30 | 12% |
| 28 | 2 | 5.5 | paved | 3.0 | 0.4 | 30.0 | 28 | 0.10 | 22% |
| 29 | 2 | 5.5 | paved | 3.0 | 1.0 | 30.0 | 29 | 0.26 | 19% |
| 30 | 2 | 5.5 | paved | 3.0 | 0.1 | 30.4 | 30 | 0.23 | 71% |
| 31 | 2 | 5.5 | paved | 3.0 | 0.3 | 2.96 | 31 | 0.05 | 15% |
| 32 | 2 | 5.5 | paved | 3.0 | 1.0 | 30.0 | 32 | 0.24 | 17% |
| 33 | 2 | 5.5 | paved | 3.0 | 0.6 | 30.0 | 33 | 0.11 | 18% |
| Average | | | | 3.3 | 4.2 | 33.9 | Total | 52.67 | 33% |

65. **The overall EIRR of the roads/streets projects is 33 percent, and the NPV is EUR 52.67 million, at a 6 percent discount rate, corresponding to an NPV/Investment Cost ratio of 3.0.** Sensitivity analysis shows that the road/street projects are economically justified even if construction cost is 20 percent higher or benefits are 20 percent lower or both. If both conditions applied, the overall EIRR would drop to 23 percent.

**Table 7: Sensitivity Analysis Scenarios**

| | | A: Costs | B: Benefits | |
|---|---|---|---|---|
| | Base | +20% | -20% | A + B |
| EIRR (%) | 33% | 28% | 27% | 23% |

***Active mobility infrastructure***

66. **A cost benefit analysis of construction and reconstruction of cycling and pedestrian infrastructure was conducted applying the following assumptions:**

- A discount rate of 6 percent and an evaluation period of 20 years. All costs are stated in constant 2021 Euros. Economic costs are 85 percent of financial costs.
- Cost – benefit for the society gained from 1 km cycled and expressed in real money is 0.64 EUR. Cost –

benefit gained from 1 km walked is estimated at 1.00 EUR.[24]

- The number of cyclists and pedestrians on the project roads and streets will increase at a rate of 6.0 percent per year, based on recommendation for modal split ratio in modern cities: passenger cars: public transport: walking and cycling = 50:25:25.[25]
- Savings in accident costs, due to construction of new infrastructure or improvement of existing facilities, carry an accident reduction factor of 20%.[26] Accident data are taken from the official reports of the Traffic Safety Agency, for the period 2016 – 2018. The risk of cyclists/pedestrians being killed in road accidents on the Project roads are calculated accordingly.

67. **The total length of the pedestrian and cycle infrastructure evaluated is 97.42 km, subdivided into 22 projects.** The total value of investments is EUR 13.55 million, which brings the average cost per km to EUR 0.14 million. The table below presents the basic current projects characteristics, while Table 9 presents the resulting economic indicators. The total EIRR is 35 precent, and the NPV is EUR 52.42 million.

**Table 8: Subprojects Characteristics Pedestrian and Cycle Infrastructure**

| No. | Local Self Government | Project description | Length (km) | Estimated daily traffic (cycl/day or ped/day |
|---|---|---|---|---|
| 1 | Veliko Gradiste | Cycle tracks and foothpaths | 9.0 – cycle tracka<br>1.6 - foothpaths | 100 cycl/day<br>200 ped/day |
| 2 | Svrljig | Foothpaths | 12.6 | 100 ped/day |
| 3 | Gadzin Han | Sand covered cycle tracks on the mountain Suva Planina | 30.0 | 50 cycl/day |
| 4 | Pozarevac | Footpaths and cycle tracks in Veljka Dugosevica Street in Kostolac | 0.43 | 50 cycl/day;<br>100 ped/day |
| 5 | Sombor | Combined pedestrian – cycle track and cycle track in Vojvodjanska Street | 2.89 – combined<br>2.49 – cycle tracks | 100 cycl/day;<br>100 ped/day |
| 6 | Pozega | Cycle track and electric car charging stations at 3 locations | 1.2 | 50 cycl/day |
| 7 | Kula | Foothpaths and park area in the center of Kula | 2.1 | 200 cycl/day |
| 8 | Priboj | Combined pedestrian – cycle between Old and New Priboj | 1.0 | 50 cycl/day |
| 9 | Vladicin Han | Combined pedestrian – cycle tracks on unpaved roads | 5.0 | 50 cycl/day;<br>50 ped/day |
| 10 | Irig | Foothpath in Lazara Tosica Street in Krusedol, Prnjavor and combined pedestrian – cycle tracks Irig - Hopovo | 0.8 – footpaths<br>0.4 – combined | 50 cycl/day;<br>50 ped/day |
| 11 | Subotica | Cycle track on Somborski put and in Franje Kluza streets | 1.6 | 100 cycl/day |
| 12 | Ivanjica | Pedestrian zone, parking lot and electric car charging stations at 2 locations; Cycle tracks in Milinka Kusica and Branislava Nusica streets | 0.45 – ped. zone<br>0.95 – cycle tracks | 50 cycl/day;<br>300 ped/day |

**Table 9: Economic Evaluation Results**

| No. | B / C ratio | NPV (M Euro) | EIRR (%) |
|---|---|---|---|
| 1 | 6.17 | 52.4 | 35% |
| 2 | 6.86 | 6.95 | 47% |
| 3 | 13.26 | 5.74 | 87% |
| 4 | 4.10 | 0.30 | 29% |
| 5 | 3.90 | 3.06 | 28% |
| 6 | 1.38 | 0.18 | 8% |
| 7 | 6.86 | 2.31 | 47% |
| 8 | 3.04 | 0.32 | 22% |
| 9 | 23.6 | 2.54 | >100% |
| 10 | 2.52 | 0.28 | 19% |
| 11 | 3.01 | 0.46 | 22% |
| 12 | 1.21 | 0.21 | 7% |
| 13 | 4.78 | 0.53 | 34% |

[24] "Manual for samfundsøkonomisk analyse på transportområdet", Transportministeriet, Denmark, 2015 (https://cyclingsolutions.info/cost-benefit-of-cycling-infrastructure)
[25] "Global Street Design Guide", NACTO&Global Designing Cities Initiative,
[26] "The Handbook of road safety measures", Rune Elvik&Truls Vaa, second edition, 2009

| | | | | |
|---|---|---|---|---|
| 13 | Topola | Footpaths on King Alexander Blvd and Mija Todorovic Street | 0.51 | 200 ped/day |
| 14 | Apatin | Cycle tracks Banja Junaković - Svilojevo | 3.0 | 100 cycl/day |
| 15 | Mali Idjos | Combined pedestrian – cycle track in Feketic; Combined pedestrian – cycle track in Vuka Karadzica Street (to the Lovcenac railway station) | 3.5 | 100 cycl/day; 100 ped/day |
| 16 | Despotovac | Cycle track Resavica - Resavska Pecina | 6.0 | 50 cycl/day |
| 17 | Ada | Combined pedestrian – cycle track in Industrial street | 2.0 | 50 cycl/day; 50 ped/day |
| 18 | Vrbas | Pedestrian zone in the center of Vrbas and cycle track Vrbas - Kula | 0.6 – ped. zone<br>1.2 – cycle tracks | 100 cycl/day; 300 ped/day |
| 19 | Raska | Combined pedestrian – cycle track on the mountain Kopaonik | 4.5 | 100 cycl/day; 100 ped/day |
| 20 | Stara Pazova | Pedestrian zone in the center of Novi Banovci | 0.4 | 100 cycl/day; 300 ped/day |
| 21 | Mionica | Park in the center of Mionica | 1.0 | 300 ped/day |
| 22 | Lajkovac | Foothpaths in Nadezde Petrovic Street, next to primary school and combined pedestrian – cycle track in Dr. Boje Markovica Street | 1.0 – footpaths<br>1.2 - combined | 50 cycl/day; 100 ped/day |
| Total | | | 97.42 | |

| | | | |
|---|---|---|---|
| 14 | 2.09 | 0.62 | 15% |
| 15 | 10.72 | 3.37 | 71% |
| 16 | 5.53 | 1.01 | 39% |
| 17 | 2.99 | 0.69 | 22% |
| 18 | 2.04 | 1.39 | 15% |
| 19 | 5.55 | 3.89 | 39% |
| 20 | 1.13 | 0.07 | 7% |
| 21 | 7.77 | 1.70 | 52% |
| 22 | 5.17 | 1.35 | 36% |
| Total | 6.17 | 52.42 | 35% |

***Street lighting***

**68. A cost benefit analysis of new installation or replacement of existing street lighting system was conducted applying the following assumptions:**

- A discount rate of 6 percent and an evaluation period of 20 years. All costs are stated in constant 2021 Euros. Economic costs are 85 percent of financial costs.

  The typical energy consumption of 1 traditional lamp is 250 W, while an LED lamp consumes 30 W. The normal working hours of the street lighting during the day is 12 hours.

- Official price list in 2021 for kWh is used.
- Where lighting is installed at existing footpaths, more pedestrians will be attracted to use them. Cost – benefit gained of 1 km walked is estimated at 1.00 EUR.[27]

**69.** The total financial cost of the proposed lighting works is EUR 1.364 million, subdivided into four projects. The basic current projects characteristics and resulting economic indicators are given in the table below.

**Table 10: Project characteristics, Financial costs and Economic Evaluation Results for Lighting Subprojects**

| No. | Local Self Government | Project description | Total Cost (M Euro) | B / C ratio | NPV (M Euro) | EIRR (%) |
|---|---|---|---|---|---|---|
| 1 | Sid | Installation of 30W LED lamps along 1.8 km of footpaths | 0.1 | 2.76 | 0.14 | 19% |
| 2 | Priboj | Replacement of 1668 mercury and sodium bulbs with modern LED | 0.32 | 3.88 | 0.73 | 34% |

[27] "Manual for samfundsøkonomisk analyse på transportområdet", Transportministeriet, Denmark, 2015 (https://cyclingsolutions.info/cost-benefit-of-cycling-infrastructure)

**Table 10: Project characteristics, Financial costs and Economic Evaluation Results for Lighting Subprojects**

| No. | Local Self Government | Project description | Total Cost (M Euro) | B / C ratio | NPV (M Euro) | EIRR (%) |
|---|---|---|---|---|---|---|
| 3 | Blace | Replacement of the existing lighting with 238 LED bulbs on the main roads in Blace | 0.054 | 3.28 | 0.09 | 29% |
| 4 | Mionica | Replacement of existing sodium, metal halide and mercury sourced high pressure bulbs with 4144 LED bulbs | 0.89 | 3.46 | 1.75 | 30% |
| Total | | | 1.364 | 3.50 | 2.72 | 30% |

**Disaster risk management**

**70. Cost benefit analysis of the disaster risk management interventions in the vicinity of existing roads are conducted applying the following assumptions:**

- A discount rate of 6 percent and an evaluation period of 20 years. All costs are stated in constant 2021 Euros. Economic costs are 85 percent of financial costs.
- Delay or extra travel time associated with road or bridge damage is estimated at 3h/year/per location.
- Values used for travel time costs are: passenger EUR/h – 7.60; cargo EUR/t/h – 0.36.[28]
- Traffic composition is retained as it was used for RED model (Table 1, Car 77 percent, Bus 3 percent, and Cargo Vehicles 20 percent).
- Average no. of passengers per car; 2; average no. of passengers per bus: 10; average no. of passengers per cargo vehicle: 1; average no. of tons per cargo vehicle: 10t.

**71. The total financial cost for the proposed disaster management works is EUR 2.990 million, subdivided into 8 projects.** The table below presents the subproject characteristics and the resulting economic indicators.

**Table 11: Projects Characteristics, Financial Costs and Economic Evaluation Results for Disaster Risk Management Subprojects**

| No. | Local Self Government | Project description | Total Cost (M Euro) | B / C ratio | NPV (M Euro) | EIRR (%) |
|---|---|---|---|---|---|---|
| 1 | Ljig | Riverbed arragement, Belanovica river | 0.075 | 11.2 | 0.72 | >100% |
| 2 | Vrnjacka Banja | Rehabilitation of 3 Bridges: over Mala Reka in Novo Selo; Grbanski potok in Štulac; Novoselska river in Novo Selo and 5 retaining walls: Bibe Banja , Jelošnica, Novo Selo-Rsavci, Ruđinci dom, Vraneš | 0.55 | 7.64 | 3.41 | 76% |
| 3 | Gadzin Han | Rehabilitation of the damaged bridge over Kutinska river | 0.06 | 14.0 | 0.73 | >100% |
| 4 | Pozarevac | Regulation of river Mlava | 0.65 | 3.88 | 1.73 | 38% |
| 5 | Vladicin Han | Reconstruction and maintenance of bridges in rural areas | 0.17 | 1.65 | 0.09 | 14% |
| 6 | Vladicin Han | Remediation of 5 landslides | 0.51 | 2.75 | 0.81 | 26% |
| 7 | Blace | Rehabilitation of the bridge on river Blatašnica, 15m long, 5m width | 0.21 | 4.00 | 0.58 | 39% |
| 8 | Tutin | Riverbed arragement, Vidrenja river | 0.765 | 3.29 | 1.61 | 32% |
| Total | | | 2.990 | 4.50 | 9.7 | 44% |

### C. Economic Analysis Results

**72. The overall EIRR of the Project investments is 35 percent, and the NPV is EUR 115.84 million, at 6 percent discount rate, corresponding to an NPV/Investment Cost ratio of 3.03.** Sensitivity analysis shows that the project is economically justified even if construction cost is 20 percent higher or if the project benefits are 20 percent lower

[28] "Manual for cost – benefit analysis", Public Enterprise Roads of Serbia and Ministry of Infrastructure, 2010

or both. If both conditions applied, the overall EIRR would drop to 24 percent.

**Table 14: Sensitivity Analysis Scenarios**

| | | A: Costs | B: Benefits | |
|---|---|---|---|---|
| | Base | +20% | -20% | A + B |
| EIRR (%) | 35% | 29% | 28% | 24% |

**D. GHG Accounting**

73. **Total gross Carbon Dioxide (CO2) emissions over the 20-year evaluation period under the without-project scenario are estimated at 390,279 tons, and under the with-project scenario at 365,041 tons, resulting in a net CO2 emission of -25,238 tons, or -1,262 tons per year.** The decrease in CO2 emissions is attributed to the increase in travel speeds with the Project.[29]

**E. Public Sector Financing and World Bank Value Added**

74. **Private sector financing is not available to undertake local infrastructure subprojects of this nature in Serbia.** Public sector financing is the appropriate vehicle for these works because the costs cannot be recovered through tariffs due low traffic volumes and the inherent nature of the investments as public goods.

75. **The World Bank's role is justified because of the project's economic and social benefits.** The World Bank's engagement in Serbia's local government infrastructure adds value in several ways, including: (i) bringing global experience in asset management; (ii) providing best practices in climate resilient transport and sustainable maintenance solutions; and (iii) helping address environmental and social standards.

[29] It was estimated with the that travel speeds for cars will increase from around 22.4 km per hour without the project to 33.9 km per hour with the project, which will decrease fuel consumption and CO2 emissions.