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Report No: PAD00241

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF EUR 30 MILLION
(US$32.5 MILLION EQUIVALENT)

TO THE

REPUBLIC OF SERBIA

FOR A

SECOND REAL ESTATE MANAGEMENT PROJECT

JULY 3, 2024

Urban, Resilience and Land
Europe and Central Asia

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 31, 2024)

Currency Unit =	EUR
EUR 0.9217 =	US$1
US$1.083 =	EUR 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Antonella Bassani
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ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
AM	Accountability Mechanism
ASPEN	Advanced Security Processing Engine
AV	Antivirus
CPF	Country Partnership Framework
CQS	Consultants' Qualification Selection
CS	Consulting Services
DA	Designated Account
DDoS	Denial-of-Service
DFIL	Disbursement and Financial Information Letter
DS	Direct Selection
EDR	Endpoint Detection and Response
EFA	Economic and Financial Analysis
ERR	Economic Rate of Return
E&S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESF	Environment and Social Framework
EU	European Union
EUR	Euro
FM	Financial Management
G	Goods
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GoS	Government of Serbia
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IC	International Consultant
IGIF	Integrated Geospatial Information Framework
INSPIRE	INfrastructure for SPatial Information in Europe
IOC	Initial Operating Capability
IPF	Investment Project Financing
IPS	Intrusion Prevention System
ISO	International Organization for Standardization
ISREC	Integrated System for Real Estate Cadaster
IT	Information Technology
IUFR	Interim, Unaudited Financial Report
LCO	Local Cadaster Office
LCS	Least-Cost Selection
M&E	Monitoring and Evaluation
MFA	Multi-Factor Authentication
MFD-e	Maximizing Finance for Development Enabling

MoU	Memorandum of Understanding
NBS	National Bank of Serbia
NPV	Net Present Value
NSDI	National Spatial Data Infrastructure
OSS	One-Stop-Shop
PAM	Privileged Access Management
PDO	Project Development Objective
PIU	Project Implementation Unit
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
REC	Real Estate Cadaster
RECRP	Real Estate Cadaster and Registration Project
REMP	Real Estate Management Project
REMP 2	Second Real Estate Management Project
RfB	Request for Bids
RfP	Request for Proposals
RfQ	Reqeust for Quotations
RGA	Republic Geodetic Authority
RSD	Serbian Dinar
SAN	Storage Area Network
SEP	Stakeholder Engagement Plan
SIDC	Secure Identification Credentials
SIEM	Security Information and Event Management
SOC	Security Operational Center
SSO	Single Sign-On
TA	Technical Assistance
TOR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
US$	United States Dollar
VPN	Virtual Private Network
XSS	Cross-Site Scripting

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DATASHEET

BASIC INFORMATION

Project Beneficiary(ies)	Operation Name		
Serbia	Second Real Estate Management Project		
Operation ID	Financing Instrument	Environmental and Social Risk Classification	
P500611	Investment Project Financing (IPF)	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
[ ] Alternative Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
29-Jul-2024	31-Jul-2029
Bank/IFC Collaboration	
No	

Proposed Development Objective(s)

To improve the transparency, accessibility, and reliability of Serbia’s real property management systems.

Components

Component Name	Cost (US$)

Component A: Implementation of the Property Mass Valuation System	8,017,525.00
Component B: Integration of Information Systems and NSDI Services Development	20,796,925.00
Component C: Institutional Improvement, RGA Sustainability, and Project Management	3,604,300.00

Organizations

Borrower:	Republic of Serbia
Implementing Agency:	Republic Geodetic Authority

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? Yes

Is this project Private Capital Enabling (PCE)? No

SUMMARY

Total Operation Cost	**32.50**
Total Financing	**32.50**
of which IBRD/IDA	**32.50**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	32.50

Expected Disbursements (US$, Millions)

WB Fiscal Year	2025	2026	2027	2028	2029	2030
Annual	0.25	3.60	6.40	10.00	12.00	0.25

Cumulative	0.25	3.85	10.25	20.25	32.25	32.50

PRACTICE AREA(S)

Practice Area (Lead)

Urban, Resilience and Land

Contributing Practice Areas

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document

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	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Moderate
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Overall	Moderate

POLICY 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

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

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Not Currently Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Not Currently Relevant
ESS 9: 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

Legal Covenants

Sections and Description
The Borrower, through RGA, shall by no later than one (1) month after the Effective Date, prepare and adopt a Project operational manual ("Operational Manual" or "POM") in form and substance satisfactory to the Bank (Section I. B. 1 of Schedule 2 to the LA)
The Borrower shall maintain at all times during Project implementation the PIU under the RGA, with the necessary resources and staff to carry out the Project, and with a composition and terms of reference satisfactory to the Bank (Section I. A. 1 of Schedule 2 of the LA)

The Borrower shall establish not later than two (2) months after the Effective Date, and thereafter maintain during Project implementation a Project Council and a Project Steering Committee with a composition, terms of reference, and resources satisfactory to the Bank (Section I. A. 2 of Schedule 2 of the LA)
The Borrower shall appoint, not later than sixty (60) days after the Effective Date, of one part-time Environmental Specialist, and one part time Social Specialist, as part of the existing PIU (Section 1.1. of the ESCP)
The Borrower, through RGA, shall: (a) prepare and furnish to the Bank not later than December 31st of each year during the implementation of the Project, a proposed Annual Work Plan and Budget (Section 1. D(a) of Schedule 2 of the LA)
The Borrower, through RGA, shall furnish to the Bank each Project Report not later than forty-five (45) days after the end of each reporting quarter, covering the calendar year (Section II of Schedule 2 of the LA)

Conditions

Type	Citation	Description	Financing Source

I. STRATEGIC CONTEXT

A. Country Context

1. **Serbia is an upper middle-income country that has made substantial gains in building institutions since emerging from the conflicts of the 1990s, but government effectiveness remains a challenge**. The first democratic governments elected in the early 2000s initiated the political and economic transition typical of other Eastern European countries a decade earlier. Significant progress was made on achieving a stable macroeconomic framework and substantial fiscal buffers, notably since 2015. However, historical trends in governance indicators show that Serbia's improvement has stalled in certain dimensions, holding back development progress in other areas.[1] Thus, the current level of government effectiveness is below those observed in new European Union (EU) member states five years prior to their accession. Moreover, checks and balances are still below the average for other upper middle-income countries, and significantly below EU levels. Since 2014, Serbia has been in negotiations with the EU regarding governance reforms to be carried out prior to it joining the bloc.

2. **Serbia's economy and the labor market were relatively resilient during the COVID-19 pandemic, driven by large-scale fiscal stimulus in 2020 and 2021, but have faced challenges related to problems in Serbia's domestic energy sector as well as external shocks**. Due to a significant increase in spending on pandemic-related goods and services, transfers to households, and subsidies provided as part of a stimulus package to mitigate pandemic impacts, the fiscal deficit reached 8 percent of gross domestic product (GDP) in 2020 and 4.1 percent in 2021. Public debt reached 57.1 percent of GDP by December 2021 but eased to 55.6 percent by the end of 2022. In 2023, there was a further decrease of fiscal deficit, which helped to bring the public debt further down to 52.9 percent of GDP (December 2023). The unemployment rate stabilized around 9 percent over the past two years. Poverty (based on the upper-middle income line of US$6.85 per day in 2017 purchasing power parity) is estimated to have declined slightly from 7.9 percent in 2021 to 7.5 percent in 2022 and further declined to 7.1 percent in 2023 despite relatively high inflation. Inflation at the end of 2023 was estimated at 7.6 percent after peaking in March 2023 at 16.2 percent. The Current Account Deficit will decrease significantly in 2023 to reach 2.6 percent of GDP after a one-off increase in 2022 due to a high import of energy and food. Large-scale imports of power started in early 2022 due to problems in Serbia's power sector, and particularly in the production of lignite-based power. Going forward, key challenges concern the performance of State-Owned Enterprises that could pose a significant fiscal risk and lower the projected growth of the economy.

3. **Vulnerability to the impacts of climate change, especially higher-frequency and higher-intensity floods, landslides, wildfires, droughts, and heatwaves, pose significant challenges to Serbia's population and economy**. The number of people affected by flooding is assessed at about 200,000 on average per year, at an estimated cost of US$1 billion in GDP. For instance, massive floods across Southeast Europe in 2014 pushed 125,000 people in Serbia into poverty and resulted in damages and losses of over EUR 1.5 billion (equivalent to 4.8 percent of then GDP). Simultaneously, mean annual temperatures have risen by 0.3°C per decade. The increase in temperatures could lead to severe water shortages and increased instances of heat waves. Significant additional risk comes from an increased frequency of droughts which, according to government estimates, have caused damages of over EUR 3.5 billion since 2000. Most recently, drought has reduced domestic agricultural output two years in a row at a time when international food prices were also rising sharply. The drought of the summer of 2022 is the latest in a series of climate-related events with significant economic impacts, including severe drought and floods in 2012 and 2014 that caused recessions. According to official statistics, extreme weather events in recent years have cost the country more than EUR 5 billion, with droughts and extreme temperatures accounting for 70 percent of the losses, and their severity and frequency is expected to grow due to climate change.[2]

[1] As noted in the 2020 Systematic Country Diagnostic Update for Serbia.
[2] Information in this paragraph obtained from the World Bank Group CPF and the *ThinkHazard* profile for Serbia.

4. **The Government of Serbia (GoS) has articulated its commitment to improve government effectiveness in the comprehensive Serbia Action Plan, with emphasis on fiscal and environmental sustainability**. The GoS has emphasized the importance of key policy areas including economic strengthening and entrepreneurship, efficient and responsible public institutions, environmental protection and green transformation, and human capacity building. Effective public administration remains crucial to the achievement of these policy areas, and this includes continued strengthening of Serbia's land administration system, enhancement of land tenure security, and the diversification of the fiscal base through the development of fair and equitable property taxation. The efforts of the GoS concerning the land sector are foundational to unlocking economic growth and the further development of land records information that can be utilized by other GoS institutions for decision-making, planning, private sector development, disaster risk management, and climate change adaptation and mitigation.

B. Sectoral and Institutional Context

5. **Over the past 20 years, Serbia has made major progress in establishing effective and professional land registration and cadaster services to facilitate land markets and provide tenure security**. From 2004 to 2012, under the World Bank-financed Real Estate Cadaster and Registration Project (RECRP; P078311), Serbia established the Real Estate Cadaster (REC), a single system for real property rights registration, which is under the authority of the Republic Geodetic Authority (RGA).[3] As such, RECRP played a pivotal role in the development of land and real estate markets in Serbia. It was supplemented by further technical assistance (TA) from the Bank to advise the GoS on three critical areas of real estate reform: (i) planning and permitting; (ii) valuation, taxation, and public land management; and (iii) security of property and property rights. TA outputs included a Land Policy Note shared with the GoS that highlighted the benefits of real estate reform on Serbia's fiscal deficit and business climate. Since 2015, the ongoing Real Estate Management Project (REMP; P147050) and its Additional Financing build on the proposals of the Land Policy Note, with support to valuation and property taxation, e-governance for enabling access to real estate information, and RGA's further institutional development.

6. **Throughout implementation of the World Bank-financed projects, the GoS has enacted crucial legislative reforms for the land sector**. Key legal framework milestones during REMP's implementation include (i) a new law regulating (property) valuation professionals via the introduction of a new licensing system and national standards for valuation in line with International and European standards; (ii) regulatory improvements in the areas of planning and construction through the implementation of a one-stop-shop (OSS) system for issuing construction permits; (iii) a new law on cadastral procedures linking the databases of cadaster, notaries, the tax administration, and the courts that enables online submission of applications for registration of property transactions and property tax declarations through notaries, substantially improving the reliability of the property rights registration system; and (iv) adoption of the Law on National Spatial Data Infrastructure (NSDI) and establishment of the GeoSrbija National Geoportal, which enables interoperability and data sharing among various agencies, as well as harmonization with the EU's INfrastructure for SPatial Information in Europe (INSPIRE) Directive. Moreover, the creation of Serbia's Sale Price Register during REMP has had a major impact on the transparency and efficiency of the residential property market by providing valuers and commercial banks with reliable information about transaction prices.

7. **Building on the above-mentioned reforms, the results of REMP's activities have provided wide ranging economic benefits for citizens, businesses, and GoS authorities, particularly in terms of efficiency gains**. Since the start of REMP, Serbia's real estate market has experienced significant efficiency gains, as evidenced by the drop from 48 days to 3.89 days in the average time required to complete the recordation of a land or property transaction at RGA. Moreover, RGA's service provision continues to experience high customer satisfaction, with a current rate of 91 percent (up from 66

[3] RGA manages Serbia's REC and supervises 164 Local Cadaster Offices (LCOs) spread throughout the country. RGA reports to the Ministry of Construction, Transport and Infrastructure.

percent at the start of REMP). To achieve these gains, REMP has invested heavily in the development of RGA's Integrated System for Real Estate Cadaster (ISREC), which provides digital maps covering approximately 67,000 km^2 (approximately 86 percent) of the national territory and integrates Serbia's land registry and cadaster within a single database. The cadastral data provided by ISREC directly feeds into GeoSrbija, which also benefits from data provision from an additional 128 Serbian institutions. Moreover, RGA is actively working to sign Memorandums of Understanding (MoUs) with other GoS institutions for data sharing to further improve service provision that requires accurate geospatial information and has signed 44 MoUs to-date. REMP also support the establishment of a Building Register that covers approximately 80 percent of the country and includes the above-referenced OSS system for construction permit issuance.[4] A utility cadaster module for ISREC is currently being developed via REMP, and both the Building Register and utility cadaster will provide key data for informed and improved infrastructure planning and investments in Serbia. Additionally, a second instance appeals backlog has been addressed through REMP with over 26,000 appeals resolved and with over 95 percent of appeals being resolved in accordance with defined service standards.

8. **REMP's support to real estate valuation also contributes to the future scale-up of a fairer and more equitable property taxation based on market values, thereby contributing to investor confidence in the Serbian economy**. Prior to REMP, Serbia was characterized as having property tax rolls that omitted significant numbers of properties and a system of taxation that did not reflect market values. As a result of REMP, major steps have been taken to address these issues. The development of a Sales Price Register, RGA's publication of regular reports on the state of the property market, the creation of mass valuation models for residential properties using sales prices, building register development, and the adoption of national valuation standards and licensing reform for valuers have had a major impact on improving the efficiency of the residential property market, and help to lay the foundations for the adoption of a market value property tax system for residential property. These efforts have helped to spur investor confidence in Serbia's real estate markets by helping to establish a more transparent sector with reliable data that reflects ground realities for informed investment decision-making.

9. **Building on the achievements of real estate valuation under REMP, the GoS is keen to expand its mass valuation models to cover non-residential properties**. This has the potential to produce the same level of transparency and efficiency in the non-residential sector as was achieved in the residential sector. Work remains to be done in Serbia on the collection of non-residential property characteristics and the identification of all individual taxable units and their geo-locations. While some of this data can be accessed through Serbia's most recent population census, it may also be required to identify other methods or sources for the collection of this data. Additionally, a system of distribution for mass valuation results needs to be developed, which would assist different users (e.g., citizens, businesses, commercial banks, government institutions, public entities, etc.) in line with their needs. The taxation of commercial and industrial properties remains a challenge, as businesses tend to rent premises rather than buy them. These income transactions are not normally captured through RGA's land registration system. As such, it is important for alternative systems to be developed for capturing income transactions such as rents and lease information for commercial and industrial properties from which mass valuation models can be developed. The creation of such systems will contribute to significant improvements in the transparency and efficiency of the non-residential property market, which will benefit private sector investment and economic growth as well as tax revenues.

10. **The GoS also aims to develop additional services for the use of the land registry and cadaster information maintained in ISREC**. In line with Serbia's vulnerability to natural disasters such as flooding and landslides, RGA is keen to further develop its Risk Register that will utilize cadastral data to identify areas of the country that are in hazard zones as part of improved climate change mitigation and adaptation risk planning and the potential economic impact of hazard events. The expansion of the Risk Register would also complement current REMP investments such as the Building Register and utility cadaster to add a further layer of data to provide a more accurate representation of ground realities for public

[4] This registry has not yet been integrated with ISREC, although this is envisioned to be completed under the proposed Project.

and private sector decision-makers to consider as part of business development and infrastructure planning in Serbia. This information would also utilize mass valuation models, as associated climate hazards would contribute to more accurate calculation of insurance premiums in the event of a disaster. Moreover, while ISREC has been developed, it has not yet been implemented in all of RGA's 164 Local Cadaster Offices (LCOs), and the GoS is keen to complete its implementation to provide standard, streamlined services to all citizens throughout Serbia.

11. **Building informality is also a persistent challenge in Serbia.** Around 4.8 million structures that have either not been registered in the cadaster or are registered but with actual building characteristics not matching their respective cadastral records.[5] Illegal construction has been a prominent urban development phenomenon since the 1960s and has intensified since 1990. Starting in the 2000s, the GoS has made efforts to legalize informal constructions via several laws on legalization, the latest one in 2015. Local self-governments are also integrating informal settlements into urban planning and zoning, and manage legalization processes in their respective territories. The process is slow, however, given the volume of illegal developments. RGA supports these initiatives by providing information on all land parcels and buildings via ISREC and the Building Register. Moreover, high-resolution satellite imagery obtained through REMP provides information on all buildings in throughout Serbia, which supports informed decision-making at both central and local government levels. However, ISREC and the Building Register are not yet fully integrated, which results in the absence of a replica of ground realities to help identify specific formal (ISREC) and informal (Building Register) properties throughout Serbia.

12. **With these initiatives in mind, the GoS approached the World Bank with a request to support further advancement of the real estate management systems in the country via the Second Real Estate Management Project (REMP 2)**. Originally, REMP 2 was envisioned as a second Additional Financing for REMP to scale up the current project activities. However, due to Environmental and Social Framework (ESF) requirements, a new Investment Project Financing (IPF) was suggested, as REMP falls under the pre-ESF Safeguards Policies. Nevertheless, REMP 2's proposed activities build directly on the investments under REMP and its Additional Financing by helping to scale-up e-service provision by RGA, bolstering the long-term sustainability of REMP's investments, and completing the national rollout of mass valuation and implementation of ISREC. REMP 2 also aims to support data quality improvements at RGA and build on the achievements of NSDI establishment to-date as part of efforts to expand accessibility and availability of geospatial information for relevant users and key actors in Serbia's land sector.

C. Relevance to Higher Level Objectives

13. **The proposed Project is closely aligned with the World Bank Group's Country Partnership Framework (CPF) for Serbia for FY22-FY26 (Report No. 166496-YF, discussed by the Board of Executive Directors on May 26, 2022)**. The CPF sets out the overall objective of supporting Serbia's robust recovery from the impacts of COVID-19 and fostering growth that will be sustainable across generations. In particular, REMP 2 will contribute towards achieving CPF Objectives 1.1: Stronger macro-fiscal framework and structural reforms for greener growth and 1.3: Improved business environment and regional integration. Under Objective 1.1, REMP 2 will continue to contribute to increasing the competitiveness of the Serbian economy by furthering its support to clarify valuation to stimulate credit markets that will help to increase access to finance for businesses. Under Objective 1.3, enhanced geospatial information management and associated e-services development and provision can help the private sector make informed decisions for investments, and more readily access needed services and documentation for enhanced business development. Improvements in mass valuation methodologies for non-residential properties and rental premises in Serbia would also partially contribute to CPF Objective 2.1: Strengthened public financial management at the central and local levels, as these methodologies would help to provide

[5] There are approximately 4.9 million properties registered in cadaster, which is almost equivalent to the number of properties that are either unregistered or are registered but with their characteristics not matching their respective cadastral records (4.8 million).

more transparency in the non-residential property market for the benefit of government revenue generation by diversifying and improving the resilience of the tax system.

14. **The Project is also aligned with the outcome areas outlined in the new World Bank Group Corporate Scorecard**, specifically, Outcome Area 11 "Digital Services" that consolidates and reports the state of online e-Government service provision. As part of its activities, REMP 2 will support the continued digital transformation of RGA and the advancement of Serbia's NSDI in line with national and international best practice and standards, and will include the corresponding Corporate Scorecard indicator that measures the number of people using digitally enable services in the Results Framework. The development of new applications and e-services to increase the usability of Serbia's NSDI for the public and businesses is also expected to leverage new technologies such as Artificial Intelligence (AI).

15. **REMP 2's activities are also Maximizing Finance for Development enabling (MFD-e)[6] and will set the stage for unlocking further private sector investment and economic activity in Serbia**. Investments in geospatial information and associated e-services will allow private sector actors to have clear, up-to-date, and accurate spatial information available for informed investments in Serbia. Moreover, the further development of mass valuation methodologies will remove constraints in real estate markets by clarifying the values of land and property that restricted investor confidence in the country's land markets. REMP 2's activities are instrumental for future private sector investments by helping to bridge the information gap that continues to restrict investor appetite in Serbia's real estate markets.

16. **The activities for the proposed Project are also fully aligned with multiple initiatives of the GoS related to business development, spatial planning, and e-Government**. Specifically, REMP 2's mass valuation activities for non-residential properties and rented premises by businesses will support the objective of Serbia's *Program for Combatting the Grey Economy (2023-2025) and its Action Plan for the period 2023-24*, particularly Goals 2 (Improving the procedure of tax supervision and reporting) and 3 (Fiscal and administrative relief of legal businesses). Further investments in e-service provision, NSDI, and national scale-up of ISREC implementation will also contribute to the GoS's draft *Spatial Plan of the Republic of Serbia (2021-2035)* as well as the *Program for e-Government Development in the Republic of Serbia (2023-2025) and Action Plan for its Implementation*. Concerning the latter, the proposed Project would contribute to Program Objective 1.4 – Public Administration (e-Government) by helping to further improve ISREC's data quality and utilization through additional e-services for users. Moreover, the investments in data managed by public administration actors will contribute to having up-to-date, networked, competently collected, and processed data that will strengthen the basis for effective government and evidence-based policymaking in Serbia.

17. **In terms of climate change adaptation and mitigation, REMP 2 will contribute to the achievement of Serbia's National Determined Contribution (NDC)**. Serbia is a part to the United Nations Framework Convention on Climate Change (UNFCCC). It submitted its NDC to the UNFCCC in 2021, pledging to cut greenhouse gas (GHG) emissions by 33.3 percent by 2030 compared to 1990 levels. Serbia is also a part to the Paris Agreement on Climate Change as of 2017 but struggles with large amounts of electricity consumption due to low levels of energy efficiency in the country, a challenge that the GoS is trying to address as part of its NDC initiatives and alignment to EU climate change policies via its ongoing accession dialogue. Most land administration activities, including REMP 2's, can be considered universally aligned since effective land administration has an important role in enhancing the climate resilience of communities, especially those located in climate vulnerable areas. Furthermore, REMP 2's activities related to geospatial information management and property valuation are considered universally aligned with the Paris Agreement.

[6] While REMP 2 will directly contribute to MFD-e as of project preparation, the task team will work with RGA during implementation to explore possible options to better capture and determine potential private capital enabling aspects of the project activities.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

18. The Project Development Objective is to improve the transparency, accessibility, and reliability of Serbia's real property management systems.

PDO Level Indicators

19. Achievement of the PDO will be measured via the following indicators:

- Enhanced data from multiple registries available via GeoSrbija (Text)
- Population with access to property services (Percentage)
- E-Services providing authoritative data for official use through GeoSrbija (Number)
- RGA's institutional sustainability enhanced to ensure business continuity (Text)

20. The Results Framework will also include an Intermediate Results indicator from the Corporate Scorecard related to Outcome Area 11 "Digital Services": People using digitally enabled services (Number).[7]

B. Project Components

21. The Project will include three components as described below.[8] See Annex 2 for a detailed description of Project activities.

22. **Component A: Implementation of the Property Mass Valuation System (EUR 7,400,000)**. This component will finance the following activities in support of the advancement of mass valuation for all types of property in Serbia to ensure the reliability of property data, along with their accessibility, transparency, and interoperability. Activities will be financed via two Sub-Components. *Sub-Component A.1: Support to Mass Valuation for Residential and Non-Residential Properties* will finance: (i) the development of mass valuation models for non-residential properties in Serbia; (ii) the national rollout of mass valuation models already developed for residential properties for the majority of Serbia's population; (iii) the development of an information system for mass property valuation; and (iv) the creation of a residential property index that includes all types of residential property, with sub-indexes for different types. *Sub-Component A.2: Building Register Advancement* will finance (i) the development of a Building Register module as part of ISREC; (ii) establishment of a central database; (iii) migration of data from the existing Building Register and from other external data sources; (iv) integration of the Building Register with the information system for mass property valuation and GeoSrbija; (v) the acquisition of very high-resolution satellite imagery and climate-related data; (vi) creation of a digital orthophoto and processing of its data; (vii) updates to the Building Register's Registry of Established Changes to Constructions; and (viii) consulting services to assess the options for automating and obtaining of data from external sources, quality assurance and quality control during software development and the development of a long-term sustainable model for the maintenance of the Building Register and the information system for the mass property valuation system.

23. In terms of climate change adaptation and mitigation, the activities under Component A will help to inform the GoS about which properties are considered more prone to GHG emissions and incentivize emissions reductions by seeking

[7] The number of people or businesses who use new or enhanced digitally enable services through support by the World Bank Group. This includes new, digitally-delivered services as well as enhancements to existing digitally-delivered services (i.e., those delivered through digital technologies such as internet, cloud computing, AI, etc.), provided by the public or private sector.

[8] The Project's front-end fee of EUR 75,000 will be paid using the loan financing. As such, the component costs for REMP 2 add up to EUR 29,925,000.

to factor into the valuation methodology for each of the property types' household and business preferences for energy efficiency. The connection between real estate valuation and reducing GHG emissions (e.g., incentives for improving the energy efficiency of buildings) will be integrated as part of the capacity building activities to be financed via Component C. Moreover, Component A activities will provide important market information for calculating the costs of climate resilient reconstruction (e.g., flood proofing, adaptable during a heat wave) and determine insurance premiums in support of crisis preparedness and disaster risk management efforts to address climate risks in Serbia that are led by government entities such as the Ministry of Interior's Sector for Emergency Management. The purchase and utilization of satellite imagery will also help to enable more efficient updates of key registries in addition to the Building Register. The imagery is a critical requirement for RGA's Risk Register (see Component B) and will be directly relevant for the identification of climate impacts such as floods, drought, and extreme temperature along with areas that are most vulnerable to these impacts. These climate considerations will be integrated into spatial and disaster risk planning, and in targeting climate disaster related evacuation activities for areas most vulnerable to these climate impacts.

24. In terms of MFD-e, Component A's activities will also improve investor confidence by clarifying the values of additional real estate categories. The absence of reliable methodologies in the past created barriers for investors because it was difficult to ensure that non-residential real estate transactions were in line with the actual value of the property. As such, the activities under Component A will address this barrier to increased private sector investments in Serbia.

25. **Component B: Integration of Information Systems and NSDI Services Development (EUR 19,200,000)**. This component will finance activities related to the further digital transformation of RGA and the advancement of Serbia's NSDI (including the expansion of GeoSrbija and development of additional data layers) in line with national and international best practice and standards. Activities will be financed via three Sub-Components. *Sub-Component B.1: Further Development and Rollout of the Integrated System for Real Estate Cadaster* will finance: (i) ISREC upgrades and the completion of its national implementation to an additional 110 LCOs that do not yet have access to the system; (ii) establishment of the infrastructure cadaster; (iii) development and implementation of an information system for land consolidation; (iv) expansion of the Risk Register; (v) technical studies for the advancement and use of cadastral data such as the development of a 3D cadaster; (vi) the supply of IT hardware and equipment and possible IT hardware installation associated small-scale retrofitting works[9]; (vii) cybersecurity support; and (viii) consultant support for the supervision, coordination and quality control of the data and systems to be implemented and/or expanded. *Sub-Component B.2: support to the National Spatial Data Infrastructure* will finance the implementation of RGA's NSDI Action Plan, including the development of web and mobile applications and digital services using new technologies such as AI. *Sub-Component B.3: Digital Archive* will finance: (i) development of a module for managing the analogue archive; (ii) development of e-services for specialized users; and (iii) conversion of scanned geodetic plans to allow online access to them. As applicable, IT hardware and equipment will also be financed via Component B that will, in line with the EU's Directive on Energy Efficiency[10] and the EU Energy Performance Certificates, aim to achieve an "A" rating for energy performance, which is considered above and beyond existing performance standards given that absence of a mandated energy efficiency rating within Serbia's existing regulatory framework which will ultimately lead to reduced GHG emissions compared to IT hardware/equipment that do not meet these requirements. Component B's NSDI activities will be implemented based on the Action Plan and Business Models produced during REMP in line with the UN-endorsed Integrated Geospatial Information Framework (IGIF).

26. In terms of climate change adaptation and mitigation, the activities under Component B will support the tracking of projected climate trends such as changes in precipitation intensity and flood, drought, and extreme heat occurrence due to urbanization and urban sprawl that have contributed to strains on existing infrastructure and public utilities as well

[9] Although not confirmed, there may be a possibility for small-scale retrofitting works (e.g., for the server room) that could be linked to the hardware installation. Any identified environmental risks and impacts (e.g., dust, noise, waste, OHS) and mitigation measures will be addressed in the ESMPs checklist to be prepared prior to the commencement of works (see Environmental and Social section of the PAD for more details).
[10] Directive on Energy Efficiency 2012/27/EU, as amended in 2018 and 2023.

as the loss of carbon sinks in Serbia. Moreover, the information provided by the advancement of GeoSrbija will be used by public agencies such as the Ministry of Construction, Transport and Infrastructure's Sector for Spatial and Urban Planning and the Ministry of Interior's Sector for Emergency Management will directly access GeoSrbija and the platform as part of their business operations to utilize these key tools and the cadaster and land registry information they contain to inform disaster and flood simulations, land use planning, and resource management, which will identify areas vulnerable to flooding and drought and ways to either avoid construction in these areas or improve climate resilience by deploying resilient building design.

27. In terms of MFD-e, Component B's investments in the development of geospatial information and related services are linked to greater private sector investment confidence, as a single point of accurate and reliable information that can be utilized to reduce investor risk will be developed.

28. **Component C: Institutional Improvement, RGA Sustainability, and Project Management (EUR 3,325,000)**. This component will finance activities related to RGA's long-term institutional sustainability and project management for REMP 2. Activities will be financed via two Sub-Components. *Sub-Component C.1: Institutional Improvement and RGA Sustainability* will finance (i) updates to RGA's Roadmap, Strategic Plan, and Business Plan for institutional transition; (ii) implementation of RGA's Portfolio Management Plan[11]; and (iii) further implementation of several International Organization for Standardization (ISO) standards for RGA's full compliance with international standards for land administration and associated IT systems. *Sub-Component C.2: Project Management* will finance (i) Project Implementation Unit (PIU) operations and Monitoring and Evaluation (M&E) activities; (ii) capacity building programs; (iii) customer satisfaction surveys; (iv) consulting services in support of various project activities including the provision of legal expertise for, among other things, improving registration of "old"[12] transactions, and development of social assessments; and (v) the supply of IT hardware and equipment in support of project management. The specialized training to be financed via this component will target RGA management and technical staff, as well as other NSDI stakeholders including government institutions, local authorities, and other relevant entities. Similarly, the capacity building programs will be designed and implemented for real estate registration and valuation institutions, including RGA, municipal authorities and Serbia's Tax Administration.

29. **Gender**. Although Serbia adopted the Law on Gender Equality in 2009, which seeks to ensure equal status of women and men, there are more men registered as property owners than women at RGA. The share of properties with women registered as owners is, on average, approximately 41 percent, but ranges from 13 percent in the south to 50 percent in the north of the country. There are many reasons for the disparities in property ownership between women and men, including cultural, economic, and gaps in the regulatory framework. The low rates for women also have broader impacts on their participation in the Serbian economy, as a lack of property documentation for land and property ownership negatively impacts one's ability, among other things, to access public services and credit markets.

30. At RGA, a contributing factor to the disparity in property ownership rates is due to 40 percent of properties in ISREC for which ownership data cannot be gender disaggregated. This is due to a lack of a unique identification (ID) number (which contains indication of sex and age) of the person registered as the property owner. In addition, property data are distributed in more than 120 cadastral databases and conducting any analysis is cumbersome and may produce unreliable results. Under Component B, the national implementation of ISREC and its associated data quality improvement activities will be carried out in cooperation with other government agencies such as the Ministry of Interior, which provides missing unique ID numbers to RGA so that the identity of the property owner can be properly established. The result of this data quality improvement will increase the number of properties for which data on ownership can be gender disaggregated.

[11] The Portfolio Management Plan was first developed in 2024 in cooperation with the Swedish International Development Cooperation Agency (Sida) and will be fully implemented under REMP 2.
[12] "Old" transactions are property transactions that took place prior to July 2018 and had not been submitted for registration before the new law on cadastral procedures was introduced.

Additionally, ISREC's national implementation will facilitate quick and easy access to property data throughout Serbia and enable the creation of valuable reports such as an improved understanding of property ownership disparities between women and men.

31. Building on the successful support provided by REMP and its Additional Financing, REMP 2 will aim to prioritize the linking of unique ID numbers for women to these backlogged properties in ISREC. An Intermediate Results Indicator "Women with land rights confirmed as a result of ISREC property data completion" will measure the number of women owners who have their land rights confirmed upon the completion of land ownership information as a result of the recordation of their unique ID number being linked to ISREC with support from the Project.

32. **Climate Co-Benefits**. Land administration provides the basis of the system of land rights, records and information. Core components of the system are cadaster and land registry functions and geospatial information systems that develop and share real estate and other geospatial information. A functioning land administration system, with accurate and up-to-date cadaster and registry data, allows for the development of land tools to address climate change risks such as drought and floods and strengthen disaster risk management. These tools include land use planning, land-related nature-based solutions, geospatial imaging needed to implement climate change adaptation and responses to flood and drought. Strong land institutions, including functions of the REC, are necessary to address risk management and adaptation. The current discrepancies between what is recorded in the cadastral, building and infrastructure records, and the reality on the ground, particularly in terms of buildings and infrastructure, undermine planning and policy measures in both of these areas due to uncertainty about what is located where. In this context, REMP 2 activities will enable the improvement of spatial planning tools to inform climate-related decision making by identifying zones vulnerable to climate risks which, in turn, improve land-use planning. This will support Serbia in achieving its climate change adaptation and mitigation objectives. Access to improved geospatial information, which contains climate data on projected trends on flood, drought and rising temperatures, including uniform digital cadastral data in all LCOs and the expansion and integration of GeoSrbija datasets, will contribute to enhanced climate resilient and disaster risk management and recovery, as this will enable GoS entities, non-governmental organizations, and academia to monitor climate change exacerbated floods, drought and rising temperatures and subsequent planning for disaster recovery more effectively (including damage assessment, identification of compensation levels and eligibility, building back better efforts). The Results Framework also includes a dedicated Intermediate Results indicator that will track the number of public institutions in Serbia with access to key geospatial datasets maintained by RGA to improve forecasting and assessment of the consequences of disaster and climate hazard events and inform climate-related decision-making.

33. **Citizen Engagement**. The proposed Project's public awareness campaigns, user satisfaction surveys and related activities will accommodate for all Serbians' needs (elderly, women, etc.) and will use technology (e.g., e-surveys) and dissemination methods (e.g., public awareness campaigns) to maximize citizen engagement. Regular customer satisfaction surveys will collect data to monitor customer's satisfaction with RGA's new products and services developed during REMP 2's implementation, as well as any issues or challenges users face in the process. The development of a Stakeholder Engagement Plan (SEP) as part of the Environment and Social Framework (ESF) commitments will also help to target relevant stakeholders during implementation to ensure their feedback, suggestions, and priorities are also fully reflected in Project activities. The PIU will gather the data for the indicators in the Results Framework with the support of relevant institutions. In addition to administrative data, the Project will generate data on user experience and perceptions through a series of targeted surveys of end users. Surveys will be publicly available and used to engage with stakeholders and the public in a two-way dialogue, in accordance with the World Bank Strategic Framework for Mainstreaming Citizen Engagement in World Bank Operations. Feedback will also be collected via RGA's Help Desk that was developed during REMP 1 that, along with the information from the customer satisfaction surveys, will be used to inform training programs for RGA staff. Additionally, RGA will explore the introduction of user feedback tools as part of its website advancements.

34. **Grievance Redress Mechanism (GRM)**. The GRM established under REMP will continue to be used. The formal and legal two-stage appeal mechanism at RGA (appeals against RGA resolutions to the local office and appeal to the legal department in the RGA head office) allows for feedback and grievances on any issue. A Help Desk will continue to provide information on the status of the appeals. Project specific complaints will be reported to the PIU (office mail and email) and monitored. Finally, RGA will continue to implement "e-complaint", a service available to all citizens to raise any issues related to RGA's work by submitting a short online form.

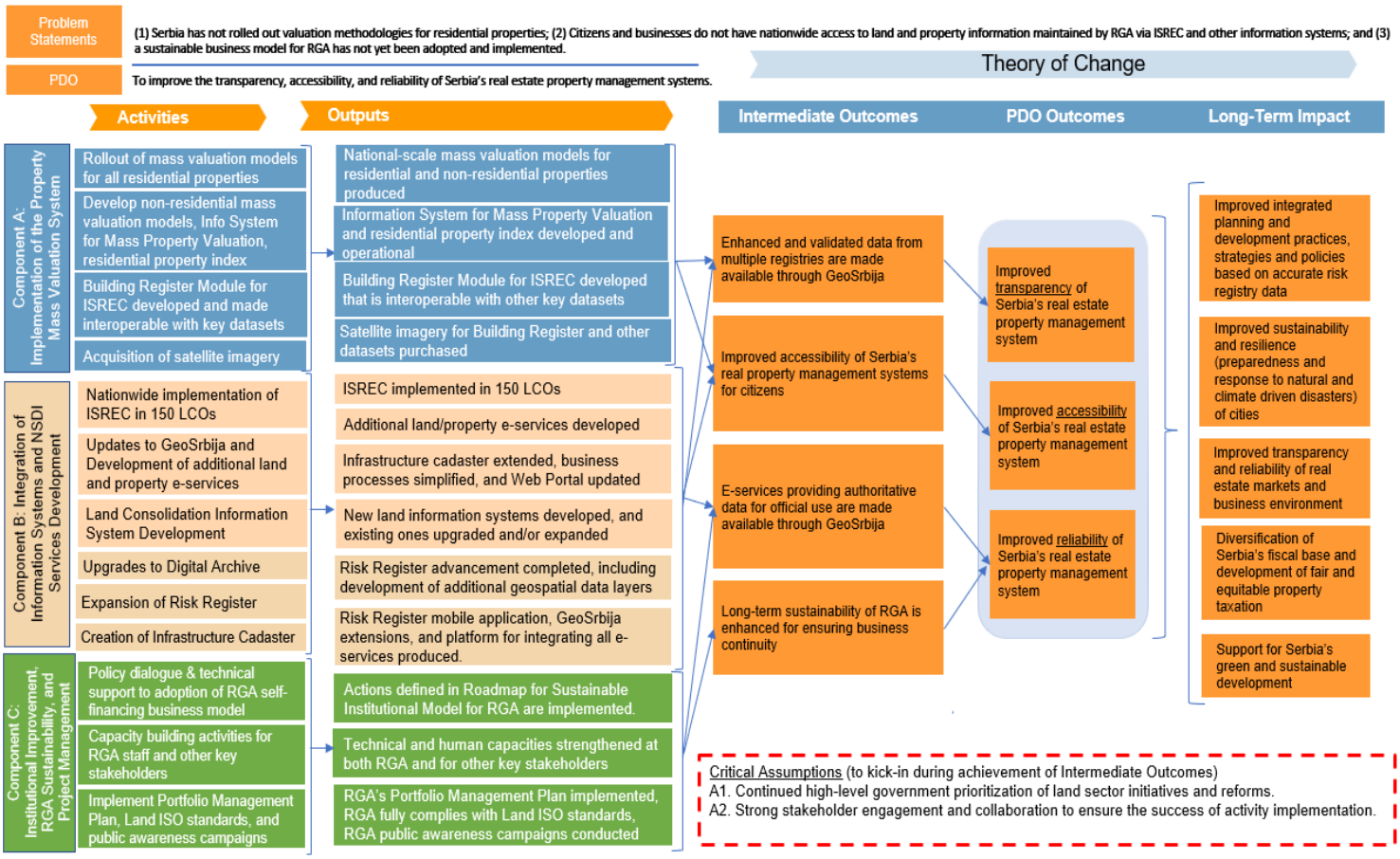
C. Project Beneficiaries

35. The primary beneficiaries of this Project will be Serbia's citizens while the Project-supported activities would also be beneficial for businesses. It is anticipated that clarity of property ownership and improved data about property units will contribute to increased mortgages as well as clarity for insurance companies concerning the determination of premiums in the event of a disaster and the need for citizens to make claims. Private sector decision-makers will also benefit from better access to data about buildings and individual units in making investment and lending decisions. Since businesses use property assets as collateral for raising finance for expansion, improvements in quality of property market information from the collection and publication of more accurate data should result in improved investment in the economy. This has the potential to raise Serbia's property market from its current semi-transparency to being transparent with corresponding benefits in terms of increased investment quality and reduced risk premiums.

36. The Project will also directly benefit decision-makers from all levels of government (local to central), as the breaking down of information silos will facilitate a more collaborative environment between GoS ministries and institutions that maintain key datasets. It is widely recognized that many municipalities in Serbia lack the data they require to enhance disaster response, urban planning and investment plans, and improved and more reliable data about buildings and individual units will help considerably in achieving this. Activities related to cadaster innovations will help key stakeholders in government to better utilize location-based data for planning purposes as well as to achieve their respective objectives in various government strategies such as the Program for Combatting the Grey Economy. The Project's capacity building initiatives will also build the technical expertise of government officials and staff to provide more effective public services throughout Serbia, which includes increased climate resilience of land-use planning that also incorporates less GHG emissive pathways. Long-term sustainable growth in Serbia requires a reduction in the physical, social and economic shocks associated with geophysical and climate change-induced disasters such as flood, drought, and rising temperatures. More broadly, institutions responsible for disaster management and response plans will benefit from expanded data on land and other real estate that incorporate climate data, which is not currently available countrywide, so that urban investments plans are better able to take hazard events into account.

D. Results Chain

37. **Theory of Change**. The proposed Project activities and related outputs and outcomes are expected to contribute toward achievement of the PDO as shown in the diagram below. The key elements in the causal results chain for achieving the PDO are (i) national rollout of mass valuation methodologies for residential properties and development of associated information systems; (ii) further advancement of existing geospatial databases and land information systems at RGA, including the national implementation of ISREC; and (iii) continued support to RGA's long-term financial sustainability, compliance with international standards for land administration, and technical and human capacity building. By doing so, REMP 2 will set stage for turning RGA into a single, accessible, transparent, and reliable source (i.e., a single source of truth) for all land and geospatial information in Serbia and contribute to additional revenue generation, improving spatial and investment planning, enhancing real estate markets, supporting Serbia's climate agenda, and improving governance of land and natural resources for sustainable development in the long term.



E. Rationale for Bank Involvement and Role of Partners

38. The World Bank is uniquely placed to support RGA in executing the Project due to its global experience, financial resources, and technical expertise. The Bank has extensive experience in supporting land administration and geospatial information management systems and processes around the world and can, therefore, provide global best practice and knowledge to support Project design and implementation. The Bank has accumulated broad experience in land administration globally and in the Europe and Central Asia (ECA) region, including from the previous REMP as well as projects supporting cadaster modernization, mass valuation, and NSDI in countries such as Türkiye, Croatia, Moldova, North Macedonia, and Bosnia and Herzegovina. These experiences, combined with the solid technical expertise of RGA developed over the course of the ongoing REMP, provide an excellent opportunity for the World Bank to continue its support to Serbia's land sector through this Project. The Bank also brings to REMP 2 its expertise in catastrophe risk assessment and finance, such as the work undertaken by the Pacific Catastrophe Risk Assessment and Financing Initiative and the work that has been undertaken on increasing community resilience through improved land administration and geospatial information.[13]

39. The proposed Project activities will also build upon, or fully complement, past and ongoing initiatives financed by other development partners. This includes the ongoing Smart Geospatial Data Infrastructure Project, or "SmartSDI", financed by Sida, which is supporting the provision of accurate, complete, and electronically accessible information for the purposes of improving services and increasing transparency. Beneficiaries include land market professionals (lawyers,

[13] World Bank (2013) *Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI): Better Risk Information for Smarter Investments – Risk Assessment – Summary Report*; World Bank (2020) *Solid Ground: Increasing Community Resilience through Improved Land Administration and Geospatial Information*.

surveyors, appraisers) and organizations that deal with mortgages that rely on more accurate and accessible real estate data to provide better services to the public. REMP 2 will also build upon Sida's support to RGA through the implementation of the aforementioned Portfolio Management Plan under Component C. Additionally, Dutch Kadaster, through its Spatial II Project, is supporting RGA with improved data management, sharing and using practices as well as supporting institutional development for the strengthening of its data sharing capacities, all of which are necessary for ensuring the interoperability of the cadaster with other key datasets maintained by other GoS institutions that participate and consume the data offered through the NSDI.

40. The Project also presents an opportunity for learning and generating knowledge that can be shared with other World Bank clients and partners in three critical areas. The first relates to the opportunity for a digital future that utilizes geospatial information in support of planning for a greener, resilient and more sustainable future, and second to ensure that sustainability and improved land administration and management tools are at the heart of long-term resilience and post-disaster recovery initiatives. Third, this Project will focus on central government and local administrations collaboration for data sharing as part of the development of Serbia's NSDI, which will help to establish the entity as a successful example of intergovernmental cooperation in the realm of geospatial information management from which other countries can draw lessons for their own initiatives.

F. Lessons Learned and Reflected in the Project Design

41. The Project design builds on the following key lessons drawn from the first REMP's implementation as well as from international best practice:

42. **Investments in the advancement of NSDI and the further development of key registries pertaining to land and other real estate set the stage for a natural next step concerning support to the advancement of property valuation for revenue generation, improvements in real estate market efficiency and transparency, and disaster risk management**. As illustrated during REMP's implementation, a comprehensive mass valuation of all residential properties based on current market values, a tax register being interoperable with the cadaster and address register, and integrated building records helps to prevent loss of revenues from the evasion of property registration fees by enhancing the GoS's revenue generation through annual property tax assessments that more accurately reflect market values. These also offer the potential for land value capture to support the provision of infrastructure and affordable, quality housing. Revenue from registration fees is diminished through illegal buildings, informal transfers, and inability to check whether declared prices are the true ones as well as creating a climate in which tax evasion and illegality is normalized. For this to be realized, there needs to be a comprehensive mass valuation system based on current market values with regular revaluations. Such a system should be unified, fairer, transparent, and more equitable than current systems.

43. **The integration and interoperability of land and geospatial information systems is a requirement for value addition of location-based data**. REMP 2 is designed to incorporate the global best practice concerning the need for full coverage by a digital database (i.e., ISREC) and its maintenance so that it reflects realities on the ground concerning land and property ownership and use rights. This cadastral database should also be fully interoperable with external authoritative information systems pertaining to topics such as physical addresses, zoning, and spatial planning, as well as civil and business registries. The development of this "Single Source of Truth", which contains the true, current real-world version of spatial data will help to enable geospatial information systems to communicate and exchange data in an accurate, effective, and consistent manner, thereby helping to facilitate the advancement of NSDI. The proposed Project will build on this important lesson from past interventions concerning geospatial information management to ensure the successful further development of ISREC and its interoperability with other systems.

44. **Broad stakeholder engagement and dialogue is crucial for successful institutional reform and long-term sustainability**. Experiences from REMP's implementation as well as past land sector engagements consistently articulate the need to ensure that all affected stakeholders, such as other government entities, are consulted about the impacts of

institutional reforms on their own business processes, institutional mandates, etc. Any real and/or perceived risks associated with the envisioned reforms must also be identified with appropriate mitigation measures defined. In addition to those identified during REMP's implementation, lessons learned from the World Bank's support to institutional reforms and the associated stakeholder engagement and dialogue in neighboring countries such as Türkiye and Greece will be considered as part of the ongoing policy discussions concerning RGA's efforts to become a financially sustainable institution in the long-term.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

45. The Project will be managed by RGA with activities related to RGA's long-term institutional sustainability and project management financed via Component C. RGA has vast experience implementing Bank-financed projects and has built a strong partnership with the World Bank's task team for REMP. A PIU will be housed at RGA and will manage implementation of project activities. The PIU will include civil servants and contracted consultants and will provide day-to-day support for project implementation. The PIU will include a PIU director in addition to a technical team consisting of an office manager, and procurement, financial management (FM), Monitoring and Evaluation (M&E), IT, data protection/cybersecurity, environmental and social specialists, as further described in the Environmental and Social Commitment Plan (ESCP) and the Project Operational Manual (POM). Adherence to the POM and ESCP, approved by the World Bank, will govern the PIU's activities by detailing consultants' and civil servants' expert roles, their responsibilities, and internal processes. The PIU will oversee and monitor all Project operating costs and logistics, all in coordination with RGA management. Additionally, the PIU will be responsible for the preparation, update, and disclosure of ESF documents as well as overall ESF and national legislation compliance throughout Project implementation.

46. While RGA will be solely responsible for REMP 2's implementation, a Steering Committee comprised of Director General of RGA, the relevant RGA sector and department directors whose units are directly related to the Project activities shall be in charge of supervising the regular implementation of activities of REMP 2. A Project Council consisting of members from the Ministry of Construction, Transport, and Infrastructure, the Ministry of Public Administration and Local Self-Government, the Ministry of Finance, the Ministry of Justice, the Ministry of Economy, RGA, the Statistical Office, the Office for IT and e-Government, and the Tax Administration, among other institutions as applicable, will also be established. The Steering Committee will report to the Project Council on a quarterly basis, or as requested by the Project Council. Roles, responsibilities, and operational procedures for the Steering Committee and Project Council will be defined in the POM.

B. Results Monitoring and Evaluation Arrangements

47. Implementation progress towards the PDO will be monitored based on completed procurements, Project disbursements, and achievement of the results indicators. Under the ongoing REMP, the PIU developed a comprehensive M&E system to monitor the progress of the Project activities. This M&E system will be modified as needed to ensure adequate monitoring of the PDO and intermediate results indicators and periodic reporting. In addition to implementation support missions conducted by the Bank every six months, the PIU will be required to submit quarterly progress reports to its management and the Bank for review. A Mid-Term Review will be carried out by the Bank at the mid-point of Project implementation to assess the overall Project progress, identify critical implementation issues, and make any necessary revisions to the Project design or schedule.

C. Sustainability

48. RGA has made vast strides in the improvement and accuracy of cadastral and legal land records as well as the provision of public services over the past two decades. As seen during REMP implementation, it has proven capacity to

implement updates to cadastral and land registry data and has transformed from a paper-based institution into one that utilizes digital technologies for all aspects of its business operations. Moreover, its establishment of a Building Register, advancement of NSDI capacities through the provision of new datasets such as the utility cadaster, and introduction of property valuation methodologies make it one of the leading land administration institutions in the Western Balkans. Nevertheless, the implementation of ISREC in all LCOs, as well the introduction of new property valuation methodologies for residential properties will require capacity building efforts to ensure long-term sustainability. As such, the Project includes financing for capacity building programs for enhancing the knowledge of RGA management and technical staff, stakeholders, and data providers to effectively maintain these new initiatives after Project completion.

49. The sustainability of the advances to be made under REMP 2 are also reinforced by two factors: (i) Serbia's strong high-level political commitment to land sector reform; and (ii) Serbia's ongoing efforts to further EU integration and compliance with key initiatives such as the INSPIRE Directive. RGA also continues to demonstrate commitment and ownership of the reforms. Throughout project preparation, RGA has actively engaged with the Bank through informative discussions and sharing of required data, which also demonstrates its commitment to achieving sustainable project impact.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

50. **Technical**. The land administration system in Serbia has a strong legal framework in place. All current data is in digital form and RGA is intensively working on data quality improvement to strengthen the reliability of land and property data. Service provision is good, with continuous improvements through the introduction of new systems such as GeoSrbija for geospatial information access. Staff are trained, and a comprehensive training program is in place to address needs for any additional capacity building. RGA has strong ownership of the Project and is committed to achieving the project objectives. There is a high level of public perception that the quality and speed of service has improved significantly since REMP implementation began, which has been reflected in the results of past customer satisfaction surveys. RGA has embraced the e-Government agenda that is considered one of the GoS's top priorities. Serbia has also been recognized as the leader on the geospatial agenda in the Western Balkans with strong progress made on advancing NSDI. There is still work to be done to achieve best international standards in terms of harmonizing records and the speed of processing applications, especially within some of the LCOs. This will be addressed via REMP 2's activities. Strong partnerships have also been developed with relevant institutions such as other agencies that report to the Ministry of Construction, Transport and Infrastructure, the Ministry of Justice, the Tax Administration, the Ministry of Interior, the Office for Information Technologies and e-Government, and many others with the goal of developing a strong and reliable land administration system. RGA has also developed strong implementation capacity over the course of REMP implementation.

51. **Paris Alignment**. The operation is aligned with the goals of the Paris Alignment on both mitigation and adaptation. On adaptation, the climate change disaster risk screening has identified floods, drought and extreme temperature as climate risks. The proposed Project aims to address these climate risks by supporting the development and advancement of geospatial information to improve urban planning, land-use zoning, and the siting of critical infrastructure. More specifically, project activities will help to provide important market information for calculating the costs of climate resilient reconstruction and determine insurance premiums in support of crisis preparedness and disaster risk management efforts in Serbia that are led by government entities. The satellite imagery for updated key registries for the Building Register will also feed into RGA's Risk Register and will be directly relevant for the identification of climate impacts such as floods, drought, and extreme temperature along with zones that are most vulnerable to these impacts. Additionally, climate considerations will be integrated into spatial and disaster risk planning, and in targeting climate disaster related evaluation activities for zones that are most vulnerable to these climate impacts.

52. Concerning the reduction of mitigation risks, a crucial mitigation activity highlighted in Serbia's updated NDC is its pledge to cut GHG emissions by 33.3 percent by 2030 compared to 1990 levels. Since this is a land administration project, according to the Paris Alignment guidance notes prepared by the World Bank's Global Practice for Urban, Resilience/Disaster Risk Management, and Land, activities such as the development of geospatial information and property valuation, are considered universally aligned and do not have a negative impact on Serbia's low-GHG emissions development pathway. For instance, no foreseen construction of emission intensive infrastructure is expected to be financed. However, some hardware and equipment such as IT servers will be purchased as part of datacenter expansion initiatives in support of the advancement of Serbia's NSDI initiatives. The new equipment to be purchased via REMP 2 will comply with energy efficiency standards to cut any potential emissions associated with high energy consumption.

53. **Economic and Financial**. The Economic and Financial Analysis (EFA) prepared by the World Bank team reveals that the Project's economic benefits are estimated to significantly exceed its costs, even if only a sub-set of fiscal revenue sources and economic benefits are considered. Reliably quantifying the wide-ranging socio-economic benefits of the Project is challenging without further data collection. However, as the EFA described in Annex 3 shows, REMP 2 is expected to yield substantial financial and wider socio-economic benefits, which are expected to start materializing as soon as the new data is collected, information systems are integrated, and mass valuation is carried out.

54. THE cost-benefit analysis yields an estimated new present financial benefit of EUR 65.92 million associated with REMP 2. This figure is likely to be an underestimate as it only considers the fiscal revenue benefits and not wider socio-economic benefits. The total additional fiscal revenue over an operational period of ten years is estimated at EUR 90.18 million. The estimated benefit assumes a EUR 30 million investment package, a 6 percent discount rate and a planning horizon of 10 years. Since the benefits of the Project are expected to start once implementation has progressed to a level where the Building Register and mass valuation enable a more transparent land and real estate market, the fiscal impacts are expected to start towards the end of the implementation period. The majority of additional fiscal revenue is expected to be generated by increased property tax collection, resulting from a higher compliance rate and taxation of unregistered buildings that were so far avoiding taxation. This is followed by the annual reduction of government spending on disaster-related repair and reconstruction spending.

55. Net benefits are expected to materialize soon after the operationalization of the new land administration systems. The financial analysis assumes that positive fiscal revenues are expected starting in 2030, after the Building Register has been updated and mass valuation of the building stock has been conducted. The Project is expected to breakeven in 2031, only one year after the project implementation phase has ended, resulting from a higher compliance rate and taxation of unregistered buildings that were so far avoiding taxation.

B. Fiduciary

56. **Financial Management (FM)**. The Project will continue to benefit from the appropriate FM arrangements that have been put in place under the ongoing REMP. The existing PIU at RGA for REMP and its Additional Financing will be responsible for implementation of the FM arrangements of REMP 2. These FM arrangements include planning and budgeting, accounting, financial reporting, flow of funds (including disbursement), internal controls, and external audit. The application of the controls and procedures in practice will be verified via World Bank supervision.

57. The existing PIU has acceptable capacity and a track record for meeting project fiduciary expectations. The existing FM arrangements at the PIU are satisfactory, with appropriate staffing, sound internal controls, and effective planning and budgeting, accounting, financial reporting, and disbursement. In particular, the existing FM system (i) ensures use of adequate accounting software; (ii) have no major issues as revealed by the audits of REMP and its Additional Financing; and (iii) has always sent the Interim, Unaudited Financial Reports (IUFRs) on time, all of which were acceptable to the Bank.

58. The PIU will submit a full set of IUFRs for each calendar quarter throughout the life of the Project, which will be due 45 days after the end of each quarter. There is already an acceptable accounting system within the PIU that will be used for project accounting and reporting, including principal financial reports used as quarterly IUFRs as well as annual project financial statements.

59. The annual audited project financial statements will be provided to the World Bank within six months of the end of each fiscal year and at Project closing. The audit will be conducted by a private auditing firm acceptable to the world Bank, and in line with agreed Terms of Reference (TORs). The audited project financial statements will be posted by RGA on its website within two weeks of the audit report's acceptance by the World bank.

60. The Designated Account (DA) for administering the Project funds will be opened at the National Bank of Serbia (NBS) in EUR and will be managed by RGA. The corresponding Serbian dinar (RSD) account will be opened at the Treasury Administration. The control environment in the NBS and the Treasury is considered acceptable. Allowed methods of disbursement will include advances to the DA, direct payments, reimbursement, and special commitments.

61. The overall FM risk for REMP 2 is Moderate, based on the above-referenced arrangements and the Project design. In order to finalize the FM arrangements, a POM acceptable to the World Bank will be prepared. The POM will provide more details on the implementation of the FM arrangements and the effective communication channels and reporting lines between RGA, the PIU, and other involved parties.

62. **Procurement**. Procurement for REMP 2 will be carried out by the PIU at RGA and in accordance with the World Bank Procurement Regulations for IPF Borrowers (Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services, Fifth Edition, September 2023) and the provisions stipulated in the Loan Agreement. The Bank's Standard Procurement Documents, including evaluation report forms for procurement of Goods, Civil Works, Non-Consulting Services and Selection of Consultants will be used. Procurement for the Project will be carried out by three Procurement Specialists[14]. RGA will ensure that this procurement arrangement remains throughout the implementation of REMP 2. The PIU has some experience with implementing the World Bank Procurement Regulations given that REMP 1 was largely implemented using the World Bank's Procurement Regulations for IPF Borrowers: Procurement in Investment Project Financing – Goods, Works, Non-Consulting and Consulting Services (August 2018). However, there is a lack of experience in applying some of the new features from the latest edition of the Procurement Regulations, such as mandatory use of rated criteria for all international competitive biddings, which may be considered a potential procurement risk that can be mitigated by training PIU and RGA staff who will be involved in the procurement of activities during REMP 2's implementation.

63. The procurement risks rating for REMP 2 is Moderate. A Project Procurement Strategy for Development (PPSD) was finalized by the Borrower and the World Bank reviewed it on April 25, 2024. The assessed procurement risks and mitigation measures are described in Table 1. The initial procurement plan for the Project is presented in Annex 1.

64. The Procurement Plan prepared by the PIU as part of the PPSD includes activities/packages to be financed under Components A, B, and C of REMP 2. Project procurement communication and Procurement Plan implementation will be performed through the Systematic Tracking of Exchanges in Procurement (STEP) system. The Procurement Plan shall set forth those contracts that will be subject to the World Bank's prior review. All other contracts shall be subject to post review by the World Bank.

65. Based on the market analysis presented in the PPSD, the PIU has identified that one of the procurement items estimated to cost EUR 3.5 million (i.e., the very high-resolution satellite imagery) could be delivered by only one company; justification for the proposed direct selection for this contract, as well as for any other contract proposed for direct selection, will be provided by the PIU in accordance with the provisions of the World Bank Procurement Regulations.

[14] One Senior Procurement Specialist/Deputy Director; ne Procurement Specialist/Environmental Specialist; one Procurement Specialist.

66. Additionally, prior to signing a contract with a state-owned enterprise should the necessity arise during project implementation, the eligibility of the company should be verified to ensure that it is eligible, otherwise a proper justification shall be prepared and submitted to the Bank's procurement authorities with a request to grant a waiver. The justification should be based on the confirmation that implementation of the Project requires awarding a contract to an otherwise ineligible state-owned enterprise due to the absence of suitable private sector alternatives, or as a consequence of the regulatory framework, or because their participation is critical to Project implementation.

Table 1: Key Procurement Risks and Proposed Mitigation

Risks	Mitigation Measures
Lack of experience in applying the provisions of the latest edition of the World Bank's Procurement Regulations due to REMP 1 use the regulations' August 2018 edition.	Conduct training on the provisions of the latest edition of the Bank's Procurement Regulations for the PIU and RGA staff involved in the Project-financed procurement activities.
Poor capacity in preparation of Terms of Reference and technical specifications for Project-financed procurement.	PIU/RGA will hire consultants/experts to improve in-house capacity.
Lengthy evaluation process of high-value and complex procurement packages.	PIU/RGA will engage technical consultants in evaluations when needed.
Low level of participation in Project-financed procurements.	Ensure broader advertisement (in the local and international media) of the Project-financed contracting opportunities and provide sufficient time for bid/proposal preparation.

C. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

D. Environmental and Social

67. **Overall Environmental and Social (E&S) risk of the Project is Moderate**. The Project is not expected to have significant adverse environmental impacts, as it will mostly support desk-based work, (i.e., software development for the development of a mass valuation system for residential properties; digital transformation of RGA; improvement of cybersecurity, data and systems protection and recovery, etc.). The Project will not support any civil works. It was confirmed that the initially planned activity related to drone purchase and usage has been dropped. The only potential indirect adverse environmental risk and impacts might arise from IT infrastructure upgrades (including the supply of hardware, servers, block storage, etc.). These issues can be effectively mitigated by aligning with the national regulatory framework and incorporating provisions under the Environmental and Social Commitment Plan (ESCP) for: (i) energy efficiency standards for hardware appliances; and (ii) the management of electrical and electronic equipment waste (e-waste). Although not confirmed, there may be a possibility for a small-scale retrofitting works (e.g., for the server room) that could be linked to the hardware installation. Any identified environmental risks and impacts (e.g., dust, noise, waste, OHS) and mitigation measures will be addressed in the ESMPs checklist to be prepared prior to the commencement of

works. On the other hand, the Project will bring some positive environmental and climate change impacts as the activities under Component B (Integration of Information Systems and NSDI Services Development) will track urbanization and urban sprawl trends, which strain infrastructure and deplete carbon sinks. Public agencies will utilize information from the advanced GeoSrbija National Geoportal, which enables interoperability and data sharing among various agencies) for disaster simulations, land use planning, and climate-smart decision-making.

68. Overall, the adverse environmental risks and impacts associated with this Project are anticipated to be minimal or negligible in scope. Consequently, the environmental risk rating is assessed as Low.

69. Social risk is considered Moderate. The Project involves various activities related to land tenure systems, including mass valuation, updating building registry, and digitalization of cadaster services. The main social risks identified are (i) concerns regarding fairness, particularly in addressing the unique needs and challenges of vulnerable groups within this context; and (ii) downstream risks related to potential land disputes associated with insufficient transparency and accuracy in the mass valuation system and its results. Financing of drones has been excluded from the Project. In the appraisal stage, it has also been clarified that digitalization will not lead to any job displacement. Project activities will not directly influence any potential land disputes. Any downstream risks of land disputes potentially triggered by mass valuation will be prevented or mitigated through various measures such as establishment of clear processes, accurate data collection, stakeholder engagement, grievance mechanisms, ensuring legal alignment, and technology integration. These measures will be further elaborated in the POM to ultimately mitigate the likelihood of misinterpretation and disputes arising. RGA will not carry out formal registration of informal properties but will record them in their system, which will allow the GoS to get an understanding of the type of irregularities and illegalities. Mass valuation aims for a fairer tax system by addressing existing inequalities, but it may inadvertently exacerbate disparities by disproportionately valuing properties in certain areas or demographic groups. Undervaluation of properties in certain areas (often those with lower incomes or predominantly occupied by certain demographic groups) can hinder homeowners' access to credit and other financial resources, while overvaluation may burden homeowners with higher taxes or limit affordable housing options, which is particularly unfavorable for the poor. To achieve fair valuation, RGA will utilize accurate data, consider socioeconomic disparities and vulnerable groups, involve stakeholders, continuously update methods, and implement oversight for ensuring transparency and accountability. In this process, RGA will follow international best practices established by the International Association of Assessing Officers, as well as adhere to International Valuation Standards and European Valuation Standards. These standards, adopted by Serbia, include ethical guidelines and professional codes of conduct that are binding for all valuers involved in mass valuation and will guide system development. To prevent potential misunderstandings, the Project will utilize transparent and standardized valuation methodologies, clearly documented, and widely understood. Information pertaining to the valuation process will be easily accessible to the public, potentially through official websites, including details such as valuation criteria and assessment results. Mechanisms for addressing grievances and resolving misinformation during mass valuation will be established, with all procedures outlined in the POM and SEP. The SEP, prepared for stakeholder and citizen engagement, prioritizes reaching vulnerable groups with tailored strategies. A Social Specialist from existing staff will be appointed to oversee SEP implementation. The Building Register will not contain original satellite imagery but electronic versions. Overall, social risk of the Project is moderate but reversible. The existing legal framework, ESCP and SEP, will be applied, as appropriate, for effective risk management.

70. Technical design risk. The Project involves the collection and processing of sensitive personal data. All data protection and cybersecurity risks will be addressed by implementing national laws and regulations including in the design of the GeoSrbija system (access controls including authentication of users, cyberthreat monitoring software, etc.). A recent audit by the Serbian data protection authority determined the design of the platform complied with legal requirements. In line with ISO standards 9001 (Quality management systems), 27001 (Information security, cybersecurity, and privacy protection), and 27701 (Privacy information management systems), RGA maintains rigorous data protection protocols and tools, including multiple firewalls, Endpoint Detection and Response, a Security Information and Event Management tool,

and "SOC 24/7", which is an operational and security management center that provides continuous protection and monitoring of information systems and networks. A detailed description of all of RGA's data protection protocols and tools can be found in Annex 4. Data protection and data and cybersecurity specialists will also be recruited to oversee data protection policy and regulation compliance for all outputs to be developed during REMP 2's implementation. To address potential digital divide in accessing digital services, the Project will draw upon international guidelines and successful practices from the previous REMP. This may include collecting data on digital access and usage, providing support and adapting the system to accommodate the needs of diverse vulnerable groups.

V. GRIEVANCE REDRESS SERVICES

71. ***Grievance Redress.*** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank'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 Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, visit https://accountability.worldbank.org.

VI. KEY RISKS

72. **The overall residual Project risk is considered Moderate** based on adopted and planned mitigation measures. Upon review of risks pertaining to Political and Governance, the Macroeconomy, Sector Strategies and Policies, Technical Design of Project or Program, Institutional Capacity for Implementation and Sustainability, and Stakeholders, it was determined that they are inherently moderate risks.

73. **The combined Fiduciary rating for Procurement and FM is Moderate**. RGA has established fiduciary systems and capacity for REMP 2. As noted in the Fiduciary section above, both Procurement and FM risks are rated Moderate. The task team will work closely with RGA to improve capacities and make any modifications to existing fiduciary arrangements as needed throughout Project implementation.

74. **E&S risk is rated Moderate**. The environmental risk is rated as Low, and the social risk is rated as Moderate. Therefore, the overall E&S risk is rated as Moderate. A detailed explanation of the assessment of these risks and assigned rating is presented in the E&S section above.

VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Closing Period
Improved transparency of Serbia's real property management systems	
Enhanced data from multiple registries available via GeoSrbija (Text)	
Jul/2024	Jul/2029
Data available on multiple non-integrated registries and not interoperable and/or accessible through one aggregated source	Validated data from multiple registries available and interoperable via GeoSrbija.
Improved accessibility of Serbia's real property management systems	
Population with access to property services (Percentage)	
Jul/2024	Jul/2029
40	90
Improved reliability of Serbia's real property management systems	
E-services providing authoritative data for official use through GeoSrbija (Number)	
Jul/2024	Jul/2029
2	40
RGA's institutional sustainability enhanced to ensure business continuity (Text)	
Jul/2024	Jul/2029
Strategic and methodological documents in support of sustainability not adopted or implemented	RGA's Strategy and Business Plans for Institutional Sustainability are adopted, Roadmap is updated, and Portfolio Management Plan is Implemented

Intermediate Indicators by Components

Baseline	Closing Period
Component A: Implementation of the Property Mass Valuation System	
Population living in a city or municipality for which residential mass valuation models have been developed and are ready to be used (Percentage)	
Jun/2024	Jun/2029
0	85

Online access to mass valuation information system by municipalities, government authorities, citizens, and businesses (Text)	
Jul/2024	Jul/2029
No access	Data is made available through (i) Mass Property Valuation Data Distribution Services; and (ii) Market Information Data Distribution Services
Residential property price indexes are published on a quarterly basis (Yes/No)	
Jul/2024	Jul/2029
No	Yes
Improvement, updating, and upgrading of the Building Register (Text)	
Jun/2024	Jun/2029
Initial Building Register created	Building Register upgraded and made interoperable with other key datasets
Component B: Integration of Information Systems and NSDI Services Development	
LCOs using the Integrated System for Real Estate Cadaster (ISREC -- Phase III) (Percentage)	
Jun/2024	Jun/2029
25	90
RGA units using the Infrastructure Cadaster System (Percentage)	
Jun/2024	Jun/2029
0	100
Women with land rights confirmed as a result of ISREC property data completion (Number)	
Jul/2024	Jul/2029
0	120000
Public institutions with access to key geospatial datasets to improve forecasting and assessment of the consequences of disaster and climate hazard events and inform climate-related decision-making (Number)	
Jun/2024	Jun/2029
0	5
People using digitally enabled services (Number)	
Jun/2024	Jun/2029
0	30000
Component C: Institutional Improvement, RGA Sustainability, and Project Management	
Public awareness campaigns completed for new RGA products and services (Number)	
Jun/2024	Jun/2029
0	40
Persons who participate in capacity building programs (Number)	
Jun/2024	Jun/2029
0	2500

➢Women who participate in capacity building programs (Percentage)	
Jul/2024	Jul/2029
0	30
Users' and stakeholders' satisfaction with respect to the efficiency, transparency, access, and reliability of RGA's delivery of new services (Percentage)	
Jun/2024	Jun/2029
0	90

Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Improved transparency of Serbia's real property management systems	
Enhanced data from multiple registries available via GeoSrbija (Text)	
Description	This indicator will measure improvements in the transparency and accessibility of Serbia's property data through the interoperability of key registries such as the Address registry, Building Register, Sales Price Register, etc., with relevant validated data available via GeoSrbija.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Improved accessibility of Serbia's real property management systems	
Population with access to property services (Percentage)	
Description	This indicator will measure the percentage of Serbia's population with access to the lates property registration and transactions services as a result of the implementation of ISREC to an additional 110 LCOs as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Improved reliability of Serbia's real property management systems	
E-services providing authoritative data for official use through GeoSrbija (Number)	
Description	This indicator will measure the number of e-services produced for the use of reliable, authoritative datasets for official use through RGA's distribution platform (GeoSrbija) as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
RGA's institutional sustainability enhanced to ensure business continuity (Text)	
Description	This indicator will track the transformation of RGA into a sustainable, self-financing institution as a result of policy dialogue support throughout the Project. To measure RGA's sustainability, progress will tracked based on (i) the adoption of RGA's Strategy and Business Plans for Institutional Sustainability by the GoS; (ii) updates to RGA's Roadmap; and (iii) the implementation of the Portfolio Management Plan.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Component A: Implementation of the Property Mass Valuation System
Population living in a city or municipality for which residential mass valuation models have been developed and are ready to be used

(Percentage)	
Description	This indicator will measure the percentage of Serbia's population living in a city or municipality for which residential mass valuation models have been developed and are ready to be used.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Online access to mass valuation information system by municipalities, government authorities, citizens, and businesses (Text)	
Description	This indicator will track progress towards the development and operationalization of data and services provided via the mass valuation information system to be established as a result of the Project. It will monitor the types of services that will be tailored for use by municipalities, government authorities, citizens, and businesses. The indicator will be considered achieved upon development and operationalization of (i) Mass Property Valuation Data Distribution Services; and (ii) Market Information Data Distribution Services.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Residential property price indexes are published on a quarterly basis (Yes/No)	
Description	This indicator will track the development and regular publication of residential property price indexes on a quarterly basis as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Improvement, updating, and upgrading of the Building Register (Text)	
Description	This indicator will track the further development of the Building Register maintained by RGA as a result of the Project. Progress will be mesaured through the Building Register's interoperability with other key datasets maintained by RGA as well as its upgrades in the form of data quality improvement and service provision.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Component B: Integration of Information Systems and NSDI Services Development	
LCOs using the Integrated System for Real Estate Cadaster (ISREC -- Phase III) (Percentage)	
Description	This indicator will measure progress on the national implementation of ISREC as a result of the Project, by monitoring and reporting the share of LCOs using the Integrated System of Real Estate Cadaster.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**

RGA units using the Infrastructure Cadaster System (Percentage)	
Description	This indicator will measure the percentage of RGA units that use the Infrastructure Cadaster System to be established during the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Women with land rights confirmed as a result of ISREC property data completion (Number)	
Description	This indicator will measure the number of women who will have their land rights confirmed upon the completion of land ownership information as a result of the recordation of their unique ID number as a result of the Project. As the indicator will measure the number of women beneficiaries as a result of REMP 2 specifically, the baseline is set at 0 with an end target of 120,000.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Public institutions with access to key geospatial datasets to improve forecasting and assessment of the consequences of disaster and climate hazard events and inform climate-related decision-making (Number)	
Description	This indicator will measure the number of Public institutions with access to key geospatial datasets and other products and services developed during the Project to improve forecasting and assessment of the consequences of disaster and climate hazard events and inform climate-related decision-making.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
People using digitally enabled services (Number)	
Description	This World Bank Group Scorecard indicator will measure the number of people or businesses who use new or enhanced, digitally-enabled services through World Bank Group support, including new, digitally-enabled services as well as enhancements to existing, digitally-delivered services, provided by the public or private sector.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Component C: Institutional Improvement, RGA Sustainability, and Project Management	
Public awareness campaigns completed for new RGA products and services (Number)	
Description	This indicator will measure the number of public awareness campaigns completed for new RGA products and services developed as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data	**RGA**

Collection	
Persons who participate in capacity building programs (Number)	
Description	This indicator will measure the number of persons (RGA technical staff, other stakeholders) who participate in capacity building programs for new products and services to be developed as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Women who participate in capacity building programs (Percentage)	
Description	This indicator will measure the percentage of woman out of the total number of persons (RGA technical staff, other stakeholders) who participate in capacity building programs for new products and services to be developed as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Users' and stakeholders' satisfaction with respect to the efficiency, transparency, access, and reliability of RGA's delivery of new services (Percentage)	
Description	This indicator will measure the percentage of satisfaction of users and stakeholders with respect to access and quality of new products and services that will be developed by RGA as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**
Women users' and stakeholders' satisfaction with respect to the efficiency, transparency, access, and reliability of RGA's delivery of new services (Percentage)	
Description	This indicator will measure the percentage of satisfaction of users and stakeholders with respect to access and quality of new products and services that will be developed by RGA as a result of the Project.
Frequency	**Semi-annual**
Data source	**RGA**
Methodology for Data Collection	**Progress Reports**
Responsibility for Data Collection	**RGA**

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Republic of Serbia
Second Real Estate Management Project

Institutional and Implementation Arrangements

1. The main institution responsible for implementing REMP 2 will be RGA, with the General Director of RGA having the ultimate responsibility for the Project. RGA has built significant implementation capacity over the years, and this will be an asset in implementing the proposed Project efficiently. The Project Implementation Unit (PIU) to be financed via Component C will be in charge of the day-to-day management of the Project and will be comprised of a team leader (i.e., project manager) and a team of technical and administrative staff capable of ensuring efficient Project implementation. The PIU will include a PIU director in addition to a technical team consisting of an office manager, and procurement, FM, M&E, IT, data protection/cybersecurity, environmental and social specialists, as further described in the ESCP and the POM. Adherence to the POM and ESCP, approved by the World Bank, will govern the PIU's activities by detailing consultants' and civil servants' expert roles, their responsibilities, and internal processes. The PIU will prepare the procurement packages for the Project activities. It will also help coordinate and oversee the implementation teams and will work with other teams working on complementary project/TA financed outside of REMP 2. The PIU will be responsible for the preparation of the Terms of Reference for technical experts who will be recruited for the implementation teams. The M&E Specialist will be responsible for the preparation of the M&E framework and design of the reporting templates, which will be used by the implementation teams to provide timely and accurate information on the progress with the achievement of results throughout Project implementation. Additionally, the PIU will be responsible for the preparation, update, and disclosure of ESF documents as well as overall ESF and national legislation compliance throughout Project implementation.

2. While RGA will be solely responsible for REMP 2's implementation, a Steering Committee comprised of Director General of RGA, the relevant RGA sector and department directors whose units are directly related to the Project activities shall be in charge of supervising the regular implementation of activities. A Project Council consisting of members from the Ministry of Construction, Transport, and Infrastructure, the Ministry of Public Administration and Local Self-Government, the Ministry of Finance, the Ministry of Justice, the Ministry of Economy, RGA, the Statistical Office, the Office for IT and e-Government, and the Tax Administration will also be established. The Steering Committee will report to the Project Council on a quarterly basis, or as requested by the Project Council. Roles, responsibilities, and operational procedures for the Steering Committee and Project Council will be defined in the POM.

3. **Annual Workplan**. Based on the information concerning agency prioritization, Project assessments and financial audits, the PIU will prepare an annual workplan and budget to be submitted at the end of the previous calendar year, which will include (i) all activities to be carried out under REMP 2 during the following year; (ii) other TA or training activities that may be required under the Project, including the purpose, cost and type of training and draft Terms of Reference; and (iii) a proposed financing plan. Each annual workplan will be discussed with, and approved by, the World Bank.

Financial Management and Disbursement

4. ***Implementing Entity and Staffing***. The existing PIU at RGA for REMP and its Additional Financing will be responsible for the implementation of the Project's FM arrangements. The team responsible for the Project's FM arrangements at the PIU is staffing with an FM Specialist and FM Assistant—the same staff who have been implementing REMP and its Additional Financing that will close on July 31, 2024. The FM team will perform tasks related to planning and

budgeting, accounting, financial reporting, disbursement, and ensuring application of internal controls, and will work with the external auditors during the audit of financial statements.

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

6. ***Accounting System***. Acceptable accounting software is in place and administered by the PIU, and it will be used for project accounting and reporting. Accounting records should include appropriate analytics of expenditures per contracts and each specific payment. The Project will follow a cash basis of accounting (cash based IPSAS), recording transactions when actual payments are done, rather than when they are incurred. Transactions should be accounted for within 8 days after incurring them. There should also be appropriate back-up of accounting records on external drives, as well as appropriate security regulation regarding access and editing rights of the financial information.

7. ***Internal Controls***. Some of the key controls to be applied for the Project should include:

(i) Appropriate authorizations and approvals of all purchases, relevant documentation, transactions of payments, etc.;
(ii) Segregation of duties so that different persons are responsible for different phases of a transaction;
(iii) Reconciliations between project accounting records and other relevant sources of information (Client Connection, bank account statements, etc.) performed at least monthly by senior finance staff; and
(iv) Original documentation supporting all project transactions is properly filed.

8. The POM will provide more details on the design of the internal controls processes and procedures as well as their application in practice.

9. ***Contract Management***. Respective technical staff at the PIU will evaluate and select contractors, act as signatory to the contracts, letters of acceptance of goods and services and monitor and evaluate the contract implementation and quality of deliverables. The FM staff will perform checks and controls of contract commitments, payments due under each contract, and review invoices and the accompanying documentation for correctness and completeness. Upon technical staff acceptance and approval of the goods received and services rendered, the FM staff will process payments to contractors and account for the transactions.

10. ***Financial Reporting***. The PIU will submit a full set of IUFRs consolidated for all project components and sub-components for each calendar quarter throughout the life of the Project. The IUFRs will be due 45 days after the end of each quarter. The format of the IUFRs will be agreed between the GoS and the World Bank and attached the POM. The following financial reports will be submitted to the Bank:

- The Statement of Sources and Uses;
- The Statement of Expenditure by Activity;
- Designated Accounts Statements; and
- Notes to the Statements.

11. The PIU has acceptable accounting software that will be used for project accounting and reporting, including quarterly IUFRs and annual project financial statements.

12. ***External Audit***. The annual audit of the project financial statements will be conducted by a private audit firm acceptable to the World Bank in line with agreed TORs. The TOR will be agreed between the GoS and the World Bank and attached to the POM.

13. The audit of the project financial statements will be funded by REMP 2. The audit report will be submitted to the World Bank no later than six months after the end of the audited period. The audited project financial statements will be posted on the RGA website within two weeks upon the audit report being accepted by the World Bank.

14. ***Financial Management Covenants***. The FM covenants for REMP 2 will be as follows:

(i) The PIU is to maintain an adequate financial management system;
(ii) The PIU is to prepare IUFRs for each calendar quarter and deliver to the Bank no later than 45 days after the end of the reporting quarter.
(iii) Annual project financial statements audited by a private audit firm acceptable to the Bank and such audit is to be delivered to the Bank not later than six months after the end of the audited period.

15. ***Funds Flow and Disbursement Arrangements***. Project funds will flow from the World Bank Loan Account to the DA opened by RGA at the NBS. This will be a foreign currency account (EUR) from which the funds will be withdrawn and will be used only for the purpose of inflows and outflows under respective project components. Payments in foreign currency to contractors based abroad will be executed directly from the DA. Funds needed for payments in local currency will be transferred to a corresponding Serbian dinar (RSD) account opened at the Treasury for the same purpose. RGA will prepare withdrawal applications for the replenishment of the DA. Allowed methods of disbursement will be advances to the DA, direct payments, reimbursement, and special commitments.

16. The ceiling for the DA will be defined in the Disbursement and Financial Information Letter (DFIL) that accompanies the Loan Agreement. Applications for replenishment of the DA will be submitted monthly or when one-third of the amount has been withdrawn, whichever occurs first. Documentation requirements for replenishment would follow standard Bank procedures as described in the Disbursement Handbook. Before funds from the Loan Account may be withdrawn or committed, the authorized representative of the implementing entities, as designated in the Loan Agreement, must furnish to the world Bank, electronically through the Client Connection website (http://clientconnection.worldbank.org), or through an authorized signatory designation letter, the names of the officials authorized (i) to sign and submit applications for withdrawal; and (ii) to receive Secure Identification Credentials (SIDC) from the World Bank.

17. ***Financial Management Supervision Plan***. During project implementation, the World Bank will supervise the Project's FM arrangements in two main ways: (i) review the Project's IUFRs for each calendar quarter, as well as the Project's annual audited financial statements and auditor's management letter; and (ii) perform on-site supervisions, review the Project's FM and disbursement arrangements to ensure compliance with the Bank's minimum requirements. The on-site supervision will include monitoring of agreed actions, review of randomly selected transactions, review internal controls, and other specific supervision activities. Supervision will be performed by the Bank-accredited FM Specialist.

Procurement Arrangements

18. ***As per the requirements of the Bank's Procurement Regulations***, a Project Procurement Strategy Document (PPSD) has been developed by the PIU and reviewed by the World Bank on April 25, 2024. Market analysis has been carried out for different packages of procurement, and, based on the findings, decisions on the packages and lots have been finalized for goods and technical services to ensure adequate participation of bidders. Consultancy contracts are also framed based on market research and packaging in terms of scope and services.

19. ***General Procurement Notices*** will be prepared by the PIU based on the template available at the World Bank's website and submitted to the World Bank to arrange for publication in the United Nations Development Business online and on the World Bank's external website after the loan negotiations.

20. ***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 Section VI. Approved Selection Methods: Goods, Works, Non-Consulting Services of the Procurement Regulations.

21. Based on the market analysis presented in the PPSD, the PIU has identified that one of the items in the Procurement Plan (i.e., Procurement of satellite imagery, estimated to cost EUR 3.5 million) could be delivered by only one company under the Direct Selection method. Justification for this proposed direct selection as well as for direct selection proposed for any other contract during project implementation, will be provided by the PIU in accordance with the World Bank Procurement Regulations.

22. Additionally, prior to signing a contract with any state-owned enterprise should the necessity arise during project implementation, the eligibility of the company should be verified to make sure that it is eligible, otherwise a proper justification shall be prepared and submitted to the Bank's procurement authorities with a request to grant a waiver. The justification should be based on the confirmation that implementation of the Project requires awarding a contract to an otherwise ineligible state-owned enterprise due to the absence of suitable private sector alternatives, or as a consequence of the regulatory framework, or because their participation is critical to project implementation.

23. IT systems procurement will use the World Bank's Standard Procurement Documents (Initial Selection Document, Request for Proposals Single Stage/Request for Proposals Two Stage). The draft PPSD makes reference to the available robust international market for IT procurement and specifies that procurement notices will be published locally and internationally.

24. ***Procurement of consulting services*** will use the World Bank standard procurement documents. Following provisions of the Procurement Regulations, Section VII, "Approved Selection Methods: Consulting Services", the selection methods to be used are (i) Quality- and Cost-Based Selection; (ii) Least Cost Selection; (iii) Fixed Budget Selection; (iv) Quality Based Selection; (v) Consultant's Qualifications Based Selection; and (vi) Direct Selection. Individual consultants are selected from those that expressed interest in response to a Request for Expression of Interest or through limited competitive selection. For direct selection of individual consultants, due justifications under the circumstances, as specified in Paragraph 7.39 of Section VII of the Regulations, apply.

25. ***Operating Costs***. The activities to be financed by the Project (as defined in the Loan Agreement) will be procured in compliance with the POM that will be reviewed and found acceptable to the Bank.

26. ***Post-Review Percentages and Frequency***. Contracts not subject to the Bank's prior review will be subject to post review by the World Bank's Procurement Specialist assigned to the Project. Post review of contracts will be carried out once per year. At a minimum, one out of five contracts will be randomly selected for post review. Physical inspection will be conducted for at least 10 percent of the contracts.

Table 1: Initial Project Procurement Plan

Item #	Activity #	COMPONENTS / ACTIVITIES IN REMP-2	Cost estimation in EUR (IBRD)	Type	Proc Method	Pcks	Prior/Post

1.	***A***	***Component A – Implementation of the property mass valuation system***					
2.	**A.1**	Subcomponent A1. Support to Mass Valuation for Residential and Non-Residential Properties					
3.	**A.1.1**	*Consultant for Sales Price Register data entry*					
4.	A.1.1.1	Consultant for Sales Price Register data entry and verification(14 local consultants)	800,000	CS	DS	Multi	Post
5.	A.1.1.1a	Consultant for Sales Price Register data entry and verification(4 local consultants)	200,000	CS	IC	Multi	Post
6.	A.1.1.2	Consultant for the QC of the Sales Price Register data (6 local consultants)	406,000	CS	DS	Multi	Post
7.	A.1.1.2a	Consultant for the QC of the Sales Price Register data (4 local consultants)	200,000	CS	IC	Multi	Post
8.	**A.1.2**	Consultant for data analysis & modeling services (1 local consultant)	125,000	CS	DS	Single	Post
9.	**A.1.2 a**	Consultant for data analysis & modeling services (1 local consultant)	125,000	CS	IC	Single	Post
10.	**A.1.3**	Coordinator for pilot municipalities (2 local consultants)	144,000	CS	DS	Multi	Post
11.	**A.1.4**	International consultant for Mass Valuation (1 international consultant)	200,000	CS	DS	Single	Post
12.	**A.1.5**	Information system for Mass Valuation	1,200,000	IT	RfP	Single	Post
13.		**Sub-total for subcomponent A1**	**3,400,000**				
14.	**A.2**	Subcomponent A.2 Building Register Advancement					
15.	**A.2.1**	Record on identified changes on buildings	500,000	IT	RfP	Single	Post

16.	**A.2.2**	Procurement of the Satellite imagery	3,500,000	G	DS	Single	Prior
17.		**Subtotal for subcomponent A2**	**4,000,000**				
18.		***Total Costs for Component A***	**7,400,000**				
19.	***B***	***Component B - Integration of information systems and NSDI services development***					
20.	**B.1**	Subcomponent B.1 Further Development and Rollout of the Integrated System for Real Estate Cadaster.					
21.	**B.1.1**	National Information System of Real Estate Cadaster	3,000,000	IT	DS	Single	Prior
22.	B.**1.2**	Information system for infrastructure	1,100,000	IT	RfP	Single	Post
23.	B.**1.3**	Information system for land consolidation	1,600,000	IT	RfP	Single	Post
24.	B.**1.4**	3D cadaster study	200,000	IT	CQS	Single	Post
25.	**B.1.5**	Procurement of Hardware (servers, storage, routers, workstations...)					
26.	B.1.5.1	Procurement of Hardware (servers, storage, routers,…)	3,000,000	G	RfB	Single	Post
27.	B.1.5.2	Procurement of Hardware (workstations, scanners...)	1,100,000	G	RfB	Multi	Post
28.	**B1.6**	Disaster recovery system of the RGA	1,500,000	G	RfP	Single	Post
29.	**B1.7**	Cyber security system of the RGA	1,500,000	G	RfP	Single	Post
30.	**B1.8**	Improvement of the RGA IT system(s)	1,300,000	IT	RfP	Multi	Post
31.	**B1.9**	ICT Individual consultant					
32.	B1.9.1	Support to data migration and IT training (5 local consultants)	450,000	CS	DS	Multi	Post
33.	B1.9.1a	Support to data migration and IT training (3 local consultants)	220,000	CS	IC	Multi	Post
34.	B1.9.2	Support to technical infrastructure at the local offices (8 local consultants)	510,000	CS	DS	Multi	Post

35.	B1.9.2a	Support to technical infrastructure at the local offices (2 local consultants)	120,000	CS	IC	Multi	Post
36.	B1.9.3	Graphical Data Quality improvement - (18 local consultants)	900,000	CS	DS	Multi	Post
37.	B1.9.3a	Graphical Data Quality improvement - (2 local consultants)	115,000	CS	IC	Multi	Post
38.	B1.9.4	Support to data preparation and testing prior migration	120,000	CS	DS	Single	Post
39.	B1.9.5	Infrastructure Cadaster Contract Management and quality assurance expert	90,000	CS	DS	Single	Post
40.	**B1.10**	Supervision, coordination, quality control of IT implementation					
41.	B1.10.1	Supervision and coordination of IT implementation	90,000	CS	CQS	Single	Post
42.	B1.10.2	Quality Assurance and Quality Control	150,000	CS	CQS	Multi	Post
43.		**Subtotal for subcomponent B1**	**17,065,000**				
44.	**B.2**	**Subcomponent B.2 Support to the National Spatial Data Infrastructure**					
45.	**B.2.1**	RGA services through web and mobile applications	1,600,000	IT	RfP	Multi	Post
46.	**B.2.2**	Consultant for the development of data harmonization methodology and development of OGC services (1 local consultant)	155,000	CS	DS	Single	Post
47.	**B.2.2a**	Consultant for the development of data harmonization methodology and development of OGC services (1 local consultant)	155,000	CS	IC	Single	Post
48.		**Subtotal for subcomponent B2**	1,910,000				

49.	**B.3**	**Subcomponent B.3. Digital Archive**					
50.	**B.3.1**	Improvement of digital services-Phase 3	225,000	IT	DS	Single	Post
51.		**Subtotal for subcomponent B3**	225,000				
52.		***Total Costs for Component B***	**19,200,000**				
53.	***C***	***Institutional improvement, RGA sustainability and Project Management***					
54.	**C.1**	Subcomponent C1. Institutional Improvement and RGA Sustainability					
55.	C.1.1	Services for legislative regulation of the reform changes in the business of the RGA	100,000	CS	CQS, IC	Multi	Post
56.	C.1.2	Support for reorganization of RGA and strategic documents	300,000	CS	CQS, IC	Multi	Post
57.	C.1.3	IT system for portfolio management	700,000	IT	RfP	Single	Post
58.	C.1.4	ISO standards - ISO 22301 - Security and Resilience - Business Continuity Management Systems - ISO 45001 - Occupational Health and Safety Management Systems - ISO 14001 - Environmental Management Systems	300,000	CS	CQS	Single	Post
59.	C.1.5	Unresolved cases document preparation (4 local consultants)	235,000	CS	DS	Multi	Post
60.	C.1.5a	Unresolved cases document preparation (2 local consultants)	100,000	CS	IC	Multi	Post
61.	C.1.2	**Subtotal for subcomponent C1**	1,735,000				
62.	**C.2**	Subcomponent C.2 Project Management					
63.	C.2.1	PIU Team					
64.	C.2.1.1	PIU Director	131,228	CS	DS	Single	Post

65.	C.2.1.2	Senior Procurement Specialist (PIU Deputy Director)	120,733	CS	DS	Single	Post
66.	C.2.1.3	Procurement Specialist (Environmental Specialist)	94,150	CS	DS	Single	Post
67.	C.2.1.4	Procurement Specialist Associate	90,454	CS	IC	Single	Post
68.	C.2.1.5	Information Technology Specialist	90,466	CS	IC	Single	Post
69.	C.2.1.6	Monitoring and Evaluation (Social Specialist)	45,226	CS	DS	Single	Post
70.	C.2.1.7	Financial Management Specialist	108,630	CS	DS	Single	Post
71.	C.2.1.8	Financial Management Assistant	70,995	CS	IC	Single	Post
72.	C.2.1.9	Office Manager	56,318	CS	DS	Single	Post
73.	**C.2.2**	Social studies and user surveys	90,000	CS	CQS	Single	Post
74.	**C.2.3**	Public Awareness Campaign	100,000	CS	CQS	Single	Post
75.	**C.2.4**	Training	250,000	CS	CQS	Multi	Post
76.	**C.2.5**	Annual Financial Audit	50,000	CS	LCS	Single	Post
77.	**C.2.6**	Incremental operating costs	291,800	IOC	RfQ	Single	Post
78.		**Subtotal for subcomponent C2**	**1,590,000**				
79.		***Total Costs for Component C***	**3,325,000**				
80.		**Preparation fee (0.25%)**	**75,000**				
81.		**TOTAL SRB REMP2 PROJECT**	**30,000,000**				

Implementation Support Plan and Resource Requirements

27. The following implementation support plan reflects the preliminary estimates of the skill requirements, timing, and resource requirements over the life of the Project. Keeping in mind the need to maintain flexibility over project activities, the skill requirements may change over time to ensure that they continue to meet the implementation support needs of the Project.

28. Implementation support will be provided in the form of direct support from the World Bank team and additional consultants will provide technical assistance as needed. During the first year of the Project, it is foreseen that frequent missions will take place to essential areas to support RGA in its initiation of project activities. Table 2 indicates the level of input that will be needed from the World Bank to provide implementation support for the proposed Project for the initial 12 months and the remainder of the Project implementation period.

Table 2: Implementation Support Plan

Time	Focus	Skills Needed	Partner Role
First 12 months	Support to: - Successful start of the Project; - Establishment of the FM system, M&E system and grievance mechanisms in line with World Bank standards - Launching Component activities	All skills	- Task team to support smooth start-up - Ensure E&S commitments are on track - Support PIU - Ensure systems and processes in place to launch project activities
12 to 48 months	- Ensure adequate implementation support for all aspects of the Project - Ensure M&E measures are undertaken in accordance with planned activities - Monitor implementation of project activities, including site visits - Support to final evaluation of the ICR	All skills	- Ensure ESF is on track - Support PIU - Provide technical assistance

Table 3: Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leaders	56	18	International and Field-based Staff
Senior Land Administration Specialist	50	15	International or Field-based Staff
Environmental Specialist	10	Local travel as needed	Field-based Staff
Social Specialist	28	Local travel as needed	Field-based Staff
Procurement Specialist	50	Local travel as needed	Field-based Staff
FM Specialist	20	Local travel as needed	Field-based Staff
Technical Specialist (Geospatial Information Management)	40	15	International and local consultants
Technical Specialist (Property Valuation)	40	15	International and local consultants

ANNEX 2: Detailed Project Components Description

COUNTRY: Republic of Serbia
Second Real Estate Management Project

1. The Project will include three components:

2. **Component A: Implementation of the Property Mass Valuation System (EUR 7,400,000)**. This component will finance the following activities in support of the advancement of mass valuation for all properties in Serbia. Activities will be financed via two Sub-Components. *Sub-Component A.1: Support to Mass Valuation for Residential and Non-Residential Properties* will finance: (i) the development of mass valuation models for non-residential properties in Serbia; (ii) the national rollout of mass valuation models already developed for residential properties for the majority of Serbia's population; (iii) the development of an information system for mass property valuation; and (iv) the creation of a residential property index that includes all types of residential property, with sub-indexes for different types. *Sub-Component A.2: Building Register Advancement* will finance (i) the development of a Building Register module as part of ISREC; (ii) establishment of a central database; (iii) migration of data from the existing Building Register and from other external data sources; (iv) integration of the Building Register with the information system for mass property valuation and GeoSrbija; (v) the acquisition of very high-resolution satellite imagery and climate-related data; (vi) creation of a digital orthophoto and processing of its data; (vii) updates to the Building Register's Registry of Established Changes to Constructions; and (viii) consulting services to assess the options for automating and obtaining of data from external sources, quality assurance and quality control during software development and the development of a long-term sustainable model for the maintenance of the Building Register and the information system for the mass property valuation system.

3. In terms of climate change adaptation and mitigation, the activities under Component A will help to inform the GoS about which properties are considered more prone to GHG emissions and incentivize emissions reductions seeking to factor into the valuation methodology for each of the property types' household and business preferences for energy efficiency. The connection between real estate valuation and reducing GHG emissions (e.g., incentives for improving the energy efficiency of buildings) will be further explored and integrated as part of the capacity building activities to be financed via Component C. Moreover, Component A activities will provide important market information for calculating the costs of resilient reconstruction (e.g., flood proofing, adaptable during a heat wave) and determine insurance premiums in support of crisis preparedness and disaster risk management efforts in Serbia that are led by government entities such as the Ministry of Interior's Sector for Emergency Management. The purchase and utilization of satellite imagery will also help to enable more efficient updates of key registries in addition to the Building Register. The imagery is a critical requirement for RGA's Risk Register (see Component B) and will be directly relevant for the identification of climate impacts such as floods, drought, and extreme temperature along with areas that are most vulnerable to these impacts. These climate considerations will be integrated into spatial and disaster risk planning, and in targeting climate disaster related evacuation activities for areas most vulnerable to these climate impacts.

4. *Sub-Component A.1: Support to Mass Valuation for Residential and Non-Residential Properties*. This sub-component will support (i) the development of mass valuation models for non-residential properties in Serbia; (ii) the rollout of mass valuation models already developed for residential properties for the majority of Serbia's population; (iii) the development of an information system for mass property valuation; and (iv) the creation of a residential property price index that will include all types of residential property, with sub-indexes for different types. The information system for mass valuation will be used primarily by governmental and municipal authorities, banks, insurance companies, real estate agents, professional users, and citizens. It will also be interoperable with RGA's Building Register, Sales Price Register, ISREC, GeoSrbija, and other systems, and will generate various statistical reports, that reflect the current market

trends and will provide location-based indexes and historical data for market research and analysis. The investments under Sub-Component A.1 will enhance the quality of market data available to market participants, valuers, banks, and government bodies, thereby helping to improve market transparency and the data available for policy making. In terms of climate change adaptation and mitigation, the valuation models and residential property price index to be produced, as well as the associated IT investments for a mass valuation information system, are new tools that will be subsequently used to better define insurance premiums in support of crisis preparedness and disaster risk management efforts in Serbia that are led by government entities such as the Ministry of Interior's Sector for Emergency Management. Additionally, the development of mass valuation models will inform Serbia's Risk Register (details in Sub-Component B.1). Combined with the use of hazard maps for natural disasters such as floods and wildfires in the Risk Register, the ability to determine values for all buildings will aid both the Ministry of Interior's Sector for Emergency Management and municipal governments in deciding how to prioritize risk mitigation actions and priorities. Additionally, valuation has been identified as a key gap in completing building retrofitting to meeting climate change objectives (e.g., enhanced energy efficiency, building construction standards, etc.). The development of the mass valuation models will enable Serbian government entities to identify the buildings that are still pending climate change retrofitting due to the existing valuation gap, which, in turn, will strengthen Serbia's climate change mitigation efforts.

5. *Sub-Component A.2: Building Register Advancement*. This sub-component will finance (i) the development of a Building Register module as part of ISREC; (ii) establishment of a central database; (iii) migration of data from the existing Building Register and from other external data sources; (iv) integration of the Building Register with the information system for mass property valuation and GeoSrbija; (v) the acquisition of very high-resolution satellite imagery and climate-related data; (vi) creation of a digital orthophoto and processing of its data; (vii) updates to the Building Register's Registry of Established Changes to Constructions; and (viii) consulting services to assess the options for automating obtaining of data from external data sources, quality assurance and quality control during software development and the development of a long-term sustainable model for the maintenance of the Building Register and the information system for the mass property valuation system. In terms of climate change adaptation and mitigation, improvements in the data quality of the Building Register and its interoperability with other key registers and datasets as a result of the Project will directly complement the expansion of Serbia's NSDI and will be used by public agencies to identify buildings constructed in high-risk hazard zones and contribute to their disaster risk planning. The Building Register's interoperability with GeoSrbija will also allow its information to be combined with other key geospatial information housed in the platform to portray a real-time model to be used by government decision-makers for Serbia's long-term climate change planning. Moreover, the purchase of satellite imagery and orthophoto production will provide high-quality images of on-the-ground realities to further inform key stakeholders about areas most prone to natural hazard zones while using mass valuation models, the Building Register, and other key datasets and information systems financed by REMP 2 under Component B (further details below).

6. **Component B: Integration of Information Systems and NSDI Services Development (EUR 19,200,000)**. This component will finance activities related to the further digital transformation of RGA and the advancement of Serbia's NSDI (including the expansion of GeoSrbija) in line with national and international best practice and standards. Activities will be financed via three Sub-Components. *Sub-Component B.1: Further Development and Rollout of the Integrated System for Real Estate Cadaster* will finance: (i) ISREC upgrades and the completion of its national implementation to an additional 110 LCOs that do not yet have access to the system; (ii) establishment of the infrastructure cadaster; (iii) development and implementation of an information system for land consolidation; (iv) expansion of the Risk Register; (v) technical studies for the advancement and use of cadastral data such as the development of a 3D cadaster; (vi) the supply of IT hardware and equipment; (vii) cybersecurity support; and (viii) consultant support for the supervision, coordination and quality control of the data and systems to be implemented and/or expanded. *Sub-Component B.2: support to the National Spatial Data Infrastructure* will finance the implementation of RGA's NSDI Action Plan, including the development of web and mobile applications and digital services using new technologies such as AI. *Sub-Component B.3: Digital Archive*

will finance: (i) development of a module for managing the analogue archive; (ii) development of e-services for specialized users; and (iii) conversion of scanned geodetic plans to allow online access to them. As applicable, IT hardware and equipment will also be financed via Component B that will, in line with the EU's Directive on Energy Efficiency[15] and the EU Energy Performance Certificates, aim to achieve an "A" rating for energy performance, which is considered above and beyond existing performance standards given that absence of a mandated energy efficiency rating within Serbia's existing regulatory framework which will ultimately lead to reduced GHG emissions compared to IT hardware/equipment that do not meet these requirements. Component B's NSDI activities will be implemented based on the Action Plan and Business Models produced during REMP in line with the UN-endorsed Integrated Geospatial Information Framework (IGIF).

7. In terms of climate change adaptation and mitigation, the activities under Component B will support the tracking of projected climate trends such as changes in precipitation intensity and flood, drought, and extreme heat occurrence due to urbanization and urban sprawl that have contributed to strains on existing infrastructure and public utilities as well as the loss of carbon sinks in Serbia. Moreover, the information provided by the advancement of GeoSrbija will be used by public agencies such as the Ministry of Construction, Transport and Infrastructure's Sector for Spatial and Urban Planning and the Ministry of Interior's Sector for Emergency Management will directly access GeoSrbija and the platform as part of their business operations to utilize these key tools and the cadaster and land registry information they contain to inform disaster and flood simulations, land use planning, and resource management, which will identify areas vulnerable to flooding and drought and ways to either avoid construction in these areas or improve climate resilience by deploying resilient building design.

8. *Sub-Component B.1: Further Development and Rollout of the Integrated System for Real Estate Cadaster*. This sub-component will support (i) ISREC upgrades and the completion of its national implementation to an additional 110 LCOs that do not yet have access to the system; (ii) establishment of the infrastructure cadaster; (iii) development and implementation of an information system for land consolidation; (iv) expansion of the Risk Register; (v) technical studies for the advancement and use of cadastral data, such as the development of a 3D cadaster; (vi) the supply of IT hardware and equipment; (vii) cybersecurity support; and (viii) consultant support for the supervision, coordination, and quality control of the data systems to be implemented and/or expanded. The national implementation of ISREC will require data quality improvements, as the data must be migrated from the systems that operate under old technical platforms that are not integrated and have different data models and data structures. The infrastructure cadaster will aim to register critical underground and above-ground infrastructure facilities and will include existing data themes under the utility cadaster and will cover additional infrastructure facilities: (i) industrial pipelines; (ii) transportation infrastructure (roads, railways, cable cars, water traffic, air traffic, terminals and border crossing points); and (iii) other infrastructure facilities (irrigation systems, irrigation canals, derivation pipelines, landfills, and other supporting facilities). The system for land consolidation will improve the efficiency of land consolidation processes, contribute to the modernization of agriculture, and increase rural and agricultural investments. The system will also support land consolidation monitoring and control procedures, will generate various statistical reports, and will be interoperable with ISREC. The technical studies for cadastral data expansion and usage will help RGA to prepare for initiatives such as the nascent implementation of the 3D cadaster for buildings and infrastructure. The studies will also provide guidance for legal framework amendments, data model modifications, upgrades of existing business processes and systems, and will provide time and cost estimations. Furthermore, Sub-component B.1's support to IT infrastructure upgrades will include the supply of servers, block storage, storage area network (SAN), backup and archiving infrastructure, network infrastructure, replacement of the outdated office equipment, and will support the initial phase of the establishment of the Disaster Recovery and Backup Data Center. Although not confirmed, there may be a possibility for small-scale retrofitting works (e.g., for the server room) that could be linked to hardware installation. Any identified environmental risks and impacts (e.g., dust, noise, waste, OHS) and mitigation measures will be addressed in the ESMPs checklist to be prepared prior to the commencement of works.

[15] Directive on Energy Efficiency 2012/27/EU, as amended in 2018 and 2023.

9. In terms of climate change adaptation and mitigation, the activities under Sub-Component B.1 will provide a variety of benefits. The national implementation and upgrades to ISREC will provide up-to-date cadastral information throughout Serbia, which will be utilized by key climate change ministries such as the Ministry for Mining and Energy[16] and the Ministry for Agriculture and Environmental Protection[17]. as a foundational dataset for accurate, location-based planning for climate change adaptation decision-making and measure by providing the agency with reliable land parcel data for areas of Serbia most at risk of natural disaster and climatic events. These data will also feed into the information contained in the Building Register, information system for mass valuation, infrastructure cadaster, land consolidation system, and Risk Register that will be used by multiple government agencies for climate-related decision making and activities such as energy analysis, disaster and flood simulations, and resource management. The Risk Register is crucial for these efforts, as it specifically monitors and maintains spatial data for all natural hazards in Serbia, including floods and wildfires. Investments in infrastructure cadaster development will directly contribute to climate change mitigation, as its data will be used by the Ministry of Construction, Transport and Infrastructure to plan quality infrastructure investments that are not located in flood-prone areas, earthquake fault lines, and other natural hazards that may jeopardize long-term sustainability of infrastructure in Serbia. The development of a land consolidation information system will provide a screening tool of climate-adaptive features for compact land development and enhanced land consolidation management to reduce GHG and increase carbon sequestration. Moreover, the expansion of the Risk Register and its enhanced interoperability with GeoSrbija and other information systems, will directly provide accurate and up-to-date information on areas of Serbia most vulnerable to climate change risks to help users of this data to make informed decisions about infrastructure development, land consolidation for improving agricultural development, housing provision, etc. To measure the use of these investments for climate change adaptation and mitigation purposes, an Intermediate Results Indicator "Public institutions with access to key geospatial datasets to improve forecasting and assessment of the consequences of disaster and climate hazard events and inform climate-related decision making" has been added to REMP 2's Results Framework. All IT hardware and equipment to be purchased under this sub-component will, in line with the EU's Directive on Energy Efficiency[18] and the EU Energy Performance Certificates, aim to achieve an "A" rating for energy performance, which is considered above and beyond existing performance standards given that absence of a mandated energy efficiency rating within Serbia's existing regulatory framework.

10. *Sub-Component B.2: Support to the National Spatial Data Infrastructure*. This sub-component will finance the implementation of RGA's NSDI Action Plan, with the aim to increase the benefits and usability of NSDI through the development of web and mobile applications and digital services using new technologies, including AI, for improving business processes, real estate management services and providing online support to users, particularly for users' needs related to the legal base, business processes, and property related information.

11. *Sub-Component B.3: Digital Archive*. This sub-component will support the upgrade of the Digital Archive system, including the (i) development of a module for managing the analogue archive; (ii) development of e-services for specialized users; and (iii) conversion of the scanned geodetic plans to allow online access to them. It will build upon the achievements of REMP, during which a central analogue and digital archive system were developed.

12. **Component C: Institutional Improvement, RGA Sustainability, and Project Management (EUR 3,325,000)**. This component will finance activities related to RGA's long-term institutional sustainability and project management for REMP 2. Activities will be financed via two Sub-Components. *Sub-Component C.1: Institutional Improvement and RGA Sustainability* will finance (i) updates to RGA's Roadmap, Strategic Plan, and Business Plan for institutional transition; (ii)

[16] This Ministry is responsible for exploring options for renewable energy, energy efficiency, climate change, and environmental protection.
[17] This Ministry works on issues concerning, among other things, environmental protection, waste management, and climate change.
[18] Directive on Energy Efficiency 2012/27/EU, as amended in 2018 and 2023.

implementation of RGA's Portfolio Management Plan[19]; and (iii) further implementation of several International Organization for Standardization (ISO) standards for RGA's full compliance with international standards for land administration and associated IT systems. *Sub-Component C.2: Project Management* will finance (i) PIU operations and M&E activities; (ii) capacity building programs; (iii) customer satisfaction surveys; and (iv) consulting services in support of various project activities including the provision of legal expertise for, among other things, improving registration of "old"[20] transactions, and development of social assessments. The specialized training to be financed via this component will target RGA management and technical staff, as well as other NSDI stakeholders including government institutions, local authorities, and other relevant entities. Similarly, the capacity building programs will be designed and implemented for real estate registration and valuation institutions including RGA, municipal authorities, and Serbia's Tax Administration.

13. *Sub-Component C.1: Institutional Improvement and RGA Sustainability*. This sub-component will finance updates to RGA's strategic documents, including its Strategic and Business Plans as well as the implementation of the Portfolio Management Plan that was developed with support from the Swedish International Development Cooperation Agency in 2024. It will also support the further implementation of several International Organization for Standardization (ISO) standards: (i) ISO 22301: Security and Resilience; (ii) ISO 45001: Occupational Health and Safety Management Systems; and (iii) ISO 14001: Environmental Management Systems. The implementation process of these standards includes analysis of the current situation and establishment of expert groups, training of RGA employees, development of standard requirements documentation, implementation of the standards in the RGA business environment, internal audits, and improvements per the audit results and recommendations.

14. *Sub-Component C.2: Project Management*. This sub-component will finance a PIU consisting of a PIU director in addition to a technical team consisting of a senior procurement specialist (PIU deputy director), a part-time procurement specialist (who will also oversee the responsibilities of an environmental specialist), a full-time procurement specialist, an FM specialist, an FM assistant, an IT specialist, an M&E specialist (who will also oversee the responsibilities of a social specialist), and an office manager. Additionally, the sub-component will finance consulting services to support various project activities, provide legal expertise, develop social assessments, conduct customer satisfaction surveys, organize public awareness campaigns, and provide capacity building programs for RGA management and technical staff, as well as for other key stakeholders. Legal expertise is needed to further strengthen the regulatory framework for property registration to address the first instance backlog requests for registration of property transactions that occurred before July 2018 and are being processed in accordance with the "old" Law on State Survey and Cadaster. While certain regulatory improvements have already been made (e.g., registration through intermediaries), additional ones are needed to prevent the creation of further backlogs. The capacity building programs will include innovative approaches to climate change adaptation and mitigation for key stakeholders and users of geospatial information to consider, including factoring greenhouse gas emissions of buildings into valuation models as a means of incentivizing energy efficiency efforts. As these are new ideas to be considered, the World Bank team will further explore these topics with RGA as it prepares annual training plans. Sub-Component C.2 will also finance the supply of IT hardware and equipment in support of project management if the need arises during project implementation.

[19] The Portfolio Management Plan was first developed in 2024 in cooperation with the Swedish International Development Cooperation Agency (Sida) and will be fully implemented under REMP 2.

[20] "Old" transactions are property transactions that took place prior to July 2018 and had not been submitted for registration before the new law on cadastral procedures was introduced.

ANNEX 3: Economic and Financial Analysis

COUNTRY: Republic of Serbia
Second Real Estate Management Project

1. **While the Project has the specific objective of improving the accuracy and accessibility of land administration information, its wider socio-economic benefits are far-ranging.** For instance, the enhancement of land administration data promises to strengthen transparency within the real estate sector, potentially leading to more efficient tax revenue collection. Such improvements lay the groundwork for more strategic planning and investment decisions. For example, granular information about the location and value of buildings can inform strategies for disaster risk management, such as pinpointing areas at greater risk and optimizing the placement of emergency services and preventative measures. A system for mass appraisal could further clarify property market dynamics, allowing financial institutions to more accurately assess the value of assets used as loan collateral. This system might also pave the way for the growth of private catastrophe insurance markets by providing data to assess the risk associated with individual buildings, thus enabling fair insurance pricing. A refined building registry is essential for the rigorous application of environmental regulations and the focus of energy or water efficiency improvement initiatives. Additionally, the integration of high-resolution satellite imagery could assist the GoS in identifying properties with higher carbon emission tendencies, potentially incorporating carbon emissions into property valuation methods and enabling targeting policies to encourage emission reductions. Enhanced property valuations could unlock dormant capital within real estate, offering businesses the opportunity to leverage increased equity for borrowing, often at lower interest rates compared to loans secured against inventories. Integrating existing services under RGA and adding additional services to the land registry will make RGAs service delivery more efficient and improve access of the public and private actors to important land informaiton.

2. **As this economic analysis shows the Project's economic benefits are estimated to significantly exceed its costs, even if only a sub-set of fiscal revenue sources and economic benefits are considered.** Reliably quantifying the wide-ranging socio-economic benefits described above is challenging without further data collection. However, as this economic and financial analysis shows, the Project is expected to yield substantial financial and wider socio-economic benefits, which are expected to start materializing as soon as the new data is collected, information systems are integrated, and mass valuation is carried out. In short, the expected fiscal benefits alone present a strong business case for this Project.

3. **The Project's socio-economic benefits arise from a combination of its complementary project components. The largest contribution to the economic gains is expected to result from efficiency gains to RGA under Component B**. Specifically, each component will provide different ingredients necessary for delivering the Project's expected benefits:

- **Component A** consists of two subcomponents. The aim is to enhance the efficiency and transparency of the property market by introducing mass valuation models, which will guide market participants, valuers, and banks on potential sale prices. Municipalities may also use these models for property tax purposes, since the publicly available data will make apparent current gaps in the property tax collection of unregistered buildings. The component includes developing an interoperable information system for mass valuation, a comprehensive residential property index with sub-indexes, and a Building Register module using high-resolution satellite imagery. These data are expected to enhance the foundations for urban planning, disaster risk management, land use management, and more.
- **Component B** consists of three subcomponents. Overall, the aim is enhancing Serbia's digital transformation and NSDI. The component is aimed at making the housing market, the non-residential property market, and their prices more transparent and enabling more efficient real estate transactions. This component focuses mainly on data collection and digital infrastructure, thereby facilitating wider economic benefits and efficiency gains to RGA

from digitalization. The economic benefits under component B will include savings to customers using RGA's services and resulting from a reduction in waiting times for inquiries and services.

- **Component C** is focused on project implementation, institutional improvements, and capacity building, both of which are crucial for successfully delivering components A, and B but is not expected to directly contribute to fiscal or economic benefits per se. It will contribute to a roadmap aimed at enabling RGA to move towards a self-financing mode of operations in the future.

Table 1. Principal project outputs and outcomes (benefits)

REMP 2 Project	Level	Without Project	With Project
		Pace of data integration and harmonization	
Cadastral update	Output	Slow	Faster
Cadastral data harmonization	Output	Slow	Faster
INSPIRE Data standard implementation (EU compatible)	Output	Exists	Strengthened
Transparent mass valuation of housing prices	Output	Non-existent	Generated
Operational efficiency of land market	Outcome	Sub-optimal	Higher efficiency
Enhanced financing of housing market	Outcome	Modest	Improved
Increased fiscal revenues	Outcome	Low	Improved
Growth in private mortgage markets	Outcome	Low	Substantial
Private catastrophe insurance	Outcome	Practically non-existent	Higher efficiency
Efficiency gains within RGA	Outcome	Low	Substantial

4. **The fiscal benefits quantified in this EFA rely on two channels resulting from improved data availability and data quality because of REMP 2, increased fiscal revenues and the development of a private catastrophe insurance market.**

- **The integration of illegal properties into the REC has the potential to increase tax and fee revenues.** The publication of mass valuation models may indirectly lead to revenue growth despite limited enforcement capabilities over municipalities and the Tax Authority's use of the Building Register for fiscal purposes. GoS is not expected to mandate the legalization of informal properties or require municipalities to revise fiscal cadasters using the REC and Building Registers. Nor is it anticipated that municipalities will be audited for taxing all properties listed in the REC. Nevertheless, the visibility of previously hidden properties through the Building Register could encourage voluntary compliance, reducing the number of illegal structures. Buyers and mortgage lenders will more readily be able to identify the legal status of buildings and assess the risk to them of any future policies to bring about mandatory compliance.
- **Improvements to data quality, coverage and accessibility will help to improve the market of private catastrophe insurance for households and businesses.** The development of the NSDI, integrating the Real Estate Cadaster, Buildings Register, and Ministry of Interior risk registers, will provide insurers with precise property locations and risk factors, enabling more accurate premium assessments. In the event of a natural disaster, like flooding, this would alleviate pressure on the GoS to compensate losses and finance the repairs to people's homes and infrastructure. A more transparent real estate market and mass valuation could thus enable insurance companies to more accurately price risks and in turn re-insure their potential losses.

5. **The financial analysis focuses on estimating the increase in tax revenues and annual savings from the direct transfer of annual costs caused by disasters to the private sector.** Both income streams of fiscal revenues are based on effects from reducing market inefficiencies and increasing the transparency of land and property markets alongside price effects of a transparent and standardized real estate valuation policy. Further impacts on government revenue streams

may arise from increasing demand in the real estate market due to higher trust in a transparent and fair real estate market. A more transparent market with efficient prices may also reduce incentives for informal or illicit transactions. This analysis focuses on estimating a subset of the wider benefits that are likely to arise from this Project, the real benefits are likely significantly larger.

6. **Fiscal analysis – data, inputs, and assumptions.** The two channels through which fiscal benefits are estimated in this EFA are additional tax revenues from property taxation based on increased compliance and reduced government spending after catastrophes based on wider private market insurance coverage. The assumptions behind the fiscal analysis are stated in Table 2. In Serbia, a large number of buildings are informal, i.e., only partially compliant with building regulations, lacking required permits, or completely illegal. Based on the institutional context, this Project is not expected to result in a change of tax policies or the destruction of illegal buildings. However, compliance to regulate buildings that so far are not included in municipal tax practices might be increased through better information and wide availability of property data. With 4.9 million formal and 4.8 million informal properties, including 2.1 million illegal and 2.7 million partially regulated, a study for RGA by the University of Leuven states that an annual loss of EUR 127 million in property taxes due to unregistered properties[21]. If 20 percent of these properties were legalized, resulting in payment of registration fees, annual property taxes, property transfer taxes, and development fees, it could yield an additional EUR 25 million in revenues per year. Furthermore, legally registered properties not currently on municipal fiscal cadasters might be identified and taxed accordingly. Additional to the expected tax benefits, the Project is expected to increase coverage of private catastrophe insurance, thus reducing the fiscal burden on the government in the aftermath of natural disasters. While quantifying the potential benefits is complex, the advantages of outsourcing some of the costs from natural disasters to the private sector are obvious. The state-funded relief for the Sava floods in 2014 incurred EUR 1.5 billion in direct costs and another EUR 200 million in indirect costs[22]. Assuming that only direct costs are insurable and considering the Sava floods as a 1 in 100-year event, the potential annual direct losses to households and businesses could be around EUR 15.1 million. However, with climate change likely increasing flood frequency, this estimate may be conservative. If the Project could transfer 25 percent of the direct cost risk exposure to private insurance, it could benefit state revenues by approximately EUR 3 million annually.

Table 2. Overview of data inputs and assumptions underpinning the fiscal benefits

Description	Without Project	With Project
Number of buildings (2023)	4.9 million	4.9 million
Informal buildings (2023)	4.8 million	4.8 million
Partially regulated (2023)	2.1 million	2.1 million
Illegal buildings (2023)	2.7 million	2.7 million
Registration rate of illegal buildings	1% annually from 2031	4% annually from 2031
Annual insurance losses from missing coverage	EUR 12.1 million	EUR 9.75 million
Annual inflation rate	3.5%	3.5%
Discount rate	6%	6%

7. **The cost-benefit analysis using the above-described data and methodology yields an estimated positive net present financial benefit of EUR 65.92 million associated with the Project (Table 3). This figure is likely to be an underestimate as it only considers the fiscal revenue benefits and not wider socio-economic benefits.** The total additional fiscal revenue over an operational period of 10 years is estimated at EUR 90.18 million. The estimated benefit assumes a EUR 30 million investment package, a 6 percent discount rate and a planning horizon of 10 years. Figure 1 shows the expected revenue streams divided by the two income sources described above. Since the benefits of the Project are expected to start once implementation has progressed to a level where the building registry and mass valuation enable

[21] https://lirias.kuleuven.be/retrieve/651724
[22] ILO: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_397685.pdf

a more transparent land and real estate market, the fiscal impacts are expected to start towards the end of the implementation period. The majority of additional fiscal revenue is expected to be generated by increased property tax collection, resulting from a higher compliance rate and taxation of unregistered buildings that were so far avoiding taxation. This is followed by the annual reduction of government spending on disaster-related repair and reconstruction spending.

8. **Net benefits are expected to materialize soon after the operationalization of the new land administration systems.** The financial analysis assumes that positive fiscal revenues are expected starting in 2030, after the building registry has been updated and the mass valuation of the building stock has been conducted. The Project is expected to break even in 2031, only one year after the Project implementation phase has ended, resulting from a higher compliance rate and taxation of unregistered buildings that were so far avoiding taxation.

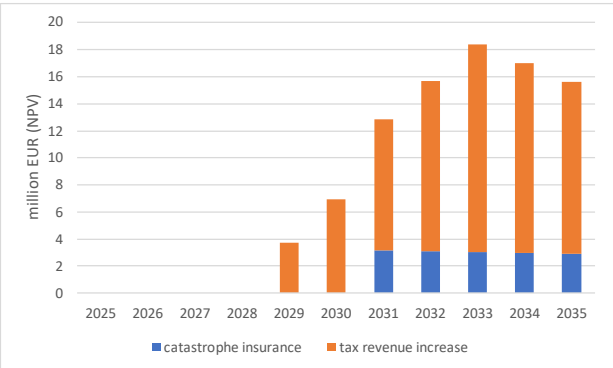
Table 3. Financial analysis of REMP 2 compared to a no-Project scenario, including costs and revenue streams.

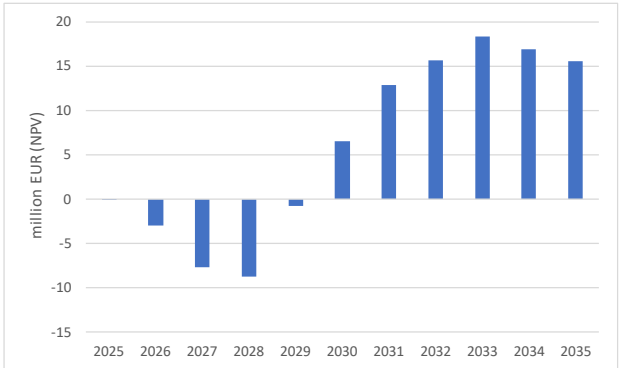
Fiscal benefits													
Without Project													
Without Project			**Implementation Period**						**Operational Period**				
Description	**Unit**	**Baseline**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
increase in registrations (cumulative)	percent	0%	0%	0%	0%	0%	1%	2%	3%	4%	5%	6%	7%
Annual savings through reduced disaster insurance costs	million EU	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase in tax revenue from registration of buildings	million EU	0	0.00	0.00	0.00	0.00	1.51	3.12	4.85	6.69	8.65	10.75	12.98
With Project													
increase in registrations (cumulative)	percentag	0%	0%	0%	0%	0%	4%	8%	12%	16%	20%	20%	20%
Annual savings through reduced disaster insurance costs	million EU	0	0.00	0.00	0.00	0.00	0.00	0.00	4.80	4.97	5.14	5.33	5.51
Increase in tax revenue from registration of buildings	million EU	0	0.00	0.00	0.00	0.00	6.46	12.93	19.39	26.76	34.62	35.83	37.08

Financial analysis (discounted at 6%)												
incremental fiscal Benefits	million EUR	**0.00**	**0.00**	**0.00**	**0.00**	**3.70**	**6.91**	**12.87**	**15.71**	**18.41**	**16.98**	**15.60**
project costs	million EUR	0.03	3.02	7.70	8.72	4.46	0.32	0.00	0.00	0.00	0.00	0.00
cash flow	million EUR	-0.03	-3.02	-7.70	-8.72	-0.75	6.59	12.87	15.71	18.41	16.98	15.60
NPV												
NPV benefits	million EUR	**$90.18**										
NPV costs	million EUR	**$24.26**										
NPV (total)	million EUR	**$65.92**										

Note: Net present value figures use a 6 percent discount rate. Incremental fiscal benefits, project costs and cash flow are discounted at 6 percent.

Figure 1: Left: Expected additional annual revenue streams; **Right:** Net annual cash flows.





Note: All figures are discounted at 6 percent. The decline in annual revenues comes from the fact that the discount rate (6 percent) is higher than the assumed inflation rate of the economy and housing sector.

9. **This EFA also estimates a subset of wider economic benefits, which are expected to exceed the narrow fiscal revenue benefits estimated above.** As discussed at the beginning of this section and throughout this PAD, there are a

wide range of welfare and economic benefits that can be expected to result from the Project, including the reduction of tax evasion and corruption, increasing transparency, increased efficiency of land administration services, enabling more effective urban planning, disaster risk management, enforcement of building standards and environmental regulations, lower interest rates on property backed loans, and improved land tenure security. To quantify some of these economic benefits, this EFA focuses on four channels:

- **Efficiency gains within RGA.** Enhanced efficiency within RGA has led to increased staff productivity, with a 19 percent rise in resolved cases from 2022 to 2023. Through REMP 2, additional efficiency increases can be expected, for example through a complete shift to electronic queries and improvements to the administration and integration of cadastral and land administration services.
- **Reduced compliance costs for service users.** Streamlining RGA services can reduce compliance costs for users. Faster processing times and more data and services offered electronically will reduce the number of hours spent to make requests and waiting for these to be processed, leading to efficiency gains (and reduced compliance costs) for service users.
- **Growth in residential mortgages.** The residential mortgage market is poised for growth. The rate of mortgage purchases has decreased recently. This means a shift of capital from the formal banking sector towards informal channels of the economy. A recovery of the rate of purchases made through official bank mortgages relative to cash purchases can be expected as interest rates are lowered again. The further increased transparency of the real estate market from REMP-2 are likely to further contribute to a reduction of informal transactions in the housing sector, making a further increase of the mortgage to cash purchase ratio likely.
- **Reduced risk premium on commercial property.** The development of price indexes and commercial mass appraisal models is expected to improve market transparency in Serbia, potentially reducing the risk premium on commercial properties. Currently, higher yields in Serbia indicate a less transparent market compared to regional counterparts. Improvements to market transparency will promote the ability of banks to correctly assess risks, thereby reducing market inefficiencies. This is likely to impact businesses' ability to borrow at lower interest rates, through effectively lowered risk premiums.

10. **Economic analysis – data, inputs, and assumptions.** The key assumptions and data inputs are presented in Table 4. Firstly, recent efficiency gains to the RGA are notable; in 2023, the RGA processed 786,000 transactions, 89 percent of which were electronic, and handled nearly 10 million institutional and professional queries along with 71 million citizen queries[23]. Further efficiency gains are expected from the integration and harmonization of different databases and services. With an annual salary expenditure of EUR 31.3 million, a 2 percent annual productivity increase can be expected – i.e., staff time is freed up to provide other kinds of public services. This would increase output given the same resource input and enable effective savings (in real terms: wage/output) of EUR 626,000 annually, accumulating to EUR 3.13 million over a five-year span. The value of additional services provided is expected to far surpass these savings. Secondly, RGA's service users currently face substantial compliance costs, with mandatory services causing an estimated 9 million hours of time loss over five years[24]. Given the median hourly wage of approximately EUR 3.4, the financial equivalent of this lost time is around EUR 4 million each year (assuming a 50 percent rate of the hourly salary to reflect lower productivity rates for hours waited). A 10 percent improvement in service access could translate into annual savings of roughly EUR 400,000 for users, amounting to EUR 1.7 million over five years, and this estimate is likely conservative considering the potential for even greater productivity enhancements. Thirdly, regarding the expected increase in residential mortgage rates, recently there has been a decline in residential mortgages (apartments), from 31 percent in 2021 to 18 percent in Q1 2024, attributed to rising European Central Bank base rates[25]. However, with an anticipated normalization of interest rates

[23] Data received from RGA.
[24] Based on estimates from RGA
[25] Based on data from RGA

and improved market transparency due to price indexes and mass valuation models, it is expected that mortgage purchases could rise by an additional 3 percent above the normal market recovery rate. Impacts of REMP 2 on residential mortgages due to improved data availability and accuracy from mass valuation are expected to start in 2028. Finally, the Project is expected to impact risk premiums on commercial properties. For instance, a prime office in Belgrade with a yield of 8.75[26] percent is valued at EUR 1.097 million[27], but if the yield were to drop to 7.875 percent, its value would escalate to EUR 1.219 million. This decrease in yields, brought about by heightened transparency, could substantially increase property values and bolster businesses' capacity to secure capital. It is assumed that there are roughly 3300 medium and large firms in Serbia[28] with at least 50 employees. To estimate the country-wide impact, it is further assumed that the average office or property is 300sqm with a lower-end average price of EUR 8 per square meter[29]. The economic impacts on reduced risk premiums are expected to start towards the completion of the implementation period in 2029.

Table 4. Overview of data inputs and assumptions underpinning the EFA

Description	Without Project	With Project
Annual Salary costs to RGA (million EUR)	31.3	31.3
Efficiency gain to RGA's services	0 %	2 %
Efficiency gains to compliance (reduced processing times)	0 %	10 %
Lost work hours (annual) due to long wait times	1,800,000	1,620,000
Average hourly wage	EUR 3.40	EUR 3.40
Mortgage to cash rate for real estate transaction	20% (2024) 30% (2030)	20% (2024) 33% (2030)
Total Number of transactions of apartments (Belgrade)	19,168	19,168
Total Number of transactions of apartments in (Rest of Serbia)	27,609	27,609
Number of transactions of houses	24,179	24,179
Average apartment price (Belgrade)	EUR 146,000	EUR 146,000
Average apartment price (rest of Serbia)	EUR 93,500	EUR 93,500
Average house price (rest of Serbia)	EUR 37,000	EUR 37,000
Annual price increase in building sector	5.5%	5.5%
Number of medium and large firms	3,300	3,300
Average floor space per firm	300 sqm	300 sqm
Average rent / sqm (Belgrade)	EUR 8	EUR 8
Annual yield	8.75 % (2025) 8.75 % (2035)	8.75 % (2025) 7.875% (2035)

11. **Economic impacts of the Project – effects of increased market transparency and service efficiency:** By improving the efficiency and integration of services offered, this Project is estimated to impact service delivery of RGA and the efficiency of its staff. Through this, additional outputs worth at least EUR 570,000[30] are estimated for 2028 (cumulative 4.2 million over 10 years) based on existing labor inputs, which can be seen as effective savings. Furthermore, savings to RGA's customers because of reduced compliance costs are expected to amount to at least EUR 1.7 million until 2035. This is an extremely conservative estimate, based on lower bound wage levels and lower bound processing times. The wider economic benefits to the mortgage market and the commercial property market resulting from increased transparency, more accurate risk measures and lower yields on commercial real estate are harder to quantify. Conservative aggregate estimates amount to EUR 167 million and EUR 109 million until 2035, respectively. These wider economic benefits are

[26] Cushman & Wakefield, 2024 (https://www.cushmanwakefield.com/en/insights/serbia-marketbeat)
[27] Based on EUR 16 monthly rent per square meter, 500 square meter office size, which can be considered representative for larger office spaces in Belgrade.
[28] OECD: https://www.oecd-ilibrary.org/sites/8bc6e718-en/index.html?itemId=/content/component/8bc6e718-en
[29] Based on estimates by Cushman & Wakefield for the average of rental prices for offices (EUR 15.5-17.5/sqm), retail (EUR 48 - 50/sqm), and industrial (EUR 4.0-5.5/sqm).
[30] Discounted at the standard 6 percent rate.

likely a lower bound estimate. The total estimated discounted benefits for a 10-year planning horizon amount to EUR 282.2 million, suggesting that when accounting for the wider economic benefits, the Project is highly profitable. A breakdown of the economic benefits of the Project is presented in Table 5.

Table 5. Economic analysis of REMP 2 compared to a no-Project scenario, including costs and revenue streams.

Economic Benefits													
Without Project			Implementation Period						Operational Period				
Description	Unit	Baseline	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Savings to yealry salary costs of RGA	million EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
savings due to increased compliance	million EUR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Value of commercial property (growth from lower risk premiums)	million EUR	1,357.7	38.0	39.3	40.7	42.1	43.6	45.2	46.7	48.4	50.1	51.8	53.6
additional volume of residential mortgages	million EUR		196	188	201	215	229	244	95	99	103	107	111
With Project													
Savings to yealry salary costs of RGA	million EUR	31.30	0.00	0.00	0.00	0.72	0.74	0.77	0.80	0.82	0.85	0.88	0.91
savings due to increased compliance	million EUR	0.00	0.00	0.00	0.00	0.00	0.36	0.38	0.39	0.40	0.42	0.43	0.45
Value of commercial property (growth from lower risk premiums)	million EUR	1,357.7	38.0	39.3	40.7	42.1	62.3	65.7	69.3	73.2	77.2	81.6	86.2
additional volume of residential mortgages	million EUR		196	188	201	215	229	244	137	144	151	159	215

Economic analysis (discounted at 6%)												
Savings to yealry salary costs of RGA	million EUR	0.00	0.00	0.00	0.57	0.56	0.54	0.53	0.52	0.50	0.49	0.48
savings due to increased compliance		0.00	0.00	0.00	0.00	0.27	0.27	0.26	0.25	0.25	0.24	0.24
Reduced risk premium on commercial property	million EUR	0.00	0.00	0.00	0.00	13.97	14.50	15.03	15.56	16.09	16.62	17.15
Growth in residential mortgages	million EUR	0.00	0.00	0.00	0.00	0.00	0.00	27.46	27.98	28.46	28.92	54.80
NPV												
NPV (total)	million EUR	**$282.53**										

ANNEX 4: RGA Data Protection Products and Services

COUNTRY: Republic of Serbia
Second Real Estate Management Project

1. RGA is fully certified with ISO standards 9001 (Quality management services), 27001 (Information security, cybersecurity, and privacy protection), and 27701 (Privacy information management systems). These certifications confirm the agency's commitment to quality management, information security, and privacy protection, thereby ensuring the highest standards in its operations and services.

2. RGA uses a combination of various tools for ICT system access control:

- **Single Sign-On (SSO)** is an authentication technology that enables users to access different applications and services using a single set of login credentials. This technology eliminates the need for multiple entries of user information and passwords when accessing different resources, thereby simplifying the user experience and increasing productivity. SSO ensures secure and efficient access to digital systems and applications through a simple authentication process, reducing the risk of misuse of user data and facilitating access rights management within RGA.

- **Multi-Factor Authentication (MFA)** is a security technology that requires users to provide multiple proofs of identify to access digital resources. In addition to traditional username and password authentication, MFA includes additional factors such as SMS codes, biometric data, or physical security keys. This additional verification enhances security, as even if one factor is compromised, other factors remain protected, reducing the risk of unauthorized access and account misuse. MFA is a key tool for strengthening digital identity security and protecting sensitive information.

- **Privileged Access Management (PAM)** is a security solution that enables control and management of privileged access to IT infrastructure and critical resources. This tool provides capabilities such as centralized privilege management, user activity recording, and behavior analysis to limit the risk of privileged account misuse and mitigate the impact of potential threats. SafeViewer PAM helps organizations maintain system integrity and prevent unauthorized access to critical resources, thereby contributing to the overall security of the IT environment.

3. RGA also has three segments under which protection mechanisms can be classified:

- **First Segment: Network Protection Mechanisms**
    - The **Adaptive Security Appliance Firewall** is a network security device designed to protect the network perimeter. It provides comprehensive protection by combining advanced features such as stateful inspection, virtual private networks (VPN), application control, and integration with advanced security solutions to enable real-time threat detection and prevention. Its flexibility and scalability make it suitable for various sizes and types of network environments.
    - The **Web Application Firewall** is a security solution designed to protect web applications from various threats such as denial-of-service (DDoS), SQL injections, and cross-site scripting (XSS). F5 WAF uses advanced traffic analysis techniques and adaptive security policies to recognize and block malicious activities in real-time, ensuring the continuous availability and integrity of web applications. Its scalability

and integration capabilities with other security tools make it essential for protecting complex and dynamic web environments.

- The **FortiGate Firewall** is an advanced security solution used to protect networks, positioned in front of the datacenter. This firewall provides robust protection against various threats, including DDoS, malware, and unauthorized access, using features such as deep packet inspection, an Intrusion Prevention System (IPS), and application control.

- **Second Segment: Endpoint Protection Mechanisms**
  - **Endpoint Detection and Response (EDR)** is a security solution used to protect endpoint devices in the network. This tool provides continuous monitoring and analysis of activities on endpoint devices to detect and respond to threats in real-time. Carbon Black EDR uses machine learning and advanced analytics to identify suspicious activities and enables a rapid response to incidents, helping prevent attacks and minimize potential damage.
  - **Antivirus (AV)** is a reliable security solution used to protect computers and networks from malware, viruses, trojans, and other malicious threats. This antivirus software provides continuous protection using advanced threat detection and removal technologies, including heuristic analysis and machine learning.
  - **Email Security** is a cybersecurity solution used to protect email communication from threats such as phishing, malware, and spam. This tool uses a multi-layered approach, including machine learning, behavioral analysis, and proactive threat detection to identify and block malicious email messages before they reach users. Sophos Email Security also provides features such as email encryption and data leakage protection, ensuring secure and reliable communication for organizations of all sizes.
  - **IBM Guardium** is an advanced cybersecurity solution designed to protect data in databases and other information repositories. This tool provides continuous monitoring, threat detection, and protection of sensitive data through features such as automatic data classification, user behavior analytics, and encryption. IBM Guardium also offers comprehensive compliance reporting and the ability to respond quickly to incidents.
  - The **Advanced Security Processing Engine (ASPEN)** serves as a Security Information and Event Management (SIEM) tool, designed for monitoring and counterintelligence tasks critical for detecting cyber-attacks targeting critical infrastructure. This tool enables the collection, analysis, and correlation of various data sources, including logs, network events, and system information to identify suspicious activities and threats. ASPEN uses advanced data analysis techniques, including machine learning and anomaly detection, to enable rapid incident detection and appropriate protective measures. With its ability to monitor complex IT environments, ASPEN contributes to the security of critical infrastructure from increasingly sophisticated cyber threats.

- **Third Segment: 24/7 Infrastructure Monitoring Mechanisms**
  - **SOC 24/7** is an operational and security management center that provides continuous protection and monitoring of information systems and networks. SOC uses advanced technologies and a team of expert analysts to identify, analyze, and respond to security threats in real-time, enabling rapid incident recognition and appropriate response. With its continuous presence and ability to address a wide range of security challenges, SOC 24/7 provides critical support to organizations in maintaining the integrity and security of their digital resources.

4. RGA also emphasizes the protection of personal data of citizens and business entities whose data it processes, and has established a robust technical protection system that encompasses the following key aspects:

- **ISO 27701 Certification**: RGA is certified according to the ISO 27701 standard, which confirms commitment to high-level personal data protection. This standard is an extension for privacy management within the information security management system (ISO 27001), ensuring that all processes are aligned with the highest standards in privacy.
- **Systematic Supervision and Controls**: Continuous supervision and controls conducted by the Commissioner for Information of Public Importance and Personal Data Protection confirm that RGA operates in accordance with laws and regulations. RGA's practices have been repeatedly rated as exemplary, guaranteeing the security of data entrusted to it.
- **Access Control**: Access to personal data is strictly controlled. Only authorized users have access to specific information, granted based on the principle of least privilege. Additionally, all user activities are logged and monitored for added security.
- **Regular Updates and Patching**: RGA's systems are regularly updated, and patches are applied as soon as they become available to minimize vulnerability to known threats. This includes operating systems, applications, and all other components of the information system.
- **Incident Detection and Response System**: RGA has a sophisticated system for detecting and responding to security incidents. This system enables the rapid identification of potential threats and their efficient mitigation to minimize damage and protect data.
- **Employee Training**: All RGA employees regularly undergo training in information security and personal data protection. RGA recognizes that employees are a key element of the data protection system and heavily invests in their education and awareness of the importance of data protection.